CITY OF Yucaipa

Stacey Chester, Chair
Dennis Miller, Vice Chair
Tony Hicks, Commissioner
Mike McCuistion, Commissioner
Brandon Mihld, Commissioner
Timothy Mullins, Commissioner
Robert O'Brine, Commissioner

AGENDA

Planning Commission
May 7, 2025
6:30 PM
Yucaipa City Hall - City Council Chambers
34272 Yucaipa Blvd., Yucaipa, California

Public Comment Via Mail or Email
Items must be submitted no later than three (3) business hours prior to the meeting at which the commenter seeks to provide comment. Public comment may be submitted via U.S. Mail to the City Clerk at 34272 Yucaipa Blvd., Yucaipa, CA 92399 or via email to publiccomment@yucaipa.gov. All mail and email correspondence will be archived, distributed to the Planning Commission, and retained as part of the public record; however, submissions will not be read out loud during the meeting. The subject line should specify "Public Comment-Planning Commission" and include the date of the meeting.

Written public comment submitted on non-agenda items and on specific agenda items will be made available to the public pursuant to the City of Yucaipa policy regarding the distribution of written public comments at City Council and Commission meetings, which may be accessed on the City's website at https://yucaipa.gov/agendas-minutes/. Individuals should be aware that comments provided, including personal information, may be disclosable pursuant to the California Public Records Act.

Live stream/recording of Planning Commission meetings:
Members of the public may watch city council meetings live at: https://yucaipa.gov/live.

Possible Live Stream Disruptions:
While the City of Yucaipa strives for uninterrupted streaming, technical issues may occasionally occur. We ask for your understanding and patience should there be any disruptions during the live broadcast. We will work diligently to resolve any issues promptly, however, please be advised that the City Council meeting may continue in person while such issues are resolved. Every attempt will be made for the meeting to be recorded and made available for viewing after its conclusion.

CALL TO ORDER

PLEDGE OF ALLEGIANCE

ROLL CALL

PUBLIC COMMENT **LIMIT 3 MINUTES**

CONSENT AGENDA

The following Consent Agenda items are expected to be routine and non-controversial. The Planning Commission will act upon them, at one time, without discussion. Any Commissioner or staff member may request removal of an item from the Consent Agenda for discussion.

1. **SUBJECT**: APPROVE THE PLANNING COMMISSION MINUTES OF MARCH 19, 2025.

RECOMMENDATION: That the Planning Commission approve the minutes of March 19, 2025.

PUBLIC HEARINGS

The order of Business for the Public Hearing Shall Be:

A. Open Public Hearing
B. Disclosure of Ex Parte Communications
C. Staff Presentation
D. Applicant/Representative Presentation (if necessary)
E. Public Comments
F. Applicant Rebuttal (if necessary)
G. Public Hearing Closed
H. Commission Discussion

2. **SUBJECT**: **TECK PROPERTIES** (CASE NO. 23-088/89/CUP/ARC/VAR): A CONDITIONAL USE PERMIT (CUP) AND MAJOR VARIANCE (MJV) FOR THE DEVELOPMENT OF A BUSINESS PARK IN THE GENERAL COMMERCIAL (CG) LAND USE DISTRICT. THE PROPOSED PROJECT CONSISTS OF 47 INDIVIDUAL TWO-STORY BUSINESS/OFFICE UNITS, WITH 6 INTERIOR FLOOR PLANS RANGING FROM 1,542 SQUARE FEET UP TO 2,990 SQUARE FEET, INCLUDING A LIVE-IN, WORK ONSITE COMPONENT THAT ALLOWS SIX (6) TENANTS TO LIVE ONSITE ON THE SECOND FLOOR OF THEIR ASSIGNED UNIT. THE PROJECT INCLUDES A MAJOR VARIANCE FOR A 90 PERCENT REDUCTION OF SIDE YARD SETBACK, PROVIDING A 1-FOOT SETBACK IN LIEU OF THE REQUIRED 10-FOOT SETBACK.

RECOMMENDATION: That the Planning Commission conduct a public hearing and if appropriate:

A) Approve the Conditional Use Permit and Variance Request (Case No. 23-088/089), subject to the Conditions of Approval as contained in this Agenda Report,

B) Review, and if it is considered acceptable, approve the architectural design and conceptual landscaping for the proposed Project;

C) Adopt the Findings for the Conditional Use Permit as contained in the Agenda Report;

D) Adopt the Major Variance Findings as contained in the Agenda Report;

E) Adopt the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program, finding the mitigation measures and standard measures and procedures will reduce the potential level of environmental impact to less than significant; and

F) Direct staff to file a Notice of Exemption.

3. **SUBJECT**: **SG OPAL** (PLN-PHE-25-0005): A LAND USE COMPLIANCE REVIEW AND MAJOR VARIANCE OF A FIFTY (50) FOOT PYLON SIGN THAT PROVIDES SIGNAGE FOR THE FUTURE TENANTS ON SITE, INCLUDING DIGITAL FUEL PRICING, WITH THE PROPOSED VARIANCE TO ALLOW FOR AN INCREASE IN STRUCTURE HEIGHT, AND A SEPARATE TEN (10) FOOT MONUMENT SIGN LIMITED TO A FIVE-TIER FUEL PRICING STRUCTURE.

RECOMMENDATION: That the Planning Commission conduct a public hearing and if appropriate:

A) Approve Major Variance and Land Use Compliance Review No. PLN-PHE-25-005, subject to the Conditions of Approval as contained in this Agenda Report;

B) Adopt the Major Variance Findings as contained in the Agenda Report;

C) Find that the Project is exempt from CEQA pursuant to Section 15305 & 15311 of the State CEQA Guidelines; and

D) Direct staff to file a Notice of Exemption.

STUDY SESSION:

4. **SUBJECT**: California Environmental Quality Act (CEQA)

ANNOUNCEMENTS

ADJOURNMENT

Notice Regarding Americans with Disability Act

The City of Yucaipa complies with the Americans with Disabilities Act of 1990. If you need special assistance to participate in this meeting, please call the City Clerk's Department at (909) 797-2489, during normal business hours, at least 48-hours prior to the meeting. Notification 48 hours prior to the meeting will enable the city to make reasonable accommodations to ensure accessibility to this meeting.

CEQA STATEMENT:
Unless stated otherwise on the agenda, every item on the agenda is exempt from CEQA guidelines sections 15060(c), 15061(b)(3), 15273, 15378, 15301, 15323 and/or Public Resource Code Section 21065.

Pursuant to Government Code Section 54957.5, any disclosable public records related to an open session item on a regular meeting agenda and distributed by the City of Yucaipa to all or a majority of the City Council, less than 72 hours prior to that meeting, are available for public inspection at Yucaipa City Hall, 34272 Yucaipa Boulevard, Yucaipa, CA 92399, during normal business hours.

NOTICE REGARDING CHALLENGES TO DECISIONS
Pursuant to all applicable laws and regulations, including without limitation, California Government Code Section 65009 and/or California Public Resources Code Section 21177, if you wish to challenge in court any of the below decisions (regarding planning, zoning and/or environmental decisions), you may be limited to raising only those issues you or someone else raised at the public hearing(s) described in this notice/agenda, or in written correspondence delivered to the city at, or prior to, this public hearing.

NOTICE REGARDING APPEALS
Appeals of a final action by the Planning Commission must be filed with the city clerk no later than ten (10) calendar days after the day on which the final action was taken, along with the appropriate fee.

AFFIDAVIT OF POSTING

State of California }
County of San Bernardino } ss.
City of Yucaipa }

I, Ana V. Sauseda, City Clerk of the City of Yucaipa, California, do hereby declare that the foregoing agenda was posted on 5/1/2025, at least seventy-two (72) hours prior to the meeting per Government Code 54954.2, at the following locations:

Yucaipa City Hall, 34272 Yucaipa Boulevard, Yucaipa, California
City of Yucaipa website www.yucaipa.gov

AVS
Ana V. Sauseda, MMC
City Clerk

POSTED
5/1/2025

Remove by: 5/8/2025

Agenda Item No. ____

City of Yucaipa
PLANNING COMMISSION MINUTES
Regular Meeting of March 19, 2025

A Regular meeting of the Planning Commission of the City of Yucaipa, California was called to order in the Council Chambers, 34272 Yucaipa Boulevard, Yucaipa, on March 19, 2025, at 6:30 PM.

PRESENT: Stacey Chester, Commissioner
Dennis Miller, Vice Chair
Mike McCuistion, Commissioner
Brandon Mihld, Commissioner
Timothy Mullins, Commissioner
Robert O'Brine, Commissioner

ABSENT: Tony Hicks, Commissioner

CITY STAFF: Benjamin Matlock, Deputy Director of Community Development/City Planner
Tuan Vu, Assistant City Attorney
Katrina Kunkel, Associate Engineer
Christian Farmer, Associate Planner
Maria Koolhoven, Planning Commission Assistant

CALL TO ORDER

The meeting was called to order at 6:30 p.m.

PLEDGE OF ALLEGIANCE

The Pledge of Allegiance was led by Vice Chair Dennis Miller.

ROLL CALL

PUBLIC COMMENT:

The following members of the public spoke:

- Hansen Wang

CONSENT AGENDA

The following Consent Agenda items are expected to be routine and non-controversial. The Planning Commission will act upon them, at one time, without discussion. Any Commissioner or staff member may request removal of an item from the Consent Agenda for discussion.

1. **SUBJECT**: APPROVE THE PLANNING COMMISSION MINUTES OF FEBRUARY 5, 2025.

   RECOMMENDATION: That the Planning Commission approve the minutes of February 5, 2025.

   ACTION: MOTION BY VICE CHAIR MILLER, SECOND BY COMMISSIONER MIHLD, CARRIED, 6-0-1 (COMMISSIONER HICKS ABSENT), TO APPROVE CONSENT AGENDA ITEM NO. 1.

PUBLIC HEARINGS

The order of Business for the Public Hearing Shall Be:

A. Open Public Hearing
B. Disclosure of Ex Parte Communications
C. Staff Presentation
D. Applicant/Representative Presentation (if necessary)
E. Public Comments
F. Applicant Rebuttal (if necessary)
G. Public Hearing Closed
H. Commission Discussion

Chair Chester disclosed that she spoke with a community member, Brett Granlund, who gave their thoughts about the item on the agenda. Vice Chair Miller, Commissioners McCuistion, Mihld, Mullins and O'Brine had no ex parte communications to disclose on any of the items on the agenda.

2. **SUBJECT**: **ACAA LP** (PLN-PHE-25-0003): A MAJOR VARIANCE FOR AN ADDITIONAL WALL-MOUNTED SIGN, WHICH WILL BRING THE TOTAL WALL MOUNTED SIGNAGE TO 325 SQUARE FEET IN LIEU OF THE PERMITTED 200 SQUARE FEET TO PROVIDE VISIBILITY FOR TRAVELERS ALONG THE I-10 FREEWAY AND TO BE IN LINE WITH THE LA QUINTA CORPORATE DESIGN REQUIREMENTS.

   RECOMMENDATION:

   That the Planning Commission conduct a public hearing and if appropriate:

   A) Approve Major Variance No. PLN-PHE-25-003, subject to the Conditions of Approval as contained in this Agenda Report; and

   B) Adopt the Major Variance Findings as contained in the Agenda Report; and,

C) Find that the Project is exempt from CEQA pursuant to Section 15311 & 15305 of the State CEQA Guidelines.

D) Direct staff to file a Notice of Exemption.

DISCUSSION:

Associate Planner Christian Farmer presented the Agenda Report.

The applicant, Alex Mucino, was in attendance. Mr. Mucino stated that construction started during the COVID pandemic and completed construction in 2023. He stated that the facility is lagging behind their competitors and that the hotel requires marketing and visibility. Mr. Mucino noted that for general travelers, it's hard to know that the building is a hotel and is often confused for an office or a small medical building. Mr. Mucino expressed that without signage fronting the highway, their occupancy will not increase.

Mr. Mucino introduced Alan Aimes from Windham, and Alan Bose from Pacific Inns, who is representing their management company, should the Commission have additional questions.

Commissioner Miller asked the applicant what the cost of the sign and installation was. Alan Aimes informed the Commission that the total sign package cost was a total of two hundred thousand dollars.

PUBLIC COMMENT:

The following members of the public spoke:

- Hansen Wang
- Kristine Mohler

The applicant, Alex Mucino, clarified that the request for the variance is to improve the occupancy at the hotel. He would like to improve the quality of the brand-new hotel, provide exceptional customer service, to keep the hotel clean and establish repeat customers and keep a fair daily rate. He stated that the sign will definitely help the occupancy standpoint and would also help the city.

The Public Hearing was then closed.

Commissioner O'Brine noted that the material that was provided was straightforward, and the sign is a good idea because you don't know what the building is from a distance.

Commissioner Mullins asked staff for additional information on the sign codes. Deputy Director of Community Development / City Planner Ben Matlock stated that staff will be working on a comprehensive development code update, and it will include some updates to the sign code as well.

Commissioner Miller suggested taking a look at the sign code for the Freeway Corridor, so these issues are proactively addressed. Commissioner Miller stated that he is in support of the enhancement of the business community. He noted that this project will create sales tax revenue, and it creates 100% bed tax for the city. The more people occupy the building the more the community will benefit.

Commissioner Mihld remembered and therefore disclosed that he spoke with community member Kristine Mohler for ex parte purposes. Commissioner Mihld agreed that the business is suffering from a lack of signage after he conducted some research. He agreed that this sign is pushing the limit but that it is needed in order for the hotel to thrive.

Commissioner McCuistion supports the La Quinta hotel in the city.

Chair Chester stated that actions come with consequences, and that the owners had to remove the original sign down. The applicant came back and expressed the impact of that decision, and she also understands the economic impact the city felt as well.

ACTION: MOTION BY Commissioner McCuistion, SECOND BY Commissioner O'Brine, CARRIED, 5-1-1, (Commissioner Hicks Absent) TO APPROVE AGENDA ITEM NO. 2.

STUDY SESSION:

3. **SUBJECT:** PLANNING 101

DISCUSSION:

Deputy Director of Community Development / City Planner Benjamin Matlock presented the Study Session Presentation.

ANNOUNCEMENTS: Deputy Director /City Planner Benjamin Matlock informed the Commissioners that the heavier agendas will be during mid or later summer.

ADJOURNMENT:

The meeting adjourned at 7:45 PM.

Benjamin Matlock	Stacey Chester
Deputy Director/City Planner	Chair of the Planning Commission

Item No. 2

CITY OF Yucaipa

AGENDA REPORT

DATE: May 7th, 2025

TO: Honorable Chair and Planning Commissioners

FROM: Christian Farmer, Associate Planner CF

SUBJECT: **Teck Properties** (Case No. 23-088/89/CUP/ARC/VAR): A Conditional Use Permit (CUP) and Major Variance (MJV) for the development of a business park in the General Commercial (CG) land use district. The Proposed Project consists of 47 individual two-story business/office units, with 6 interior floor plans ranging from 1,542 square feet up to 2,990 square feet, including a live-in, work onsite component that allows six (6) tenants to live onsite on the second floor of their assigned unit. The project includes a Major Variance for a 90 percent reduction of side yard setback, providing a 1-foot setback in lieu of the required 10-foot setback.

RECOMMENDATION:

That the Planning Commission conduct a public hearing and:

A. Approve the Conditional Use Permit and Variance Request (Case No. 23-088/089), subject to the Conditions of Approval as contained in the Agenda Report,

B. Review, and if it is considered acceptable, approve the architectural design and conceptual landscaping for the proposed Project;

C. Adopt the Findings for the Conditional Use Permit as contained in the Agenda Report;

D. Adopt the Major Variance Findings as contained in the Agenda Report;

E. Adopt the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program, finding the mitigation measures and standard measures and procedures will reduce the potential level of environmental impact to less than significant; and,

F. Direct staff to file a Notice of Exemption.

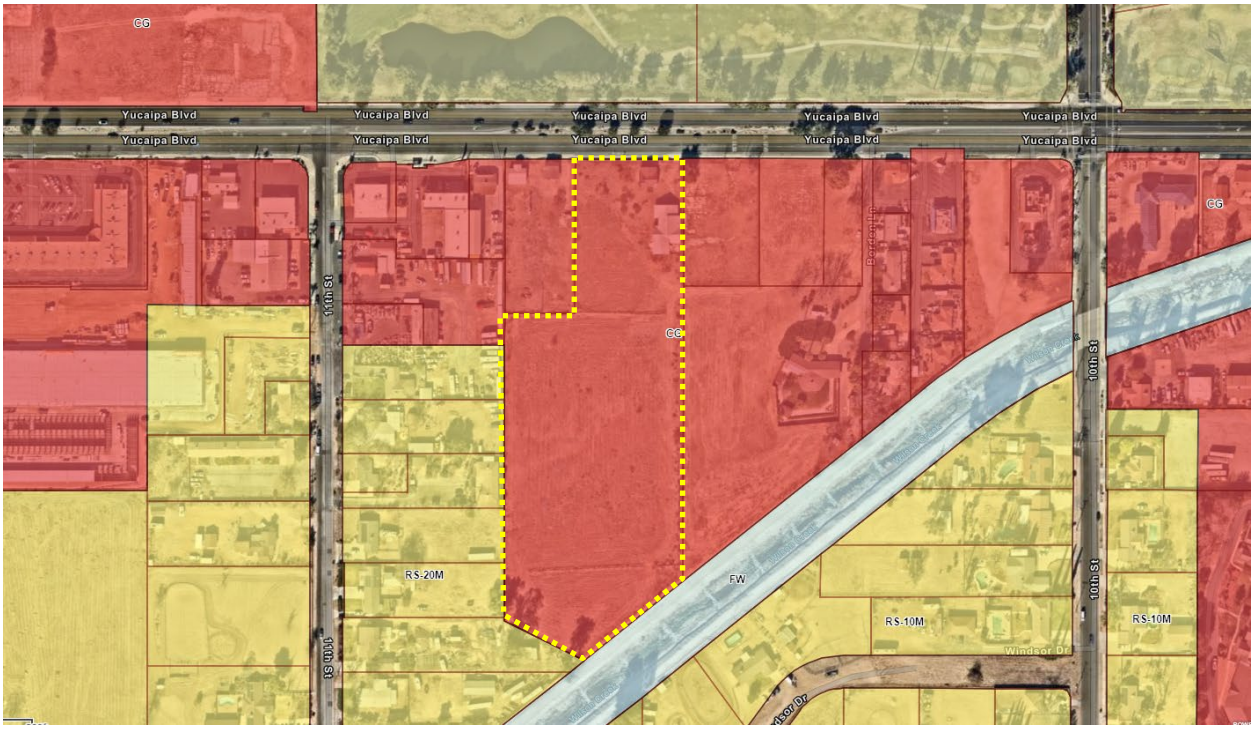
BACKGROUND/DISCUSSION:

Area Land Use Designations; Improvement Levels; and existing Land Uses:

Site:	CG (General Commercial)	IL-1	Non-conforming (vacant) SFR
North:	PD (Planned Development)	IL-1	Chapman Heights Development
South:	FW (Floodway)	IL-1	Wilson Creek Channel
East:	CG	IL-1	Vacant and Non-conforming SFR
West:	CG & RS-20M (Single-Residential, 20,000 square foot minimum)	IL-1	Commercial and Single Family Residential (SFR)

Location and Setting:

The Proposed Project site is located on a vacant parcel (APN 0318-013-11) that totals 5.70 acres at 33193 Yucaipa Boulevard, approximately 560 feet east of 11th Street. The space is currently undeveloped and till-graded except for two (2) structures: a vacant single-family residence and outbuilding that front the south side of Yucaipa Boulevard. Adjacent uses include vacant undeveloped parcels to the east, residential structures and commercial properties (including a massage spa and a restaurant) further east, the Wilson Creek flood control channel to the southeast, with single family residences across the channel and to the southwest, two unoccupied and abandoned single-family residences directly west and adjacent to Yucaipa Boulevard, and commercial development (including a flooring store and a tire shop) further west. The residential community of Chapman Heights and the associated golf course are located to the north of the Project site, across Yucaipa Boulevard.



Aerial view and land use of subject site

Conditional Use Permit

The proposed Project consists of a Conditional Use Permit (CUP) that would allow the development of a business park containing "flex-use" business units, including several live-work units following the demolition of the existing two vacant structures. The Proposed Project ("Project") would consist of 47 individual business/office unit suites with six (6) interior business/office floor plan sizes consisting of 1,542 square feet (SF) (Building A), 2,266 SF (Building B), 2,506 SF (Building C), 2,990 SF (Building D), and 2,750 SF (Building E), and a 1,929 SF building (Building F) to serve as the manager's office and two (2) onsite living quarters to provide onsite 24-hour security. The Project also includes four (4) additional units for the live-in, work onsite component that would allow tenants to live onsite on the second floor of their assigned unit, replacing the mezzanine area. Several of the units also provides a secure storage yard for vehicles.

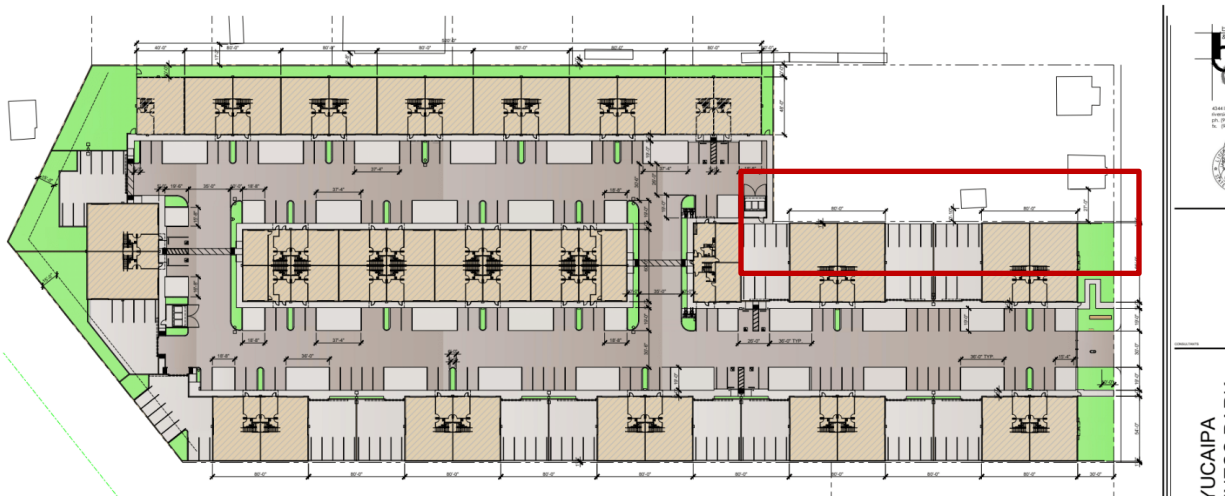
Access circulation will consist of one (1) 30-foot-wide driveway from Yucaipa Boulevard that will be gated and provide transponder authorization only. A total of 189 parking stalls will be provided consisting of 183 standard stalls, 6 Americans with Disabilities Act (ADA) stalls, 35 loading zones, and 15 secure- gated vehicle yards for their corresponding units.

Proposed Site Plan

The building is proposed as a multi-tenant flex space that would be leased out to a wide range of potential tenants that have been identified by the applicant as including HVAC repair, electricians, graphic design, vehicle tinting, plumbers, and other similar uses. The proposed uses for the Project are speculative but would be restricted to uses that are generally permitted within CG Land Use District. These would be evaluated by staff and anticipated to be completed through a Zoning Compliance Review proposed as part of an upcoming update to the Development Code that would be in place prior to the operation of this Project. Where projects exceed the scope implied by this approval, the City Planner would make the determination if additional entitlements are required. The property owner/property management company would also retain leasing rights to exclude additional types of uses.

Major Variance:

The proposed Project includes a Major Variance request for the reduction of the Side Yard Setback at the western property line to accommodate the building. The CG Land Use District specifies that a Side Yard Setback of at least 10 feet is required along one side of the Project, but no particular side is required. This proposal is for a reduction to the western portion of the parcel, located only along the commercial-zoned parcel adjacent to the site along their northerly area of the site. If a setback were to be provided on the other property line, then this area could apply the 0-lot line setback to this portion of the site. However, because the other side is also at a 0-lot line, the variance request is for a 90 percent reduction of the side yard setback to allow a side yard setback of one (1) foot. The variance is only proposed to be applied to the commercial-adjacent portion of the western property line (approximately 290 feet), with the remainder of the development complying with the required 10-foot setback requirement where it is located adjacent to residential uses.



Portion of site subject to the variance request in red

The applicant has prepared the required Variance Findings for the Project, which are attached for the Commission's reference. To construct the Project as proposed, the Planning Commission must adopt all four of the mandatory Findings that are required for the approval of a Variance (see attached Findings). These Findings recognize that there are extraordinary or unusual circumstances that apply to the property or to the intended use in order to justify the reduction of a particular development standard. Below are the four Major Variance Findings and staff's recommendation that the Findings have been met for each respective Variance.

Variance Finding 1:

> *The granting of this variance will not be materially detrimental to other properties or land uses in the area and will not substantially interfere with the present or future ability to use solar energy systems.*

Staff Response:

The proposed encroachments will not cast a shadow on any portion of the roof of the adjoining property that could be designated for solar use during peak solar hours and there will be no impact on the use of future solar systems. Further, the building is only 22 feet at peak height, less than the 45 feet that is otherwise allowable within the CG Land Use District, and the approval of the Major Variance will not result in the structure casting shadows on adjacent properties to impact solar. Future developments on the vacant commercial parcel could also feature a 0-lot line setback along the shared property line to maximize their site layout. Further, the units would not affect solar rays from reaching adjacent properties and there are no conditions of health and safety requirements being compromised as a result of the proposed development.

Variance Finding 2:

> *There are exceptional circumstances and conditions applicable to this property and its permitted use that do not apply to other properties in the vicinity and in particular the same subdivision.*

Staff Response:

The subject site narrows toward the north and given the likely need to accommodate larger vehicle maneuvering, also requires larger than standard drive aisle widths. By reducing the setbacks for "Bldg. D." to a 1-foot setback, the site design can accommodate wider drive-aisles that exceed minimum emergency access requirements. The reduction to the side yard setback also minimizes the possibility for an attractive nuisance, as the ten foot area toward the front of the property could be difficult to monitor for trespassers. The reduction in setback will also remove a challenging portion of the property to landscape and maintain. For similar reasons, a 0-lot line variance was approved at 31875 Dunlap Boulevard. Lastly, the setback reduction only applies to the front 280 feet of the property, less than a third of the total site and is maintained as required along the residential portion of the site.

Variance Finding 3:

> *The strict application of the land use district deprives this property of privileges enjoyed by other properties enjoyed by others in the vicinity or in the same land use district.*

Staff Response:

The application of a 10-foot setback would limit the ability to develop the northern portion of the subject site. To be able to mirror the entry units and to accommodate two-way traffic and parking, the applicant proposes to reduce the side yard setback. Further, there are substandard setbacks at nearby properties, such as 12137 11th Street, 32801 Yucaipa Boulevard, 33649 Yucaipa Boulevard and the previously mentioned 31875 Dunlap Boulevard.

Variance Finding 4:

> *The granting of the variance is compatible with the objectives, policies, general land uses and programs specified in the General Plan and any applicable plan.*

Staff Response:

The Project is to provide small office and warehouse opportunities for business and uses that are permitted within the CG Land Use District. Approval of the project would also allow a use that is permitted by the Development Code, and which supports a number of General Plan policies, including but not limited to: CDL-1.2, CDL-10.1, CDL-10.3, CDL-10.4, and ED-1.1. The proposed Project is otherwise generally consistent with the Development Code requirements.

Architectural Review:

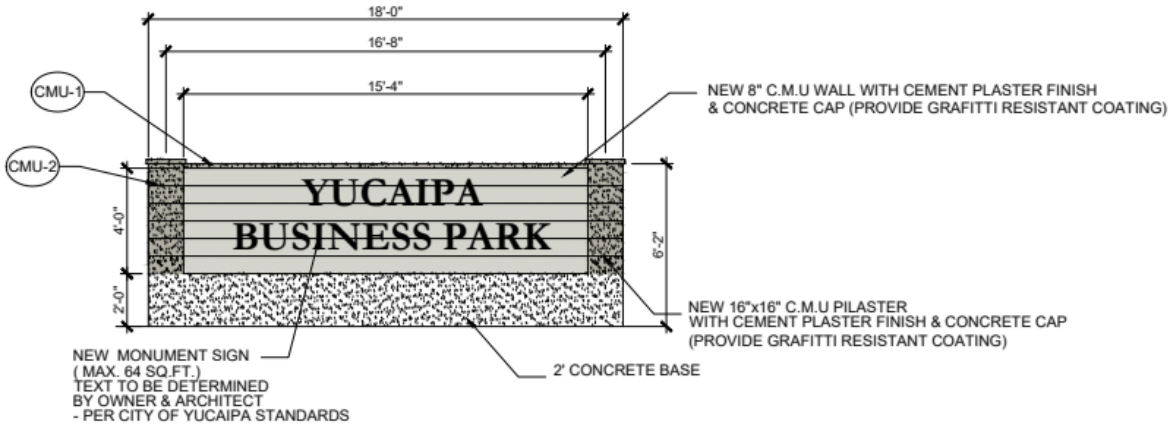
The applicant has submitted an architectural design package for the proposed multi-tenant complex and the preliminary landscape plan design for the overall site (attached) and requests Planning Commission approval as required in the Conditions of Approval. The Project is located on Yucaipa Boulevard; however, the proposed location of individual units has varying visibility to motorists from Yucaipa Boulevard due to the proposed arrangement and layout of the buildings. Overall, the site features a utilitarian design with CMU construction with contrasting grey and dark grey faces with bands of black with tan roll-up doors, red awnings and bronze windows and doors. The units facing Yucaipa Boulevard have been designed as the most visible and include an additional elevation featuring faux windows, with a pop-out and awning.

Proposed Elevations

The conceptual landscaping plan has been designed to complement the building design and to provide a landscape buffer between sensitive uses and along Yucaipa Boulevard. The plant palette includes a variety of evergreen and deciduous trees to support the landscaped areas onsite and is consistent with the plant palette included in the Citywide Design Guidelines. The project includes a perimeter fence that will be a mixture of block wall and a tubular steel or wrought fence, including a wrought iron gate and fence along the entry of the property. Like other development projects, the landscaping will be reviewed by the City's Contract Landscape Architect to verify consistency with water efficiency requirements prior to permit issuance.

Monument Sign:

The applicant has also included a freestanding sign for the proposed Project. Pursuant to the Yucaipa Development Code, all new monument signage is to be reviewed by the Planning Commission. The sign is proposed to be 6 feet tall with the actual sign being 4 feet by 15 feet and 4 inches which is compliant with the total sign area allowable by Development Code Section 84.0370. The sign is proposed at the northwest portion of the Project site. The contents of the text denoting the project's name is subject to change at the owner's discretion, but the design of the sign will not change. Finally, it should be noted that, consistent with the Conditions of Approval, tenant-specific wall signs for the buildings will need to be reviewed through the Building and Safety process.



Proposed Sign

General Plan Consistency

The proposed Project is located within the CG Land Use District. The table and discussion below provides an evaluation of the proposed Project's consistency with adopted development standards with the City's Development Code and adopted General Plan:

CRITERIA	PROPOSAL	COMPLIANCE WITH DEVELOPMENT CODE
Land Use	Professional Services, Retail Trade/Personal Services I and II, Convenience/Support Services, or Wholesale/Warehouse Services	**Yes:** CG standards allows for such businesses with approval of a Conditional Use Permit.
Building Height	A two-story building with a 23'4 peak height	**Yes:** CG Development standards allow a building height of 45 feet.
Building and Lot Coverage	• Building Coverage: Approximately 33.4 percent. • Site Coverage: 90 percent.	**Yes:** CG Development standards allow a building coverage of 60 percent and 90 percent coverage for both buildings and paved surfaces.
Landscaping	Site Landscaping: approximately 10 percent of the Project site is landscaped.	**Yes:** A minimum of 10 percent of the site must be landscaped.
Building and Landscape Setback	A multi-tenant commercial complex with: • Side yard: 0 feet • Side yard: 1 foot • Front yard: 30 feet • Rear yard: 15 feet	**Yes[1]:** CG Development standards are as follows: • Front Yard Setback: 15 feet • Side Yard Setbacks: 10 feet on one side • Rear Yard Setbacks: Not required
Parking Spaces	The site can accommodate 189 total spaces.	**Yes:** The Development Code requires a parking space for each 250 feet of office and 1 per 1,000 feet of warehouse space for a total of 182 spaces.

The Project meets or exceeds[1] the City's General Plan and Development Code standards for the above referenced items as well as for access and site design.

In addition, the proposed Project supports a number of General Plan policies. These include the following:

- CDL-6.1 Land Use Mix. Allow a flexible mix of commercial uses, quasi-public/institutional uses, mixed use, and housing that provides high levels of pedestrian activity; offer density/intensity incentives to encourage development that supports the economic vitality of the downtown.

[1] With approval of Major Variance for the1 foot side yard setback

- CDL-10.1 Development Review. Implement and adhere to development review procedures and design guidelines in the City of Yucaipa Municipal Code that advance the visual quality of the community.
- CDL-11.1 Community Preservation. Encourage the rehabilitation of neighborhoods and commercial and industrial areas, and the application of code compliance efforts where needed to preserve and maintain community quality of life.
- ED-1.1 Employment and Revenue Focus. Invest public resources and exercise discretionary land-use authority to support the retention, expansion, and attraction of businesses that generate a higher number of jobs per acre and higher net municipal revenues per acre.
- ED-1.4 Available Sites and Buildings Inventory. Partner with property owners, real estate brokers, utility companies, and other stakeholders to maintain an inventory of sites and buildings available for office, medical, educational, and industrial uses.

Environmental Review

The Initial Study prepared for this proposal, which was made available for comment for 20 days beginning on March 28, 2025, and ending on April 17, 2025, considers the potential environmental impacts that could occur as a result of the Project. The Initial Study was made available to the public through a hardcopy form at City Hall and as a digital file on the City's website.

To support the analysis for the Project, several technical studies, including an Air Quality and Greenhouse Gas Analysis, Preliminary WQMP, Biological, Cultural Resources, and Traffic Impact and VMT Analysis. In addition, one tribe provided a response following notification pursuant to Assembly Bill 52 indicating a formal request for consultation and ultimately provided mitigation measure language that is in the attached MMRP under Mitigation Measures CUL-1 and -2 and TCR-1, -2, and -3. Based upon the analysis, all available evidence indicates that any adverse impacts that could occur can be mitigated to a less-than-significant level, and consequently, staff recommends the adoption of a Mitigated Negative Declaration. Notable measures include protocols for tribal monitors, the procedure for any inadvertent cultural resource discoveries, biological protocols, and noise reduction measures. No comments were received during the public notice period for the environmental review document.

Processing and Procedural Actions:

Notices of the Project were sent to all property within 300 feet of the project site. Further, the City initiated AB-52 Tribal Noticing and published a Notice of Intent in the Yucaipa News Mirror on March 28th 2025. In response to the noticing, one neighbor to the project came to the City to provide comment indicating they were in favor of the project with some questions about the overall grading and any potential runoff that could be generated. Following the counter discussion, a neighbor to the project also provided a letter identifying concerns with drainage and runoff onto their property. Consistent with law, the applicant is conditioned to implement a Water Quality Management Plan for the site.

Development Impact Fees:

Based on 119,564 square feet of commercial development on 5.70 acres with the credit for the 2,423 square foot home, the Project can be expected to generate **$666,966.80** in Development Impact Fees, using the current fee schedule, as follows:

Drainage Facilities:	$82,965.56
Traffic Facilities:	$441,958.06
Public Facilities:	$90,599.38
Fire Facilities:	$51,443.80
TOTAL:	**$666,966.80**

CONCLUSION:

The proposed Conditional Use Permit is consistent with the CG Official Land Use District and the General Plan and Development Code standards for the District. The Project meets standards for access, lot size and dimension, setbacks following approval of the Major Variance, and site design. The required findings for approval of the Conditional Use Permit have been made and are attached.

Attachments:

1. Conditional Use Permit Findings
2. Variance Findings
3. Land Use District & Location Map
4. Site Photos
5. IS/MND
6. Mitigation Monitoring and Reporting Plan
7. Neighbor Response Letter
8. Conditions of Approval
9. Site Plans
10. Landscaping Plans
11. Grading Plan

Approved by:

MK for BM

Benjamin Matlock, Deputy Director of Community Development/City Planner
Development Services Department

FINDINGS: CONDITIONAL USE PERMIT NO. 23-088

1. The proposed project will not have a significant impact on the environment because the required mitigation measures will reduce the potential level of impact to less than significant.

2. The site for the proposed use is adequate in size and shape to accommodate the proposed use and all yards, open spaces, setbacks (outside of the side yard setback discussed in the preceding Variance Findings section), walls and fences, parking areas, landscaping, and other features pertaining to the application, because the site is large enough and the design is configured to accommodate the proposed Project and accompanying features.

3. The site for the proposed use has adequate access, meaning that the site design incorporates appropriate street and highway limitations, because the site proposes ingress and egress from Yucaipa Blvd. and contains appropriate internal driveway circulation with aisle widths that meet emergency access requirements.

4. The proposed use will not have a substantial adverse effect on abutting property or the permitted use thereof, meaning that the use will not generate excessive noise, vibration, traffic, or other disturbances, because: 1) The Project design provides for adequate building setbacks within the City's CG Land Use District, with the side yard setback Variance Findings discussed and evaluated as part of the Variance review; 2) The proposed "flex use" commercial facility complies with City development standards; 3) Improvements have been conditioned to occur prior to occupancy; 4) Access is to be provided along Yucaipa Boulevard; and; 5) Adequate on-site landscaping is proposed along the property lines adjacent to more sensitive land uses, and on-site. In addition, the use will not substantially interfere with the present or future ability to use solar energy systems because the height of the proposed buildings will not substantially hinder the use of such devices on surrounding properties.

5. The proposed uses are consistent, subject to approval of the General Plan Amendment, with the goals, policies, standards, and maps of the General Plan and any applicable plan, because the proposed Project and associated uses are permitted in the CG Land Use District of the Yucaipa General Plan.

6. The lawful conditions stated in the approval are deemed necessary to protect the public health, safety, and general welfare, because they ensure adequate circulation, drainage, and compatibility with surrounding land uses.

7. The design of the site has considered the potential for the use of solar energy systems and passive or natural heating and cooling opportunities, because there are no obstructions to the collection of solar energy or the natural movement of wind toward or around surrounding properties.

FINDINGS: MAJOR VARIANCE 23-089

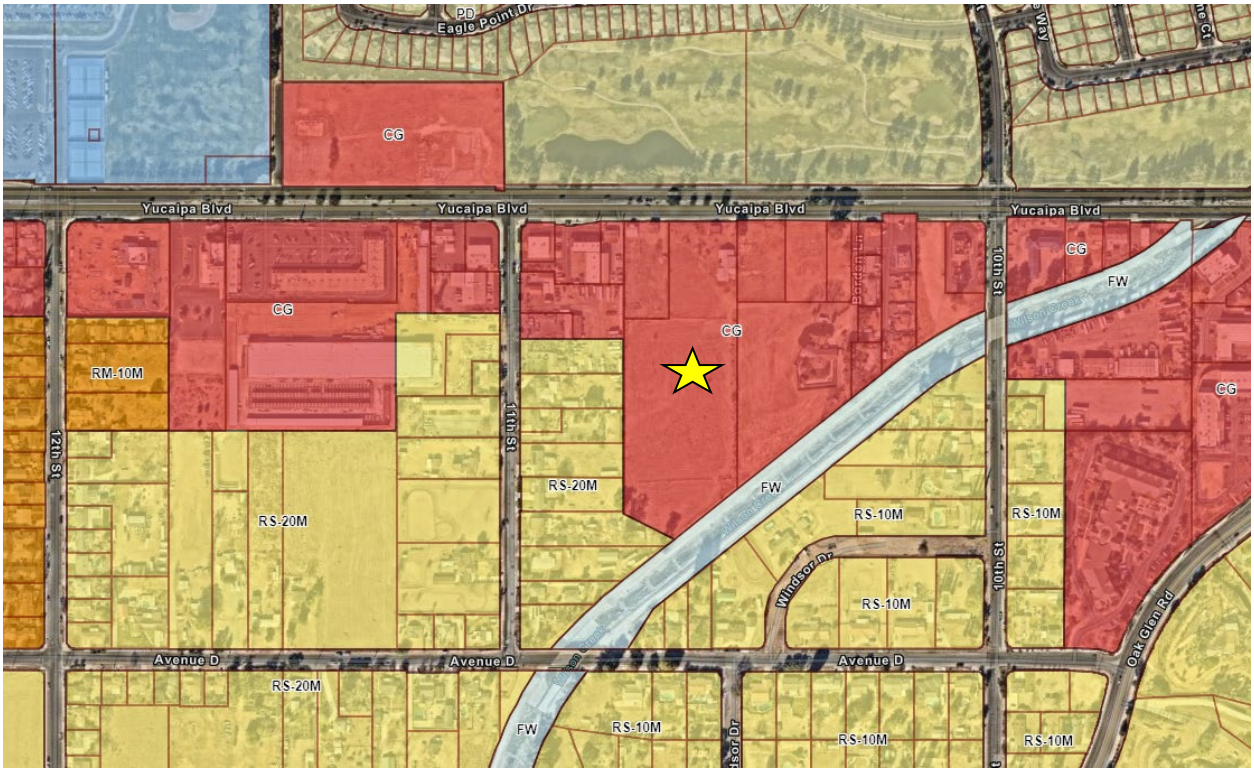
1. The granting of such variance will not be materially detrimental to other properties or land uses in the area and will not substantially interfere with the present or future ability to use solar energy systems, because the proposed encroachments will not cast a shadow on any portion of the roof of the adjoining property that could be designated for solar use during peak solar hours and there will be no impact on the use of future solar systems. Further, the building is only 22 feet at peak height, less than the 45 feet that is otherwise allowable within the CG Land Use District, and the approval of the Major Variance will not result in the structure casting shadows on adjacent properties to impact solar. Future developments on the vacant commercial parcel could also feature a 0-lot line setback along the shared property line to maximize their site layout. Further, the units would not affect solar rays from reaching adjacent properties and there are no conditions of health and safety requirements being compromised as a result of the proposed development.

2. There are exceptional or extraordinary circumstances or conditions applicable to the property or to the intended use that do not apply to other properties in the same district or vicinity, because the subject site narrows toward the north and given the likely need to accommodate larger vehicle maneuvering, also requires larger than standard drive aisle widths. By reducing the setbacks for "Bldg. D." to a 1-foot setback, the site design can accommodate wider drive-aisles that exceed minimum emergency access requirements. The reduction to the side yard setback also minimizes the possibility for an attractive nuisance, as the ten foot area toward the front of the property could be difficult to monitor for trespassers. The reduction in setback will also remove a challenging portion of the property to landscape and maintain. For similar reasons, a 0-lot line variance was approved at 31875 Dunlap Boulevard. Lastly, the setback reduction only applies to the front 280 feet of the property, less than a third of the total site and is maintained as required along the residential portion of the site.

3. The strict application of the land use district deprives such property of privileges enjoyed by other properties in the vicinity or in the same land use district, because the application of a 10-foot setback would limit the ability to develop the northern portion of the subject site. To be able to mirror the entry units and to accommodate two-way traffic and parking, the applicant proposes to reduce the side yard setback. Further, there are substandard setbacks at nearby properties, such as 12137 11th Street, 32801 Yucaipa Boulevard, 33649 Yucaipa Boulevard and the previously mentioned 31875 Dunlap Boulevard.

4. The granting of the variance is compatible with the objectives, policies, general land uses, and programs specified in the City's General Plan and any other applicable plan, because the Project is to provide small office and warehouse opportunities for business and uses that are permitted within the CG Land Use District. Approval of the project would also allow a use that is permitted by the Development Code, and which supports a number of General Plan policies, including but not limited to: CDL-1.2, CDL-10.1, CDL-10.3, CDL-10.4, and ED-1.1. The proposed Project is otherwise generally consistent with the Development Code requirements.

LAND USE: SERVICE COMMERCIAL (CG)



LOCATION

SITE PHOTOS

YUCAIPA BUSINESS PARK PROJECT

INITIAL STUDY / MITIGATED NEGATIVE DECLARATION (IS/MND)

March 2025

City of Yucaipa

Development Services Department

34272 Yucaipa Boulevard

Yucaipa, CA 92399

Prepared by:

Ruth Villalobos & Associates, Inc

APPENDICIES

Appendix A- Air Quality & Greenhouse Gas Emissions Assessment Yucaipa Business Park Development, ECORP Consulting Inc. October 2023.

Appendix B- Biological Technical Report for the Yucaipa Business Park Project, ECORP Consulting Inc. April 2024

Appendix C- Cultural Resource Evaluation for the Yucaipa Business Project, Paleowest June 9, 2023

Appendix D- Water Quality Management Plan for Tract Map 20372, Blue Engineering and Consulting, Inc. August 2022.

Appendix E - Yucaipa Business Park Development Traffic Impact Analysis Yucaipa, California, TJW Engineering, Inc. December 4, 2024.

Appendix F- Yucaipa Business Park Development Vehicle Miles Traveled (VMT) Analysis. TJW Engineering, Inc. December 4, 2024.

CITY OF YUCAIPA

INITIAL STUDY

ENVIRONMENTAL CHECKLIST FORM

1. Project Title: Yucaipa Business Park - Cases 23-088/CUP and 23-089/VAR

2. Lead Agency Name and Address: City of Yucaipa, 34272 Yucaipa Blvd., Yucaipa, CA 92399

3. Contact Person and Phone Number: Christian Farmer, Associate Planner (909) 797-2489 ext. 270

4. Project Location: One (1) vacant and mostly undeveloped parcel, consisting of two (2) unoccupied and abandoned structures, that totals 5.70 acres located at 33193 Yucaipa Boulevard on the south side of Yucaipa Boulevard approximately 560 feet east of 11th Street cross-street in the City of Yucaipa, APN: 0318-013-11.

5. Project Sponsor's Name and Address: Glen Schmidt, Teck Properties LLC, PO Box 639, Forest Falls, CA 92339

6. General Plan Designation: CG (General Commercial)

7. Description of the Project: A Conditional Use Permit (CUP) and Variance (VAR) for the development of a business park in the General Commercial (CG) land use district. The Proposed Project consists of 47 individual two-story business/office units, with 6 interior floor plans ranging from 1,542 square feet up to 2,990 square feet, and a live-in, work onsite component that allows six (6) tenants to live onsite on the second floor of their assigned unit.

8. Surrounding Land Uses and Setting: Single family residences and commercial development to the north and west, Yucaipa flood control channel to the south and open space, tilled-graded land to the east followed by residences and commercial development.

9. Other public agencies whose approval is required (e.g. permits, financing approval, or participation agreement): Will serve letters and/or Agreements from the Yucaipa Valley Water District (YVWD) for sewer service and Western Heights Water Company (WHWC) for water, and a permit from San Bernardino County Flood Control District.

Yucaipa Business Park Development Project - Cases 23-088/CUP and 23-089/VAR

INTRODUCTION

This section explains the background and purpose of this Mitigated Negative Declaration (MND), which is the environmental review document prepared pursuant to the provisions of the California Environmental Quality Act (CEQA) for a Conditional Use Permit (CUP) and Variance (VAR) to develop a business park in the General Commercial (CG) land use district.

It establishes the context and scope for the MND and outlines the process for reviewing the Draft MND and issuing the Final MND. The City of Yucaipa is the lead agency under CEQA. A "lead agency" is defined by Section 21067 of CEQA as "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment."

ENVIRONMENTAL REVIEW PROCESS

This IS and Notice of Intent (NOI) to adopt a MND is being circulated for agency and public review and comment for 20 days beginning March 28, 2025. All written comments must be received by 5:30 p.m. April 17, 2025. Written comments or questions concerning this document should be directed to:

City of Yucaipa
Christian Farmer
Associate Planner
City of Yucaipa
cfarmer@yucaipa.gov
34272 Yucaipa Boulevard
Yucaipa, CA 92399

DETAILED PROJECT DESCRIPTION

Project and Location Setting

The Proposed Project site is located on a vacant parcel (APN 0318-013-11) that totals 5.70 acres at 33193 Yucaipa Boulevard, approximately 560 feet east of 11th Street, in the City of Yucaipa ("City"). The space is currently undeveloped and tilled-graded with the exception of two (2) structures, a vacant single-family residence and outbuilding that front the south side of Yucaipa Boulevard and will be demolished and removed prior to grading and construction of the proposed development. Adjacent uses include vacant undeveloped parcels to the east, residential structures and commercial properties (including a massage spa and a restaurant) further east, the Wilson Creek flood control channel to the southeast, with single family residences across the channel and to the southwest, two unoccupied and abandoned single-family residences directly west, adjacent to Yucaipa Boulevard, and commercial development (include a flooring store and a tire shop) further west. The residential community of Chapman Heights and the associated golf course are located to the north of the Project site, across Yucaipa Boulevard.

A Conditional Use Permit (CUP) would allow the development of a business park containing "flex-use" business units, including several live-work units, within the land use designation of General Commercial (CG). The Proposed Project ("Project") would consist of 47 individual business/office unit suites with six (6) interior business/office floor plan sizes consisting of 1,542 square feet (SF) (Building A), 2,266 SF (Building B), 2,506 SF (Building C), 2,990 SF (Building D), and 2,750 SF (Building E), and a 1,929 SF building (Building F) to serve as the manager's office and two (2) onsite living quarters to provide onsite 24-hour security. The Proposed Project also includes four (4) additional units for the live-in, work onsite component that would allow tenants to live onsite on the second floor of their assigned unit, replacing the mezzanine area. Each unit also provides a secure storage yard for vehicles

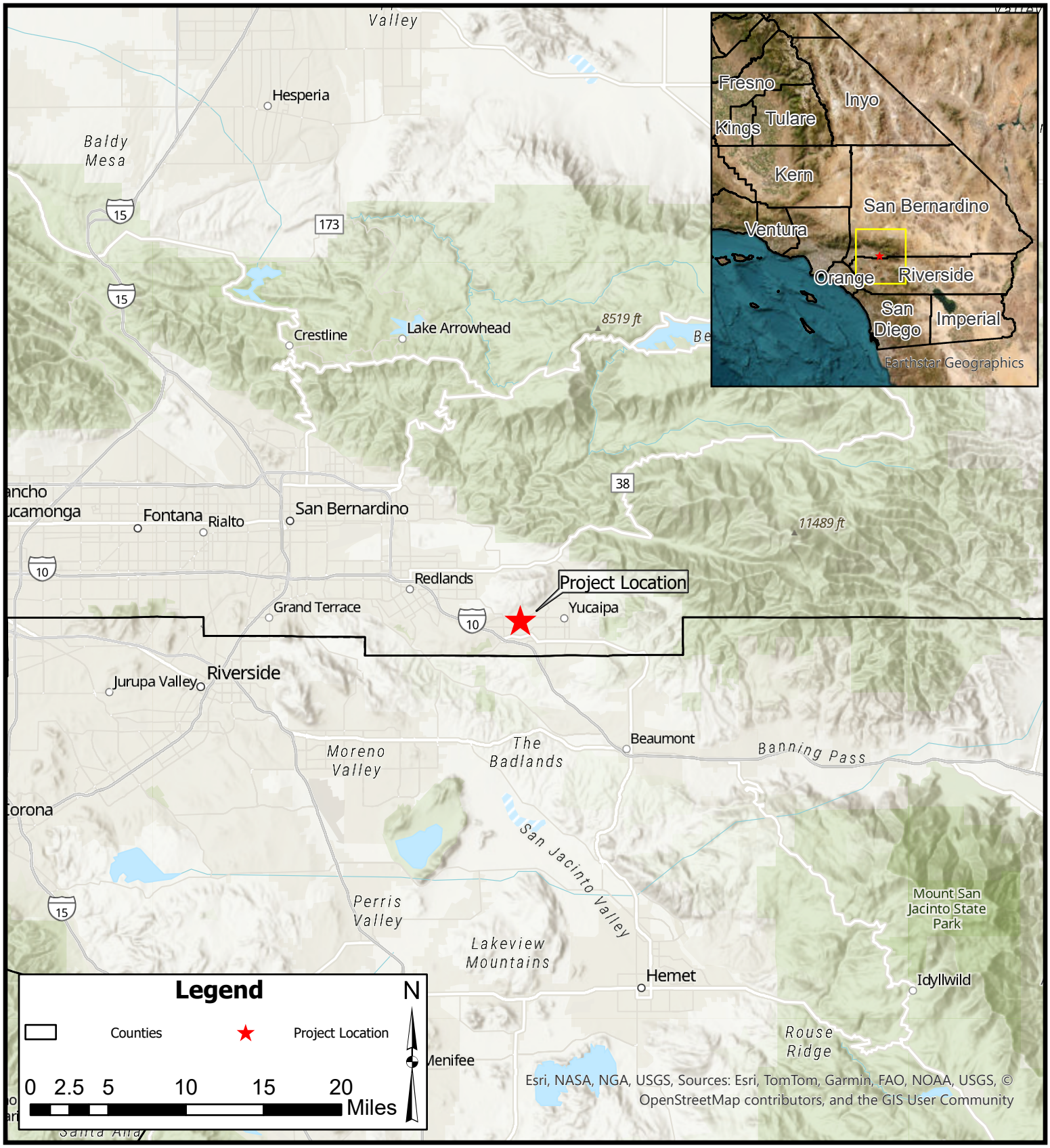
Access circulation will consist of one (1) 30-foot-wide driveway off of Yucaipa Boulevard that will be gated and provide transponder authorization only. A total of 189 parking stalls will be provided consisting of 183 standard stalls, 6 Americans with Disabilities Act (ADA) stalls, 35 loading zones, and 15 secure-gated vehicle yards for corresponding units. The Variance is for the proposed deviation from the CG-required 10-foot side yard setback to a 1-foot side yard setback with the intent to deter any debris and refuge accumulation that could between the Project's proposed buildings and adjacent existing or future buildings on properties to the east and west, as maintenance would be limited through the entire depth of the site.

This environmental document analyzes the Project that could be constructed should the CUP be granted and analyzes the proposed business park development component under a CG land use district, which would permit 47 business/office units, including six (6) live-work units.

Prior Site History

The Proposed Project is located along Yucaipa Boulevard, which was historically used for agricultural and residential purposes. According to historic aerials, a single-family dwelling with a storage/hay barn constructed as early as 1938 is noted in the northeastern portion of the property, with agricultural land use within the remaining parcel to the west and south.

Figure 1 – Regional Map



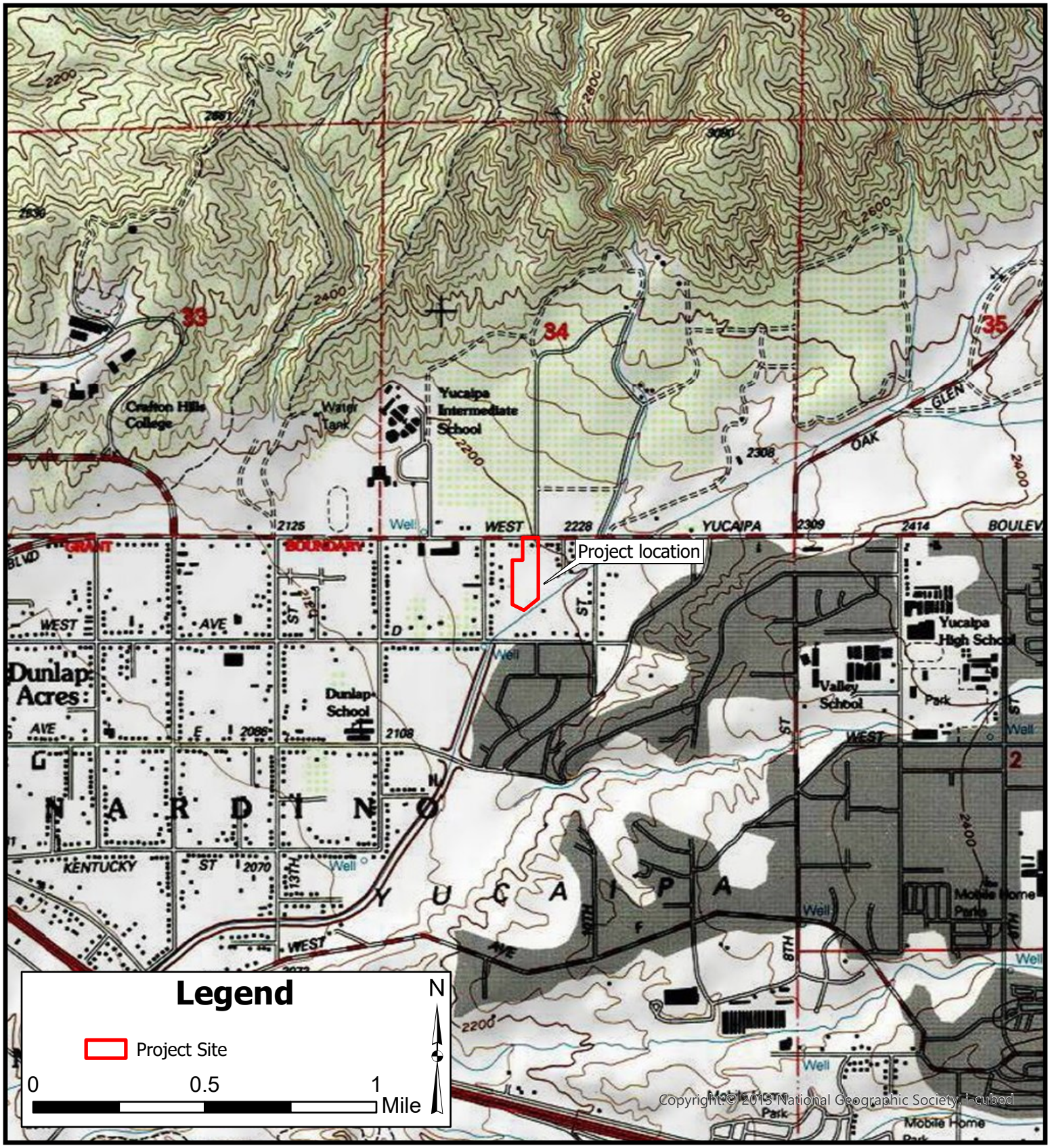
Yucaipa Business Park Project

Regional Map

RVA

Figure 1

Figure 2 – Project Vicinity Map



Yucaipa Business Park Project

Project Vicinity Map

RVA

Figure 2

Figure 3 – Project Footprint Map

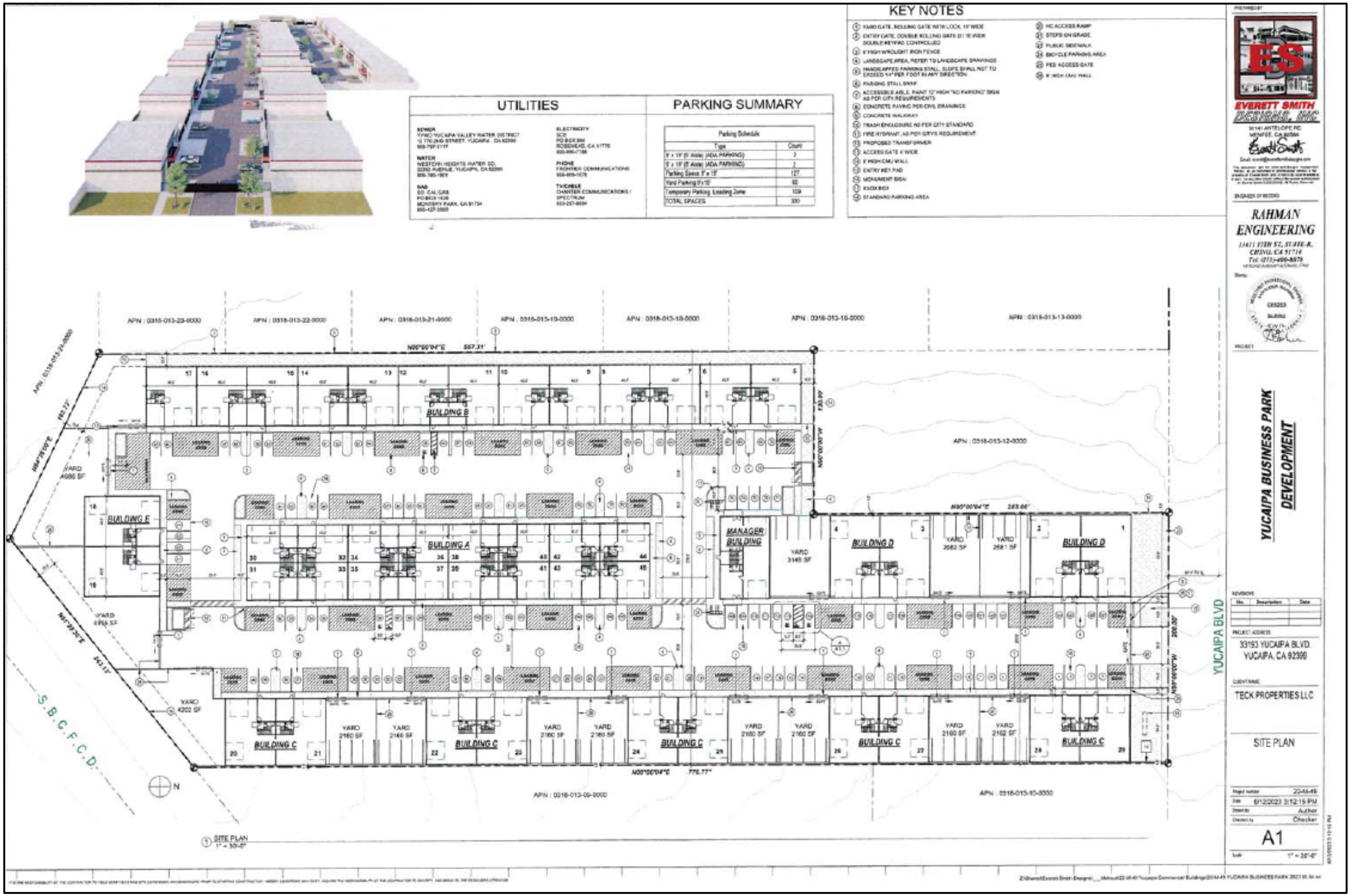
Yucaipa Business Park Project

Project Footprint Map

RVA

Figure 3

Figure 4 – Project Site Plan



Yucaipa Business Park Project

Project Site Plan

Figure 4

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below (☒) would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Less Than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

	Aesthetics		Greenhouse Gases		Public Services
	Agricultural Resources		Hazards & Hazardous Materials		Recreation
	Air Quality		Hydrology/Water Quality		Transportation
	Biological Resources		Land Use/Planning	☒	Tribal Cultural Resources
☒	Cultural Resources		Mineral Resources		Utilities/Service Systems
	Energy		Noise		Wildfire
	Geology/Soils		Population/Housing	☒	Mandatory Findings of Significance

DETERMINATION:
(To be completed by the Lead Agency)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	X
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	
I find that the proposed project MAY have a "potential significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

Christian Farmer
Associate Planner

3-25-2025
Date

1. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

2. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

3. Must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 17, "Earlier Analysis," may be cross-referenced).

5. Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(d). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The analysis of each issue should identify: (a) the significance criteria or threshold used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance.

AESTHETICS

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
1. AESTHETICS. Would the Project:				
a) Have a substantial adverse effect on a scenic vista?			☒	
b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?				☒
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			☒	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			☒	

a) Policy PR-4.7, Scenic Resources, of the City of Yucaipa's 2016 General Plan states that the City will "Protect Yucaipa's scenic resources, including scenic corridors along roads and views of the hillsides, prominent ridgelines, canyons, and other significant natural features, to the extent practical." Resources identified in the General Plan include the City's designated Scenic Corridors (Bryant Street, Yucaipa Boulevard, Wildwood Canyon Road, Oak Glen Road, Sand Canyon Road, and Live Oak Canyon Road) and the prominent hillsides, ridgelines, and open space areas that surround the City, including Crafton Hills and the San Bernardino National Forest. From the perspective of Yucaipa Boulevard, but south of the subject property and facing north toward Crafton Hills, the view is currently obfuscated by existing residential structures across the street just past a neighborhood golf course; however, while the Crafton Hills remain partially visible, the Proposed Project, consisting of two-story structures, will not significantly alter this view. Views from the public right of way of Yucaipa Boulevard would remain uninterrupted. The Project's design and scale are consistent with existing structures and will fully comply with all applicable height and development regulations, ensuring minimal visual impact on the surrounding area. As such, the Proposed Project's height of development would have a less than significant impact on scenic vistas.

b) According to Caltrans Scenic Highway Program, there are no official state designated scenic highways that exist within the City of Yucaipa. A portion of State Route 38 passes through the City of Yucaipa and is an eligible state scenic highway that has not been officially designated; however, this roadway is located along the opposite side of the City to the north. The City of Yucaipa has designated Bryant Street, Yucaipa Boulevard, Wildwood Canyon Road, Oak Glen Road, Sand Canyon Road, and Live Oak Canyon Road as scenic corridors within the City. The Proposed Project is adjacent to Yucaipa Boulevard, a City designated scenic corridor. However, the Project's design and scale are consistent with other existing structures in the area and would not significantly change the existing visual character in the area. There would be no impact to resources along a state scenic highway because of the Proposed Project as there is not one in the Project area.

c) The Project is located on a grubbed, graded, site with two vacant and boarded up buildings. The Project site is surrounded by commercial and residential uses and the Wilson Creek flood control channel to the

south. The site is located within an urbanized area adjacent to Yucaipa Boulevard. The Proposed Project consists of the development of a business park, including six (6) live-work units. These are conditionally permitted uses within the CG (General Commercial) land use district. Compliance with the Development Code will be verified through the Architectural Review Process for the buildings. The proposed structures, and their associated landscaping and architecture, are consistent with all applicable zoning and other regulations governing scenic quality, with the exception of a variance for deviation from the CG-required 10-foot side yard setback to a 1-foot side yard setback to deter from debris and refuge accumulation between the Project's proposed buildings and adjacent existing or future buildings on properties to the east and west. Therefore, development of the Proposed Project would have a less than significant impact to visual quality.

d) Additional lighting will occur with the development of the Project to provide security within the interior of the Project. However, the amount of lighting will be similar to other commercial and residential developments in the surrounding area, and the Project will be required to comply with the City's Development Code, which contains property development and general design standards that ensure new developments and expansions of existing developments will not have a negative impact upon surrounding land uses. This includes the requirement that any lighting to be added to the Project shall be shielded to minimize light spillage to adjacent properties, and that light trespass shall not exceed 0.50 footcandles beyond the site's property line. Therefore, impacts related to light and glare will be less than significant through compliance with the Development Code.

AGRICULTURAL RESOURCES

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
2. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the Project:				
a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to non-agricultural use?				☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?				☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				☒

a) According to the California Department of Conservation, Important Farmland Finder, the Proposed Project site is designated as "urban and built-up land" and does not contain any prime, unique, or important farmland. The Project site is located on one parcel that currently includes two unoccupied and abandoned structures and does not feature any current agricultural activities. As such, the proposed improvements to the site would not convert Farmland (Prime Farmland, Unique Farmland, or Farmland of Statewide Importance) to a non-agricultural use. The proposed Project would not result in impacts to Farmland.

b) The City of Yucaipa also utilizes a "one map system" in which the General Plan Land Use Designations and Zoning Categories are the same and combined onto one map. The Project site is currently designated as CG (General Commercial). The Project site is not designated or zoned for agriculture uses. In addition, there are no active Williamson Act contracts within the City of Yucaipa. The proposed Project would not conflict with existing zoning for agricultural use or a Williamson Act contract.

c-d) No forest land or timberland is located within the Project site. Therefore, no impacts would occur.

e) As noted in items a-d above, the area is designated "urban and built up," and no portions of the area are currently farmed nor subject to Williamson Act contracts. The Project site also does not contain forest land. As such, the Proposed Project would not affect these resources.

AIR QUALITY

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
3. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			☒	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			☒	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			☒	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			☒	

To support the analysis of the Project, an Air Quality & Greenhouse Gas Emissions Assessment, dated October 2023 (Revised February 2025), was prepared by ECORP Consulting, Inc. and is included as Appendix A.

a) Air quality plans describe air pollution control strategies to be implemented by a city, county, or regional air district. The primary purpose of the air quality plans is to bring an area that does not attain federal and state air quality standards into compliance with those standards pursuant to the requirements of the Clean Air Act and California Clean Air Act. A consistency determination plays an important role in local agency project review by linking local planning and individual projects to the applicable air quality plan.

The Proposed Project is within the South Coast Air Basin (Basin), and the South Coast Air Quality Management District (SCAQMD) is the agency principally responsible for comprehensive air pollution control in the Basin. SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources, and responded to this requirement by preparing the 2022 Air Quality Management Plan (AQMP), an air quality management plan covering all portions of the Basin.

The SCAQMD CEQA Handbook states that "New or amended General Plan Elements (including land use zoning and density amendments), Specific Plans, and significant Projects must be analyzed for consistency with the AQMP." A proposed project should be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency 1) whether the Project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP and 2) whether the Project will exceed the assumptions in the AQMP, or increments based on the year of Project buildout and phase.

The regional emissions inventory for the South Coast Air Basin was compiled by SCAQMD, the San Bernardino Association of Governments (SANBAG), and the Southern California Association of Governments (SCAG) and is used for the AQMP. Regional population, housing, and employment projections are based, in part, on the City's General Plan land use designations. The proposed site is designated for General Commercial (CG) uses. The overall project reflects improvements to the site for the permitted land use. As such, the Proposed Project would have been considered in the assumptions used for the AQMP for the growth expected within the City and is consistent with the allowable uses of the land use designation of the General Plan. Therefore, the Project will not conflict with or obstruct the implementation of the 2022 AQMP.

b-c) The Proposed Project consists of a CUP that would permit an allowable use under the land use designation of the property of General Commercial (CG), and a Variance from the CG-required 10-foot side yard setback to a 1-foot side yard setback. To quantify project-related impacts, the Proposed Project was evaluated utilizing the CalEEMod version 2022.1.1.20 air quality modeling program for this MND, using very conservative parameters for its assessment and information that was provided by the applicant. The results are as follows:

Construction Maximum Daily Emissions

Construction Year	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
	Pollutants (Pounds/Day)					
Calendar Year 1	4.04	39.9	36.7	0.05	7.14	4.34
Calendar Years 2	6.64	36.1	34.0	0.05	6.94	4.15
SCAQMD RST	*75*	*100*	*550*	*150*	*150*	*55*
Exceed?	**No**	**No**	**No**	**No**	**No**	**No**

Source: AQ&GHG Assessment for the Yucaipa Business Park Development Project (Appendix A)

Operation Maximum Daily Emissions

Category	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
	Pollutants (Pounds/Day)					
Summer Emissions						
Area	4.74	0.16	7.57	0.01	0.44	0.43
Energy	0.04	0.73	0.61	<0.01	0.06	0.06
Mobile	4.23	1.15	7.71	<0.01	0.01	0.01
Total	9.01	2.05	15.9	0.01	0.50	0.49
SCAQMD RST	*55*	*55*	*550*	*150*	*150*	*55*
Exceed?	**No**	**No**	**No**	**No**	**No**	**No**
Winter Emissions						
Area	4.03	0.12	3.05	0.01	0.43	0.42
Energy	0.04	0.73	0.61	<0.01	0.06	0.06
Mobile	3.84	1.21	9.09	<0.01	0.01	0.01
Total	7.91	2.07	12.7	0.01	0.49	0.48
SCAQMD RST	*55*	*55*	*550*	*150*	*150*	*55*

Exceed?	**No**	**No**	**No**	**No**	**No**	**No**

Source: AQ&GHG Assessment for the Yucaipa Business Park Development Project (Appendix A)

Construction related impacts would be reduced by the appropriate dust control measures implemented during each phase of development, as required by SCAQMD Rule 403 - Fugitive Dust. The requirements for Rule 403 include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the Project site, and maintaining effective cover over exposed areas. Engineering Department specific Conditions of Approval for development proposals include provisions for Rule 403 that will apply during grading and building activities to minimize fugitive dust. Other SCAQMD rules would also apply, such as Rule 1113 for low VOC paints and materials. Operational impacts would be minimized by adherence to the Building Code and Title 24 requirements. As shown in the tables above, the Project's emissions would not exceed any SCAQMD thresholds for any criteria area air pollutants during construction or operations and therefore potential impacts would be less than significant.

d) During construction, the proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the Project area. However, these emissions are short-term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction site. Therefore, construction odors would not adversely affect a substantial number of people. According to the SCAQMD, land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The proposed Project does not include any of these uses, rather construction of a commercial business park with several apartment units designed for live-work, managerial and security purposes. As such, these impacts would be less than significant.

Construction Localized Significance Thresholds Analysis

Maximum On-site Emissions	NO_x	CO	PM_{10}	$PM_{2.5}$
	Pollutants (Pounds/Day)			
Demolition	27.3	23.5	1.20	1.10
SCAQMD LST	*118*	*775*	*4*	*4*
Exceed LST?	No	No	No	No
Site Preparation Year 1	39.7	35.5	1.81	1.66
Site Preparation Year 2	36.0	32.9	1.60	1.47
SCAQMD LST	*170*	*1,174*	*7*	*5*
Exceed LST?	No	No	No	No
Site Grading	18.2	18.8	0.84	0.77
SCAQMD LST	*170*	*1,174*	*7*	*5*
Exceed LST?	No	No	No	No
Building Construction, Paving, and Painting	19.92	24.25	0.92	0.85
SCAQMD LST	*118*	*775*	*4*	*4*
Exceed LST?	No	No	No	No

Source: AQ&GHG Assessment for the Yucaipa Business Park Development Project (Appendix A)

BIOLOGICAL RESOURCES

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4. BIOLOGICAL RESOURCES. Would the Project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			☒	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				☒
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			☒	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				☒

To support the analysis of the Project, a Biological Technical Report, dated December 2024, was prepared by ECORP Consulting, Inc. and is attached as Appendix B.

a) The literature review and database searches identified 12 special-status plant species and 27 special-status wildlife species that could occur on or near the Project site. However, due to the current lack of suitable habitat for special-status plant and wildlife species, many of the species are presumed absent from the Project site.

The Project site has been regularly disturbed since 2000 by mechanical activities such as discing and weed abatement, which has significantly reduced habitat value and quality for native species. Suitable foraging habitat for bat species was documented in the fiddleneck (*Amsinckia* sp.) fields, but no signs of bats (e.g., guano, staining) or live bats were observed. The monarch butterfly (*Danaus plexippus*) was observed flying over the Project site, and the site contains nectar sources in the form of fiddleneck fields and sheltering sites in the form of eucalyptus trees. The southern California legless lizard (*Anniella stebbinsi*) has a moderate potential to occur on the Project site due to the presence of suitable habitat and recent records within five miles and two recent records of this species were documented within 5 miles. Marginally suitable open habitat occurs within the disturbed portions of the Project site for the coastal whiptail snake (*Aspidoscelis tigris stejnegeri*) The burrowing owl (*Athene cunicularia*) was not found during the survey, but the Project

site provides suitable habitat for this species due to the presence of California ground squirrels and their burrows. The Project site also contains marginally suitable habitat for the Crotch bumble bee (*Bombus crotchii*) along the edges of the site. The Proposed Project is not expected to have a substantial adverse effect on any of these species with implementation of appropriate Mitigation Measures, including pre-construction surveys and habitat management practices, as further outlined below. With implementation of Mitigation Measures MM BIO-1 through MM BIO-9, potential impacts to candidate, sensitive, or special status species would be reduced to a less than significant impact.

b) The Project site was evaluated for the presence of riparian habitat and other sensitive natural communities using historic aerial photograph analysis and an investigative field survey. No aquatic features were identified within the Project site. However, one riverine feature, Wilson Creek is located adjacent to the Project site's southern boundary, within an improved San Bernardino County Flood Control Channel. With implementation of Mitigation Measure MM BIO-8 potential impacts to Wilson Creek would be reduced to less than significant levels. Consequently, the Proposed Project would not have any substantial adverse effect on riparian habitats or other sensitive natural communities identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

c) The Project site was evaluated for the presence of state or federally protected wetlands using both historic aerial photograph analysis and an investigative field survey. No aquatic features, including wetlands, were identified within the Project site. Therefore, the Proposed Project would not have any substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means.

d) The Project site was analyzed for its ability to function as a wildlife corridor. Although the Project site does consist of open and undeveloped land, it is completely surrounded by urban development and is isolated from large, contiguous blocks of native habitat. Wildlife commonly found in urban areas, including coyote and racoon could use the Project site or areas immediately adjacent, such as the Wilson Creek flood control channel, for local travel but the Project site itself does not provide wildlife movement corridors or linkage opportunities. Therefore, the Project would not interfere substantially with the movement of native resident or migratory fish or wildlife species or a migratory wildlife corridor.

The Project site was also analyzed for its ability to function as a wildlife nursery site. Due to the level of development and disturbance within and adjacent to the Project site, nursery site habitat for bird species (e.g. heron rookery) is not anticipated to occur. Suitable bat roosting habitat is present within the Project site in the abandoned buildings and the trees adjacent to the Project site. With implementation of Mitigation Measures MM BIO-1 through MM BIO-9, the Proposed Project is not expected to interfere substantially with or impede the use of native wildlife nursery sites.

e) A single coast live oak tree is located adjacent to the northeast border of the Project site. Coast live oak trees are protected by the City of Yucaipa Development Code Division 9 – Plant Protection and Management. With implementation of Mitigation Measure BIO-7, which establishes a buffer zone around the tree and avoiding construction activities within its root zone, the Project is not expected to have any significant impact on any biological resources protected by local ordinances.

f) A Habitat Conservation Plan (HCP) is a long-term agreement with USFWS designated to offset any harmful effects that a proposed activity might have on federally listed threatened and endangered species. The HCP allows development to proceed while providing a mechanism to conserve listed species and

provide for incidental take. The Natural Communities Conservation Planning Program (NCCP) of California Department of Fish Wildlife is an effort by the State of California and numerous private and public partners that takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. An NCCP identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. The City of Yucaipa is not a part of any HCP or NCCP. As such, there would be no impacts to any applicable Habitat Conservation Plans, Natural Community Conservation Plans, or other plans for the proposed Project.

Mitigation Measures

BIO-1: Any ground disturbing activities and vegetation clearing activities should occur outside of the active nesting bird season (i.e., February 1st–August 31), when feasible, to ensure compliance with the California Fish and Game Code (CFGC). If any ground disturbing activities were to take place during the active breeding bird season, a qualified biologist shall conduct a nesting bird survey prior to ground disturbing activities. If nesting birds are discovered during pre-construction surveys, the qualified biologist will identify appropriate Mitigation Measures such as providing a work area buffer, prescribe a monitor for work, or postponing construction until after anticipated fledge date, to prevent impacts to nesting birds. Mitigation Measures will be dependent on the nesting bird characteristics in relation to the Project observed during the pre-construction survey.

BIO-2: A pre-construction survey for Burrowing Owls shall be conducted by a qualified biologist within 30 days prior to the start of any ground-disturbing activities. If active burrows are found, a buffer zone shall be established, and no construction activities shall occur within this zone until the owls have vacated the burrows. Passive relocation may be employed under the guidance of a qualified biologist and in accordance with California Department of Fish Wildlife (CDFW) guidelines if necessary.

BIO-3: A qualified biologist shall conduct a pre-construction survey for the southern California legless lizard in areas of suitable habitat. If this species is found, the biologist shall relocate individuals to nearby suitable habitat outside the impact area. Construction personnel shall be trained to recognize the species and instructed to halt work and contact the biologist if a legless lizard is encountered during construction.

BIO-4: A pre-construction survey for roosting bats shall be conducted by a qualified biologist within 14 days prior to the start of any ground-disturbing activities at the abandoned buildings. If suitable evidence of bat occupation is present, e.g., guano or live bats are heard, a follow-up nighttime emergence survey shall be conducted to determine the species present and evaluate the size and significance of any colony. If roosting bats are determined to be present, a Bat Management Plan that outlines project-specific protective measures to avoid and minimize impacts to roosting bats during project construction shall be required and implemented.

BIO-5: Prior to the commencement of any ground-disturbing activities, a qualified biologist shall conduct a pre-construction survey for the Crotch bumble bee. If any nests are found, a buffer zone shall be established to avoid disturbance, and construction activities shall not occur within this zone until the bees have naturally relocated or the nesting season has ended.

BIO-6: A qualified biologist shall conduct a pre-construction survey for the coastal whiptail snake in areas of suitable habitat. If this species is found, the biologist shall relocate individuals to nearby suitable habitat outside the impact area. Construction personnel shall be trained to recognize the species and instructed to halt work and contact the biologist if a whiptail lizard is encountered during construction.

BIO-7: To ensure the protection of the coast live oak tree located adjacent to the northeast border of the Project site, a buffer zone will be established around the tree, and no construction activities will be allowed within its root zone. Additionally, the construction contractor shall avoid any damage to the tree during construction activities. Should there be any encroachment into the rootzone, a permit shall be required pursuant to Section 89.0515 of the Yucaipa Development Code and measures shall be taken consistent with Resolution 96-03.

BIO-8: To prevent direct and indirect impacts to the Wilson Creek flood control channel, the following Best Management Practices (BMPs) shall be implemented:

- To ensure no direct impacts, Wilson Creek flood control channel located within 50 feet (15 meters) of the Project footprint shall be clearly demarcated with orange construction fencing or other visible markers and no Project-related activities shall be permitted within the delineated area.
- To minimize potential indirect impacts, the applicant shall prepare and implement an Erosion and Sediment Control Plan to avoid and minimize erosion and runoff to the Wilson Creek flood control channel adjacent to the Project site.
- As the Project will disturb at least 1 acre of land, the project applicant is required to obtain coverage under the General Construction Storm Water Permit from the State Water Resources Control Board and prepare a Stormwater Pollution Prevention Plan (SWPPP), implementing BMPs to minimize soil erosion during construction and avoid stormwater runoff into potentially jurisdictional features located off-site.
- All staging of construction equipment and materials shall be located within the Project site and outside of the demarcated Wilson Creek flood control channel.

BIO-9: All construction personnel shall be trained by a qualified biologist on the identification of special-status species that may be encountered on the Project site. Training shall include a review of Mitigation Measures and protocols to follow if a special-status species is encountered.

CULTURAL RESOURCES

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
5. CULTURAL RESOURCES. Would the Project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?			☒	
b) Cause a substantial adverse change in the significance of an archaeological resources pursuant to Section 15064.5?		☒		
c) Disturb any human remains, including those interred outside of formal cemeteries?			☒	

To support the analysis of the Project, a Cultural Resources Evaluation, dated June 2023, was prepared by PaleoWest and is attached as Appendix C.

a) The Proposed Project contains two abandoned, boarded up buildings, a single-family residence constructed in 1950 and an associated storage/hay barn constructed ca. 1950. These buildings were evaluated for historical significance by applying the criteria of the California Register of Historical Resources (CRHR) using data gathered during the pedestrian survey and information acquired through historical research. The buildings located within the Project site were determined not eligible for the CRHR under any criteria. Therefore, potential impacts on historical resources would be less than significant.

b) Numerous historic-period sites have been previously documented within one mile of the Project site. A review of the historic aerial photographs indicates that a residence was present in 1938 and the adjoining field was utilized initially as a grove. After 1959 the field appears to have been cross-fenced and maintained intermittently for animal keeping and grazing. Historic use of the property as well as continual weed-abatement of the field has resulted in disturbance of the ground surface. Despite the disturbance, the potential for intact subsurface cultural material is moderate. Therefore, all initial ground-disturbing activities shall be monitored by a qualified archaeologist, as outlined in Mitigation Measure CUL-3, and interested Native American Tribe, as outlined in Mitigation Measures CUL-4. With implementation of Mitigation Measure MM CUL-1-4, potential impacts to archaeological resources would be reduced to less than significant levels.

c) There are no known human remains on the site. A review of historic aerial photos and maps was conducted and did not identify possible cemeteries in the area; therefore, a low likelihood exists that human remains could be uncovered during ground-disturbing activities. However, there is always a possibility that unidentified human remains could be discovered during Project construction. Consistent with State law, if at any time during grading human remains are found, the Project is to be conditioned to halt work and contact made with the San Bernardino County Coroner's Office. Standard Conditions of Approval are included pertaining to State Health and Safety Code Section 7050.5. In addition, any discoveries of remains would also be assessed to determine if they are of Native American origin.

In the event that human remains are encountered during the course of any future development, California State Law (Health and Safety Code Section 7050.5 and Section 5079.98 of the Public Resources Code) states that no further earth disturbance shall occur at the location of the find until the San Bernardino County Coroner has been notified. If the remains are determined to be prehistoric, the Coroner will notify the Native

American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD).

Mitigation Measures:

CUL-1 A Monitoring and Treatment Plan that is reflective of the project mitigation ("Cultural Resources" and "Tribal Cultural Resources") shall be completed by the archaeologist and submitted to the Lead Agency for dissemination to the Yuhaaviatam of San Manuel Nation Cultural Resources Management Department (YSMN, also known as San Manuel Band of Mission Indians). Once all parties review and approve the plan, it shall be adopted by the Lead Agency – the plan must be adopted prior to permitting for the project. All findings will be subject to the protocol detailed within the Monitoring and Treatment Plan.

CUL-2 An archaeological monitor with at least 3 years of regional experience in archaeology shall be present for all initial ground-disturbing activities that occur within the proposed project area (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage and irrigation removal and installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], and archaeological work). A sufficient number of archaeological monitors shall be present each work day to ensure that simultaneously occurring ground disturbing activities receive thorough levels of monitoring coverage.

ENERGY

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
6. ENERGY. Would the Project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			☒	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			☒	

a) The proposed Project's energy use will not be done in a wasteful and/or inefficient manner. Project construction will be performed by contractors with an economic incentive to minimize costs, one element of which is fuel conservation, which would benefit their profits. Construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with local, state, and federal regulations limiting engine idling times and requiring recycling of construction debris would further reduce the amount of transportation fuel demand during the Project's construction. The commercial/residential Project will be required by the California Code of Regulations to minimize direct operational energy usage by means of thermal wall insulation, insulating double-pane windows, high-efficiency HVAC equipment, LED lighting, motion-detector light switches, Energy Star® appliances, and other modern energy-saving features. In addition, low-flow plumbing fixtures conserve both water and energy, as less electric power would be needed for water conveyance and treatment.

The Project would utilize construction contractors which practice compliance with applicable CARB regulation regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. Compliance with these measures would result in a more efficient use of construction-related energy and would minimize or eliminate wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption.

Energy consumption in support of or related to Project operations would include transportation energy demands (energy consumed by employee and patron vehicles accessing the Project site) and facilities energy demands (energy consumed by building operations and site maintenance activities). Building operation and site maintenance (including landscape maintenance) would result in the consumption of electricity (provided by Southern California Edison) and natural gas (provided by Southern California Gas Company). Energy consumption of the Proposed Project operation is anticipated be minimal as the proposed Project includes 47 individual business/office unit suites, of these six (6) units will have live-in, work onsite components that would allow tenants to live onsite, with one unit also serving as a manager's office, and two of the onsite living quarters that can help support the 24-hour security.

The Proposed Project would result in a long-term minor increase in demand for electricity and natural gas. However, the Project is required to be designed and constructed in accordance with the most recent Title 24 standards of the California Code of Regulations. Part 6 of Title 24 specifically establishes energy efficiency standards for residential and non-residential buildings constructed in the State of California to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new

energy efficiency technologies and methodologies. The 2022 version of Title 24 was adopted by the California Energy Commission (CEC) and became effective on January 1, 2023. The Proposed Project would meet current Title 24 requirements. These measures would reduce inefficient, wasteful, and unnecessary use of electricity or natural gas during operation of the Project and impacts would be less than significant.

b) The Project would not conflict with or obstruct any adopted energy conservation plans, state or local plans for renewable energy, or energy efficiency. The California Building Energy Efficiency Standards (California Code of Regulations, Title 24, Parts 6 and 11) are designed to reduce unnecessary energy consumption in newly constructed and existing buildings, such as residential and commercial structures. The Building Energy Efficiency Standards are applicable to the Proposed Project, which is designed for both non-residential and residential uses. Thus, the Proposed Project would not conflict with Title 24 or obstruct its implementation on applicable land use development projects in California and impacts would be less than significant.

GEOLOGY AND SOILS

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
7. GEOLOGY AND SOILS. Would the Project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			☒	
(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			☒	
(ii) Strong seismic ground shaking?			☒	
(iii) Seismic-related ground failure, including liquefaction?			☒	
(iv) Landslides?			☒	
b) Result in substantial soil erosion or the loss of topsoil?			☒	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			☒	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			☒	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				☒

a) (i-iv) According to the City's General Plan Map S-1 (Geologic Hazard Overlay District), the site is not within the boundaries of a fault zone as defined within the Alquist-Priolo Earthquake Fault Zone Act. However, Southern California is a seismically active area. As such, seismic ground shaking and ground rupture due to movement of a fault is a potential hazard in Yucaipa. The Project will be required to comply with the Yucaipa Municipal Code and the Building Code, which is designed to mitigate earthquake hazards. The Uniform Building Code (UBC) has identified groundwater within 50 feet of the surface as a potential problem for seismic-related ground failure, including liquefaction. According to the Yucaipa General Plan, ground water can vary within the City from depths lower than 300 feet below surface elevation to as close as 40 feet. Based upon information contained within the Yucaipa General Plan, Yucaipa Valley Water District, and the San Bernardino Municipal Valley Water District, the depth to ground water in the Project area and the surrounding Western Heights Sub-Basin is approximately 350 feet. Due to the depth of groundwater, the potential for liquefaction near the subject area is considered minimal. The Project site is also located on and surrounded by relatively flat land and is therefore not susceptible to seismically induced landslides. Thus, impacts would be less than significant.

b) The Project site is not traversed by any USGS identified drainage courses; the Wilson Creek flood control channel is located outside of the Project boundary to the southeast. The Project would be required to prepare and implement all National Pollutant Discharge Elimination System (NPDES) permit requirements and appropriate BMPs (Best Management Practices) through a Storm Water Pollution Prevention Plan (SWPPP) and Water Quality Management Plan (WQMP). These plans are a standard condition for Projects over one (1) acre in size and are intended to minimize soil erosion and prevent the off-site discharge of pollutants. The Project's compliance with these provisions would ensure less than significant impacts related to soil erosion.

c) See above items 7 (a-b). Due to the depth of groundwater and the absence of landslide hazards per the City's General Plan for the Project area, the potential for liquefaction or landslide is minimal and potential impacts are less than significant.

d) The Project area is not identified as being within the City's Geologic Hazard Overlay as shown on General Plan Exhibit S-1 and is not expected to be susceptible to landslides and related phenomena. The site has been graded and is relatively flat, and is not located adjacent to any unstable areas, such as steep hillsides. As such, the Proposed Project would not impact a geologic unit or soil that is unstable and would not cause such an area to become unstable because of the Project and potential impacts are less than significant.

e) The Proposed Project will connect to the Yucaipa Valley Water District (YVWD) sewer services and will not utilize any septic tanks.

f) According to the City's General Plan Figure PR-6 (Cultural and Paleontological Resource Sensitivity Overlay Districts) the Project site is not located within a Paleontological Resource Sensitivity Area. In addition, based on the existing land use activities, prior site disturbances, and limited new construction that would require substantial excavation of the site, impacts are not expected to occur.

GREENHOUSE GAS EMISSIONS

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
8. GREENHOUSE GAS EMISSIONS. Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			☒	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			☒	

To support the analysis of the Project, an Air Quality & Greenhouse Gas Emissions Assessment, dated October 2023 (Revised February 2025), was prepared by ECORP Consulting, Inc. and is attached as Appendix A.

a) Constituent gases of the earth's atmosphere, called atmospheric greenhouse gases (GHG), play a critical role in the earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO_2), methane (CH_4), ozone, water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the greenhouse effect and have led to a trend of unnatural warming of the earth's natural climate, known as global warming or climate change.

To determine whether the Project's GHG emissions are significant, an Air Quality & Greenhouse Gas Emissions Assessment (Appendix A) was prepared and utilized the SCAQMD draft screening threshold of 3,000 metric tons of CO_2 equivalent ($MTCO_2e$) per year for all land uses. CalEEMod Version 2022.1 was used to calculate the GHG emissions from the proposed Project.

The GHG emissions were calculated based on the above-described parameters. The Project's total GHG emissions is estimated at 654 $MTCO_2e$ for construction and 569 $MTCO_2e$ per year during operation. According to the thresholds of significance established above, a cumulative global climate change impact would occur if the GHG emissions created from the on-going operations of the proposed Project would exceed the SCAQMD draft threshold of 3,000 $MTCO_2e$ per year for all land uses. Therefore, the Project would not create a significant cumulative impact to global climate change and thus no mitigation is required.

Greenhouse Gas Emissions

Category	Greenhouse Gas Emissions CO_2e (Metric Tons/Year)
Construction	
Construction Calendar Year 1	39
Construction Calendar Year 2	615
Total	654
Operational	

Construction Emissions (amortized over the 30-year life of the Project)	22
Area	4
Energy	427
Mobile	0
Waste	47
Water	69
Refrigerants	0
Total	569
SCAQMD Draft Screening Threshold	*3,000*
Exceed?	**No**

Source: AQ&GHG Assessment for the Yucaipa Business Park Development (Appendix A)

b) SCAG's 2020 Regional Transportation Plan/Sustainable Communities Strategy (2020 RTP/SCS) is required to meet all federal transportation conformity requirements, including regional emissions analysis, financial constraint, timely implementation of transportation control measures, and interagency consultation and public involvement. The SCAG region must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions. Specifically, the region has been tasked by CARB to achieve a 19 percent below 2005 per capita reduction by the end of 2035. As part of the state's mandate to reduce per-capita GHG emissions from automobiles and light trucks, the 2020 RTP/SCS presents strategies and tools that are consistent with local jurisdictions' land use policies and incorporate best practices for achieving the state-mandated reductions in GHG emissions at the regional level through reduced per-capita vehicle miles traveled. These strategies identify how the SCAG region can implement the RTP/SCS and achieve related GHG Reductions. An analysis of the Project's consistency with the RTP/SCS goals is outlined in the Air Quality & GHG Assessment for the Yucaipa Business Park Development (Appendix A), Table 3-4 – Project Consistency with the 2020 RTP/SCS. Implementing SCAG's RTP/SCS will greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emission reduction targets. As shown in Table 3-4 – Project Consistency with the 2020 RTP/SCS, the proposed Project would in no way conflict with the stated goals of the RTP/SCS; therefore, the proposed Project would not interfere with SCAG's ability to achieve the region's mobile source GHG reduction targets outlined int eh RTP/SCS, and it can be assumed that regional mobile emissions will decrease in line with the goals of the RTP/SCS. Furthermore, it would not conflict with the SCAG RTP/SCS targets, since those targets were established and are applicable on a regional level. As such, the Project would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions.

HAZARDS AND HAZARDOUS MATERIALS

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
9. HAZARDS AND HAZARDOUS MATERIALS. Would the Project?				
a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?			☒	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			☒	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			☒	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			☒	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			☒	

a-d) The Proposed Project includes the request for a CUP to allow the construction of a business park with a few providing live-work units in the General Commercial (CG) land use district. It is not anticipated that a flex use commercial Project that caters to contractors and other small, independent business operators would directly involve the routine transport of hazardous materials; however, equipment used at the site during construction activities could utilize substances considered by regulatory bodies as hazardous, such as diesel fuel and gasoline from typical construction equipment and would therefore have the potential to discharge hazardous materials during construction. These types of materials are not acutely hazardous, and all storage, handling, use, and disposal of these materials are regulated by federal and state requirements, for which the Project construction activities would be required to strictly adhere to. These regulations include: the federal Occupational Safety and Health Act and Hazardous Materials Transportation Act; Title 8 of the California Code of Regulations (Cal OSHA), and the state Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. The amount of hazardous material discharge during construction is expected to be less than significant, and the Project would be required to comply with applicable laws, ordinances and procedures. Through compliance with the aforementioned laws and requirements, and also through the implementation of a SWPPP and the WQMP requirements to prevent the off-site discharge of pollutants during construction and operation of the Project, impacts would be less than significant.

During operation of the Project, potential hazardous materials would be limited to routine elements associated with both commercial residential developments, including the use of cleaning supplies, maintenance chemicals, and landscaping products typical for commercial spaces, as well as household cleaners and solvents, none of which would not represent a significant hazard. Further, no hazardous materials will be transported to or from the site during Project construction or operation. The site is also not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The proposed Project is approximately 0.25 miles from Yucaipa High School but would not present a significant impact to the school due to required compliance with regulations related to precautions and handling procedures.

e) The project site is not within two miles of a public or private airport. The nearest airport is Redlands Municipal Airport (REI), which is located four and a half (4.5) miles northwest of the Project site. In addition, the Project site is not within the Redlands Airport Land Use Compatibility Plan. No impact would occur with implementation of the Project.

f) The proposed CUP would impact one (1) parcel located between Yucaipa Boulevard to the north and the Wilson Creek flood control channel to the south. The subject site is currently designated for commercial uses, and upon facilitation of the CUP, development of the proposed business park would not impact access to users traveling along the Yucaipa Boulevard public right-of-way which serves as a local emergency evacuation route (Yucaipa General Plan Figure S-5 Evacuation Routes).

g) The Project site is not within a State Responsibility Fire Hazard Severity Zone (Moderate, High, or Very High) per CAL FIRE's Fire Hazard Severity Zones Maps. According to the City's General Plan Map S-3 (Fire Safety Overlay District), the Project site is not within Fire Safety Review Area 1 (FR1) but is located in Fire Safety Review Area 2 (FR 2). FR1 corresponds to very high to extremely high fire hazard severity zones recommended by CAL FIRE. FR2 corresponds to areas exposed to the impacts of wildland fires and other natural hazards primarily due to its proximity to FR1. However, risks to future development from fire hazards are addressed through adherence to the City's Standard Conditions of Approval as required by the City's Fire Department, which includes provisions for adequate fire access that are addressed through the Project's internal circulation design, sprinkler water systems within habitable living spaces, and the placement of new fire hydrants at applicable intervals that meet the water flow requirements of the Fire Code. Adherence to the City's Standard Conditions of Approval would make potential impacts less than significant.

HYDROLOGY AND WATER QUALITY

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
10. HYDROLOGY AND WATER QUALITY. Would the Project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			☒	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			☒	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			☒	
(i) result in a substantial erosion or siltation on- or off-site;			☒	
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			☒	
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			☒	
(iv) impede or redirect flood flows?			☒	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			☒	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			☒	

a) Yucaipa Valley Water District (YVWD) provides wastewater treatment facilities for the Project site. The proposed Project has the potential to release water pollutants during the construction and operation phases, which would have the potential to violate water quality and waste discharge standards. However, the Project is required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) for construction and a Water Quality Management Plan (WQMP) for operations. The Project's compliance with these provisions would ensure less than significant impacts related to violating any water quality standards or waste discharge requirements or degrading water quality of surface or ground water.

b) The proposed Project will receive potable water service from Western Heights Water Company (WHWC). No wells are proposed for the Project which would draw from the groundwater table. The Project site does not currently function as a substantial source of groundwater recharge. Therefore, development of the site would not interfere with groundwater recharge. Additionally, the Yucaipa Sustainable Groundwater Management Agency (Yucaipa SGMA) oversees the implementation of the Groundwater Sustainability Plan (GSP) for the Yucaipa Subbasin. The GSP, approved by the California Department of Water Resources in January 2024, outlines the basin setting and establishes criteria for maintaining or achieving sustainable groundwater management. The GSP serves as a framework for active management of local groundwater resources, with the aim of achieving sustainable groundwater management in the Yucaipa Subbasin by

2042. Western Heights Water Company and the City of Yucaipa are partners in the Yucaipa SGMA. Potential impacts to groundwater from the Project would be less than significant.

c (i-iv)) The Project site is relatively flat, gently sloping from northeast to southwest, and does not support any drainage features. The Wilson Creek flood control channel is located outside of the Project site, to the southeast, and will not be impacted by the proposed Project. Therefore, the Project would not substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river.

The Project would be required to prepare and implement all National Pollutant Discharge Elimination System (NPDES) permit requirements and appropriate BMPs (Best Management Practices) through a Storm Water Pollution Prevention Plan (SWPPP) for construction and Water Quality Management Plan (WQMP) for long term operations. These plans are a standard condition for Projects over one (1) acre in size and are intended to minimize soil erosion and siltation on- or off-site. BMPs are also required to retain and infiltrate stormwater from the site and treat any stormwater runoff discharged from the site, removing trash, debris, and pollutants. BMPs are required to be designed to ensure the rate or amount of surface runoff from the site is not increased from the Project site and would not result in flooding on-or off-site or exceed capacity of existing or planned stormwater drainage systems. The Project's compliance with these provisions would ensure less than significant impacts related to soil erosion, flooding and polluted runoff.

Regarding the potential to impede or redirect flood flows, according to the City's General Plan Map S-2b (Floodplain Safety Overlay District), the Project site is not within a 100 Year Flood Area (Floodplain Review Area 1) but is within a 500 Year Flood Area (Floodplain Review Area 2) associated with Wilson Creek. The proposed Project will incorporate design measures to manage and direct onsite runoff efficiently. Runoff will be conveyed downslope following the gentle northeast to southwest grade into a curb and gutter system, ensuring that the natural drainage pattern is maintained. These measures will prevent any significant alteration to existing flood flows and ensure that flood risks are not exacerbated. Therefore, the impact on flood flows will be less than significant.

d) As outlined above in c) the Project site is not located in a 100 Year Flood Area and no future structures built for the Project would be placed within a 100-year floodplain. According to the City's General Plan Map S-2b (Floodplain Safety Overlay District), the Project site is not located within any dam inundation areas. The City of Yucaipa is located just east of the I-10 freeway and is over 55 miles east of the Pacific Ocean with an average elevation of 2,400 feet above sea level. As such, the City is not under threat of a tsunami, otherwise known as a seismic sea wave. Similarly, the potential for a seiche to occur is remote, given the limited number of large water bodies within Yucaipa and its sphere of influence. Therefore, the Project is not expected to release pollutants due to being inundated by flood hazard, tsunami or seiche and potential impacts would be less than significant.

e) As outlined in a) above, the Project is required to prepare and implement a SWPPP for construction and a WQMP for operations. The Project's compliance with these provisions would ensure less than significant impacts related to violating any water quality standards and thereby would also not conflict with or obstruct implementation of a water quality control plan, specifically the Water Quality Control Plan for the Santa Ana Region. As outlined in b) above, the proposed Project would not conflict with or obstruct implementation of a sustainable groundwater management plan, specifically the Groundwater Sustainability Plan (GSP) for the Yucaipa Subbasin. Potential impacts would be less than significant.

LAND USE AND PLANNING

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
11. LAND USE AND PLANNING. Would the Project:				
a) Physically divide an established community?				☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			☒	

a) Dividing an established community typically involves creating a physical barrier that changes the connectivity between areas of the community. The parcels immediately adjacent to the east and west of the Project site are vacant. Parcels further east and west contain existing residential and commercial developments that are connected to and have access from Yucaipa Boulevard but are not connected to each other. Development of the Project site would not bisect any portion of the surrounding existing developments and would be completely contained within the Project area parcels.

b) The proposed CUP would permit an allowable land use under the General Commercial (CG) land use district. The proposed CUP would allow for the development of a business park consisting of 47 individual business/office suites with several that include a live-work component. Improvements to the Project site are required to be consistent with adopted development standards and good planning practices. Grading and building improvements would be undertaken consistent with appropriate City standards and drainage design criteria. The Variance is for the proposed deviation from the CG-required 10-foot side yard setback to a 1-foot side yard setback with the intent to deter from debris and refuge accumulation between the Project's proposed buildings and adjacent existing or future buildings on properties to the east and west. This variance is not related to a regulation or policy developed for the purpose of avoiding or mitigating an environmental impact, as 0-foot lot lines are permitted in the district. The proposed Project would not conflict with plans, policies or regulations with the purpose of avoiding or mitigating an environmental effect and therefore potential impacts from conflict are less than significant.

MINERAL RESOURCES

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
12. MINERAL RESOURCES. Would the Project:				
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?				☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				☒

a-b) The City of Yucaipa General Plan indicates the entire City is within an MRZ-3 (Mineral Resource Zone 3) classification, in which the significance of mineral deposit cannot be evaluated. No mining activities currently occur in the area, and no significant mineral resources or mineral resource recovery sites are known to exist within the City of Yucaipa. Due to the size of the Project site and proximity to other residential and commercial uses, the site is unlikely to be considered a viable site for mineral extraction. Therefore, the Project would not result in impacts related to mineral resources.

NOISE

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
13. NOISE. Would the Project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			☒	
b) Generation of excessive ground borne vibration or ground borne noise levels?			☒	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				☒

a-b) The Project site is adjacent to residential land uses, which are considered noise sensitive land uses in the City General Plan. The General Plan and the Municipal Code identify noise levels for various types of land use and certain activities, and how noise levels are to be measured.

Construction noise sources are regulated within the City of Yucaipa Municipal Code Section 87.0905(b) which limits construction activities to between the hours of 7:00 AM and 7:00 PM weekdays and Saturdays with no construction allowed on Sundays or Federal holidays. The City of Yucaipa does not include a numerical noise standard associated with construction noise.

During the construction phases for the Project, noise and vibration will be generated from typical activities associated with new building construction, which includes the use of grading equipment, hammers, nail guns, and other typical construction techniques. No unique construction techniques or pilings would be required as part of construction that might cause excessive ground-borne vibration. Section 87.0905(e) of the Municipal Code allows for "Temporary construction, repair, or demolition activities between 7am and 7pm, except Sundays and Federal holidays." While construction activities will periodically raise noise levels above their current levels, the level of noise increase is not expected to be substantial and will only occur during the limited time associated with these activities as allowed in the Municipal Code. Adherence with the Municipal Code would result in less than significant construction noise impacts. Implementation of Mitigation Measures NOI-1 through NOI-7 will reduce construction noise to the greatest extent feasible.

c) The Project site is not within two miles of a public or private airport. The nearest airport is Redlands Municipal Airport, which is located four and a half (4.5) miles northwest of the Project site. In addition, the Project is not within the Redlands Airport Land Use Compatibility Plan. No impacts would occur with the Project.

Mitigation Measures

NOI-1: During Project site excavation and grading on-site, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer standards.

NOI-2: The contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.

NOI-3: Equipment shall be shut off and not left to idle when not in use.

NOI-4: The contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the Project site during all Project construction.

NOI-5: Jackhammers, pneumatic equipment and all other portable stationary noise sources shall be shielded and noise shall be directed away from sensitive receptors.

NOI-6: The Project proponent shall mandate that the construction contractor prohibit the use of music or sound amplification on the Project site during construction.

NOI-7: The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment.

POPULATION AND HOUSING

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
14. POPULATION AND HOUSING. Would the Project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			☒	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				☒

a) The proposed Project site is located within an area generally developed with commercial and residential uses and involves the construction of mixed-use developments for 47 commercial units and associated landscape improvements, parking and drive aisles. The proposed Project is consistent with the allowable uses of the land use district for the site, subject to approval of the CUP, on approximately 5.70 acres of a parcel and was otherwise considered in the City's build-out envisioned by the General Plan that was adopted in 2016. The Project would introduce minimal population growth from the development of a small number of residential units with the commercial units; however, this would not be substantial or unplanned. As such, impacts are expected to be less than significant.

b) The Project would not result in the demolition of any occupied residences nor displace any housing that would necessitate the construction of replacement housing elsewhere. There is an existing non-conforming single-family residence and outbuilding (garage/barn) that has been vacant for several decades that are proposed to be demolished. Therefore, the Project would not displace any people or necessitate replacement housing elsewhere.

PUBLIC SERVICES

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
15. PUBLIC SERVICES. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
a) Fire protection?			☒	
b) Police protection?			☒	
c) Schools?			☒	
d) Parks?			☒	
e) Other public facilities?			☒	

a) The City of Yucaipa is currently served by the California Department of Forestry (CAL FIRE). The Project site is accessible from an existing improved street and one ingress/egress driveway. New on-site streets will be designed consistent with existing City Engineering and Fire Department standards and would not require unique or altered fire protection services. As a standard condition of approval, developers are required to pay development impact fees towards fire protection services that are assessed from the details of the proposed Project. The proposed Project would have a less than significant impact on fire protection services and would not affect fire department service ratios or response times, nor would it require the construction of any new fire facilities.

b) The San Bernardino County Sheriff's Department currently serves the Project site and surrounding area. As a standard condition of approval, the Project would be required to pay development impact fees towards police protection services based upon the size of the Project site. The proposed Project would therefore have a less than significant impact on police protection services. Additionally, the Conditions of Approval include requirements for security cameras onsite, as well as adequate lighting, which would support general provisions of Crime Prevention through Environmental Design (CPTED) for the general operation of the site.

c) The Yucaipa-Calimesa Joint Unified School District (YCJUSD) would serve future residents of the Project. As a standard condition of approval, developers are required to pay development impact fees to the YCJUSD prior to issuance of building permits. Under state law, impacts to school facilities are addressed by the State of California through specific procedures, such as development impact fees and the issuance of bonds, therefore the impact from the proposed Project on schools would be less than significant.

d) The Proposed Project will involve minimal new residential development and, therefore, potentially have a slight increase in the number of potential park users or affect existing park facilities. The City of Yucaipa has adopted development impact fees to offset the potential impact of new users caused by new residential developments. With implementation of the development impact fees, the impact on parks would be less than significant.

e) The Proposed Project would not require new or altered public facilities or services. The City requires future development to pay development impact fees for a variety of public facilities, including drainage improvements, traffic, and civic center facilities. In addition, the Project will complete street improvements and onsite drainage improvements to meet state and local requirements, and impacts from those improvements as part of the overall proposed Project have been addressed as part of this analysis. Other necessary improvements, such as water and sewer connections, would be provided by other agencies that have the ability to require necessary facilities to be installed by the developer and/or require payment of fees to provide that service.

RECREATION

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
16. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			☒	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment				☒

a-b) See response to 15 d) above. While the Project will introduce a small number of residents to the community, leading to a slight increase in the usage of local parks and recreational facilities, this impact would be very small and less than significant. The Project, primarily consisting of commercial developments with a residential component, does not require the construction or expansion of recreational facilities in the area and, therefore, will have no impact on the environment from the construction or expansion of recreational amenities. Additionally, the portion of the project that is residential will be required to pay Development Impact Fees that will be used for Park Facilities.

TRANSPORTATION/TRAFFIC

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
17. TRANSPORTATION/TRAFFIC.				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			☒	
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?			☒	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				☒
d) Result in inadequate emergency access?			☒	

To support the analysis of the Project, a Traffic Impact Analysis was prepared by TJW Engineering, Inc. dated December 4, 2024, and is included in Appendix D and a Vehicle Miles Traveled (VMT) Analysis was prepared by TJW Engineering, Inc. dated December 4, 2024, and is included as Appendix E.

a) The City of Yucaipa General Plan (GP) aims to maintain a minimum of Level of Service (LOS) C on all intersections, signalized or unsignalized, and roadway segments. The Traffic Impact Analysis (Appendix D) indicates that the proposed Project would not result in reducing LOS at study area intersections and roadways segments below minimum LOS levels in the GP and therefore would not conflict with the GP or GP policies related to circulation system LOS.

The City of Yucaipa GP identifies Yucaipa Boulevard as an Urban Arterial Highway, with an east-west direction, with six (6) existing travel lanes, and no on-street parking. The City of Yucaipa GP identifies bicycle facilities, by classification, throughout the City. Within the Project study area, the City GP identifies Class II bicycle lanes on Yucaipa Boulevard, Sand Canyon Road – 14th Street, and Oak Glen Road. A Class III bicycle facility is identified on 12th Street. For pedestrians, paved sidewalks are located along all roadways within the study area with the exception of Sand Canyon Road and 14th Street. The City of Yucaipa is served by Omnitrans, which provides bus service throughout the County of San Bernardino. The proposed Project site is located within ½ mile of four stops along Omnitrans Route 19 which travels between the Yucaipa Transit Center (east of Project site) and the Fontana Transit Center (west of the Project site). The stops include Yucaipa Boulevard intersections with 12th Street, 11th Street, 10th Street, and Oak Glen Road. The Project will construct a new driveway off of Yucaipa Boulevard; however, the existing lanes of Yucaipa Boulevard, including existing bike lane and sidewalk along the Projects frontage, will remain in place. Therefore, the proposed Project will not result in changes to existing transportation facilities in the Project area or conflict with plans, ordinances or policies related to the circulation system and potential impacts would be less than significant.

b) A VMT analysis was prepared using the City's Guidelines for VMT analysis. The analysis was prepared using the San Bernardino Transportation Analysis Model (SBTAM). The SBTAM model was modified to include the project socioeconomic data. In this case, the Project is located within Traffic Analysis Zone (TAZ) 53847102. The model was run for base year 2016 and future year 2040 with project conditions. VMT was then evaluated using the Origin-Destination(OD) matrices as required by the City guidelines.

As outlined in the City's guidelines for VMT analysis, a project would result in a significant project-generated VMT impact if:

1. The baseline project-generated VMT per service population exceeds the County of San Bernardino baseline VMT per service population, or
2. The cumulative project-generated VMT per service population exceeds County of San Bernardino baseline VMT per service population.

The Project's effect on VMT would be considered significant if it resulted in the following condition:

1. The cumulative link-level boundary VMT per service population within the City of Yucaipa increases under the plus project condition compared to the no project condition.

The project-generated baseline (2016) VMT per service population was determined to be 30.9, below the county-wide baseline (2016) threshold of 32.7. The cumulative (2040) project-generated county-wide VMT per service population was determined to be 33.7, below the county-wide baseline (2040) threshold of 35.3. The cumulative city-wide link-level VMT per service population was determined to be 14.14 without the Project and 14.06 with the Project, resulting in a decrease under the Project conditions. Because the VMT per service population is below the County threshold for baseline (2016) and cumulative (2040) scenarios, the Project would have a less than significant VMT impact. In addition, the with -Project cumulative link-level boundary VMT per service population is lower than the no project conditions. Therefore, the Project would not conflict with or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b) and impacts are less than significant.

c) The Project would not result in the modification of existing adjacent roadways. As shown in the site plan for the proposed Project, the Project will provide one ingress/egress driveway on the south side of Yucaipa Boulevard. An encroachment permit and traffic control plan will be required for any construction within the public right of way along Yucaipa Boulevard. Engineering development standards would also be incorporated into the design of the final Project improvements that include traffic signage and stop controlled signage to ensure the safety of automobile traffic entering and leaving the Project site. Therefore, the Project will not have impacts related to substantially increasing hazards due to a geometric design feature, and it will also not increase hazards due to incompatible uses.

d) The Proposed Project is located adjacent to Yucaipa Boulevard. The Project will provide one ingress/egress driveway on the south side of Yucaipa Boulevard but will not make any changes to Yucaipa Boulevard. Onsite driveways and parking would be designed to be consistent with the City's Engineering and Fire Department standards, and include adequate driveway widths, and adequate ingress and egress width for fire and first responder vehicles. Therefore, impacts would be less than significant.

TRIBAL CULTURAL RESOURCES

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
18. TRIBAL CULTURAL RESOURCES. Would the Project:				
a) Cause a substantial adverse change in the significance of a Tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:		☒		
(i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or		☒		
(ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		☒		

To support the analysis of the Project, a Cultural Resources Evaluation, dated June 2023, was prepared by PaleoWest and is attached as Appendix C.

a) (i-ii) As outlined in the Cultural Resources Evaluation a records search at the South-Central Coastal Information Center (SCCIC) located at California State University, Fullerton, was conducted for all recorded historic and prehistoric archaeological sites within one mile of the Project site. Data from the SCCIC indicated 12 cultural resources have been documented within one mile of the Project site (none within the Project site), which included the following prehistoric resources, all located to the southeast along a drainage:

- One prehistoric resource documented within one mile of the Project – containing multiple artifacts, a trail, and potential cremation remails
- One prehistoric resource documented within one mile of the Project – containing an isolated mano
- Multicomponent artifact scatter within ½ mile of the Project – containing burned bone fragments

Historic use of the property as well as continual week-abatement of the field has resulted in disturbance of the ground surface. Despite the disturbance, the potential for intact subsurface tribal cultural resources is moderate.

The City of Yucaipa initiated consultation with the following California Native American tribes, pursuant to AB 52, on September 7, 2023:

- Yuhaaviatam of San Manuel Nation (YSMN)
- Soboba Band of Luiseno Indians

- Torres-Martinez Desert Cahuilla Indians

The tribes consulted did not identify known tribal cultural resources at the Project site. However, through the consultation process with the tribes, the following mitigation measures were requested:

TCR-1 Tribal Monitoring: At the discretion of the consulting tribe(s), Tribal monitor(s) authorized to represent YSMN shall be present for all initial ground-disturbing activities that occur within the proposed project area (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage and irrigation removal and installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], and archaeological work). If further excavation below the initial ground disturbing activity is required later, monitors again shall be present at the discretion of the Tribe(s). At the discretion of the consulting tribes, a sufficient number of Tribal monitors shall be present each workday to ensure that simultaneously occurring ground disturbing activities receive thorough levels of monitoring coverage. A Monitoring and Treatment Plan that is reflective of the project mitigation ("Cultural Resources" and "Tribal Cultural Resources") shall be completed by the archaeologist, as detailed within CUL-1, and submitted to the Lead Agency for dissemination to the Yuhaaviatam of San Manuel Nation Cultural Resources Management Department (YSMN). Once all parties review and agree to the plan, it shall be adopted by the Lead Agency – the plan must be adopted prior to permitting for the project. Any and all findings will be subject to the protocol detailed within the Monitoring and Treatment Plan.

TCR-2 Treatment of Cultural Resources During Project Implementation: If a pre-contact cultural resource is discovered during project implementation, ground-disturbing activities shall be suspended 60 feet around the resource(s), and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed.

The Project Archaeologist shall develop a research design that shall include a plan to evaluate the resource for significance under CEQA criteria. Representatives from YSMN, the Archaeologist, and the Lead Agency shall confer regarding the research design, as well as any testing efforts needed to delineate the resource boundary. Following the completion of evaluation efforts, all parties shall confer regarding the resource's archaeological significance, its potential as a Tribal Cultural Resource (TCR), and avoidance (or other appropriate treatment) of the discovered resource. Removal of any cultural resource(s) shall be conducted with the presence of a Tribal monitor representing the Tribe, unless otherwise decided by YSMN. All plans for analysis shall be reviewed and approved by the applicant and YSMN prior to implementation, and all removed material shall be temporarily curated on-site.

It is the preference of YSMN that removed cultural material be reburied as close to the original find location as possible. However, should reburial within/near the original find location during project implementation not be feasible, then a reburial location for future reburial shall be decided upon by YSMN, the landowner, and the Lead Agency, and all finds shall be reburied within this location. Additionally, in this case, reburial shall not occur until all ground-disturbing activities associated with the project have been completed, all monitoring has ceased, all cataloguing and basic recordation of cultural resources have been completed, and a final monitoring report has been issued to Lead Agency, CHRIS, and YSMN. All reburials are subject to a reburial agreement that shall be developed between the landowner and YSMN outlining the determined reburial process/location and shall include measures and provisions to protect the reburial area from any future impacts.

Should it occur that avoidance, preservation in place, and on-site reburial are not an option for treatment, the landowner shall relinquish all ownership and rights to this material and confer with YSMN to identify an American Association of Museums (AAM)-accredited facility within the County that can accession the materials into their permanent collections and provide for the proper care of these objects in accordance with the 1993 CA Curation Guidelines. A curation agreement with an appropriate qualified repository shall be developed between the landowner and museum that legally and physically transfers the collections and associated records to the facility. This agreement shall stipulate the payment of fees necessary for permanent curation of the collections and associated records and the obligation of the Project developer/applicant to pay for those fees.

All draft records/reports containing the significance and treatment findings and data recovery results shall be prepared by the archaeologist and submitted to the Lead Agency and YSMN for their review and comment. After approval from all parties, the final reports and site/isolate records are to be submitted to the local CHRIS Information Center, the Lead Agency, and YSMN.

TCR-3 Inadvertent Discoveries of Human Remains: If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.

Initial ground-disturbing activities shall be monitored by a qualified archaeologist, as outlined in Mitigation Measure CUL-1, and interested Native American Tribe(s), as outlined in Mitigation Measures CUL-2. With implementation of Mitigation Measure MM CUL-1 and MM CUL-2, potential impacts to tribal cultural resources would be reduced to less than significant levels.

UTILITIES AND SERVICE SYSTEMS

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
19. UTILITIES AND SERVICE SYSTEMS. Would the Project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			☒	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			☒	
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments			☒	
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			☒	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			☒	

a-c) Western Heights Water Company (WHWC) provides potable water and the Yucaipa Valley Water District (YVWD) provides wastewater treatment facilities for the Project site. As outlined in the Yucaipa General Plan EIR (2016), Figure 5.16-3 WHWC Water Distribution System, The Project site is served by WHWC's existing water system, Zone 2E. The proposed Project would construct a water lateral connection to the existing WHWC line in Yucaipa Boulevard, to serve the Project. The Project does not require relocation or construction of new or expanded WHWC water facilities.

YVWD is the wastewater treatment provide and provides sewer service for the Project site. As outlined in the Yucaipa General Plan EIR (2016), YVWD routes sewage flows from its public sewer collection system to the Henry N. Wochholz Regional Water Recycling Facility (WRWRF), where it is treated by a three-phase system capable of handling 6.67 million gallons per day (mgd). Full buildout under the proposed General Plan Update is estimated to generate about 7.0 mgd of residential wastewater and about 1.25 mgd of nonresidential wastewater. The General Plan Update buildout would require WRWRF to build new or expanded wastewater treatment facilities to keep up with demand. Additional sewer connections would be added as development occurs. Sewer systems are funded by impact fees, grants, fair share cost arrangements and service fees. The proposed Project was not determined by YVWD to impact YVWD facilities and thus require payment of development impact fees. As a standard condition of approval, the City will require the Project to pay YVWD service fees for connection, as well as require the execution of the Development Agreement with YVWD that sets forth the requirements for the necessary connection. Therefore, potential impacts associated with wastewater (sewer) treatment are less than significant.

Existing electric, gas, and telecommunications utilities are located in Yucaipa Boulevard. The proposed Project would construct lateral connections to these existing So Cal Gas, Southern California Edison (SCE), and Frontier or Charter Communications, to serve the Project. The Project would not require the relocation or construction of new or expanded utilities.

As outlined in the Yucaipa General Plan Update EIR (2016), Yucaipa's terrain makes it vulnerable to flooding during winter months or intense seasonal storms. To prevent and control flooding, Yucaipa and the San Bernardino County Flood Control District (SBCFCD) manage a network of local and regional flood control channels, detention basins, and other flood control facilities. New development is required to retain the increase in stormwater flows onsite to ensure that there would be no net increase in stormwater flows to the City's existing drainage system as determined through preparation of the required Water Quality Management Plan (WQMP) that describes the BMPs and site design measures that will be implemented to minimize site runoff. Implementation of the Project's WQMP BMPs and site design measures would ensure the site's runoff would not require the relocation or construction of new or expanded City stormwater drainage facilities. Therefore, impacts would be less than significant.

d) As outlined in the Yucaipa General Plan Update EIR (2016), two landfills that accept the great majority of landfilled solid waste from Yucaipa are the Mid-Valley Sanitary Landfill in the City of Rialto and the San Timoteo Sanitary Landfill in the city of Redlands; both facilities are operated by County of San Bernardino Solid Waste Management Division. These landfills have a total remaining capacity of over 81,100,000 cubic yards, over 60,800,000 tons, and combined residual daily disposal capacity of over 6,500 tons per day. The estimated closing dates of the landfills are 2033 and 2043. There is adequate landfill capacity in the region for solid waste that would be generated by the General Plan Update buildout, including the proposed Project, and impacts related to landfill capacity would be less than significant.

e) Per Title 8, Chapter 8.28 of the Municipal Code, all properties within the City are required to subscribe to refuse collection and handling services. The program is designed to collect trash, recyclables, green waste, and organic waste and to assist the City in meeting mandated AB 939 diversion goals and SB 1383 organic recycling goals established by the State of California. Solid waste collection and recycling services pursuant to Chapter 8.28 are a mandatory requirement for all new developments in the City of Yucaipa. The Project will be served by the City-approved waste disposal service, which is currently served by a contract through Burrtec Wastes Industries, Inc. for waste collection. With the Project's adherence to Chapter 8.28 guidelines, Project impacts in regard to compliance with federal, state and local management regulations will be reduced to less than significant.

WILDFIRE

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
20. WILDFIRE. Would the Project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			☒	
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			☒	
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			☒	
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			☒	

a) The Project site is located between 10th and 11th Street which are both existing 2-way local collectors paved roadways, and the development of the site would not impact access to users traveling along both of these public right-of-way streets. The Project site is located directly south of, and would have direct access from Yucaipa Boulevard, a local evacuation route per Yucaipa General Plan Figure S-5 Evacuation Routes. During construction, appropriate traffic control and management strategies will be implemented to ensure that Yucaipa Boulevard remains accessible for emergency vehicles and evacuation purposes. Therefore, the proposed Project would not impair implementation of an adopted emergency response plan or an emergency evacuation plan, and impacts would be less than significant.

b-d) According to the City's General Plan Map S-3 (Fire Safety Overlay District), the Project site is not within Fire Safety Review Area 1 (FR1) but is located in Fire Safety Review Area 2 (FR 2). FR1 corresponds to very high to extremely high fire hazard severity zones recommended by CAL FIRE. FR2 corresponds to areas exposed to the impacts of wildland fires and other natural hazards primarily due to its proximity to FR1.

The Project will comply with standard Fire Department conditions of approval to mitigate fire-related risks, such as adequate fire access, creating defensible space around structures, using fire-resistant building materials, and implementing vegetation management practices to reduce fuel loads sprinkler water systems within habitable living spaces, and the placement of new fire hydrants at applicable intervals that meet the water flow requirements of the Fire Code. Additionally, the City has adopted the latest California Building and Fire Codes, which require fire-resistant construction materials and design features based on building use and occupancy. These measures are designed to mitigate the risk of wildfire exposure and thus, in turn, minimize the potential for pollutant concentrations from wildfire smoke.

The Proposed Project does not require the installation or maintenance of extensive infrastructure such as roads, fuel breaks, or emergency water sources that could exacerbate fire risk. As outlined in the Utilities and Service Systems analysis above, existing wet and dry utilities are located in Yucaipa Boulevard and the proposed Project would only need to construct lateral connections within the improved boulevard, to serve the Project. The construction and maintenance of these short utility connections in an already improved City roadway, would not exacerbate wildfire risk.

The Project site and surrounding properties are relatively flat, with a gentle slope from east to west. The Project site and surrounding properties are not currently subject to landslides or slope instability. The proposed Project and any future developments of the adjacent vacant properties would be required to prepare a Water Quality Management Plan (WQMP) that describes the BMPs and site design measures that will be implemented to minimize site runoff. Implementation of the Project's WQMP BMPs and site design measures would ensure the site's runoff would not result in downstream flooding or drainage changes.

Therefore, the Project's impacts related to wildlife risk are less than significant.

MANDATORY FINDINGS OF SIGNIFICANCE

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
21. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		☒		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)?			☒	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			☒	

a) The Proposed Project will not result in significant impacts that have the potential to degrade the quality of the environment. The Project site does not feature any critical natural habitat and would not cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. In addition, no significant historical or cultural resources were identified onsite, and the Project would therefore not eliminate important examples of major periods of California history or prehistory. As outlined in the analysis above, potential impacts to sensitive biological resources, cultural resources, and tribal cultural resources would be reduced to less than significant levels with implementation of Mitigation Measures MM BIO-1 through BIO-9, CUL-1, CUL-2, CUL-3, TCR-1, TCR-2, and TCR-3. Therefore, potential impacts from the proposed Project to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory are less than significant with implementation of mitigation measures.

b) The Proposed Project is consistent with the City of Yucaipa's General Plan. The evaluation of the proposed Project included herein utilized a variety of topical sections, including aesthetics, agricultural resources, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gases, hazardous materials, hydrology and water quality, land use planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, tribal cultural resources, utilities and services, and wildfire. The analysis of the Project did not identify potential significant or cumulative

impacts that could not be mitigated to a level that is less than significant. Therefore, the proposed Project does not have impacts that are cumulatively considerable.

c) The Project will involve site improvements that are to be constructed consistent with existing City regulations, standards, and processes, as well as those of other agencies. The topical issues discussed within this document, which include potential adverse impacts on human beings, including air quality, geology and soils, hazards and hazardous material, hydrology and water quality, noise, public services, and wildfire did not identify the potential for adverse effects on human beings that are not reduced to less than significant levels through compliance with applicable federal, state, and local regulations and standard conditions of approval. Therefore, potential for the proposed Project to have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly, is less than significant.

INFORMATION SOURCES/ REFERENCES:

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3. City of Yucaipa Development Code. Accessed December 2024. https://codelibrary.amlegal.com/codes/yucaipaca/latest/overview

4. City of Yucaipa Municipal Code. Accessed December 2024. https://codelibrary.amlegal.com/codes/yucaipaca/latest/overview

5. Caltrans State Scenic Highway Map. Accessed January 2025. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa

6. California Department of Conservation, Farmland Mapping & Monitoring Program. Accessed February 2025. https://www.conservation.ca.gov/dlrp/fmmp

7. California Department of Toxic Substances Control, EnviroStor webpage. Accessed February 2025. https://www.envirostor.dtsc.ca.gov/public/

8. CAL FIRE Fire Hazard Severity Zones Maps. Accessed January 2025. www.fire.ca.gov. https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-maps-2022

9. Yucaipa Sustainable Groundwater Management Agency (Yucaipa SGMA). Accessed February 2025. https://www.yucaipasgma.org/ordinances

10. Yucaipa Valley Water District. Accessed October 2024. https://www.yvwd.us/

11. Western Heights Water Company Service Area Boundary. Accessed September 2024. https://westernheightswater.org/service-area/

MITIGATION MONITORING AND REPORTING PROGRAM

This Mitigation Monitoring and Reporting Program (MMRP) has been prepared pursuant to the California Environmental Quality Act (CEQA) and the State CEQA Guidelines to provide for monitoring of the mitigation measures required by adoption of a Mitigated Negative Declaration prepared for a Conditional Use Permit (CUP) and Variance (VAR) for the development of a business park in the General Commercial (CG) land use district. The Proposed Project consists of 47 individual two-story business/office units, with 6 interior floor plans ranging from 1,542 square feet up to 2,990 square feet, and a live-in, work onsite component that allows six (6) tenants to live onsite on the second floor of their assigned unit.

Section 21081.6 of the Public Resources Code and Section 15091(d) of the CEQA Guidelines require public agencies to "adopt a reporting or monitoring program for changes to the Project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." The lead agency must define specific reporting and/or monitoring requirements to be enforced during Project implementation prior to final approval of the proposed Project.

The City of Yucaipa (City) is the lead agency for the proposed Project and is responsible for administering and implementing the MMRP. The MMRP stipulates how all required mitigation measures are to be implemented and completed during the appropriate Project phase. It also facilitates documentation necessary to verify that mitigation measures were in fact properly implemented.

3.7.1 Mitigation Monitoring and Reporting Program Procedures

This MMRP gives the City the primary responsibility for taking all actions necessary to implement the mitigation measures according to the specifications provided for each measure and for demonstrating that the action has been successfully completed. The City, at its discretion, may delegate responsibility for measure implementation and monitoring, or portions thereof, to other responsible individuals, such as a licensed contractor. Specific responsibilities for the City include:

- Coordination of all mitigation monitoring activities
- Management of the preparation, approval, and filing of monitoring or permit compliance reports
- Maintenance of records concerning the status of all approved mitigation measures
- Quality control assurance of field monitoring personnel
- Coordination with other agencies regarding compliance with mitigation or permit requirements
- Reviewing and recommending acceptance and certification of implementation documentation

- Acting as a contact for interested parties or surrounding property owners who wish to register complaints, observations of unsafe conditions, or environmental violations; verifying any such circumstances; and developing any necessary corrective actions

3.7.2 Mitigation Monitoring and Reporting Program Matrix

The MMRP is organized in a matrix format. The first column identifies the mitigation measure. The second column titled "Responsible for Monitoring," refers to the agency responsible for ensuring that the mitigation measure is implemented. The third column "Monitoring Frequency" and the fourth column "Timing of Verification" refer to when monitoring will occur. The fifth column "Method of Verification" will be used by the lead agency to ensure what implementation of the mitigation will look like. The sixth column "Verified Date/Initials" will document the person who verified that the mitigation measure was satisfactorily implemented and will include the date on which this verification occurred. The last column titled "Sanctions for Non-Compliance" will be used to assist the lead agency in determining consequences for failing to comply with the mitigation measure. The mitigation measures are presented by environmental issue area.

Mitigation Measure	Responsible for Monitoring	Responsible for Implementation	Monitoring Frequency	Timing of Verification	Method of Verification	Verified Date/Initials	Sanctions for Non-Compliance
BIOLOGY							
BIO-1: Any ground disturbing activities and vegetation clearing activities should occur outside of the active nesting bird season (i.e., February 1st–August 31), when feasible, to ensure compliance with the California Fish and Game Code (CFGC). If any ground disturbing activities were to take place during the active breeding bird season, a qualified biologist shall conduct a nesting bird survey prior to ground disturbing activities. If nesting birds are discovered during pre-construction surveys, the qualified biologist will identify appropriate Mitigation Measures such as providing a work area buffer, prescribe a monitor for work, or postponing construction until after anticipated fledge date, to prevent impacts to nesting birds. Mitigation Measures will be dependent on the nesting bird characteristics in relation to the Project observed during the pre-construction survey.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to grading and or during construction	During grading and construction	Applicant to provide preconstruction survey to the City		Withhold Grading Permits
BIO-2: A pre-construction survey for Burrowing Owls shall be conducted by a qualified biologist within 30 days prior to the start of any ground-disturbing activities. If active burrows are found, a buffer zone shall be established, and no construction activities shall occur within this zone until the owls have vacated the burrows. Passive relocation may be employed under the guidance of a qualified biologist and in accordance with California Department of Fish Wildlife (CDFW) guidelines if necessary.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to grading and or during construction	During grading and construction	Applicant to provide preconstruction survey to the City		Withhold Grading Permits
BIO-3: A qualified biologist shall conduct a pre-construction survey for the southern California legless lizard in areas of suitable habitat. If this species is found, the biologist shall relocate individuals to nearby suitable habitat outside the impact area. Construction personnel shall be trained to recognize the species and instructed to halt work and contact the biologist if a legless lizard is encountered during construction.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to grading and or during construction	During grading and construction	Applicant to provide preconstruction survey to the City		Withhold Grading Permits
BIO-4: A pre-construction survey for roosting bats shall be conducted by a qualified biologist within 14 days prior to the start of any ground-disturbing activities at the abandoned buildings. If suitable evidence of bat occupation is present, e.g., guano or live bats are heard, a follow-up nighttime emergence survey shall be conducted to determine the species present and evaluate the size and significance of any colony. If roosting bats are determined to be present, a Bat Management Plan that outlines project-specific protective measures to avoid and minimize impacts to roosting bats during project construction shall be required and implemented.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to grading and or during construction	During grading and construction	Applicant to provide preconstruction survey to the City		Withhold Grading Permits

Mitigation Measure	Responsible for Monitoring	Responsible for Implementation	Monitoring Frequency	Timing of Verification	Method of Verification	Verified Date/Initials	Sanctions for Non-Compliance
BIO-5: Prior to the commencement of any ground-disturbing activities, a qualified biologist shall conduct a pre-construction survey for the Crotch bumble bee. If any nests are found, a buffer zone shall be established to avoid disturbance, and construction activities shall not occur within this zone until the bees have naturally relocated or the nesting season has ended.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to grading and or during construction	During grading and construction	Applicant to provide preconstruction survey to the City		Withhold Grading Permits
BIO-6: A qualified biologist shall conduct a pre-construction survey for the coastal whiptail snake in areas of suitable habitat. If this species is found, the biologist shall relocate individuals to nearby suitable habitat outside the impact area. Construction personnel shall be trained to recognize the species and instructed to halt work and contact the biologist if a whiptail lizard is encountered during construction.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to grading and or during construction	During grading and construction	Applicant to provide preconstruction survey to the City		Withhold Grading Permits
BIO-7: To ensure the protection of the coast live oak tree located adjacent to the northeast border of the Project site, a buffer zone will be established around the tree, and no construction activities will be allowed within its root zone. Additionally, the construction contractor shall avoid any damage to the tree during construction activities. Should there be any encroachment into the rootzone, a permit shall be required pursuant to Section 89.0515 of the Yucaipa Development Code and measures shall be taken consistent with Resolution 96-03.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to Removal of, or Encroachment Into, the Protected Zone of Oak Trees	During grading and construction	Applicant to provide grading plans to City		Withhold Grading Permits
BIO-8: To prevent direct and indirect impacts to the Wilson Creek flood control channel, the following Best Management Practices (BMPs) shall be implemented: • To ensure no direct impacts, Wilson Creek flood control channel located within 50 feet (15 meters) of the Project footprint shall be clearly demarcated with orange construction fencing or other visible markers and no Project-related activities shall be permitted within the delineated area. • To minimize potential indirect impacts, the applicant shall prepare and implement an Erosion and Sediment Control Plan to avoid and minimize erosion and runoff to the Wilson Creek flood control channel adjacent to the Project site.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to grading and or during construction, prior to occupancy	Ongoing	Applicant to provide WQMP and erosion control plans to City		Withhold Grading Permits/withhold occupancy

Mitigation Measure	Responsible for Monitoring	Responsible for Implementation	Monitoring Frequency	Timing of Verification	Method of Verification	Verified Date/Initials	Sanctions for Non-Compliance
• As the Project will disturb at least 1 acre of land, the project applicant is required to obtain coverage under the General Construction Storm Water Permit from the State Water Resources Control Board and prepare a Stormwater Pollution Prevention Plan (SWPPP), implementing BMPs to minimize soil erosion during construction and avoid stormwater runoff into potentially jurisdictional features located off-site. • All staging of construction equipment and materials shall be located within the Project site and outside of the demarcated Wilson Creek flood control channel.							
BIO-9: All construction personnel shall be trained by a qualified biologist on the identification of special-status species that may be encountered on the Project site. Training shall include a review of Mitigation Measures and protocols to follow if a special-status species is encountered.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to grading	Prior to grading	City Staff to verify prior to permit issuance		Withhold Grading Permits
CULTURAL							
CUL-1 A Monitoring and Treatment Plan that is reflective of the project mitigation ("Cultural Resources" and "Tribal Cultural Resources") shall be completed by the archaeologist and submitted to the Lead Agency for dissemination to the Yuhaaviatam of San Manuel Nation Cultural Resources Management Department (YSMN, also known as San Manuel Band of Mission Indians). Once all parties review and approve the plan, it shall be adopted by the Lead Agency – the plan must be adopted prior to permitting for the project. All findings will be subject to the protocol detailed within the Monitoring and Treatment Plan.	Planning Division	Project Developer	Prior to Permit issuance	Prior to Permit Issuance	Notification to the City and tribes from the Applicant's archaeological team.		Withhold Grading Permits
CUL-2 An archaeological monitor with at least 3 years of regional experience in archaeology shall be present for all initial ground-disturbing activities that occur within the proposed project area (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage and irrigation removal and installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], and archaeological work). A sufficient number of archaeological monitors	Planning Division	Project Developer	Ongoing	Ongoing	Notification to the City and tribes from the Applicant's archaeological team.		Withhold Grading Permits

Mitigation Measure	Responsible for Monitoring	Responsible for Implementation	Monitoring Frequency	Timing of Verification	Method of Verification	Verified Date/Initials	Sanctions for Non-Compliance
shall be present each workday to ensure that simultaneously occurring ground disturbing activities receive thorough levels of monitoring coverage.							
NOISE							
NOI-1 During all Project site excavation and grading on-site, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer standards.	Planning Division	Project Developer	Ongoing	Ongoing	Noise Ordinance/Code Enforcement		Code Enforcement Citation
NOI-2 The contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.	Planning Division	Project Developer	Ongoing	Ongoing	Noise Ordinance/Code Enforcement		Code Enforcement Citation
NOI-3 Equipment shall be shut off and not left to idle when not in use.	Planning Division	Project Developer	Ongoing	Ongoing	Noise Ordinance/Code Enforcement		Code Enforcement Citation
NOI-4 The contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the Project site during all Project construction.	Planning Division	Project Developer	Ongoing	Ongoing	Noise Ordinance/Code Enforcement		Code Enforcement Citation
NOI-5 Jackhammers, pneumatic equipment and all other portable stationary noise sources shall be shielded and noise shall be directed away from sensitive receptors.	Planning Division	Project Developer	Ongoing	Ongoing	Noise Ordinance/Code Enforcement		Code Enforcement Citation
NOI-6 The Project proponent shall mandate that the construction contractor prohibit the use of music or sound amplification on the Project site during construction.	Planning Division	Project Developer	Ongoing	Ongoing	Noise Ordinance/Code Enforcement		Code Enforcement Citation
NOI-7 The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment.	Planning Division	Project Developer	Ongoing	Ongoing	Noise Ordinance/Code Enforcement		Code Enforcement Citation
Tribal Resources							

Mitigation Measure	Responsible for Monitoring	Responsible for Implementation	Monitoring Frequency	Timing of Verification	Method of Verification	Verified Date/Initials	Sanctions for Non-Compliance
TCR-1 Tribal Monitoring: At the discretion of the consulting tribe(s), Tribal monitor(s) authorized to represent YSMN shall be present for all initial ground-disturbing activities that occur within the proposed project area (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage and irrigation removal and installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], and archaeological work). If further excavation below the initial ground disturbing activity is required later, monitors again shall be present at the discretion of the Tribe(s). At the discretion of the consulting tribes, a sufficient number of Tribal monitors shall be present each workday to ensure that simultaneously occurring ground disturbing activities receive thorough levels of monitoring coverage. A Monitoring and Treatment Plan that is reflective of the project mitigation ("Cultural Resources" and "Tribal Cultural Resources") shall be completed by the archaeologist, as detailed within CUL-1, and submitted to the Lead Agency for dissemination to the Yuhaaviatam of San Manuel Nation Cultural Resources Management Department (YSMN). Once all parties review and agree to the plan, it shall be adopted by the Lead Agency – the plan must be adopted prior to permitting for the project. Any and all findings will be subject to the protocol detailed within the Monitoring and Treatment Plan.	Planning Division	Project Developer	Ongoing	Ongoing	Notification to the City and tribe by the archaeological and/or paleontological monitor and on-site inspection		Code Enforcement Citation
TCR-2 Treatment of Cultural Resources During Project Implementation: If a pre-contact cultural resource is discovered during project implementation, ground-disturbing activities shall be suspended 60 feet around the resource(s), and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. The Project Archaeologist shall develop a research design that shall include a plan to evaluate the resource for significance under CEQA criteria. Representatives from YSMN, the Archaeologist, and the Lead Agency shall confer regarding the research design, as well as any testing efforts needed to delineate the resource boundary. Following the completion of evaluation efforts, all parties shall confer regarding the resource's archaeological significance, its potential as a Tribal Cultural Resource (TCR), and avoidance (or other appropriate treatment) of the discovered resource. Removal of any cultural resource(s) shall be conducted with the presence of a Tribal monitor representing the Tribe,	Planning Division	Project Developer	Ongoing	Ongoing	Notification to the City, County Coroner, and NAHC by the archaeological and/or paleontological monitor and on-site inspection		Issuance of a Stop Work Order

Mitigation Measure	Responsible for Monitoring	Responsible for Implementation	Monitoring Frequency	Timing of Verification	Method of Verification	Verified Date/Initials	Sanctions for Non-Compliance
unless otherwise decided by YSMN. All plans for analysis shall be reviewed and approved by the applicant and YSMN prior to implementation, and all removed material shall be temporarily curated on-site. It is the preference of YSMN that removed cultural material be reburied as close to the original find location as possible. However, should reburial within/near the original find location during project implementation not be feasible, then a reburial location for future reburial shall be decided upon by YSMN, the landowner, and the Lead Agency, and all finds shall be reburied within this location. Additionally, in this case, reburial shall not occur until all ground-disturbing activities associated with the project have been completed, all monitoring has ceased, all cataloguing and basic recordation of cultural resources have been completed, and a final monitoring report has been issued to Lead Agency, CHRIS, and YSMN. All reburials are subject to a reburial agreement that shall be developed between the landowner and YSMN outlining the determined reburial process/location and shall include measures and provisions to protect the reburial area from any future impacts. Should it occur that avoidance, preservation in place, and on-site reburial are not an option for treatment, the landowner shall relinquish all ownership and rights to this material and confer with YSMN to identify an American Association of Museums (AAM)-accredited facility within the County that can accession the materials into their permanent collections and provide for the proper care of these objects in accordance with the 1993 CA Curation Guidelines. A curation agreement with an appropriate qualified repository shall be developed between the landowner and museum that legally and physically transfers the collections and associated records to the facility. This agreement shall stipulate the payment of fees necessary for permanent curation of the collections and associated records and the obligation of the Project developer/applicant to pay for those fees. All draft records/reports containing the significance and treatment findings and data recovery results shall be prepared by the archaeologist and submitted to the Lead Agency and YSMN for their review and comment. After approval from all parties, the final reports and site/isolate records are							

Mitigation Measure	Responsible for Monitoring	Responsible for Implementation	Monitoring Frequency	Timing of Verification	Method of Verification	Verified Date/Initials	Sanctions for Non-Compliance
to be submitted to the local CHRIS Information Center, the Lead Agency, and YSMN.							
TCR-3 Inadvertent Discoveries of Human Remains: If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project. Initial ground-disturbing activities shall be monitored by a qualified archaeologist, as outlined in Mitigation Measure CUL-1, and interested Native American Tribe(s), as outlined in Mitigation Measures CUL-2. With implementation of Mitigation Measure MM CUL-1 and MM CUL-2, potential impacts to tribal cultural resources would be reduced to less than significant levels.	Planning Division	Project Developer	Throughout construction	Throughout construction	Notification to the City, County Coroner, and NAHC by the archaeological and/or paleontological monitor and on-site inspection		Issuance of a Stop Work Order

Air Quality & Greenhouse Gas Emissions Assessment
Yucaipa Business Park Development

Yucaipa, California

Prepared For:

City of Yucaipa
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CONTENTS

1.0 INTRODUCTION 1-1
1.1 Project Location and Description 1-1
2.0 AIR QUALITY 2-1
2.1 Air Quality Setting 2-1
2.1.1 South Coast Air Basin 2-1
2.1.2 Criteria Air Pollutants 2-2
2.1.3 Toxic Air Contaminants 2-5
2.1.4 Ambient Air Quality 2-5
2.1.5 Sensitive Receptors 2-7
2.2 Regulatory Framework 2-8
2.2.1 Federal 2-8
2.2.1.1 Clean Air Act 2-8
2.2.2 State 2-8
2.2.2.1 California Clean Air Act 2-8
2.2.2.2 California State Implementation Plan 2-8
2.2.2.3 Tanner Air Toxics Act and Air Toxics "Hot Spots" Information and Assessment Act 2-10
2.2.3 Local 2-10
2.2.3.1 South Coast Air Quality Management District 2-10
2.2.3.2 City of Yucaipa General Plan Public Safety Element 2-12
2.2.3.3 Southern California Association of Governments 2-12
2.3 Air Quality Emissions Impact Assessment 2-13
2.3.1 Thresholds of Significance 2-13
2.3.1.1 SCAQMD Regional Significance Thresholds 2-13
2.3.1.2 SCAQMD Localized Significance Thresholds 2-14
2.3.2 Methodology 2-14
2.3.3 Impact Analysis 2-15
2.3.3.1 Project Construction-Generated Criteria Air Quality Emissions 2-15
2.3.3.2 Project Operations Criteria Air Quality Emissions 2-20
2.3.3.3 Conflict with the 2022 Air Quality Management Plan 2-21
2.3.3.4 Exposure of Sensitive Receptors to Toxic Air Contaminants 2-24
2.3.3.5 Odors 2-27
3.0 GREENHOUSE GAS EMISSIONS 3-1
3.1 Greenhouse Gas Setting 3-1

3.1.1 Sources of Greenhouse Gas Emissions 3-2
3.2 Regulatory Framework 3-3
3.2.1 State 3-3
3.2.1.1 Executive Order S-3-05 3-3
3.2.1.2 Assembly Bill 32 Climate Change Scoping Plan and Updates 3-3
3.2.1.3 Senate Bill 32 and Assembly Bill 197 of 2016 3-3
3.2.1.4 Senate Bill X1-2 of 2011, Senate Bill 350 of 2015, and Senate Bill 100 of 2018 3-3
3.2.1.5 2022 Building Energy Efficiency Standards for Residential and Nonresidential Buildings 3-4
3.2.2 Local 3-4
3.2.2.1 South Coast Air Quality Management District 3-4
3.2.2.2 2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy 3-5
3.3 Greenhouse Gas Emissions Impact Assessment 3-5
3.3.1 Thresholds of Significance 3-5
3.3.2 Methodology 3-8
3.3.3 Impact Analysis 3-8
3.3.3.1 Generation of GHG Emissions 3-8
3.3.3.2 Conflict with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases 3-10
4.0 REFERENCES 4-1

LIST OF TABLES

Table 2-1. Criteria Air Pollutants – Summary of Common Sources and Effects 2-3
Table 2-2. Summary of Ambient Air Quality Data 2-6
Table 2-3. Attainment Status of Criteria Pollutants in the San Bernardino County Portion of the SoCAB 2-7
Table 2-4. SCAQMD Regional Significance Thresholds – Pounds per Day 2-13
Table 2-5. Local Significance Thresholds at 25 Meters of a Sensitive Receptor (SRA 35) 2-14
Table 2-6. Construction-Related Emissions (Regional Significance Analysis) 2-15
Table 2-7. Equipment-Specific Grading Rates 2-17
Table 2-8. Construction-Related Emissions (Localized Significance Analysis) 2-19
Table 2-9. Operational-Related Emissions (Regional Significance Analysis) 2-20
Table 3-1. Greenhouse Gases 3-2
Table 3-2. Construction-Related Greenhouse Gas Emissions 3-9
Table 3-3. Operational-Related Greenhouse Gas Emissions 3-9
Table 3-4. Project Consistency with the 2020 RTP/SCS 3-10

LIST OF ATTACHMENTS

Attachment A – CalEEMod Output File for Air Quality Emissions and Greenhouse Gas Emissions

LIST OF ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AB	Assembly Bill
AQMP	Air Quality Management Plan
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CG	General Commercial
CH_4	methane
City	City of Yucaipa
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
DPM	diesel particulate matter
EO	Executive Order
GHG	greenhouse gas
HVAC	Heating, Ventilation, and Air Conditioning
IPCC	Intergovernmental Panel on Climate Change
LSTs	localized significance thresholds
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_x	nitric oxides
O_3	ozone
OPR	Office of Planning and Research
PM	particulate matter
PM_{10}	coarse particulate matter
$PM_{2.5}$	fine particulate matter
ppb	parts per billion
ppm	parts per million
Project	Yucaipa Business Park Development Project
RCPG	Regional Comprehensive Plan and Guide
ROGs	reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District

LIST OF ACRONYMS AND ABBREVIATIONS

SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_x	sulfur oxides
SRA	source receptor area
SoCAB	South Coast Air Basin
TACs	toxic air contaminants
USEPA	U.S. Environmental Protection Agency
VMT	vehicle miles traveled
VOCs	volatile organic compounds

1.0 INTRODUCTION

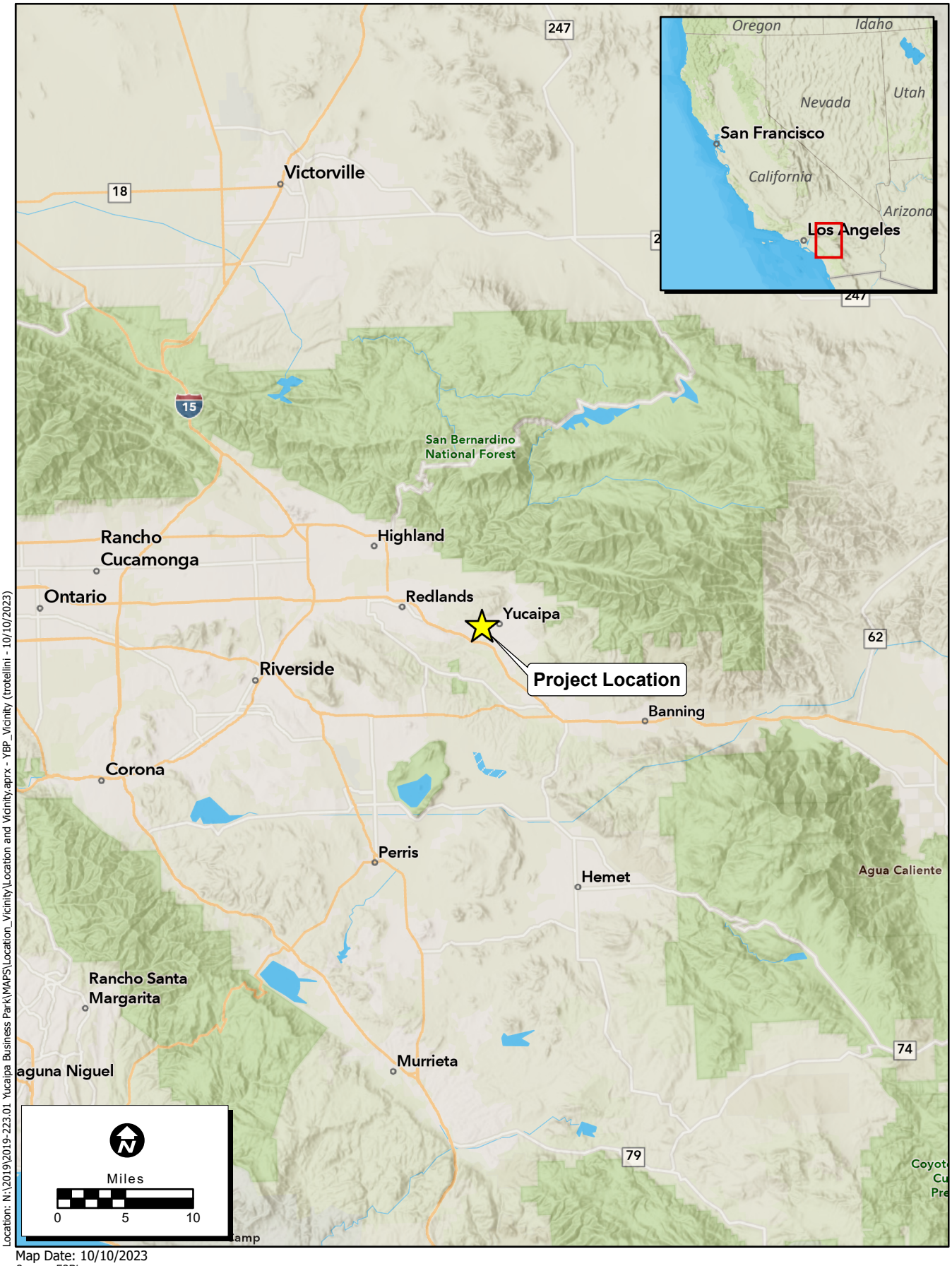
This report documents the results of an Air Quality and Greenhouse Gas (GHG) Emissions Assessment completed for the Yucaipa Business Park Development Project (Project), which proposes the construction of 96,060 square feet of commercial business park and a total of six apartment units designated for live-work and managerial use on an approximate 5.7-acre lot in the City of Yucaipa (City), California (see Figure 1). This assessment was prepared using methodologies and assumptions recommended in the rules and regulations of the South Coast Air Quality Management District (SCAQMD). Regional and local existing conditions are presented, along with pertinent emissions standards and regulations. The purpose of this assessment is to estimate Project-generated criteria air pollutants and GHG emissions attributable to the Project and to determine the level of impact the Project would have on the environment.

1.1 Project Location and Description

The Project Area is located at 33193 Yucaipa Boulevard between 10th and 11th streets in the City of Yucaipa, California. Both 10th and 11th streets hold commercial land uses at their intersection with Yucaipa Boulevard. The lot is currently occupied by a vacant single-family residence, which will be removed to accommodate the Proposed Project uses. The Proposed Project consists of 96,060 square feet of commercial business park and a total of six apartment units designated for live-work and managerial use on an approximate 5.7-acre lot. The Proposed Project would have one vehicular access point with right-turn only ingress and right-turn only egress from Yucaipa Boulevard. The internal roadways will provide two-way access. The Proposed Project would also include 191 total parking spaces.

The Project Area is located along the south side of Yucaipa Boulevard and is bordered to the north, east, south, and west by residential uses and by commercial businesses to the west/northwest. Properties surrounding the Project Area are zoned as Planned Development, General Commercial, Single Residential, Floodway, and Single Residential. The lot is currently occupied by a vacant single-family residence which will be removed to accommodate the Proposed Project. The Project Area is zoned as General Commercial with a General Plan land use designation of General Commercial. Under the City of Yucaipa Municipal Code Section 84.0350 *General Commercial (CG) District*, land uses in this district that are subject to a Planned Development Review include dwelling units in conjunction with a commercial use.

The Project construction work is anticipated to begin in late 2023 with completion planned for 2024. Construction stages consist of demolition, site preparation, building construction, paving, and painting. Construction equipment used for the Project would be expected to include excavators, dozers, tractors, loaders, and generators to perform the demolition and earth work activities.



Map Date: 10/10/2023
Sources: ESRI

Figure 1. Project Vicinity

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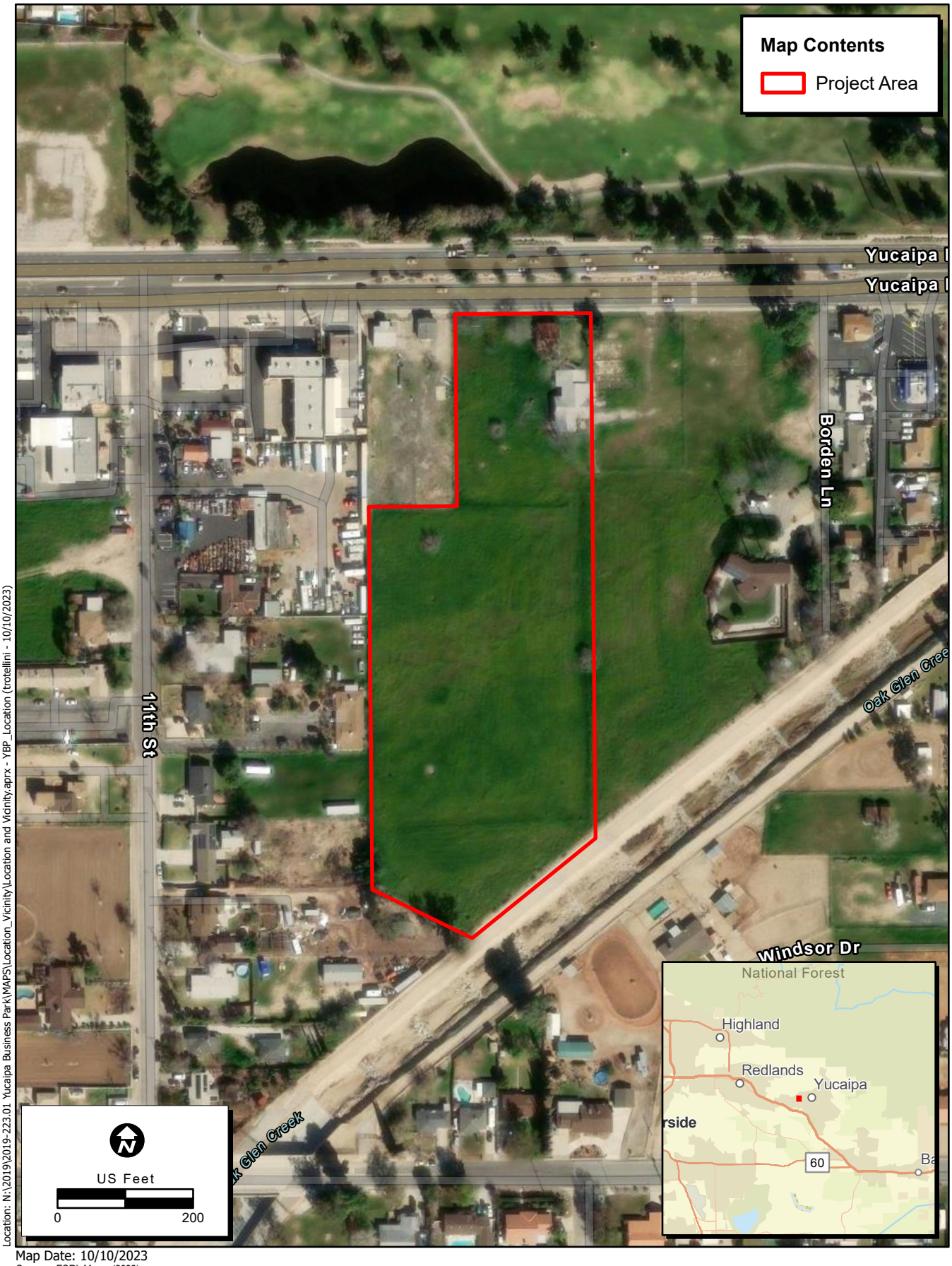
2019-223.01 Yucaipa Business Park



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Map Date: 10/10/2023

Sources: ESRI, Maxar (2023)

Figure 2. Project Location

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2.0 AIR QUALITY

2.1 Air Quality Setting

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. These factors are discussed below, along with the current regulatory structure that applies to the South Coast Air Basin (SoCAB), which encompasses the Project Area, pursuant to the regulatory authority of the SCAQMD.

Ambient air quality is commonly characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The air basin is subject to a combination of topographical and climatic factors that reduce the potential for high levels of regional and local air pollutants. The following section describes the pertinent characteristics of the air basin and provides an overview of the physical conditions affecting pollutant dispersion in the Project Area.

2.1.1 South Coast Air Basin

The California Air Resources Board (CARB) divides California into air basins that share similar meteorological and topographical features. The Project Area lies in the SoCAB, which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County. The air basin is on a coastal plain connecting broad valleys and low hills and is bounded by the Pacific Ocean on the southwest, with high mountains forming the remainder of the perimeter (SCAQMD 1993).

2.1.1.1 Temperature and Precipitation

The air basin is part of a semi-permanent high-pressure zone in the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds. The annual average temperature varies little throughout the 6,645-square-mile SoCAB, ranging from the low 60s to the high 80s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas (SCAQMD 1993).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all annual rains fall between November and April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains.

2.1.1.2 Humidity

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent, and low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SoCAB (SCAQMD 1993).

2.1.1.3 Wind

Wind patterns across the south coastal region are characterized by westerly or southwesterly onshore winds during the day and by easterly or northeasterly breezes at night. Wind speed is higher during the dry summer months than during the rainy winter.

Between periods of wind, air stagnation may occur in both the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall, surface high-pressure systems over the SoCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue for a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the diffusion of pollutants by inhibiting the eastward transport of pollutants. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (SCAQMD 1993).

2.1.1.4 Inversion

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two similarly distinct types of temperature inversions control the vertical depth through which pollutants are mixed. These inversions are the marine/subsidence inversion and the radiation inversion. The height of the base of the inversion at any given time is known as the "mixing height" (SCAQMD 1993).

2.1.2 Criteria Air Pollutants

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone (O_3), coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) are considered to be local pollutants because they tend to accumulate in the air locally. Particulate matter (PM) is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized in Table 2-1.

Table 2-1. Criteria Air Pollutants – Summary of Common Sources and Effects

Pollutant	Major Manmade Sources	Human Health & Welfare Effects
CO	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
NO_2	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Causes brown discoloration of the atmosphere.
O_3	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (N_2O) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
PM_{10} & $PM_{2.5}$	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
SO_2	A colorless, nonflammable gas formed when fuel containing sulfur is burned. Examples are refineries, cement manufacturing, and locomotives.	Respiratory irritant. Aggravates lung and heart problems. Can damage crops and natural vegetation. Impairs visibility.

Source: California Air Pollution Control Officers Association (CAPCOA 2013)

2.1.2.1 Carbon Monoxide

CO in the urban environment is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. CO combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High CO concentrations can cause headaches, aggravate cardiovascular disease and impair central nervous system functions. CO concentrations can vary greatly over comparatively short distances. Relatively high concentrations of CO are typically found near crowded intersections and along heavy roadways with slow moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within relatively short distances of the source. Overall CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973. CO levels in the SoCAB are in compliance with the state and federal one- and eight-hour standards.

2.1.2.2 Nitrogen Oxides

Nitrogen gas comprises about 80 percent of the air and is naturally occurring. At high temperatures and under certain conditions, nitrogen can combine with oxygen to form several different gaseous compounds collectively called nitric oxides (NO_x). Motor vehicle emissions are the main source of NO_x in urban areas.

NO_x is very toxic to animals and humans because of its ability to form nitric acid with water in the eyes, lungs, mucus membrane, and skin. In animals, long-term exposure to NO_x increases susceptibility to respiratory infections and lowers resistance to such diseases as pneumonia and influenza. Laboratory studies show that susceptible humans, such as asthmatics, who are exposed to high concentrations can suffer from lung irritation or possible lung damage. Precursors of NO_x, such as NO and NO_2, are attributed to the formation of O_3 and $PM_{2.5}$. Epidemiological studies have also shown associations between NO_2 concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

2.1.2.3 Ozone

O_3 is a secondary pollutant, meaning it is not directly emitted. It is formed when volatile organic compounds (VOCs) or ROGs and NO_x undergo photochemical reactions that occur only in the presence of sunlight. The primary source of ROG emissions is unburned hydrocarbons in motor vehicles and other internal combustion engine exhaust. NO_x forms as a result of the combustion process, most notably due to the operation of motor vehicles. Sunlight and hot weather cause ground-level O_3 to form. Ground-level O_3 is the primary constituent of smog. Because O_3 formation occurs over extended periods of time, both O_3 and its precursors are transported by wind and high O_3 concentrations can occur in areas well away from sources of its constituent pollutants.

People with lung disease, children, older adults, and people who are active can be affected when O_3 levels exceed ambient air quality standards. Numerous scientific studies have linked ground-level O_3 exposure to a variety of problems including lung irritation, difficult breathing, permanent lung damage to those with repeated exposure, and respiratory illnesses.

2.1.2.4 Particulate Matter

PM includes both aerosols and solid particulates of a wide range of sizes and composition. Of concern are those particles smaller than or equal to 10 microns in diameter size (PM_{10}) and smaller than or equal to 2.5 microns in diameter ($PM_{2.5}$). Smaller particulates are of greater concern because they can penetrate deeper into the lungs than larger particles. PM_{10} is generally emitted directly as a result of mechanical processes that crush or grind larger particles or form the resuspension of dust, typically through construction activities and vehicular travel. PM_{10} generally settles out of the atmosphere rapidly and is not readily transported over large distances. $PM_{2.5}$ is directly emitted in combustion exhaust and is formed in atmospheric reactions between various gaseous pollutants, including NO_x, sulfur oxides (SO_x) and VOCs. $PM_{2.5}$ can remain suspended in the atmosphere for days and/or weeks and can be transported long distances.

The principal health effects of airborne PM are on the respiratory system. Short-term exposure of high $PM_{2.5}$ and PM_{10} levels are associated with premature mortality and increased hospital admissions and emergency room visits. Long-term exposure is associated with premature mortality and chronic respiratory disease. According to the U.S. Environmental Protection Agency (USEPA), some people are much more sensitive than others to breathing PM_{10} and $PM_{2.5}$. People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worse illnesses; people with bronchitis can expect aggravated symptoms; and children may experience decline in lung function due to breathing in PM_{10} and $PM_{2.5}$. Other groups

considered sensitive include smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths.

2.1.3 Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

Most recently, CARB identified diesel particulate matter (DPM) as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine (USEPA 2002). Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs; due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

2.1.4 Ambient Air Quality

Ambient air quality in the Project Area can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. CARB maintains more than 60 monitoring stations throughout California. O_3, PM_{10} and $PM_{2.5}$ are the pollutant species most potently affecting the Project region. As described below, the region is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, $PM_{2.5}$, and PM_{10} (see Table 2-3 below).

The Redlands air quality monitoring station (500 North Dearborn Street), located 4.1 miles northwest of the Project Area, monitors ambient concentrations of O_3 and PM_{10}. The San Bernardino air quality monitoring station (24302 East 4th Street), located approximately 12.13 miles northwest of the Project Area, monitors ambient concentrations of O_3, PM_{10}, and $PM_{2.5}$. Ambient emission concentrations will vary due to localized

variations in emission sources and climate and should be considered "generally" representative of ambient concentrations in the Project Area.

Table 2-2 summarizes the published data concerning O_3, $PM_{2.5}$, and PM_{10} from two monitoring stations nearest to the Project Area. O_3, $PM_{2.5}$, and PM_{10} are the pollutant species most potently affecting the Project region.

Table 2-2. Summary of Ambient Air Quality Data

Pollutant Standards	2020	2021	2022
O_3 – Redlands Monitoring Station			
Max 1-hour concentration (ppm)	0.173	0.145	0.135
Max 8-hour concentration (ppm) (state/federal)	0.137 / 0.136	0.120 / 0.119	0.109 / 0.109
Number of days above 1-hour standard (state/federal)	104 / 16	74 / 7	63 / 2
Number of days above 8-hour standard (state/federal)	145 / 141	118 / 114	106 / 104
O_3 – San Bernardino Monitoring Station			
Max 1-hour concentration (ppm)	0.162	0.142	0.128
Max 8-hour concentration (ppm) (state/federal)	0.129 / 0.128	0.113 / 0.112	0.105 / 0.105
Number of days above 1-hour standard (state/federal)	89 / 15	66 / 6	60 / 3
Number of days above 8-hour standard (state/federal)	132 / 130	101 / 98	103 / 96
PM_{10} – Redlands Monitoring Station			
Max 24-hour concentration (µg/m^3) (state/federal)	82.9 / 87.7	41.8 / 44.2	47.7 / 50.5
Number of days above 24-hour standard (state/federal)	* / *	0 / 0	0 / 0
PM_{10} – San Bernardino Monitoring Station			
Max 24-hour concentration (µg/m^3) (state/federal)	100.8 / 174.8	71.2 / 182.4	* / 177.8
Number of days above 24-hour standard (state/federal)	* / 1.0	25.8 / 1.0	* / 1.0
$PM_{2.5}$ – San Bernardino Monitoring Station			
Max 24-hour concentration (µg/m^3) (state/federal)	56.6 / 56.6	57.9 / 57.9	40.1 / 40.1
Number of days above federal 24-hour standard	6.1	3.0	6.4

Source: CARB 2023
µg/m^3 = micrograms per cubic meter; ppm = parts per million
* = Insufficient (or no) data available to determine the value

The USEPA and CARB designate air basins or portions of air basins and counties as being in "attainment" or "nonattainment" for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The National Ambient Air Quality Standards (NAAQS) (other than O_3, PM_{10} and $PM_{2.5}$ and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O_3, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over one- to three-year periods, depending on the pollutant. The California Ambient Air Quality Standards (CAAQS) are not to be exceeded

during a three-year period. The attainment status for the San Bernardino County portion of the SoCAB, which encompasses the Project Area, is included in Table 2-3.

Table 2-3. Attainment Status of Criteria Pollutants in the San Bernardino County Portion of the SoCAB

Pollutant	State Designation	Federal Designation
O_3	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/Attainment
Lead	Attainment	Unclassified/Attainment

Source: CARB 2022a

The determination of whether an area meets the state and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the state standards of the same pollutant. The region is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, $PM_{2.5}$ and PM_{10} (CARB 2022b).

2.1.5 Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptors to the Project Area include adjacent residences located approximately 15 feet (4.57 meters) to the west.

2.2 Regulatory Framework

2.2.1 Federal

2.2.1.1 Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the USEPA to establish the NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The USEPA classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. Table 2-3 lists the federal attainment status of the SoCAB for the criteria pollutants.

2.2.2 State

2.2.2.1 California Clean Air Act

The California Clean Air Act (CCAA) allows the state to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

2.2.2.2 California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The USEPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the USEPA for approval and publication in the Federal Register. The *2022 Air Quality Management Plan* (AQMP) is the SIP for the SoCAB. The 2022 AQMP is a regional blueprint for achieving air quality standards and healthful air in the SoCAB and those portions of the Salton Sea Air Basin that are under SCAQMD's jurisdiction. The 2022 AQMP includes aggressive new regulations and the development of incentive programs to support early deployment of advanced technologies. The two key areas for incentive programs are (1) promoting widespread deployment of available zero emission and low NOx technologies and (2) developing new zero emission and ultra-low NOx technologies for use in cases where the technology is not currently available. The 2022 AQMP prioritizes distribution of incentive funding in "environmental justice" areas and seek opportunities to focus benefits on the most disadvantaged communities. The 2022 AQMP focuses on available, proven, and cost-effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnership with other entities promoting reductions in GHGs and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The AQMP relies on a regional and multi-level partnership of governmental agencies at the federal, state, regional, and local level. These agencies (USEPA, CARB, local governments, Southern California Association of Governments [SCAG] and the SCAQMD) are the primary agencies that implement the AQMP programs. The 2022 AQMP incorporates the latest scientific and technical information and planning assumptions, including SCAG's latest Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. The 2022 AQMP includes integrated strategies and measures to meet the NAAQS. The current status of the SIPs for the SoCAB's nonattainment pollutants are shown below:

- On November 28, 2007, CARB submitted a SIP revision to the USEPA for O_3, $PM_{2.5}$ (1997 Standard), CO, and NO_2 in the SoCAB. This revision is identified as the "2007 South Coast SIP". The 2007 South Coast SIP demonstrates attainment of the federal $PM_{2.5}$ standard in the SoCAB by 2014 and attainment of the federal eight-hour O_3 standard by 2023. This SIP also includes a request to reclassify the O_3 attainment designation from "severe" to "extreme". The USEPA approved the redesignation effective June 4, 2010. The "extreme" designation requires the attainment of the eight-hour O_3 standard in the SoCAB by June 2024. CARB approved $PM_{2.5}$ SIP revisions in April 2011 and the O_3 SIP revisions in July 2011. The USEPA approved the $PM_{2.5}$ SIP in 2013 and has approved 46 of the 61, 1997 eight-hour O_3 SIP requirements. In 2014, the USEPA proposed a finding that the SoCAB has attained the 1997 $PM_{2.5}$ standards. In 2016, the USEPA determined that the SoCAB had attained the 1997 $PM_{2.5}$ standards; however, the SoCAB was not redesignated as an attainment area because the USEPA had not approved a maintenance plan and additional requirements under the CAA had not been met.

- In 2012, the SCAQMD adopted the 2012 AQMP, which was a regional and multiagency effort (the SCAQMD, CARB, SCAG, and the USEPA). The primary purposes of the 2012 AQMP were to demonstrate attainment of the federal 24-hour $PM_{2.5}$ standard by 2014 and to update the USEPA-approved eight-hour Ozone Control Plan. In 2012, the 2012 AQMP was submitted to CARB and the USEPA for concurrent review and approval for inclusion in the SIP. The 2012 AQMP was approved by CARB on January 25, 2013.

- In 2017, the SCAQMD adopted the 2016 AQMP. The 2016 AQMP includes strategies and measures to meet the following NAAQS:
    - 2008 eight-hour O_3 (75 parts per billion [ppb]) by 2013
    - 2012 annual $PM_{2.5}$ (12 µg/m^3) by 2025
    - 1997 eight-hour O_3 (80 ppb) by 2023
    - 1979 one-hour O_3 (120 ppb) by 2022
    - 2006 24-hour $PM_{2.5}$ (35 µg/m^3) by 2019
- In 2022, the SCAQMD adopted the 2022 AQMP. In response to the USEPA lowering the primary and secondary O_3 standard levels to 70 ppb, the 2022 AQMP was developed to address the requirements for meeting this standard. The 2022 AQMP explores new and innovative ways to accomplish these goals through incentive programs, efficiency improvements, recognition of co-benefits from other programs, regulatory measures, and other voluntary actions.

2.2.2.3 Tanner Air Toxics Act and Air Toxics "Hot Spots" Information and Assessment Act

CARB's statewide comprehensive air toxics program was established in 1983 with Assembly Bill (AB) 1807, the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an Airborne Toxics Control Measure for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions.

CARB also administers the State's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a Health Risk Assessment and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the "Hot Spots" Act was amended by Senate Bill (SB) 1731, which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

2.2.3 Local

2.2.3.1 South Coast Air Quality Management District

The SCAQMD is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties, including the Project Area. The agency's primary responsibility is ensuring that the NAAQS and CAAQS are attained and maintained in the SoCAB. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to

reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities. All projects are subject to SCAQMD rules and regulations in effect at the time of construction.

The following is a list of noteworthy SCAQMD rules that are required of construction activities associated with the Proposed Project:

- **Rule 201 & Rule 203 (Permit to Construct & Permit to Operate)** – Rule 201 requires a "Permit to Construct" prior to the installation of any equipment "the use of which may cause the issuance of air contaminants . . ." and Regulation II provides the requirements for the application for a Permit to Construct. Rule 203 similarly requires a Permit to Operate.
- **Rule 212 (Standards for Approving Permits and Issuing Public Notice)**- This rule requires the applicant to show that the equipment used of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, is so designed, controlled, or equipped with such air pollution control equipment that it may be expected to operate without emitting air contaminates in violation of Section 41700, 4170 or 44300 of the Health and Safety Code or of these rules.
- **Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible PM are prohibited from crossing any property line. This rule is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM_{10} suppression techniques are summarized below.

    a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
    b) All onsite roads will be paved as soon as feasible or watered periodically or chemically stabilized.
    c) All material transported offsite will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
    d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
    e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the workday to remove soil tracked onto the paved surface.

- **Rule 1113 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.
- **Rule 1401 (New Source Review of Toxic Air Contaminants)** – This rule requires new source review of any new, relocated, or modified permit units that emit TACs. The rule establishes allowable risks for permit units requiring permits pursuant to Rules 201 and 203 discussed above.

2.2.3.2 City of Yucaipa General Plan Public Safety Element

The City of Yucaipa General Plan Public Safety Element identifies risks due to natural and human-caused hazards, including air quality and climate change, and implements policies and programs to achieve the General Plan vision. The following relevant and applicable policies from the City's Public Safety Element have been identified for the Project:

- **S-7.1 Integrated Planning.** Integrate air quality planning with land use, economic development, and transportation-related planning to allow for the control and management of air quality.
- **S-7.3 Sensitive Land Uses.** Protect residents from health risks by avoiding the placement of sensitive uses and land uses generating high levels of pollutants within close proximity to one another. Appropriate distances shall be determined based on best available knowledge.
- **S-7.4 Regional Cooperation.** Work with the South Coast Air Quality Management District, San Bernardino Association of Governments, local cities, and other agencies and stakeholders in implementing programs that reduce air pollution.

2.2.3.3 Southern California Association of Governments

On September 3, 2020, the SCAG Regional Council adopted the 2020 - 2045 Regional Transportation Plan/ Sustainable Communities Strategy (2020 RTP/SCS). The 2020 RTP/SCS charts a course for closely integrating land use and transportation – so that the region can grow smartly and sustainably. It was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The 2020 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The SCAG region strives toward sustainability through integrated land use and transportation planning. The SCAG region must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions. Specifically, the region has been tasked by CARB to achieve a 19 percent below 2005 per capita reduction by the end of 2035. It is noted that the 2024-2050 RTP/SCS is currently being prepared.

2.3 Air Quality Emissions Impact Assessment

2.3.1 Thresholds of Significance

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to air quality if it would do any of the following:

1) Conflict with or obstruct implementation of any applicable air quality plan.

2) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

3) Expose sensitive receptors to substantial pollutant concentrations.

4) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

2.3.1.1 SCAQMD Regional Significance Thresholds

The significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. According to the SCAQMD, an air quality impact is considered significant if the Proposed Project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SCAQMD established thresholds of significance for air quality for construction and operational activities of land use development projects such as that proposed, as shown in Table 2-4.

Table 2-4. SCAQMD Regional Significance Thresholds – Pounds per Day

Air Pollutant	Construction Activities	Operations
ROG	75	55
CO	550	550
NO_x	100	55
SO_x	150	150
PM_{10}	150	150
$PM_{2.5}$	55	55

Source: SCAQMD 1993 ($PM_{2.5}$ threshold adopted June 1, 2007)

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions

exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

2.3.1.2 SCAQMD Localized Significance Thresholds

In addition to regional significance thresholds, the SCAQMD developed localized significance thresholds (LSTs) for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at new development sites (offsite mobile source emissions are not included in the LST analysis protocol). LSTs represent the maximum emissions that can be generated at a project site without expecting to cause or substantially contribute to an exceedance of the most stringent national or state ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the Project source receptor area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. The Project Area is located within SCAQMD SRA 35 (East San Bernardino Valley). Table 2-5 shows the LSTs for a one-, two-, and five-acre project site in SRA 35 with sensitive receptors located within 25 meters of the Project Area (the nearest sensitive receptors to the Project Area are located approximately 4.57 meters to the west).

Table 2-5. Local Significance Thresholds at 25 Meters of a Sensitive Receptor (SRA 35)

Project Size	Pollutant (pounds per day) Construction / Operations			
	NOx	CO	PM_{10}	$PM_{2.5}$
1 Acre	118 / 118	775 / 775	4 / 1	4 / 1
2 Acres	170 / 170	1,174 / 1,174	7 / 2	5 / 2
5 Acres	270 / 270	2,075 / 2,075	14 / 4	9 / 3

Source: SCAQMD 2009

2.3.2 Methodology

Air quality impacts are assessed in accordance with methodologies recommended by the SCAQMD. Where criteria air pollutant quantification is required, emissions are modeled using the California Emissions Estimator Model (CalEEMod), version 2022.1 (CAPCOA 2022). CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions are calculated primarily using CalEEMod model defaults for San Bernardino County – South Coast. Construction emissions modeling also accounts for the demolition and hauling of 5,500 square feet of building. Operational emissions are also calculated primarily using CalEEMod model defaults for San Bernardino County – South Coast. Per the Vehicle Miles Traveled (VMT) Screening Assessment conducted by KOA, the Project is expected to generate approximately 1,235 weekday daily vehicle trips, including 132 and 120 trips during the AM and PM peak hours, respectively (KOA 2023a).

2.3.3 Impact Analysis

2.3.3.1 Project Construction-Generated Criteria Air Quality Emissions

Regional Construction Significance Analysis

Construction-generated emissions are temporary and short-term but have the potential to represent a significant air quality impact. The basic sources of short-term emissions that will be generated through construction of the Proposed Project will be from grading activities and the from the operation of the construction vehicles (i.e., trenchers, dump trucks). Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. The dry climate of the area during the summer months creates a high potential for dust generation. Construction activities would be subject to SCAQMD Rule 403, which requires taking reasonable precautions to prevent the emissions of fugitive dust, such as using water or chemicals, where possible, for control of dust during the clearing of land and other construction activities.

Construction-generated emissions associated the Proposed Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See Attachment A for more information regarding the construction assumptions, including construction equipment and duration, used in this analysis.

Predicted maximum daily construction-generated emissions for the Proposed Project are summarized in Table 2-6. Construction-generated emissions are short-term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance.

Table 2-6. Construction-Related Emissions (Regional Significance Analysis)

Construction Year	Pollutant (pounds per day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Construction Calander Year One	4.04	39.9	36.7	0.05	7.14	4.34
Construction Calander Year Two	6.64	36.1	34.0	0.05	6.94	4.15
SCAQMD Regional Significance Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed SCAQMD Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.
Notes: Emissions taken of the season, summer or winter, with the highest outputs. Emission reduction/credits for construction emissions are applied based on the required implementation of SCAQMD Rule 403. The specific Rule 403 measures applied in CalEEMod include the following: sweeping/cleaning adjacent roadway access areas daily; water exposed surfaces multiple times daily; and limit speeds on unpaved roads to 25 miles per hour.

As shown in Table 2-6, emissions generated during Project construction would not exceed the SCAQMD's regional thresholds of significance. Therefore, criteria pollutant emissions generated during Project

construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard, and no health effects from Project criteria pollutants would occur.

Localized Construction Significance Analysis

The nearest sensitive receptors to the Project Area include adjacent residences located approximately 15 feet (4.57 meters) to the west. In order to identify localized, air toxic-related impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the Final Localized Significance Threshold Methodology (dated June 2003 [revised 2008]) for guidance (SCAQMD 2008). The LST methodology assists lead agencies in analyzing localized impacts associated with Project-specific level proposed projects.

For this Project, the appropriate SRA for the localized significance thresholds is the East San Bernardino Valley, SRA 35. LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The Proposed Project would disturb approximately 5.7 acres during construction. As previously described, the SCAQMD has produced lookup tables for projects that disturb less than or equal to 5 acres daily. The SCAQMD has also issued guidance on applying the CalEEMod emissions software to LSTs for projects greater than five acres. Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, Table 2-7 is used to determine the maximum daily disturbed acreage for comparison to LSTs. All construction years have the same equipment, as such, only phases are shown in the table.

Table 2-7. Equipment-Specific Grading Rates					
Construction Phase	**Equipment Type**	**Acres Graded/Disturbed per 8-Hour Day**	**Equipment Quantity**	**Operating Hours per Day**	**Acres Graded per Day**
Demolition	Concrete/Industrial Saws	0.0	1	8	0.0
	Excavators	0.0	3	8	0.0
	Rubber Tired Dozers	0.5	2	8	1.0
				Demolition Total:	**1.0**
Site Preparation	Rubber Tired Dozers	0.5	3	8	1.5
	Tractors/Loaders/Backhoes	0.5	4	8	2.0
				Site Preparation Total:	**3.5**
Grading	Excavators	0.0	1	8	0.0
	Graders	0.5	1	8	0.5
	Rubber Tired Dozers	0.5	1	8	0.5
	Tractors/Loaders/Backhoes	0.5	3	8	1.5
				Grading Total:	**2.5**
Building Construction, Paving, and Painting	Air Compressors	0.0	1	8	0.0
	Cranes	0.0	1	8	0.0
	Forklifts	0.0	3	8	0.0
	Generator Sets	0.0	1	8	0.0
	Pavers	0.0	2	8	0.0
	Paving Equipment	0.0	2	8	0.0
	Rollers	0.0	2	8	0.0
	Tractors/Loaders/Backhoes	0.5	3	8	1.5
	Welders	0.0	1	8	0.0
				Building Construction, Paving and Painting Total:	**1.5**

Source: CAPCOA 2021

As shown in Table 2-7, Project implementation could potentially disturb a total maximum of 1.0 acres during demolition; 3.5 acres during site preparation; 2.5 acres during site grading; and 1.5 acres during building construction, paving, and painting one-time construction phases. As described, the SCAQMD has produced lookup tables for projects that disturb 1, 2, and 5 acres. Since the Project Area could potentially disturb 1 acre during the demolition phase, over 2 acres during the site preparation and grading phase and over 1 acre during the building construction, paving and painting phases, the LST threshold value for a 2-acre site and a 1-acre site was employed from the LST lookup tables. This is conservative since the analysis will only

account for the dispersion of air pollutants over one and two acres before reaching sensitive receptors, as opposed to accounting for the dispersion of air pollutants over a greater 5.7-acre Project Area.

LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. The nearest sensitive receptors to Project Area are residences located approximately 4.57 meters distant. Notwithstanding, the SCAQMD Methodology explicitly states: "It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters." Therefore, LSTs for receptors located at 25 meters were utilized in this analysis. The SCAQMD's methodology clearly states that "offsite mobile emissions from a project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "onsite" emissions outputs were considered. Table 2-8 presents the results of localized emissions from the most polluting activity for each year of construction.

Table 2-8. Construction-Related Emissions (Localized Significance Analysis)				
Activity	**Onsite Pollutant (pounds per day)**			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Demolition (1.0 Acres)	27.3	23.5	1.20	1.10
SCAQMD Localized Significance Threshold (1 Acre)	*118*	*775*	*4*	*4*
Exceed SCAQMD Localized Threshold?	**No**	**No**	**No**	**No**
Site Preparation Year 1 (3.5 Acres)	39.7	35.5	1.81	1.66
Site Preparation Year 2 (3.5 Acres)	36.0	32.9	1.60	1.47
SCAQMD Localized Significance Threshold (2 Acres)	*170*	*1,174*	*7*	*5*
Exceed SCAQMD Localized Threshold?	**No**	**No**	**No**	**No**
Site Grading (4.0 Acres)	18.2	18.8	0.84	0.77
SCAQMD Localized Significance Threshold (2 Acres)	*170*	*1,174*	*7*	*5*
Exceed SCAQMD Localized Threshold?	**No**	**No**	**No**	**No**
Building Construction, Paving, and Painting (1.5 Acres)	19.92	24.25	0.92	0.85
SCAQMD Localized Significance Threshold (1 Acre)	*118*	*775*	*4*	*4*
Exceed SCAQMD Localized Threshold?	**No**	**No**	**No**	**No**

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.
Notes: Emissions taken of the season, summer or winter, with the highest outputs. Building construction, paving and painting assumed to occur simultaneously. Emission reduction/credits for construction emissions are applied based on the required implementation of SCAQMD Rule 403. The specific Rule 403 measures applied in CalEEMod include the following: sweeping/cleaning adjacent roadway access areas daily; water exposed surfaces multiple times daily; and limit speeds on unpaved roads to 25 miles per hour.

Table 2-8 shows that the emissions of these pollutants during construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, significant impacts would not occur concerning LSTs during construction activities. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative. The SCAQMD Environmental Justice Enhancement Initiative program seeks to ensure that everyone has the right to equal protection from air pollution. Therefore, significant impacts would not occur concerning LSTs during construction activities.

2.3.3.2 Project Operations Criteria Air Quality Emissions

Regional Operational Significance Analysis

Implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, CO, and SO_2 as well as O_3 precursors such as ROGs and NO_X. Project-generated increases in emissions would be predominantly associated with motor vehicle use. Operational air pollutant emissions are based on the area of impact identified on the Project's site plans. Long-term operational emissions attributable to the Project are identified in Table 2-9 and compared to the operational significance thresholds promulgated by the SCAQMD.

Table 2-9. Operational-Related Emissions (Regional Significance Analysis)

Emission Source	Pollutant (pounds per day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Summer Emissions						
Area	4.74	0.16	7.57	0.01	0.44	0.43
Energy	0.04	0.73	0.61	<0.005	0.06	0.06
Mobile	4.23	1.15	7.71	<0.005	0.01	0.01
Total	**9.01**	**2.05**	**15.9**	**0.01**	**0.50**	**0.49**
SCAQMD Regional Significance Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceed SCAQMD Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Winter Emissions						
Area	4.03	0.12	3.05	0.01	0.43	0.42
Energy	0.04	0.73	0.61	<0.005	0.06	0.06
Mobile	3.84	1.21	9.09	<0.005	0.01	0.01
Total	**7.91**	**2.07**	**12.7**	**0.01**	**0.49**	**0.48**
SCAQMD Regional Significance Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceed SCAQMD Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.

As shown in Table 2-9, the Project's emissions would not exceed any SCAQMD thresholds for any criteria air pollutants during operation.

As identified in Table 2-3, the San Bernardino County portion of the SoCAB is listed as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, $PM_{2.5}$ and PM_{10} (CARB 2022a). O_3 is a health threat to persons who already suffer from respiratory diseases and can cause severe ear, nose and throat irritation and increases susceptibility to respiratory infections. PM can adversely affect the human respiratory system. As shown in Table 2-8, the Proposed Project would result in increased emissions of the O_3 precursor pollutants ROG, NOx, PM_{10}, and $PM_{2.5}$, however, the correlation between a project's emissions and increases in nonattainment days, or frequency or severity of related illnesses, cannot be accurately quantified. The overall strategy for reducing air pollution and related health effects in the SCAQMD is contained in the SCAQMD 2022 AQMP. The AQMP provides control measures that reduce emissions to attain federal ambient air quality standards by their applicable deadlines such as the application of available cleaner technologies, best management practices, incentive programs, as well as development and implementation of zero and near-zero technologies and control methods. The CEQA thresholds of significance established by the SCAQMD are designed to meet the objectives of the AQMP and in doing so achieve attainment status with state and federal standards. As noted above, the Project would increase the emission of these pollutants, but would not exceed the thresholds of significance established by the SCAQMD for purposes of reducing air pollution and its deleterious health effects.

Localized Operational Significance Analysis

According to the SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project only if the project includes stationary sources (e.g., smokestacks) or attracts heavy-duty trucks that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). The Proposed Project does not include such uses. Therefore, in the case of the Proposed Project, the operational LST protocol is not applied.

2.3.3.3 Conflict with the 2022 Air Quality Management Plan

As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a SIP that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the NAAQS and CAAQS. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously mentioned, the Project Area is located within the SoCAB, which is under the jurisdiction of the SCAQMD. The SCAQMD is required, pursuant to the federal CAA, to reduce emissions of criteria pollutants for which the SoCAB is in nonattainment. In order to reduce such emissions, the SCAQMD drafted and adopted the 2022 AQMP. The 2022 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state and federal air quality standards. The 2022 AQMP is a regional and multi-agency effort including the SCAQMD, CARB, SCAG, and the USEPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's latest RTP/SCS, updated emission inventory methodologies for various source categories,

and SCAG's latest growth forecasts. (SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.) The Project is subject to the SCAQMD's AQMP.

According to the SCAQMD, in order to determine consistency with SCAQMD's air quality planning two main criteria must be addressed.

Criterion 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) *Would the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new air quality violations?*

As shown in Tables 2-6, 2-8, and 2-9, the Proposed Project would result in emissions that would be below the SCAQMD regional and localized thresholds during both construction and operations. Therefore, the Proposed Project would not result in an increase in the frequency or severity of existing air quality violations and would not have the potential to cause or affect a violation of the ambient air quality standards.

b) *Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?*

As shown in Tables 2-6 and 2-9, the Proposed Project would be below the SCAQMD regional thresholds for construction and operations. Because the Project would result in less than significant regional emission impacts, it would not delay the timely attainment of air quality standards or AQMP emissions reductions.

Criterion 2:

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning within the SoCAB focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining Project consistency focuses on whether or not the Proposed Project exceeds the assumptions utilized in preparing the forecasts presented its air quality planning documents. Determining whether or not a project exceeds the assumptions reflected in the 2022 AQMP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

a) *Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the 2022 AQMP?*

A project is consistent with regional air quality planning efforts in part if it is consistent with the population, housing, and employment assumptions that were used in the development of the SCAQMD air quality plans. Generally, three sources of data form the basis for the projections of air pollutant emissions in the City of Yucaipa. Specifically, SCAG's Regional Comprehensive Plan and Guide (RCPG) provides regional population forecasts for the region and SCAG's RTP/SCS provides socioeconomic forecast projections of regional

population growth. The City of Yucaipa General Plan is referenced by SCAG in order to assist forecasting future growth in the city.

The Project Area is zoned as General Commercial with a General Plan land use designation of General Commercial. Under the City of Yucaipa Municipal Code Section 84.0350 *General Commercial (CG) District*, land uses in this district that are subject to a Planned Development Review include dwelling units in conjunction with a commercial use. According to the City's General Plan, the General Commercial designation provides appropriately located areas for stores, offices, service establishments, and amusements with a wide range of commodities and services scaled to meet both neighborhood and community needs (City of Yucaipa 2016).

The 5.7-acre Project Area is currently occupied by a vacant single-family residence, which will be removed to accommodate the Proposed Project uses. The Project proposes the construction of 96,060 square feet of commercial business park and a total of six apartment units designated for live-work and managerial use on an approximate 5.7-acre lot. Based on an assumption of 1.5 residents per household for the live/work units, 9 residents are estimated to live in the Project Area. Using the ITE Trip Generation Manual's rate of 3.08 employees per 1,000 square feet for Land Use Code 770 Business Park, the Project would have approximately 296 employees (KOA 2023b). The Project is not proposing to amend the City General Plan, is consistent with all land use designations applied to the site and would not increase the number of people residing or working in the area beyond that anticipated.

The Project is consistent with the City of Yucaipa General Plan and is therefore consistent with the types, intensity, and patterns of land use envisioned for the site vicinity in the RTP/SCS and RCPG. As a result, the Project would not conflict with the land use assumptions or exceed the population or job growth projections used by SCAQMD to develop the 2022 AQMP. The City's population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the City; and these are used by SCAG in all phases of implementation and review. Additionally, as the SCAQMD has incorporated these same projections into their air quality planning efforts, it can be concluded that the Proposed Project would be consistent with the projections. (SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.) Therefore, the Proposed Project would be considered consistent with the population, housing, and employment growth projections utilized in the preparation of SCAQMD's air quality plans.

b) Would the project implement all feasible air quality mitigation measures?

In order to further reduce emissions, the Project would be required to comply with emission reduction measures promulgated by the SCAQMD, such as SCAQMD Rules 201, 402, 403, and 1113. SCAQMD Rule 402 prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. SCAQMD Rule 403 requires fugitive dust sources to implement Best Available Control Measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is

intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. SCAQMD 1113 requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories. As such, the Proposed Project meets this consistency criterion.

c) Would the project be consistent with the land use planning strategies set forth by SCAQMD air quality planning efforts?

The AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The Proposed Project is consistent with the land use designation and development density presented in the City's General Plan and therefore, would not exceed the population or job growth projections used by the SCAQMD to develop the AQMP.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of a project on air quality. The Proposed Project would not result in a long-term impact on the region's ability to meet state and federal air quality standards. The Proposed Project's long-term influence would also be consistent with the goals and policies of the SCAQMD's 2022 AQMP.

The Project would be consistent with the emission-reduction goals of the 2022 AQMP.

2.3.3.4 Exposure of Sensitive Receptors to Toxic Air Contaminants

As previously described, sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over age 65, children under age 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptors to the Project Area include adjacent residences located approximately 15 feet (4.57 meters) to the west.

Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term Proposed Project-generated emissions of DPM, ROG, NOx, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; and other miscellaneous activities. The portion of the SoCAB which encompasses the Project Area is designated as a nonattainment area for federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, $PM_{2.5}$ and PM_{10} (CARB 2022a). Thus, existing O_3, PM_{10}, and $PM_{2.5}$ levels in the SoCAB are at unhealthy levels during certain periods. However, as shown in Tables 2-6 and 2-8, the Project would not exceed the SCAQMD regional or localized significance thresholds for emissions during construction.

The health effects associated with O_3 are generally associated with reduced lung function. Because the Project would not involve construction activities that would result in O_3 precursor emissions (ROG or NOx) in excess of the SCAQMD thresholds, the Project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The Project would not involve construction activities that would result in CO emissions in excess of the SCAQMD thresholds. Thus, the Project's CO emissions would not contribute to the health effects associated with this pollutant.

Particulate matter (PM_{10} and $PM_{2.5}$) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary TAC of concern. PM_{10} exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM and PM_{10} exhaust contains $PM_{2.5}$ exhaust within it as a subset. As with O_3 and NOx, the Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the SCAQMD's thresholds. Accordingly, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

Furthermore, the Project has been evaluated against the SCAQMD's LSTs for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative and can be used to assist lead agencies in analyzing localized impacts associated with Project-specific level of proposed projects. The SCAQMD Environmental Justice Enhancement Initiative program seeks to ensure that everyone has the right to equal protection from air pollution. The Environmental Justice Program is divided into three categories, with the LST protocol promulgated under Category I: Further-Reduced Health Risk. As shown in Table 2-8, the emissions of pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Thus, the fact that onsite Project construction emissions would be generated at rates below the LSTs for NO_x, CO, PM_{10}, and $PM_{2.5}$ demonstrates that the Project would not adversely impact nearby sensitive receptors.

In summary, Project construction would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants.

Operational Air Contaminants

Operation of the Proposed Project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the operations of the Project; nor would the Project attract additional heavy-duty truck sources, a major source of DPM, that spend long periods queuing and idling at the site. Onsite Project emissions would not result in significant concentrations of pollutants at

nearby sensitive receptors. The Project would not have a high carcinogenic or non-carcinogenic risk during operation.

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SoCAB is designated as in attainment. Detailed modeling of Project-specific CO "hot spots" is not necessary and thus this potential impact is addressed qualitatively.

A CO "hot spot" would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. The analysis prepared for CO attainment in SCAQMD's 1992 Federal Attainment Plan for Carbon Monoxide in Los Angeles County and a Modeling and Attainment Demonstration prepared by the SCAQMD as part of the 2003 AQMP can be used to demonstrate the potential for CO exceedances of these standards (SCAQMD 2003). The SCAQMD is the air pollution control officer for much of southern California. The SCAQMD conducted a CO hot spot analysis as part of the 1992 Federal Attainment Plan for Carbon Monoxide at four busy intersections in Los Angeles County during the peak morning and afternoon time periods (SCAQMD 1992). The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. Despite this level of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992). In order to establish a more accurate record of baseline CO concentrations affecting the Los Angeles, a CO "hot spot" analysis was conducted in 2003 at the same four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards. The highest one-hour concentration was measured at 4.6 ppm at Wilshire Boulevard and Veteran Avenue and the highest eight-hour concentration was measured at 8.4 ppm at Long Beach Boulevard and Imperial Highway. Thus, there was no violation of CO standards.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District, the air pollution control officer for

the San Francisco Bay Area, concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

According to the VMT Screening Analysis, the Proposed Project is anticipated to result in 1,235 vehicle trips per day. Thus, the Proposed Project would not generate traffic volumes at any intersection of more than 100,000 vehicles per day (or 44,000 vehicles per day) and there is no likelihood of the Project traffic exceeding CO values.

2.3.3.5 Odors

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

During construction, the Proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the Project Area. However, these emissions are short-term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area. Therefore, construction odors would not adversely affect a substantial number of people to odor emissions.

According to the SCAQMD, land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Proposed

Project does not propose any of these uses. The Proposed Project would construct 96,060 square feet of commercial business park and a total of six apartment units designated for live-work and managerial use on an approximate 5.7-acre lot.

3.0 GREENHOUSE GAS EMISSIONS

3.1 Greenhouse Gas Setting

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead trapped, resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are CO_2, methane (CH_4), and N_2O. Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. More specifically, experts agree that human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850–1900 in 2011–2020. (Intergovernmental Panel on Climate Change [IPCC] 2023).

Table 3-1 describes the primary GHGs attributed to global climate change, including their physical properties, primary sources, and contributions to the greenhouse effect.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weight each gas by its global warming potential. Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Despite the sequestration of CO_2, human-caused climate

change is already causing damaging effects, including weather and climate extremes in every region across the globe (IPCC 2023).

Table 3-1. Greenhouse Gases

Greenhouse Gas	Description
CO_2	Carbon dioxide is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.
CH_4	Methane is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH_4 to the atmosphere. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about12 years.
N_2O	Nitrous oxide is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.

Sources: USEPA 2023a, 2023b, 2023c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; it is sufficient to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

3.1.1 Sources of Greenhouse Gas Emissions

In 2022, CARB released the 2022 edition of the California GHG inventory covering calendar year 2020 emissions. In 2020, California emitted 369.2 million gross metric tons of CO_2e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2020, accounting for approximately 38 percent of total GHG emissions in the state. Continuing the downward trend from previous years, transportation emissions decreased 27 million metric tons of CO_2e in 2020, though the intensity of this decrease was most likely from light duty vehicles after shelter-in-place orders were enacted in response to the COVID-19 pandemic. Emissions from the electricity sector account for 16 percent of the inventory and have remained at a similar level as in 2019 despite a 44 percent decrease in in-state hydropower generation (due to below average precipitation levels), which was

more than compensated for by a 10 percent growth in in-state solar generation and cleaner imported electricity incentivized by California's clean energy policies. California's industrial sector accounts for the second largest source of the state's GHG emissions in 2020, accounting for 23 percent (CARB 2022b).

3.2 Regulatory Framework

3.2.1 State

3.2.1.1 Executive Order S-3-05

Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

3.2.1.2 Assembly Bill 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed AB 32 (Health and Safety Code § 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 required CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which outlined measures to meet the 2020 GHG reduction goals. California exceeded the target of reducing GHG emissions to 1990 levels by the year 2017.

The Scoping Plan is required by AB 32 to be updated at least every five years. The latest update, the 2017 Scoping Plan Update, addresses the 2030 target established by SB 32 as discussed below and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include increasing the use of renewable energy in the State, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of methane emissions from agricultural and other wastes.

3.2.1.3 Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include § 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030.

3.2.1.4 Senate Bill X1-2 of 2011, Senate Bill 350 of 2015, and Senate Bill 100 of 2018

In 2018, SB 100 was signed codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

3.2.1.5 2022 Building Energy Efficiency Standards for Residential and Nonresidential Buildings

The Building and Efficiency Standards (Energy Standards) were first adopted and put into effect in 1978 and have been updated periodically in the intervening years. These standards are a unique California asset that have placed the State on the forefront of energy efficiency, sustainability, energy independence and climate change issues. The 2022 California Building Codes include provisions related to energy efficiency to reduce energy consumption and greenhouse gas emissions from buildings. Some of the key energy efficiency components of the codes are:

1. Energy Performance Requirements: The codes specify minimum energy performance standards for the building envelope, lighting, heating and cooling systems, and other components.
2. Lighting Efficiency: The codes require that lighting systems meet minimum efficiency standards, such as the use of energy-efficient light bulbs and fixtures.
3. Heating, Ventilation, and Air Conditioning (HVAC) Systems: The codes establish requirements for HVAC systems, including the use of high-efficiency equipment, duct sealing, and controls.
4. Building Envelope: The codes include provisions for insulation, air sealing, glazing, and other building envelope components to reduce energy loss and improve indoor comfort.
5. Renewable Energy: The codes encourage the use of renewable energy systems, such as photovoltaic panels and wind turbines, to reduce dependence on non-renewable energy sources.
6. Commissioning: The codes require the commissioning of building energy systems to ensure that they are installed and operate correctly and efficiently.

Overall, the energy efficiency provisions of the 2022 California Building Codes aim to reduce the energy consumption of buildings, lower energy costs for building owners and occupants, and reduce the environmental impact of the built environment. The 2022 Building Energy Efficiency Standards improve upon the 2019 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The exact amount by which the 2022 Building Codes are more efficient compared to the 2019 Building Codes would depend on the specific provisions that have been updated and the specific building being considered. However, in general, the 2022 Building Codes have been updated to include increased requirements for energy efficiency, such as higher insulation and air sealing standards, which are intended to result in more efficient buildings. The 2022 standards are a major step toward meeting Zero Net Energy.

3.2.2 Local

3.2.2.1 South Coast Air Quality Management District

To provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, SCAQMD staff is convening an ongoing GHG CEQA Significance Threshold Working Group. Members of the working group include government agencies implementing CEQA and representatives from

various stakeholder groups that provide input to SCAQMD staff on developing the significance thresholds. On October 8, 2008, the SCAQMD released the Draft Air Quality Management District Staff CEQA GHG Significance Thresholds. These thresholds have not been finalized and continue to be developed through the working group.

On September 28, 2010, SCAQMD Working Group Meeting #15 provided further guidance, including an interim screening level numeric "bright-line" threshold of 3,000 metric tons of CO_2e annually and an efficiency-based threshold of 4.8 metric tons of CO_2e per service population (defined as the people that work and/or congregate in the Project Area) per year in 2020 and 3.0 metric tons of CO_2e per service population per year in 2035. The SCAQMD has not announced when staff is expecting to present a finalized version of these thresholds to the governing board.

3.2.2.2 2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy

SCAG's 2020 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The SCAG region strives toward sustainability through integrated land use and transportation planning. It was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses, and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The SCAG region must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions. Specifically, the region has been tasked by CARB to achieve a 19 percent below 2005 per capita reduction by the end of 2035. The RTP/SCS is supported by a combination of transportation and land use strategies that help the region achieve this GHG emission reduction goal. The RTP/SCS is also intended to assist the SCAG region to achieve federal CAA requirements, preserve open space areas, improve public health and roadway safety, support the vital goods movement industry, and use resources more efficiently. It is noted that the 2024-2050 RTP/SCS is currently being prepared.

3.3 Greenhouse Gas Emissions Impact Assessment

3.3.1 Thresholds of Significance

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to greenhouse gas emissions if it would:

1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

2) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases

The Appendix G thresholds for GHG emissions do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the

appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA. With respect to GHG emissions, the CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or other performance-based standards." (14 California Code of Regulations [CCR] 15064.4(b)). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change." (14 CCR 15064.4(c)). Section 15064.4(b) provides that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment:

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15130). As a note, the CEQA Guidelines were amended in response to Senate Bill 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements to avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a less than significant finding for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

The local air quality agency regulating the SoCAB is the SCAQMD, the regional air pollution control officer for the basin. As previously stated, to provide guidance to local lead agencies on determining significance

for GHG emissions in CEQA documents, SCAQMD staff convened a GHG CEQA Significance Threshold Working Group. The Working Group was formed to assist the SCAQMD's efforts to develop a GHG significance threshold and is composed of a wide variety of stakeholders including the State Office of Planning and Research (OPR), CARB, the Attorney General's Office, a variety of city and county planning departments in the Basin, various utilities such as sanitation and power companies throughout the Basin, industry groups, and environmental and professional organizations. The numeric bright line and efficiency-based thresholds described above were developed to be consistent with CEQA requirements for developing significance thresholds, are supported by substantial evidence, and provide guidance to CEQA practitioners and lead agencies in determining whether GHG emissions from a proposed project are significant.

In *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal. 4th 2014, 213, 221, 227, following its review of various potential GHG thresholds proposed in an academic study [Crockett, *Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World* (July 2011), 4 Golden Gate U. Envtl. L. J. 203], the California Supreme Court identified the use of numeric bright-line thresholds as a potential pathway for compliance with CEQA GHG requirements. The study found numeric bright line thresholds designed to determine when small projects were so small as to not cause a cumulatively considerable impact on global climate change was consistent with CEQA. Specifically, Public Resources Code section 21003(f) provides it is a policy of the State that "[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." The Supreme Court-reviewed study noted, "[s]ubjecting the smallest projects to the full panoply of CEQA requirements, even though the public benefit would be minimal, would not be consistent with implementing the statute in the most efficient, expeditious manner. Nor would it be consistent with applying lead agencies' scarce resources toward mitigating actual significant climate change impacts." (Crockett, *Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World* (July 2011), 4 Golden Gate U. Envtl. L. J. 203, 221, 227.)

The significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Specifically, Project emissions are compared to the SCAQMD bright line numeric threshold of 3,000 metric tons annually. This standard is appropriate for this Project because it is in the same air quality basin that the experts analyzed. For the Proposed Project, the SCAQMD's 3,000 metric tons of CO_2e per year threshold is used as the significance threshold in addition to the qualitative thresholds of significance set forth below from Section VII of CEQA Guidelines Appendix G. The 3,000 metric tons of CO_2e per year threshold represents a 90 percent capture rate (i.e., this threshold captures projects that represent approximately 90 percent of GHG emissions from new sources). The 3,000 metric tons of CO_2e per year value is typically used in defining small projects within this air basin that are considered less than significant because it represents less than one percent of future 2050 statewide GHG emissions target and the lead agency can provide more efficient implementation of CEQA by focusing its scarce resources on the top 90 percent. This threshold is correlated to the 90 percent capture rate for nonresidential projects within the air basin. Land use projects above the 3,000 metric tons of CO_2e per year level would fall within the percentage

of largest projects that are worth mitigating without wasting scarce financial, governmental, physical and social resources (Crockett 2011). As noted in the academic study, the fact that small projects below a numeric bright line threshold are not subject to CEQA-based mitigation does not mean such small projects do not help the State achieve its climate change goals because even small projects participate in or comply with non-CEQA-based GHG reduction programs, such as constructing development in accordance with statewide GHG-reducing energy efficiency building standards, called Cal Green or Title 24 energy-efficiency building standards (Crockett 2011).

Additionally, the Project is evaluated for consistency with SCAG's 2020 RTP/SCS.

3.3.2 Methodology

GHG emissions-related impacts are assessed in accordance with methodologies recommended by the SCAQMD. Where GHG emission quantification is required, emissions are modeled using CalEEMod, version 2022.1. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Project construction-generated GHG emissions are calculated primarily using CalEEMod model defaults for San Bernardino County – South Coast. Construction emissions modeling also accounts for the demolition and hauling of approximately 5,500 square feet of building material. Operational GHG emissions are also calculated primarily using CalEEMod model defaults for San Bernardino County – South Coast. Per the VMT Screening Assessment conducted by KOA, the Project is expected to generate approximately 1,235 weekday daily vehicle trips, including 132 and 120 trips during the AM and PM peak hours, respectively (KOA 2023a).

3.3.3 Impact Analysis

3.3.3.1 Generation of GHG Emissions

Construction

Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project Area, and off-road construction equipment (e.g., dozers, loaders, excavators). Table 3-2 illustrates the specific construction generated GHG emissions that would result from construction of the Project. Once construction is complete, the generation of these GHG emissions would cease.

Table 3-2. Construction-Related Greenhouse Gas Emissions	
Emissions Source	**CO_2e (Metric Tons/ Year)**
Construction Calander Year One	39
Construction Calander Year Two	615
Total Construction	**654**

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.

As shown in Table 3-2, Project construction would result in the generation of approximately 654 metric tons of CO_2e over the entire course of construction. Once construction is complete, the generation of these GHG emissions would cease. Consistent with SCAQMD recommendations, Project construction GHG emissions have been amortized of the expected life of the Project, which is considered to be 30 years per the SCAQMD. The amortized construction emissions are added to the annual average operational emissions (Table 3-3).

Operational Significance Analysis

Operation of the Project would result in an increase in GHG emissions primarily associated with motor vehicle trips. Long-term operational GHG emissions attributed to the Project are identified in Table 3-3.

Table 3-3. Operational-Related Greenhouse Gas Emissions	
Emissions Source	**CO_2e (Metric Tons/ Year)**
Construction Emissions (amortized over the 30-year life of the Project)	22
Area	4
Energy	427
Mobile	0
Waste	47
Water	69
Refrigerants	0
Total	**569**
SCAQMD Significance Threshold	*3,000*
Exceed SCAQMD Threshold?	**No**

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.

As shown in Table 3-3, operational-generated emissions would not exceed the SCAQMD's numeric bright-line threshold of 3,000 metric tons of CO_2e annually. SCAQMD thresholds were developed based on substantial evidence that such thresholds represent quantitative levels of GHG emissions, compliance with which means that the environmental impact of the GHG emissions will normally not be cumulatively considerable under CEQA. These thresholds were developed as part of the SCAQMD GHG CEQA Significance

Threshold Working Group. The working group was formed to assist the SCAQMD's efforts to develop a GHG significance threshold and is composed of a wide variety of stakeholders including the State OPR, CARB, the Attorney General's Office, a variety of city and county planning departments in the SoCAB, various utilities such as sanitation and power companies throughout the basin, industry groups, and environmental and professional organizations. The 3,000 metric tons of CO_2e per year value represents less than one percent of future 2050 statewide GHG emissions target.

3.3.3.2 Conflict with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

SCAG's 2020 RTP/SCS is required to meet all federal transportation conformity requirements, including regional emissions analysis, financial constraint, timely implementation of transportation control measures, and interagency consultation and public involvement (42 U.S.C. §7401 et seq.). The SCAG region must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions. Specifically, the region has been tasked by CARB to achieve a 19 percent below 2005 per capita reduction by the end of 2035.

As part of the state's mandate to reduce per-capita GHG emissions from automobiles and light trucks, the 2020 RTP/SCS presents strategies and tools that are consistent with local jurisdictions' land use policies and incorporate best practices for achieving the state-mandated reductions in GHG emissions at the regional level through reduced per-capita vehicle miles traveled. These strategies identify how the SCAG region can implement the RTP/SCS and achieve related GHG reductions. The Proposed Project's consistency with the RTP/SCS goals is analyzed in Table 3-4.

Table 3-4. Project Consistency with the 2020 RTP/SCS

Strategy	Project Consistency
Focus Growth Near Destinations & Mobility Options	
Emphasize land use patterns that facilitate multimodal access to work, educational, and other destinations.	**Not Applicable**: This strategy focuses on multimodal access. The Proposed Project would not interfere with this strategy.
Focus on a regional jobs/housing balance to reduce commute times and distance and expand job opportunities near transit and along center-focused main streets.	**Consistent:** The Project is proposing the construction of 96,060 square feet of commercial business park and a total of 6 apartment units designated for live-work and managerial use. The Project Area represents an infill location within an area of the City developed with mainly commercial and residential uses. The Project provides both commercial and residential uses within the Project Area which would reduce commute times and distance.
Plan for growth near transit investments and support implementation of first/last mile strategies.	**Not Applicable**: This strategy focuses on transit investments. The Proposed Project would not interfere with this strategy.
Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses.	**Consistent**: The Project is proposing the construction of 96,060 square feet of commercial business park and a total of 6 apartment units designated for live-work and

	managerial use. The majority of the lot is currently vacant and the only structure is an unoccupied single-family residence that will be removed. The lot will be redeveloped with commercial and residential uses.
Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods.	**Consistent**: The Project is proposing the construction of 96,060 square feet of commercial business park and a total of 6 apartment units designated for live-work and managerial use. The Project Area represents an infill location within a developed area of the City.
Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations).	**Consistent**: The Project Area represents an infill location within a developed area of the City. The Project provides mixed use of commercial and residential uses which reduces reliance on and the amount of solo car trips.
Identify ways to "right size" parking requirements and promote alternative parking strategies (e.g., shared parking or smart parking)	**Not Applicable**: This strategy focuses on parking requirements and alternative parking strategies. The Project would provide 191 parking stalls of various types. The Proposed Project would not interfere with this strategy.
Promote Diverse Housing Choices	
Preserve and rehabilitate affordable housing and prevent displacement.	**Consistent**: The Project would not cause displacement as the single-family home on the lot is unoccupied and would be replaced by a commercial business park and a total of 6 apartment units designated for live-work and managerial use. The Project would increase residential density in the Project Area, which has benefits to air quality and reduction of criteria air pollutants as well as affordable housing.
Identify opportunities for new workforce and affordable housing development.	**Consistent**: The Project would construct a commercial business park and a total of 6 apartment units designated for live-work and managerial use. This provides new work and housing opportunities.
Create incentives and reduce regulatory barriers for building context-sensitive accessory dwelling units to increase housing supply	**Not Applicable**: This strategy focuses on context-sensitive accessory dwelling units. The Proposed Project would not interfere with this strategy.
Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of GHG emissions.	**Not Applicable**: This strategy focuses supporting local jurisdictions to streamline housing developments. The Proposed Project would not interfere with this strategy.
Leverage Technology Innovations	
Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing, and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging, and parking/drop-off space.	**Not Applicable**: This strategy focuses on promoting low emission technologies. The Proposed Project would not interfere with this strategy.

Improve access to services through technology – such as telework and telemedicine as well as other incentives such as a "mobility wallet," an app-based system for storing transit and other multi-modal payments.	**Not Applicable**: This strategy focuses on access to services using technology. The Proposed Project would not interfere with this strategy.
Identify ways to incorporate "micro-power grids" in communities, for example solar energy, hydrogen fuel cell power storage, and power generation.	**Not Applicable**: This strategy focuses on "micro-power grids." The Proposed Project would not interfere with this strategy.
Support Implementation of Sustainability Policies	
Pursue funding opportunities to support local sustainable development implementation projects that reduce GHG emissions.	**Not Applicable**: This strategy focuses on funding opportunities for local sustainable development projects. The Proposed Project would not interfere with this goal.
Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations.	**Not Applicable**: This strategy focuses on supporting statewide legislation. The Proposed Project would not interfere with this goal.
Support local jurisdictions in the establishment of Enhanced Infrastructure Financing Districts, Community Revitalization and Investment Authorities, or other tax increment or value capture tools to finance sustainable infrastructure and development projects, including parks and open space.	**Not Applicable**: This strategy calls on cities to establish tax incentives or other value capture tools to finance sustainable infrastructure. The Proposed Project would not interfere with this strategy.
Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies.	**Not Applicable**: This strategy calls on SCAG to work with local jurisdictions to identify ways to implement sustainable strategies. The Proposed Project would not interfere with this strategy.
Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region.	**Not Applicable**: This strategy calls on planning organizations to promote resources and best practices in SCAG. The Proposed Project would not interfere with this strategy.
Continue to support long range planning efforts by local jurisdictions.	**Not Applicable**: This strategy focuses on supporting long range planning efforts. The Proposed Project would not interfere with this goal.
Provide educational opportunities to local decision makers and staff on new tools, best practices, and policies related to implementing the Sustainable Communities Strategy.	**Not Applicable**: This strategy calls on local jurisdictions to provide educational opportunities on new tools and practices to promote the Sustainable Communities Strategy. The Proposed Project would not interfere with this strategy.
Promote a Green Region	
Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate changes and natural hazards.	**Not Applicable**: This strategy focuses on local climate adaptation and hazard mitigation plans. The Proposed Project would not interfere with this goal.
Support local policies for renewable energy production, reduction of urban heat islands, and carbon sequestration.	**Not Applicable**: This strategy calls on local governments to adopt policies for renewable energy production. The Proposed Project would not interfere with this strategy.

Integrate local food production into the regional landscape.	**Not Applicable**: This strategy focuses on local food production. The Proposed Project would not interfere with this goal.
Promote more resource efficient development focused on conservation, recycling, and reclamation.	**Consistent:** The Proposed Project would be required to adhere to the latest CALGreen Building Codes and Title 24, which will result in a more efficient Project Area.
Preserve, enhance, and restore regional wildlife connectivity.	**Not Applicable**: The Project would be constructed in an existing urban setting. The Proposed Project would not interfere with this goal.
Reduce consumption of resource areas, including agricultural land.	**Consistent:** The Project would be constructed in an existing urban setting. The Proposed Project would not be located in resource areas, including agricultural land.
Identify ways to improve access to public park space.	**Not Applicable**: This strategy focuses on public parks. The Proposed Project would not interfere with this goal.

Source: SCAG 2020

Implementing SCAG's RTP/SCS will greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emission reduction targets. As shown, the Proposed Project would in no way conflict with the stated goals of the RTP/SCS; therefore, the Proposed Project would not interfere with SCAG's ability to achieve the region's mobile source GHG reduction targets outlined in the RTP/SCS, and it can be assumed that regional mobile emissions will decrease in line with the goals of the RTP/SCS. Furthermore, the Proposed Project is not regionally significant per CEQA Guidelines Section 15206 and as such, it would not conflict with the SCAG RTP/SCS targets, since those targets were established and are applicable on a regional level. As such, the Project would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions.

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LIST OF ATTACHMENTS

Attachment A – CalEEMod Output File for Air Quality and Greenhouse Gas Emissions

ATTACHMENT A

CalEEMod Output Files – Criteria Air Pollutant and Greenhouse Gas Emissions

Yucaipa Business Park Development Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

3. Construction Emissions Details

3.1. Demolition (2023) - Unmitigated

3.3. Site Preparation (2023) - Unmitigated

3.5. Site Preparation (2024) - Unmitigated

3.7. Grading (2024) - Unmitigated

3.9. Building Construction (2024) - Unmitigated

3.11. Paving (2024) - Unmitigated

3.13. Architectural Coating (2024) - Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Yucaipa Business Park Development
Construction Start Date	12/1/2023
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	1.80
Location	34.03249479601071, -117.08081273031723
County	San Bernardino-South Coast
City	Yucaipa
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5166
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Office Park	158	1000sqft	3.63	96,060	0.00	—	—	—
Apartments Low Rise	6.00	Dwelling Unit	0.38	6,360	0.00	—	20.0	—
Parking Lot	191	Space	1.72	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.00	6.64	20.8	29.4	0.04	0.93	0.89	1.81	0.85	0.21	1.07	—	5,378	5,378	0.24	0.14	4.72	5,430
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.80	6.62	39.9	36.7	0.05	1.81	5.34	7.14	1.66	2.68	4.34	—	5,531	5,531	0.24	0.14	0.12	5,552
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.13	4.39	15.1	20.0	0.03	0.67	0.81	1.48	0.62	0.25	0.87	—	3,681	3,681	0.16	0.09	1.32	3,713
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.39	0.80	2.76	3.64	0.01	0.12	0.15	0.27	0.11	0.05	0.16	—	609	609	0.03	0.01	0.22	615

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.00	6.64	20.8	29.4	0.04	0.93	0.89	1.81	0.85	0.21	1.07	—	5,378	5,378	0.24	0.14	4.72	5,430
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	4.80	4.04	39.9	36.7	0.05	1.81	5.34	7.14	1.66	2.68	4.34	—	5,531	5,531	0.23	0.07	0.04	5,552
2024	4.43	6.62	36.1	34.0	0.05	1.60	5.34	6.94	1.47	2.68	4.15	—	5,527	5,527	0.24	0.14	0.12	5,548
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.21	0.18	1.68	1.50	< 0.005	0.07	0.04	0.12	0.07	0.02	0.08	—	233	233	0.01	< 0.005	0.04	235
2024	2.13	4.39	15.1	20.0	0.03	0.67	0.81	1.48	0.62	0.25	0.87	—	3,681	3,681	0.16	0.09	1.32	3,713
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.04	0.03	0.31	0.27	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.02	—	38.6	38.6	< 0.005	< 0.005	0.01	38.8
2024	0.39	0.80	2.76	3.64	0.01	0.12	0.15	0.27	0.11	0.05	0.16	—	609	609	0.03	0.01	0.22	615

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.93	9.01	2.05	15.9	0.01	0.50	0.00	0.50	0.49	0.00	0.49	192	3,122	3,314	14.4	0.25	0.28	3,748
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.78	7.91	2.07	12.7	0.01	0.49	0.00	0.49	0.48	0.00	0.48	192	3,107	3,299	14.4	0.25	0.28	3,735

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.73	3.10	0.77	3.91	0.01	0.09	0.00	0.09	0.09	0.00	0.09	140	2,772	2,911	14.0	0.16	0.28	3,308
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.13	0.57	0.14	0.71	< 0.005	0.02	0.00	0.02	0.02	0.00	0.02	23.1	459	482	2.32	0.03	0.05	548

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.34	4.23	1.15	7.71	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	—	245	245	0.21	0.09	0.00	278
Area	2.51	4.74	0.16	7.57	0.01	0.44	—	0.44	0.43	—	0.43	56.2	125	182	0.17	< 0.005	—	187
Energy	0.08	0.04	0.73	0.61	< 0.005	0.06	—	0.06	0.06	—	0.06	—	2,568	2,568	0.24	0.02	—	2,580
Water	—	—	—	—	—	—	—	—	—	—	—	54.3	184	239	5.58	0.13	—	418
Waste	—	—	—	—	—	—	—	—	—	—	—	81.6	0.00	81.6	8.16	0.00	—	285
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.28	0.28
Total	6.93	9.01	2.05	15.9	0.01	0.50	0.00	0.50	0.49	0.00	0.49	192	3,122	3,314	14.4	0.25	0.28	3,748
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.97	3.84	1.21	9.09	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	—	248	248	0.23	0.10	0.00	283
Area	1.74	4.03	0.12	3.05	0.01	0.43	—	0.43	0.42	—	0.42	56.2	107	164	0.17	< 0.005	—	168
Energy	0.08	0.04	0.73	0.61	< 0.005	0.06	—	0.06	0.06	—	0.06	—	2,568	2,568	0.24	0.02	—	2,580
Water	—	—	—	—	—	—	—	—	—	—	—	54.3	184	239	5.58	0.13	—	418
Waste	—	—	—	—	—	—	—	—	—	—	—	81.6	0.00	81.6	8.16	0.00	—	285
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.28	0.28

Total	5.78	7.91	2.07	12.7	0.01	0.49	0.00	0.49	0.48	0.00	0.48	192	3,107	3,299	14.4	0.25	0.28	3,735
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.65	3.06	0.03	3.30	< 0.005	0.03	—	0.03	0.03	—	0.03	3.85	19.7	23.6	0.01	< 0.005	—	24.0
Energy	0.08	0.04	0.73	0.61	< 0.005	0.06	—	0.06	0.06	—	0.06	—	2,568	2,568	0.24	0.02	—	2,580
Water	—	—	—	—	—	—	—	—	—	—	—	54.3	184	239	5.58	0.13	—	418
Waste	—	—	—	—	—	—	—	—	—	—	—	81.6	0.00	81.6	8.16	0.00	—	285
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.28	0.28
Total	0.73	3.10	0.77	3.91	0.01	0.09	0.00	0.09	0.09	0.00	0.09	140	2,772	2,911	14.0	0.16	0.28	3,308
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.12	0.56	0.01	0.60	< 0.005	0.01	—	0.01	0.01	—	0.01	0.64	3.27	3.91	< 0.005	< 0.005	—	3.97
Energy	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	425	425	0.04	< 0.005	—	427
Water	—	—	—	—	—	—	—	—	—	—	—	8.99	30.5	39.5	0.92	0.02	—	69.2
Waste	—	—	—	—	—	—	—	—	—	—	—	13.5	0.00	13.5	1.35	0.00	—	47.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Total	0.13	0.57	0.14	0.71	< 0.005	0.02	0.00	0.02	0.02	0.00	0.02	23.1	459	482	2.32	0.03	0.05	548

3. Construction Emissions Details

3.1. Demolition (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.39	2.84	27.3	23.5	0.03	1.20	—	1.20	1.10	—	1.10	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.17	0.17	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.50	1.29	< 0.005	0.07	—	0.07	0.06	—	0.06	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.27	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.09	1.04	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	202	202	0.01	0.01	0.02	204
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.03	< 0.005	0.30	0.16	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	229	229	0.03	0.04	0.01	240
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.2	11.2	< 0.005	< 0.005	0.02	11.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.5	12.5	< 0.005	< 0.005	0.01	13.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.86	1.86	< 0.005	< 0.005	< 0.005	1.88
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.07	2.07	< 0.005	< 0.005	< 0.005	2.18

3.3. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.70	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.02	0.16	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.7	20.7	< 0.005	< 0.005	—	20.8
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.43	3.43	< 0.005	< 0.005	—	3.44
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.22	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	236	236	0.01	0.01	0.03	238
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.94	0.94	< 0.005	< 0.005	< 0.005	0.95
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.91	0.84	< 0.005	0.04	—	0.04	0.04	—	0.04	—	135	135	0.01	< 0.005	—	135
Dust From Material Movement	—	—	—	—	—	—	0.13	0.13	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.02	0.17	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.3	22.3	< 0.005	< 0.005	—	22.4
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.10	1.12	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	231	231	0.01	0.01	0.03	234
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.96	5.96	< 0.005	< 0.005	0.01	6.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.99	0.99	< 0.005	< 0.005	< 0.005	1.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.26	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	—	1.84	1.84	—	0.89	0.89	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	1.00	1.03	< 0.005	0.05	—	0.05	0.04	—	0.04	—	162	162	0.01	< 0.005	—	163
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	0.96	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	198	198	0.01	0.01	0.02	200
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.0	11.0	< 0.005	< 0.005	0.02	11.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.82	1.82	< 0.005	< 0.005	< 0.005	1.85
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.10	8.30	0.01	0.32	—	0.32	0.29	—	0.29	—	1,517	1,517	0.06	0.01	—	1,523
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.30	1.51	< 0.005	0.06	—	0.06	0.05	—	0.05	—	251	251	0.01	< 0.005	—	252
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.17	2.97	0.00	0.00	0.46	0.46	0.00	0.11	0.11	—	505	505	0.02	0.02	2.02	512
Vendor	0.05	0.01	0.59	0.32	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	514	514	0.04	0.08	1.43	539
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.20	2.24	0.00	0.00	0.46	0.46	0.00	0.11	0.11	—	463	463	0.02	0.02	0.05	468
Vendor	0.05	0.01	0.61	0.32	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	514	514	0.04	0.08	0.04	538
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.12	0.11	0.13	1.49	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	297	297	0.01	0.01	0.55	301
Vendor	0.03	0.01	0.39	0.20	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	325	325	0.03	0.05	0.39	341
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.27	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	49.2	49.2	< 0.005	< 0.005	0.09	49.9
Vendor	0.01	< 0.005	0.07	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	53.8	53.8	< 0.005	0.01	0.06	56.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.64	0.54	4.94	6.35	0.01	0.25	—	0.25	0.23	—	0.23	—	957	957	0.04	0.01	—	960
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.90	1.16	< 0.005	0.04	—	0.04	0.04	—	0.04	—	158	158	0.01	< 0.005	—	159
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	1.27	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	216	216	0.01	0.01	0.86	219
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	0.96	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	198	198	0.01	0.01	0.02	200
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.64	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	127	127	0.01	< 0.005	0.24	129
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	21.0	21.0	< 0.005	< 0.005	0.04	21.3

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	4.12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	4.12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.57	0.73	< 0.005	0.02	—	0.02	0.02	—	0.02	—	84.5	84.5	< 0.005	< 0.005	—	84.8

Architectural Coatings	—	2.61	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.10	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.0	14.0	< 0.005	< 0.005	—	14.0
Architectural Coatings	—	0.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.59	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	101	101	< 0.005	< 0.005	0.40	102
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.45	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	92.5	92.5	< 0.005	< 0.005	0.01	93.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.03	0.30	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	59.4	59.4	< 0.005	< 0.005	0.11	60.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.83	9.83	< 0.005	< 0.005	0.02	9.97
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	1,601	1,601	0.15	0.02	—	1,611
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	26.9	26.9	< 0.005	< 0.005	—	27.0
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	62.7	62.7	0.01	< 0.005	—	63.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,691	1,691	0.16	0.02	—	1,701
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Office Park	—	—	—	—	—	—	—	—	—	—	—	—	1,601	1,601	0.15	0.02	—	1,611
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	26.9	26.9	< 0.005	< 0.005	—	27.0
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	62.7	62.7	0.01	< 0.005	—	63.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,691	1,691	0.16	0.02	—	1,701
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	265	265	0.03	< 0.005	—	267
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	4.45	4.45	< 0.005	< 0.005	—	4.47
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	10.4	10.4	< 0.005	< 0.005	—	10.4
Total	—	—	—	—	—	—	—	—	—	—	—	—	280	280	0.03	< 0.005	—	282

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	0.08	0.04	0.71	0.59	< 0.005	0.05	—	0.05	0.05	—	0.05	—	845	845	0.07	< 0.005	—	847
Apartments Low Rise	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.08	0.04	0.73	0.61	< 0.005	0.06	—	0.06	0.06	—	0.06	—	877	877	0.08	< 0.005	—	879

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	0.08	0.04	0.71	0.59	< 0.005	0.05	—	0.05	0.05	—	0.05	—	845	845	0.07	< 0.005	—	847
Apartments Low Rise	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.08	0.04	0.73	0.61	< 0.005	0.06	—	0.06	0.06	—	0.06	—	877	877	0.08	< 0.005	—	879
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	140	140	0.01	< 0.005	—	140
Apartments Low Rise	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.30	5.30	< 0.005	< 0.005	—	5.32
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	145	145	0.01	< 0.005	—	146

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	1.74	1.57	0.12	3.05	0.01	0.43	—	0.43	0.42	—	0.42	56.2	107	164	0.17	< 0.005	—	168
Consumer Products	—	2.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architect Coatings	—	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.78	0.72	0.04	4.52	< 0.005	0.01	—	0.01	0.01	—	0.01	—	18.1	18.1	< 0.005	< 0.005	—	18.2
Total	2.51	4.74	0.16	7.57	0.01	0.44	—	0.44	0.43	—	0.43	56.2	125	182	0.17	< 0.005	—	187
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	1.74	1.57	0.12	3.05	0.01	0.43	—	0.43	0.42	—	0.42	56.2	107	164	0.17	< 0.005	—	168
Consumer Products	—	2.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.74	4.03	0.12	3.05	0.01	0.43	—	0.43	0.42	—	0.42	56.2	107	164	0.17	< 0.005	—	168
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.02	0.02	< 0.005	0.04	< 0.005	0.01	—	0.01	0.01	—	0.01	0.64	1.22	1.86	< 0.005	< 0.005	—	1.91
Consumer Products	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.10	0.09	< 0.005	0.56	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.05	2.05	< 0.005	< 0.005	—	2.06
Total	0.12	0.56	0.01	0.60	< 0.005	0.01	—	0.01	0.01	—	0.01	0.64	3.27	3.91	< 0.005	< 0.005	—	3.97

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	53.8	183	236	5.54	0.13	—	414
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	0.48	1.63	2.11	0.05	< 0.005	—	3.69
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	54.3	184	239	5.58	0.13	—	418
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	53.8	183	236	5.54	0.13	—	414
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	0.48	1.63	2.11	0.05	< 0.005	—	3.69
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	54.3	184	239	5.58	0.13	—	418
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	8.91	30.2	39.1	0.92	0.02	—	68.6
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	0.08	0.27	0.35	0.01	< 0.005	—	0.61

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	8.99	30.5	39.5	0.92	0.02	—	69.2

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	79.2	0.00	79.2	7.91	0.00	—	277
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	2.41	0.00	2.41	0.24	0.00	—	8.42
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	81.6	0.00	81.6	8.16	0.00	—	285
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	79.2	0.00	79.2	7.91	0.00	—	277
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	2.41	0.00	2.41	0.24	0.00	—	8.42
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	81.6	0.00	81.6	8.16	0.00	—	285
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Office Park	—	—	—	—	—	—	—	—	—	—	—	13.1	0.00	13.1	1.31	0.00	—	45.9
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	0.40	0.00	0.40	0.04	0.00	—	1.39
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	13.5	0.00	13.5	1.35	0.00	—	47.3

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.23	0.23
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.28	0.28
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.23	0.23
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.28	0.28

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	12/1/2023	12/29/2023	5.00	20.0	—
Site Preparation	Site Preparation	12/30/2023	1/13/2024	5.00	10.0	—
Grading	Grading	1/14/2024	2/11/2024	5.00	20.0	—
Building Construction	Building Construction	2/12/2024	12/30/2024	5.00	231	—
Paving	Paving	2/12/2024	12/30/2024	5.00	231	—
Architectural Coating	Architectural Coating	2/12/2024	12/30/2024	5.00	231	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40

Site Preparation	Tractors/Loaders/Backh	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backh oes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backh oes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	3.20	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2

Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	35.1	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	16.4	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	7.01	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	12,879	4,293	144,090	48,030	4,493

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	5,500	—
Site Preparation	—	—	15.0	0.00	—
Grading	—	—	20.0	0.00	—
Paving	0.00	0.00	0.00	0.00	1.72

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

Office Park	0.00	0%
Apartments Low Rise	—	0%
Parking Lot	1.72	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	532	0.03	< 0.005
2024	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	1,235	1,235	1,235	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	5
Propane Fireplaces	0
Electric Fireplaces	0

No Fireplaces	1
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
12879	4,293	144,090	48,030	4,493

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Office Park	1,676,428	349	0.0330	0.0040	2,635,888
Apartments Low Rise	28,114	349	0.0330	0.0040	99,939
Parking Lot	65,595	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Office Park	28,081,932	0.00
Apartments Low Rise	250,087	0.00
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Office Park	147	—
Apartments Low Rise	4.47	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Office Park	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Office Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	26.4	annual days of extreme heat
Extreme Precipitation	4.05	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	21.3	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score

Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	100
AQ-PM	52.8
AQ-DPM	81.7
Drinking Water	44.3
Lead Risk Housing	73.7
Pesticides	17.7
Toxic Releases	42.3
Traffic	60.0
Effect Indicators	—
CleanUp Sites	53.4
Groundwater	59.6
Haz Waste Facilities/Generators	75.8
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	39.3
Cardio-vascular	73.6
Low Birth Weights	19.6
Socioeconomic Factor Indicators	—

Education	54.6
Housing	76.0
Linguistic	7.38
Poverty	60.8
Unemployment	51.3

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	22.6356987
Employed	16.72013345
Median HI	24.76581548
Education	—
Bachelor's or higher	29.77030669
High school enrollment	100
Preschool enrollment	14.08956756
Transportation	—
Auto Access	27.10124471
Active commuting	35.09559861
Social	—
2-parent households	28.53843193
Voting	36.75093032
Neighborhood	—
Alcohol availability	57.82112152
Park access	2.194276915
Retail density	23.09765174

Supermarket access	23.70075709
Tree canopy	8.250994482
Housing	—
Homeownership	34.58231746
Housing habitability	17.75952778
Low-inc homeowner severe housing cost burden	47.22186578
Low-inc renter severe housing cost burden	27.97382266
Uncrowded housing	45.28422944
Health Outcomes	—
Insured adults	40.74169126
Arthritis	0.0
Asthma ER Admissions	55.2
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	24.5
Cognitively Disabled	2.3
Physically Disabled	3.2
Heart Attack ER Admissions	16.5
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	51.5
Physical Health Not Good	0.0

Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	1.1
SLR Inundation Area	0.0
Children	24.2
Elderly	45.2
English Speaking	62.1
Foreign-born	14.1
Outdoor Workers	39.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	88.7
Traffic Density	69.9
Traffic Access	23.0
Other Indices	—
Hardship	65.5
Other Decision Support	—
2016 Voting	56.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	61.0
Healthy Places Index Score for Project Location (b)	16.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No

Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Change acreage based on information provided by project proponent.
Construction: Construction Phases	Timing adjusted so construction, paving, and painting occur in same time frame

PALEOWEST

DRAFT

CULTURAL RESOURCES EVALUATION FOR THE YUCAIPA BUSINESS PARK DEVELOPMENT PROJECT, YUCAIPA, SAN BERNARDINO COUNTY, CALIFORNIA

Submitted to:

Teck Properties
P.O. Box 674
Forest Falls, California 92339

Technical Report 19-514

June 9, 2023

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DRAFT
CULTURAL RESOURCES EVALUATION FOR THE YUCAIPA BUSINESS PARK DEVELOPMENT PROJECT, YUCAIPA, SAN BERNARDINO COUNTY, CALIFORNIA

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CONTENTS

MANAGEMENT SUMMARY **5**

1.0 INTRODUCTION **7**
1.1 PROJECT LOCATION AND DESCRIPTION 7

2.0 REGULATORY CONTEXT **11**
2.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT 11

3.0 SETTING **12**
3.1 ENVIRONMENTAL SETTING 12
3.2 PREHISTORIC SETTING 12
Prehistory 13
Early Holocene Period 14
Middle Holocene Period 14
Late Holocene Occupations 15
3.3 ETHNOGRAPHY 16
Ethnohistory 16
3.4 HISTORICAL SETTING 18

4.0 CULTURAL RESOURCES INVENTORY **21**
4.1 PREVIOUS CULTURAL RESOURCE INVESTIGATIONS 21
4.2 CULTURAL RESOURCES REPORTED WITHIN ONE MILE OF THE PROJECT LOCATION 23
4.3 ADDITIONAL SOURCES 24
4.4 NATIVE AMERICAN SACRED LANDS FILE SEARCH 24

5.0 FIELD INVESTIGATION **26**
5.1 FIELD METHODS 26
5.2 FIELD RESULTS 26
5.3 CALIFORNIA REGISTER OF HISTORIC RESOURCES EVALUATION .....

6.0 MANAGEMENT RECOMMENDATIONS **31**

7.0 REFERENCES **32**

APPENDICES
Appendix A. Native American Heritage Commission And Notification Letters
Appendix B. Department of Parks and Recreation Form 523

FIGURES
Figure 1-1 Project Vicinity Map 8
Figure 1-2 Project Location Map 9

Figure 1-3 Project Area 10

Figure 5-1 Single Family Residence in Project Site, Facing South 27
Figure 5-2 Storage Building and Hay Barn in Project Site, Facing East 27
Figure 5-3 Storage Building and Hay Barn in Project Site, Facing East 28
Figure 5-4 Agricultural Field in Project Site, Facing East 28
Figure 5-5 Agricultural Field in Project Site, Facing Southwest 29

TABLES

Table 3-1 Characteristics of the Prehistoric Periods of San Bernardino County 13
Table 4-1 Cultural Resources Studies within One Mile of the Project 21
Table 4-2 Cultural Resources Recorded within One Mile of the Project 23

MANAGEMENT SUMMARY

PaleoWest, LLC was contracted by Teck Properties to conduct a cultural resources survey for the Yucaipa Business Park Development Project located in Yucaipa, California. As proposed, the project consists of a 45-unit commercial business park on a 5.7-acre parcel (Assessor Parcel Number [APN] 0318-013-11) situated along the south side of Yucaipa Boulevard between 10th and 11th Streets in Yucaipa, San Bernardino County, California. The City of Yucaipa (City), as Lead Agency for the project, required this study as part of the environmental review process to comply with the California Environmental Quality Act (CEQA). This investigation included background research, communication with the Native American Heritage Commission (NAHC) and Tribal representatives, and a pedestrian survey of the Project area. The purpose of the study is to provide the City with the necessary information and analysis to determine, as mandated by CEQA, whether the proposed project would cause substantial adverse changes to any historical/archaeological resources that may exist in the project area.

The records search did not identify any previously recorded cultural resources within the project. The field survey revealed that the project site is currently developed with one residential property with an associated outbuilding surrounded by a fallow field dating to 1950. Additional features were identified during the survey; these included remnant sections of wood fence lines and a remnant concrete irrigation standpipe. A review of the historic maps indicated that the property has been developed with a single-family residence as early as 1938. The field surrounding the residence has been used as a grove, and later, for animal keeping and grazing pasture.

The buildings located at APN 0318-013-11 were evaluated for historical significance by applying the criteria of the California Register of Historical Resources (CRHR) using data gathered during the pedestrian survey and information acquired through historical research. PaleoWest recommends that the buildings located at APN 0318-013-11 **are not eligible** for the CRHR under any criteria. Therefore, the buildings located at APN 0318-013-11 are not considered a historical resource for the purposes of CEQA.

Although these resources are no longer inhabited and the field/pasture appears to have been unused since approximately 2009, there is some potential for intact subsurface artifacts and deposits. The sensitivity for buried cultural resources is considered to be **moderate**.

Therefore, PaleoWest recommends that all **initial ground-disturbing** activities be monitored by a qualified archaeologist. In the event cultural materials are encountered during earthmoving operations associated with the project, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds and a treatment plan can be determined. The Cahuilla Band of Indians has requested they be updated as the project moves forward and that a Cahuilla Tribal monitor be present during all ground disturbing activity. The Soboba Band of Luiseno Indians has concerns for the project and will be drafting a formal response. The San Manuel Band of Mission Indians has concerns and will interface directly with the City. The Serrano Nation of Mission Indians requests to be notified if cultural resources are identified during project construction.

In the event human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to State Public Resources Code Section 5097.98. The County

Coroner must be notified of the find immediately. If the remains are determined to be Native American, the County Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The MLD recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials, preservation of Native American human remains and associated items in place, relinquishment of Native American human remains and associated items to the descendants for treatment, or any other culturally appropriate treatment.

1.0 INTRODUCTION

In November 2019, at the request of Teck Properties, PaleoWest completed a cultural resources study on approximately 5.7 acres of land (Assessor's Parcel Number (APN) 0318-013-11) in Yucaipa, San Bernardino County, California. As proposed, the project will be developed as a 45-unit commercial business park. The study is part of the environmental review process for the City of Yucaipa, (City), who as Lead Agency for the project, required the study in compliance with the California Environmental Quality Act [CEQA (PRC § 21000, et seq.)]. The purpose of this study is to provide the City with the necessary information and analysis to determine, as mandated by CEQA, whether the proposed project would cause substantial adverse changes to any historical/ archaeological resources that may exist in or around the project area. In order to identify and evaluate such resources, PaleoWest conducted a cultural resources records search, pursued historical background research, and carried out a pedestrian field survey. This report is a complete account of the methods, results, and findings of the study.

1.1 PROJECT LOCATION AND DESCRIPTION

The 5.7-acre project site is located on the south side of Yucaipa Boulevard between 10th and 11th Avenues in Yucaipa. The proposed project is depicted on the United States Geological Survey (USGS) *Yucaipa, California* 7.5-minute topographic quadrangle map in an unsectioned portion of the San Bernardino Land Grant, Township 1 South/Township 2 South, Range 2 West, San Bernardino Baseline and Meridian (1967 photorevised 1980), as depicted in Figures 1-1 through 1-3.

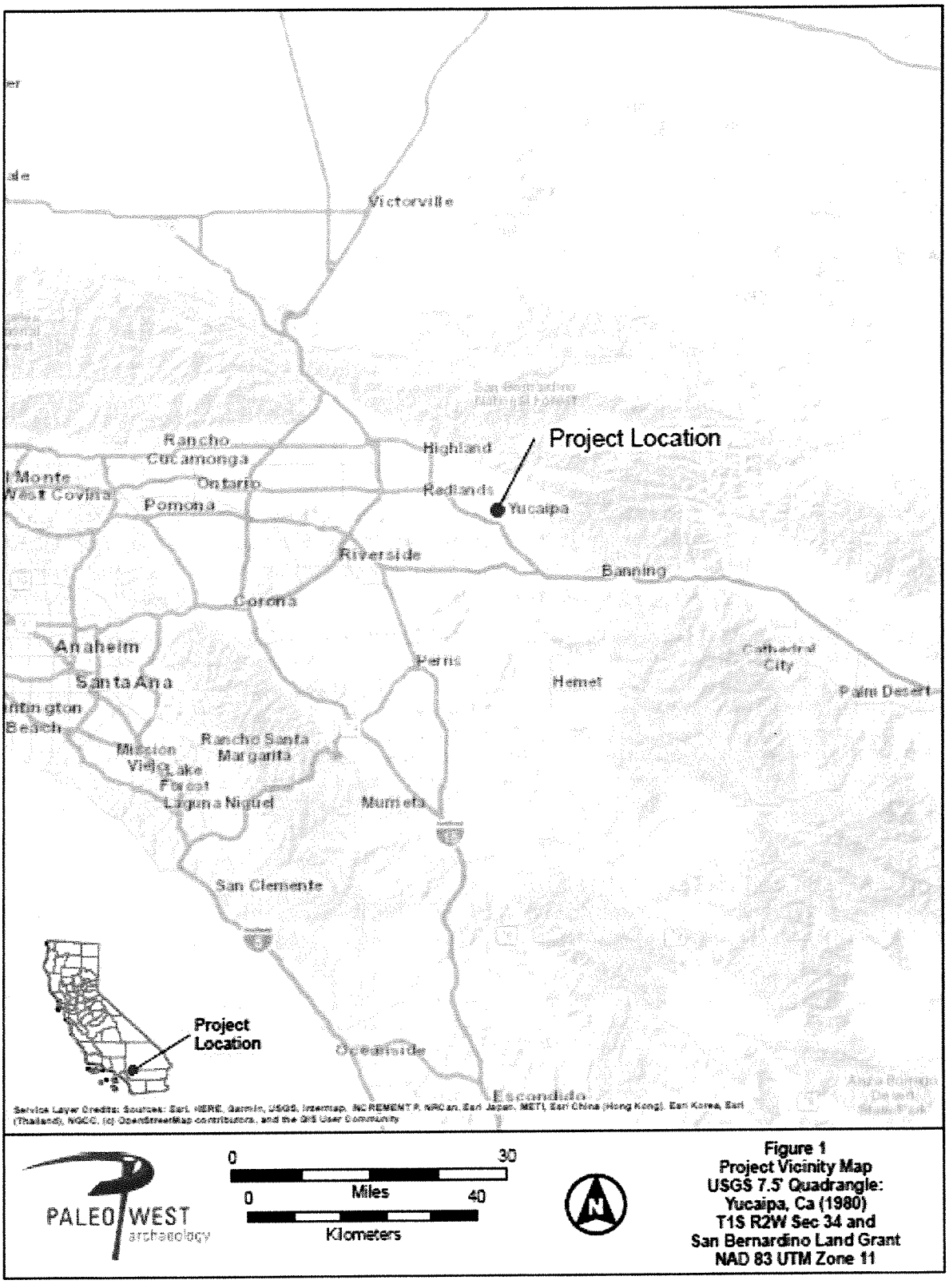

Figure 1-1 Project Vicinity Map

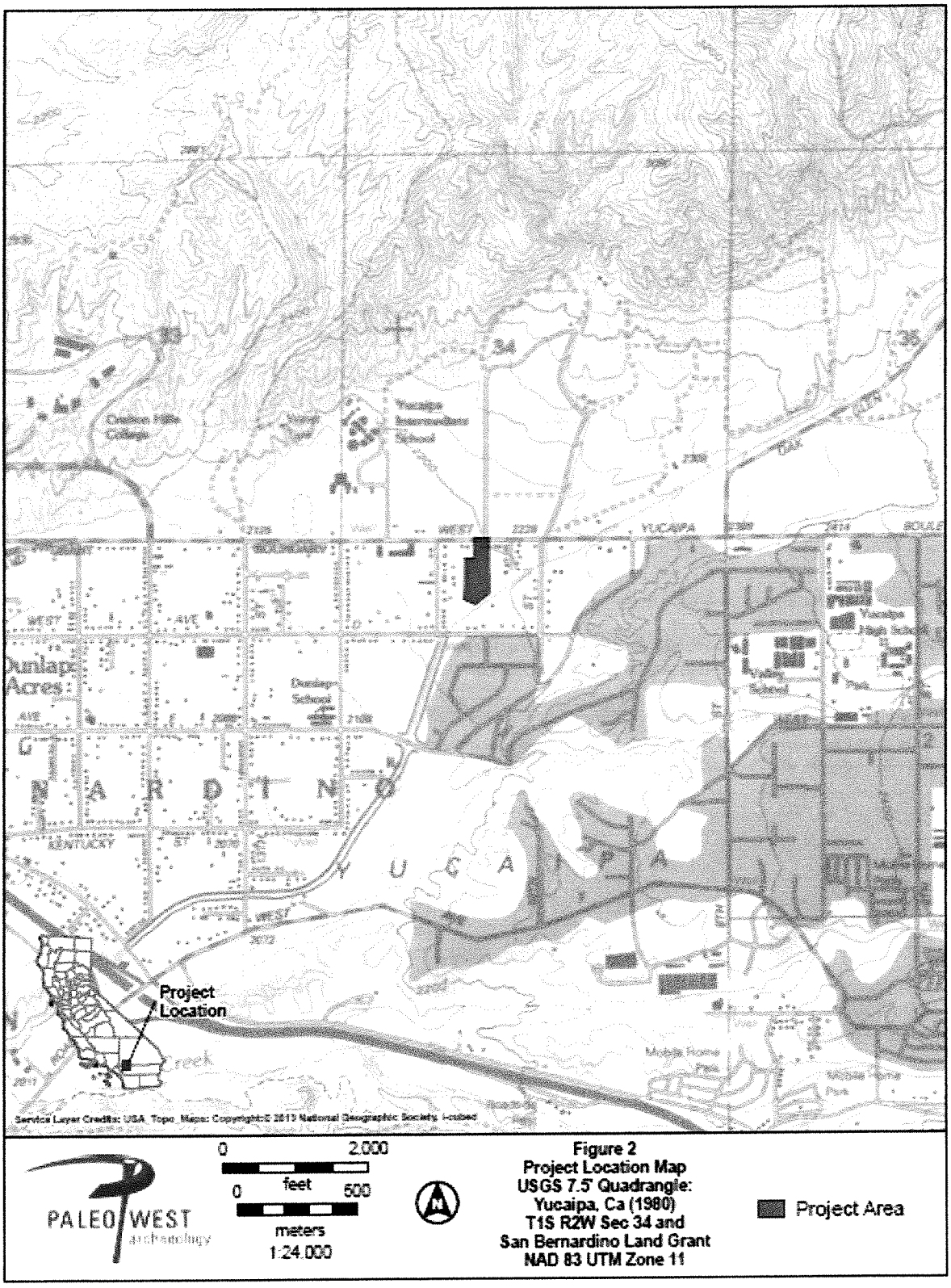

Figure 1-2 Project Location Map

Figure 1-3 Project Area

2.0 REGULATORY CONTEXT

2.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The proposed project is subject to compliance with CEQA, as amended. Compliance with CEQA statutes and guidelines requires both public and private projects with financing or approval from a public agency to assess the project's impact on cultural resources (Public Resources Code Section 21082, 21083.2 and 21084 and California Code of Regulations 10564.5). The first step in the process is to identify cultural resources that may be impacted by the project and then determine whether the resources are "historically significant" resources

CEQA defines historically significant resources as "resources listed or eligible for listing in the California Register of Historical Resources (CRHR)" (Public Resources Code Section 5024.1). A cultural resource may be considered historically significant if the resource is 45 years old or older, possesses integrity of location, design, setting, materials, workmanship, feeling, and association, and meets any of the following criteria for listing on the CRHR:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or,
4. Has yielded, or may be likely to yield, information important in prehistory or history (Public Resources Code Section 5024.1).

Cultural resources are buildings, sites, humanly modified landscapes, traditional cultural properties, structures, or objects that may have historical, architectural, cultural, or scientific importance. CEQA states that if a project will have a significant impact on important cultural resources, deemed "historically significant," then project alternatives and mitigation measures must be considered. Additionally, any proposed project that may affect historically significant cultural resources must be submitted to the State Historic Preservation Officer (SHPO) for review and comment prior to project approval by the responsible agency and prior to construction.

3.0 SETTING

This section of the report summarizes information regarding the physical and cultural setting of the Project area, including the prehistoric, ethnographic, and historic contexts of the general area. Several factors, including topography, available water sources, and biological resources, affect the nature and distribution of prehistoric, ethnographic, and historic-period human activities in an area. This background provides a context for understanding the nature of the cultural resources that may be identified within the region.

3.1 ENVIRONMENTAL SETTING

The project area is situated at an elevation of approximately 2,200 feet above mean sea level (AMSL), which places it in the Upper Sonoran Life Zone. The Upper Sonoran Life Zone ranges from about 500 feet AMSL to an elevation of approximately 5,000 feet AMSL and is represented in cismontane valleys and low mountain slopes with a predominantly chaparral community. Common native plants include oak and scrub oak, sycamore, chamise, cacti, agave, yucca, species of sage, chía, and various grasses. Common animals include deer, coyotes, jack rabbits, cottontail rabbits, skunks, ground squirrels, and voles, as well as birds and reptiles (Schoenherr 1992).

The biotic character of this area has been altered from its natural setting by residential and agricultural use. Virtually all native vegetation on site has been removed by agricultural and weed-abatement disking activities. Plant pioneers including puncturevine (*Tribulus terrestris)* and introduced seasonal grasses were noted in the disked soil. Several mature landscape trees and a pomegranate tree were present in the project.

The project is located on an alluvial slope at the western base of the San Bernardino Mountains. The San Bernardino Mountains are composed of Jurassic and Cretaceous age granitic rocks, which have intruded and metamorphosed older rocks. The project straddles branches of the San Andreas Fault, which separates metamorphic rocks from clastic alluvial deposits derived from the mountains to the east. The alluvial slope consists of young and old alluvial fans (Qyf, Holocene–late Pleistocene; Qof–Pleistocene; (Morton and Miller 2003), which drain southwest into the Santa Ana River.

The project region is characterized by a semi-arid climate, with dry, hot summers and moderate winters. Annual rainfall in cismontane southern California ranges from 5 to 15 inches per year in form of winter rain, with occasional warm monsoonal showers in late summer (Beck and Haas 1974). An ephemeral blue-line waterway, now channelized, is the nearest water source, situated near the southeast corner of the project; Oak Glen Creek is approximately one half-mile southeast of the project.

3.2 PREHISTORIC SETTING

Of the many chronological sequences proposed for southern California, two primary regional syntheses are commonly used in the archaeological literature. The first, advanced by Wallace in 1955, defines four cultural horizons, each with characteristic local variations: Early Man Horizon,

Millingstone, Intermediate, and Late Prehistoric. Employing a more ecological approach, Warren (1986) defined five periods in southern California prehistory: Lake Mojave, Pinto, Gypsum, Saratoga Springs, and Protohistoric. Warren viewed cultural continuity and change in terms of various significant environmental shifts, defining the cultural ecological approach for archaeological research of the California deserts and coast. Many changes in settlement patterns and subsistence focus are viewed as cultural adaptations to a changing environment, beginning with the gradual environmental warming in the late Pleistocene, the desiccation of the desert lakes during the early Holocene, the short return to pluvial conditions during the middle Holocene, and the general warming and drying trend, with periodic reversals, that continues to this day (Warren 1986).

Prehistory

Of the many chronological sequences proposed for southern California, as stated above, two primary regional syntheses are commonly used in the archaeological literature. Table 3-1, below, presents the sequences, followed by a detailed discussion.

Table 3-1: Characteristics of the Prehistoric Periods of San Bernardino County

Mojave and Colorado Desert [1]			**Westernmost County [2]**		
Period	**Chronological Range**	**Diagnostic Projectile Points**	**Period**	**Chronological Range**	**Diagnostic Artifacts/Features**
Proto-historic	A.D. 1200 – 1850	Desert Side-notched	Late Prehistoric	A.D. 500 – historic	Ceramics, Cottonwood Triangular and Desert side-notched projectile points (arrow points), cremations
Saratoga Springs	A.D. 500 – 1200	Rosegate series; pottery	Intermediate	2000 B.C. – A.D. 500	Mortars, pestles, discoidals, abundant projectile points (dart points), land and sea mammal bone
Gypsum	2000 B.C. – A.D. 500	Elko Series, Gypsum, Humboldt series; T-shaped drills, occasional large scraper planes, mortar and pestle	Millingstone	6500 – 2000 B.C.	Metates, manos, cogstones, discoidals, core tools, paucity of projectile points, inhumations
Pinto	5000 – 2000 B.C.	Pinto series; heavy keeled scrapers, flat millingstones	Early Man	9000 B.C.? – 6500 B.C.	Large, often fluted, points, such as Clovis and Folsom types in association with extinct fauna

Table 3-1: Characteristics of the Prehistoric Periods of San Bernardino County

Mojave and Colorado Desert [1]			Westernmost County [2]		
Period	**Chronological Range**	**Diagnostic Projectile Points**	**Period**	**Chronological Range**	**Diagnostic Artifacts/Features**
Lake Mojave	7000 – 5000 B.C.	Lake Mojave series; well-made bifacial knives and other cutting tools, large domed or keeled scrapers			

[1] Warren 1984, 1986.

[2] Wallace 1955, 1962.

Early Holocene Period

The Early Holocene Period in southern California is generally characterized as a hunting tradition. It dates from the earliest human presence, around 10,000 or 9000 B.C. in some areas, to approximately 5000 B.C. The Early Holocene Period, with its focus on big game hunting, is the earliest cited for the coast (Wallace 1955) as well as the California high desert (Warren 1984) but may actually be absent in California. A typical Clovis occupation, based on the hunting of large late Pleistocene megafauna, has yet to be demonstrated for California or neighboring areas; a few isolated Clovis and Folsom points are known for the desert region, however.

In the California desert, the Lake Mojave Period (7000 to 5000 B.C.) is associated with the now-dry lakes. The material culture of the Lake Mojave Period is dominated by stylized dart points of the Lake Mojave and Silver Lake series, well-made bifacial knives and other cutting tools, large domed or keeled scrapers, and other characteristic artifact types (Wallace 1962). Ground stone tools are rare or absent at most sites.

Middle Holocene Period

Millingstone traditions enjoyed a long history along the coast during the Early Holocene Period. In the desert, the Pinto Period (5000 to 2000 B.C.) succeeded the Lake Mojave Period and appears to have been a time of climatic stress, with resultant changes in environment and staple resources which affected cultural adaptations. As lakes and rivers dried up, plant and animal resources changed. Warren (1984) postulated the populations adjusted to hostile arid conditions by moving to oases in the deserts or to the edges of the desert. This dry period was followed by a moister period in which people returned to the deserts and more plant resources were utilized (Wallace 1962; Warren 1984).

Milling equipment became more prevalent, but, similar to the preceding Lake Mojave Period, dart points, especially Pinto series points, still dominated the material culture and heavy keeled scrapers, flat milling stones, and manos are still found, associated with sites from this period. This wet period was followed by another dry spell, which again resulted in decreased desert

populations and subsequently led into the Little Pluvial at about 2000 B.C. (Warren 1984). Sites in the Mojave Desert associated with the Pinto Period are generally small and usually limited to surface debris leading to the hypothesis that these sites are related to seasonal occupation by smaller groups (Warren 1984).

The Millingstone Period persists until approximately 2000 or 1500 B.C. The Millingstone cultural assemblage is dominated by metates and manos, informal cobble and flake tools, and a distinct lack of well-made bifacial tools. Diagnostic artifacts include discoidal and cogstone artifacts, which continue into Intermediate times (Wallace 1955). Interment beneath a cairn of milling stones or rocks is a characteristic mortuary practice of the Millingstone Period.

The Middle Holocene/Late Holocene transition is marked by diversification in native subsistence economies and an increased emphasis on exchange and interregional trade as ameliorating factors contributing to cultural stability. In inland regions, the start of the Little Pluvial and the start of the Gypsum Period (2000 B.C. to A.D. 500) coincide with Elko series points as the diagnostic artifact. The mortar and pestle, introduced during this period, represent an important innovation in seed processing technology and probably reflect diversification in seed collecting strategies. A developing reliance on acorn crops may be indicated by this technological change. Manos and milling stones are commonly found at Gypsum Period sites. Flake scrapers see wider use, although the occasional large scraper plane is also found (Warren 1984). Limited trade goods reaching the desert from the coast, such as *Haliotis* and *Olivella* shell beads and ornaments, are found associated with Gypsum Period sites (Warren 1984). Minor (1975) suggests that the first of the pit and groove petroglyphs were produced during the latter half of the Gypsum Period. The Coso petroglyphs, thought to have been drawn earlier, reflect a change in tool choice: from atlatl to bow and arrow, which coincides with the use of the atlatl at the beginning of the Gypsum Period and increased use of the bow and arrow into the Late Holocene Period (Warren 1984).

It is during this time that the earliest Takic migrations may have proceeded across the desert to the coast, since the material culture, particularly of the desert sites, is notably different from that of earlier periods. The change from flexed burials to cremations is viewed as a Takic cultural trait, as is the production of Z-twist, rather than S-twist, cordage, basketry, and sea grass fabrics. A marked shift in settlement patterns may also be indicative of the Takic migration into former Hokan territory (Moratto 1984).

Late Holocene Occupations

In the southern California coastal region, the Late Prehistoric Period began around A.D. 500 or 600 and is marked by the introduction of small projectile points suitable for use with the bow and arrow (Wallace 1955). It continued until the time of European contact, conventionally placed at A.D. 1769 with establishment of the *Mission San Diego de Alcala* in San Diego, the first of 21 missions established by the Spanish in California. In the southern California desert region, cultural periods assigned to this time frame include the Saratoga Springs Period (A.D. 500 to 1200) and the Protohistoric Period (A.D. 1200 to historic times, which is as late as 1850 in some locales) (Warren 1984).

The Saratoga Springs Period continues the successful adaptation to a desert environment through increasingly complex subsistence strategies and technology and was greatly influenced by the Hakataya Culture of the lower Colorado River area (Warren 1984). Distinguishing

characteristics of the Saratoga Springs culture are based primarily on pottery and projectile point types. Ceramic vessel technology, appearing first on the lower Colorado River approximately A.D. 800, begins to spread west into the southern California deserts by A.D. 900. Brown Ware and Buff Ware ceramics are found at Saratoga Springs Period sites. Associated with the use of ceramics are Desert Side-notched and Cottonwood triangular projectile points. Increased use of steatite for ornaments, beads, and pendants is also characteristic of this period (Warren 1984).

The Protohistoric Period sites contain flaked stone assemblages made almost exclusively of pressure flaked cryptocrystalline silicates (CCS). Few bifaces, an increase in the quantity of flake cores and large flake blanks, and a decrease in flaked stone density characterize most sites from the Protohistoric Period. The Protohistoric Period, previously referred to as the Shoshonean Period, is a continuation of Saratoga Springs cultures. This period is characterized by the continuation of the generalized archaic lifestyle based on hunting and gathering practices with a strong reliance on plant foods and small game (Warren 1984; Warren and Crabtree 1986). A decreased reliance on large game is evident in archaeological assemblages and seasonal movement was common, resulting in a diverse array of site types. Another indicator of the Protohistoric Period is the presence of Obsidian Butte obsidian, especially at southern California sites (Wilke 1978).

3.3 ETHNOGRAPHY

The project area is within the traditional cultural territory of the Serrano and the Cahuilla (Bean, 1978; Bean and Smith 1978). Like other Native American groups in Southern California, these tribes were seminomadic hunter-gatherers who subsisted by exploitation of seasonably available plant and animal resources. They were first encountered by the Spanish missionaries in the late 18th century. The first written accounts of the Serrano are attributed to the mission fathers, and later documentation was by Kroeber (1976), Strong (1929); and by Bean and Smith (1978) and others for the Cahuilla.

Ethnohistory

Mission San Gabriel was established in 1771 and an asistencia, or mission outpost was subsequently established in 1819 near Redlands (Harley 1988), approximately 4 miles from the project area. With the Spanish intrusion of the late 18th century came a drastic change in lifestyle for the natives of Southern California. Incorporation and relocation of the indigenous populations into the mission system generally led to the disruption of native cultures, changes in subsistence and land use practices, revolt, and cultural disintegration.

The end of Spanish rule in 1821 and the secularization of the missions in the mid-1830s brought the Mexican Rancho land grants and the ranchero system. Many of the Serrano lived on the rancheros as laborers and some migrated to inland and outlying areas. While some traditional culture and lifeways survived into this period, they were in decline; most individuals assimilated into Mexican culture by 1850 (Bean and Smith 1978).

Serrano

Ethnohistorically, the Serrano Indians occupied portions of the central and western Mojave Desert, including the length of the Mojave River and much of present-day San Bernardino County and northeastern Los Angeles County (Sutton and Earle 2017). The term Serrano is Spanish for "mountaineer, highlander" (Bean and Smith 1978) and is derived from sierra, meaning "mountain range" (Bean and Smith 1978). This term was given to people who inhabited the areas of the San Bernardino Mountains that had no associated mission. The Serrano culture group actually incorporates distinct cultures of people that have similar linguistic patterns. These people are the Desert Serrano and the Mountain Serrano (Sutton and Earle 2017).

The Serrano were hunter-gatherers who relied on the women to do much of the collecting while the men captured various animals. The primary flora that they exploited depended on the exact area they inhabited but, generally speaking, they collected acorns, piñion nuts, honey, mesquite, yucca, and cactus fruits, in addition to various seeds, bulbs, and roots. The men hunted hare, rabbits, and rodents as the basis of their animal protein along with pronghorn, desert bighorn and deer (Sutton and Earle 2017).

The most common hunting implements were the bow and arrow, throwing stick, traps, snares, and deadfalls. The bow and arrow were used for hunting large game, while the other items were used for smaller game and birds (Bean and Smith 1978a). Meat was prepared in earth ovens, by boiling in watertight baskets, or by parching. Plants were consumed both raw and cooked. Food processing involved the use of manos, metates, mortars, and pestles. Flint knives, stone and bone scrapers, ceramic trays and bowls, baskets, and horn and bone spoons and stirrers were also used (Bean and Smith 1978).

Most Serrano lived in small villages near water, primarily the Mojave River (Sutton and Earle 2017), and also perennial seeps, streams, and small lakes. The availability of water largely determined the nature, duration, and distribution of Serrano settlements (Benedict 1924 in Bean and Smith 1978). Family dwellings were circular, domed, willow-frame structures covered with tule thatching (Bean and Smith 1978). Dwellings contained a central fire pit and were used primarily for sleeping and storage.

The Late Prehistoric natives of the Serrano area practiced cremation of the dead. Most of a deceased individual's personal possessions were burned with the body. One month after death, other possessions were burned. A seven-day mourning ceremony was held annually. At this time, gifts and shell money were distributed (Strong 1929 in Bean and Smith 1978).

With the Spanish intrusion came a drastic change in lifestyle for the natives of Southern California. Incorporation of the indigenous populations into the mission system led to the disruption of native cultures and changes in subsistence and land use practices. Mission San Gabriel, established in 1771, probably had a limited effect on the Serrano population until the asistencia was established near Redlands, perhaps as early as 1819 (Harley 1988). Cattle ranches/farms were established on or near Indian villages, primarily in the major drainages conducive to horticulture and animal husbandry. Within a short time, the missions controlled many ranchos where Indians lived and worked.

After 1820, most of the Serrano in the San Bernardino Valley were moved to Mission San Gabriel. Land near ancestral villages was cleared for farming, and water was diverted for irrigation and

stock. The mission's expansion drastically affected native plants and animals, and human populations were decimated by European introduced diseases, conflicts, and forced labor. Further declines in local population occurred as the Native Americans retreated to isolated sanctuaries in the mountains (Bean and Smith 1978).

Cahuilla

The Cahuilla's traditional territory encompassed diverse topography ranging from the Salton Sink to the San Bernardino Mountains and San Gorgonio Pass (Bean 1978; Bean and Saubel 1978; Kroeber 1925). The Cahuilla were generally divided into three groups: Desert Cahuilla, Mountain Cahuilla, and Pass Cahuilla (Kroeber 1925). Like other Southern California Native American tribes, the Cahuilla were semi-nomadic peoples leaving their villages and using temporary camps near available plant and animal resources.

Cahuilla villages usually were in canyons or near adequate sources of water and food plants. The immediate village territory was owned in common by a lineage group or band. The other lands were divided into tracts owned by clans, families, or individuals. Trails used for hunting, trading, and social interaction connected the villages. Each village was near numerous sacred sites that included rock art panels (Bean and Saubel 1978).

Social organization of the Cahuilla was patrilineal clans and kinships groups known as moieties. Lineages within a clan cooperated in defense, subsistence activities, and religious ceremonies. Most lineages owned their own village sites and resource plots; although the majority of their territory was open to all Cahuilla people (Bean 1978).

3.4 HISTORICAL SETTING

In California, the historic era is generally divided into three periods: the Spanish Period (1769 to 1821), the Mexican Period (1821 to 1848), and the American Period (1848 to present).

Spanish Period

The Spanish Period, 1769-1821, is characterized by exploration of southern California and the establishment of missions in the San Diego and Los Angeles regions. Early exploration of the San Bernardino County area began slowly until 1772 when Captain Pedro Fages and his men crossed through the Gorgonio Pass on an exploratory trip northward. With the Spanish intrusion of the late 18th century came a drastic change in lifestyle for the natives of southern California. Incorporation of the indigenous populations into the mission system generally led to the disruption of native cultures and changes in subsistence and land use practices (Harley 1988). An asistencia of the Mission San Gabriel was established in the San Bernardino area in 1819 at the Indian village of *Guachama* and later named San Bernardino by the Catholic padres (Gudde 1998). Another village, *Yu'kaipa't,* was located in the vicinity of the project site. The Spanish utilized this area primarily for grazing cattle (www.yucaipahistory.org).

Mexican Period

In 1821, Mexico overthrew Spanish rule and the missions began to decline. By 1833, the Mexican government passed the Secularization Act, and the missions, reorganized as parish churches, lost their vast land holdings, and released their neophytes (Cleland 1962). In 1834, a prominent

group of Californians coerced Governor Figueroa in to creating the "Provisional Regulations." These regulations made mission lands available for their occupation (Beattie and Beattie 1939).

During the Mexican Period, the ranchos were predominantly devoted to cattle, with great tracts of land used for grazing. The area in the vicinity of the proposed project was surrounded by several ranchos during the Mexican Period. These included the El Muscupiabe Rancho of Miguel Blanco (Michael White) and Henry Hancock to the northwest, the Bandini and Rubidoux Ranchos to the south, and the Cucamongo Rancho to the west. The project is within the original San Bernardino Land Grant, granted to Don Antonio Maria Lugo by Governor Juan Alvarez in 1842. Diego Sepulveda, nephew of Lugo, was given the area that is now west Yucaipa and built an adobe house there. This rancho holding consisted of 37,700 acres that encompassed the entire San Bernardino Valley. Much of the rancho acreage was used for cattle grazing (Ingersoll 1904; Beattie 1925; Beattie and Beattie 1951).

During this period cattle ranching, including trade in tallow and hides, was more prevalent than agricultural activities. Livestock and horticulture were substantial businesses until the Gold Rush of 1849. Hostilities arose between the Mexicans and the newly arriving Americans from the east; in 1848 the United States officially obtains California from Mexico through the Treaty of Guadalupe Hidalgo in 1848 (Cleland 1962).

American Period

The American Period, 1848-Present, began with the Treaty of Guadalupe Hidalgo. In 1850, California was accepted into the Union as the 31st state, driven by the increase in population due to the Gold Rush.

Among the first Anglo-Americans to cross the area were Jedediah Smith and his party traveling through the Mojave Desert on their way to Mission San Gabriel, stopping to camp near the present-day Rialto, west of the project (Stoebe and Bemis 1976). As travel along the Santa Fe Trail during the early American Period brought more settlers, the pattern of settlement developed along the San Bernardino Mountain foothills and drainages. A colony was established in 1851 by a large group of Mormons who eventually purchased land, including the Lugo rancho holdings, in present-day San Bernardino (Stoebe and Bemis 1976).

The completion of the Southern Pacific Railroad line from Los Angeles through the San Gorgonio Pass in 1876 brought a huge influx of new arrivals from the East. The trains transported settlers into the area, creating a period of agricultural and land development, ultimately resulting in the establishment of San Bernardino County in 1853. Smaller railroad lines were constructed to connect the outlying communities with the larger transportation corridors. Transportation, agriculture, and the control of water have continued to be central themes in the settlement, development, and growth of San Bernardino County (Robinson 1979).

San Bernardino County. Captain Jefferson Hunt of the Mormon Battalion led a group of settlers into San Bernardino in 1851, and the Mormon Colony purchased land that same year. Brigham Young recalled the Mormons to Salt Lake City six years later (Haenszel 1992). San Bernardino County was created from parts of Los Angeles, San Diego, and Mariposa Counties in 1853. Gold was discovered in Holcomb and Bear Valleys in the San Bernardino Mountains in 1860. Silver was being mined at Ivanpah in 1870, and the rich silver mines of the Calico district were developed

in the 1880s. Borax was first discovered in 1862 in the Searles Dry Lake area near Trona (Hoover et al. 1990). By the early 1880s, citriculture was established as the economic base of the community. Produce ultimately assumed prominence as the county's economic base, with thousands of acres under cultivation by the beginning of World War I (McGroarty 1911).

Yucaipa. This section was taken largely from the Yucaipa Historical Society website. In 1851, the Mormons sold some of their recently obtained Rancho San Bernardino acreage to American settlers. James Waters purchased land in the lower Yucaipa area, including the Sepulveda adobe. Utilizing these bricks, he constructed a new home, now known as the Yucaipa Adobe. Settlers to the area planted grain and groves of fruit and citrus in the lower areas as well as orchards of apples and cherries in the higher elevations. In 1910, a subdivision of 11,000 acres of the Yucaipa area was offered in 5, 10, and 20-acre lots by the Redlands and Yucaipa Land Company. Following World War II, fruit production dropped; groves were replaced by chicken and egg ranches and small residential tracts, as well as trailer parks. The City of Yucaipa was incorporated in 1989; housing developments eventually replaced the chicken ranches, agricultural fields and citrus groves (www.yucaipahistory.org).

4.0 CULTURAL RESOURCES INVENTORY

The records search was conducted by Senior Archaeologist Roberta Thomas on November 7, 2019, at the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton. The records search included a review of all recorded historic and prehistoric archaeological sites within one mile of the project, as well as a review of known cultural resource survey and excavation reports. In addition, the California State Historic Property Data File (HPD), which includes the National Register of Historic Places (National Register), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI) were reviewed.

Senior Archaeologist, Gini Austerman completed archival research during November 2019. Research methodology focused on the review of a variety of primary and secondary source materials relating to the history and development of the project area. Sources included, but were not limited to, online sources, published literature in local and regional history, historic aerial photographs, and historic maps.

4.1 PREVIOUS CULTURAL RESOURCE INVESTIGATIONS

Data from the SCCIC indicate that there have been 42 previous cultural resource studies conducted in the records search area, none of which includes the project.

Table 4-1
Previous Cultural Studies Within One Mile of the Project

Report #	Date	Author(s)	Title
SB-00040	1958	Hicks, Frederic	Archaeological Investigations in The Yucaipa Valley
SB-00142	1973	Smith, Gerald A.	Schumaker East and Schumaker West
SB-00338	1976	San Bernardino County Museum Association	A Cultural Resources Survey Report, Yucaipa Valley County Water District
SB-00339	1976	Martz, Patricia	Environmental Impact Evaluation: Test Excavation at Sbr-1000, Yucaipa Valley County Water District Sanitary Sewers Project
SB-00378	1977	Martz, Patricia	Archaeological Investigations at Ca-Sbr-1000, Yucaipa, California
SB-00446	1976	Hearn, Joseph E.	Yucaipa Park and Recreation District, Archaeological - Historical Resources Assessment of Land at Seventh And Avenue "E"
SB-00561	1977	Hearn, Joseph E.	Archaeological - Historical Resources Assessment of The Golden Globe Orange Growers Corporation Property in The Yucaipa Area
SB-00578	1977	Hearn, Joseph E.	Archaeological - Historical Resources Assessment of Tract 10044, Yucaipa Area
SB-00957	1980	Leonard, Joanne C.	An Archaeological Assessment of The Village of Yukai-Pa-T (Sbr-1000)
SB-00973	1980	Leonard, Joanne C.	Oak Glen Road Extension: An Addendum to The Archaeological Assessment of The Realignment of Avenue E.
SB-01356	1983	Whitney-Desautels, Nancy A.	Cultural Resource Report on The Chapman Ranch Property Located in An Unincorporated Portion of The County of San Bernardino
SB-01357	1983	Whitney-Desautels, Nancy A.	Cultural Resource Report on The Chapman Ranch Property Located in An Unincorporated Portion of The County of San Bernardino

Table 4-1
Previous Cultural Studies Within One Mile of the Project

Report #	Date	Author(s)	Title
SB-01445	1984	Rector, Carol H.	Cultural Resources Inventory for the 1984 And Part Of 1985 California Metropolitan Project Area Public Lands Sale Program
SB-01576	1986	Foster, Daniel G.	Vegetation and Watershed Management, Archeological Review, Crafton Hills Vmp Project, San Bernardino Ranger Unit
SB-01583	1986	Lerch, Michael K.	Archaeological Survey of Tentative Tract No. 13377, Yucaipa, San Bernardino County, California
SB-01836	1988	Swanson, Mark T.	Archaeological Monitoring for The Sun Glen Project, Tract 10069, Yucaipa Area, San Bernardino County
SB-01849	1989	Bissell, Ronald M.	Cultural Resources Reconnaissance of The Frontrunner Homes Property, Yucaipa, San Bernardino County, California
SB-01858	1989	Swanson, Mark	Environmental Impact Evaluation: A Cultural Resource Assessment Of 32- And 9.5-Acre Tracts of Land in The Community of Yucaipa, San Bernardino County, California
SB-02048	1989	Tenney, Christy	A Preliminary Report on the 1972-76 Excavations at Ca-Sbr-1000/H, Yucaipa, California
SB-02059	1990	Infotec Research	Compendium of Results of Obsidian Studies for Study Area Sites: Appendix to Prehistoric Sites in The Prado Basin, California: Regional Context and Significance Evaluation
SB-02068	1990	Ross, Lester A.	Glass Beads from the 1977 University of Redlands Archaeological Excavations at The Southern Tip of The Yucaipa Rancheria Site (Ca-Sbr-1000/H), Yucaipa, San Bernardino County, California
SB-02566	1977	Strand, Jennifer	The Faunal Analysis of SBR- 1000, Yucaipa, California
SB-03006	1991	Ridgeway, Ginger	Analysis of Floral-Faunal Remains from Soil Samples of The Martz Excavation
SB-03128	1996	Lerch, Michael K.	Cultural Resource Assessment of The Oak Glen Road Extension, Ave E to Ave F, Yucaipa, San Bernardino County, Ca. 13pp
SB-03130	1996	Grenda, Donn R.	Village Life at Yukaipa't: Archaeological Data Recovery at Ca-Sbr-1000/H, Yucaipa, Ca. 207pp
SB-03260	1996	Sander, Jay K.	An Archaeological Survey & Geological Monitoring at Cook's Subdivision, Yucaipa, San Bernardino County, Ca. 8pp
SB-03265	1998	Mckenna, Jeanette A. And Richard S. Shepard	Historic Archaeological Investigations of Sites Located Within the Chapman Heights Project Area, Yucaipa, San Bernardino County, Ca. 43pp
SB-03607	1998	Grenda, Donn R.	Between the Coast & The Desert: Archaeological Data Recovery at The Yukaipa't Site, CA-SBR-1000/H, Yucaipa, CA. 225PP
SB-03608	1996	Lerch, Michael K. And Michael F. Rodarte	Cultural Resource Assessment of TT15661, Yucaipa, San Bernardino County, CA. 12PP
SB-03620	1998	Bricker, Lauren, Janet L. Tearnan, And Jeanette Mckenna	Historic/Architectural Assessment of Sites Located Within the Chapman Heights Project Area, Yucaipa, CA. 53PP
SB-03821	1999	Love, Bruce	Robinson Ranch North Project, City of Yucaipa, San Bernardino County, Ca. 19pp
SB-04110	2003	Chandler, Evelyn N.	Cultural Resources Survey for the Proposed Chapman Heights Road Extension Project, City of Yucaipa, San Bernardino, Ca. 16pp
SB-04114	2001	Hemelryck, Valerie	Results of Construction Monitoring for Archaeological/Paleontological Resources, Yucaipa Valley Center Project, City of Yucaipa, San Bernardino County, Ca.11pp
SB-04227	2001	Budinger, Fred E.	Verizon Site: Oak Glen. 12pp
SB-04722	2001	Lerch, Michael K., William E. Hayden, Kurt R. Heidelberg, And Anne Q. Stoll	A Class I Cultural Resources Assessment for the FEMA/City of San Bernardino Vegetation Management Project (HMGP #1005-20), San Bernardino County, California.

Table 4-1
Previous Cultural Studies Within One Mile of the Project

Report #	Date	Author(s)	Title
SB-04838	2005	Heidelberg, Kurt And Bricker, David	For Low-Water Crossing Improvements On 10th Street at Wilson Creek in The City of Yucaipa, San Bernardino Federal Project Id #Brlks-5457(010) Agreement #08-5457
SB-04839	2005	Wlodarski, Robert J.	Records Search and Field Reconnaissance Results for The Proposed Nextel Wireless Communications Site (CA8346-A; Wippert's RV), Located At 32645 Yucaipa Boulevard, Yucaipa, San Bernardino County, California 92399.
SB-04840	2005	Hatheway, Roger	A Phase 2 Historical and Architectural Survey of The Butler/James Ranch Residence Located at The Clover Cell Site, 32645 Yucaipa Boulevard, Yucaipa, California 92399.
SB-04921	2005	Brunzell, David	Archaeological Monitoring Program Parkside Village, City of Yucaipa San Bernardino County, California
SB-04923	2005	Hoover, Anna, Gilean, William, And Dailey, Brian	An Archaeological Mitigation-Monitoring Report for Wildwood Canyon Estates 11 Tract 14625, City of Yucaipa, San Bernardino County, California
SB-05185	2006	Sander, Jay	Results of Cultural Resource Inventory of A 5-Acre Property, Assessor's Parcel #318-151-02 Located in Yucaipa, San Bernardino County, California.
SB-06136	2008	Bonner, Wayne H. And Marnie Aislin-Kay	Cultural Resource Records Search and Site Visit Results for Royal Street Communications California, LLC Candidate LA3213A (Yucaipa YUSD), 33000 Yucaipa Boulevard, Yucaipa, San Bernardino County, California.

4.2 CULTURAL RESOURCES REPORTED WITHIN ONE MILE OF THE PROJECT APE

Data from the SCCIC indicated 12 cultural resources have been documented within one mile of the project; none of which were located within the project parcel. Noted within the one-mile radius of the project, but outside of the project boundaries, are 6 residential properties, 1 mining-related site, and 2 refuse deposits. One multicomponent resource consisted of both a prehistoric and historic-era artifact scatter. Two prehistoric resources have been documented within one mile of the project; one is a site containing multiple artifacts, a trail, and potential cremation remains, the other is an isolated mano. The nearest resource to the project is the multicomponent artifact scatter site, P-36-001000, located on the south-facing bank of an ephemeral drainage approximately ½ mile to the southeast of the project site. All three of the resources consisting of prehistoric artifacts are located to the southeast along this unnamed drainage. Table 4-2 lists the cultural resources within a mile of the project area that are mapped, documented on DPR forms, and on file at the SCCIC.

Table 4-2 Cultural Resources Reported within One Mile of the Project

Resource Primary No.	Resource Trinomial No.	Resource Description
P-36-000913	CA-SBR-913	Prehistoric artifact scatter, trail, and possible cremations
P-36-001000	CA-SBR-1000	Multicomponent artifact scatter and burned bone fragments
P-36-011247	CA-SBR-11247H	Historic refuse deposit
P-36-011260	CA-SBR-11260H	Historic mining pit
P-36-012311		32645 Yucaipa Blvd, craftsman house ca. 1919 recommended 6Z not eligible for listing on the CRHR or NRHP
P-36-013963		Truesdale Homestead site remnants, ca. 1890 site not evaluated

P-36-013964		Jones Ranch buildings; ca. 1930s with two adobe outbuildings. Not evaluated
P-36-013965		Crafton Hills Airport runway and hanger building, ca. 1932. Not evaluated
P-36-013966		Cramer House citrus orchard and grounds, ca. 1932. Not evaluated
P-36-013967		Lynn Homestead residence and adobe outbuildings, ca. 1890. Not evaluated
P-36-014490	CA-SBR-12978H	Historic refuse deposit
P-36-060205		Isolated prehistoric mano

4.3 ADDITIONAL SOURCES

Additional sources consulted during the cultural resource literature review and records search include the National Register of Historic Places, the Office of Historic Preservation Archaeological Determinations of Eligibility, and the Office of Historic Preservation Directory of Properties in the Historic Property Data File, online files of the City of Yucaipa, historical newspapers databases including those of the *San Bernardino County Sun* and the *Redlands Daily Facts*, historic Sanborn Fire Insurance Maps, historic aerials, Ancestry.com, Calisphere, the Los Angeles Public Library research databases and publications including various primary and secondary historical sources dealing with the history of Yucaipa and San Bernardino County. There are no additional historic properties, historical resources, or historic landmarks recorded within the study area.

In November 2109 Ms. Austerman reviewed historic aerials and maps of the project area. The aerial photographs indicate that a residence and outbuildings were present on the project as early as 1938 through to the present (Nationwide Environmental Title Research, LLC. Aerial Photographs for T1S, R2W, San Bernardino Base Meridian available at www.historicaerials.com). The maps that were reviewed include the 1901 edition of the U.S. Department of the Interior Geologic Study *San Bernardino, California* 7.5-minute Quadrangle, and historic topographic maps and aerial photographs available on Historic Aerials online maps and (www.historicaerials.com). The 1955 topographic map indicates the presence of groves and a structure on the project site.

A review of the San Bernardino County Tax Assessor Property Information Management Internet website for the project APN indicates the construction date of the residence as 1950. Ownership history for the property lists Paul T. and Roberta L. Monk as owners from 1976 to 2006, at which time the ownership transferred to the Roberta L. Monk Trust. Ownership transferred again in 2019. A search of Ancestry.com and FamilySearch websites reveal that Paul T. (b. 2/1933; d. 12/2006) and Roberta L. Monk (b. 5/1937; d. 2007) were married in Los Angeles, California in 1961 and were residing in Yucaipa by 1976. No additional information was identified to indicate that the Monks were important to the settlement of the area.

4.4 NATIVE AMERICAN SACRED LANDS FILE SEARCH

PaleoWest contacted the NAHC, as part of the cultural resource assessment, on November 6, 2019, for a review of the SLF. The objective of the SLF search was to determine if the NAHC had any knowledge of Native American cultural resources (e.g., traditional use or gathering area, place of religious or sacred activity, etc.) within the immediate vicinity of the Project area. The NAHC responded with a letter dated November 11, 2019. The NAHC indicated that the results of the SLF search were positive and provided a list of Tribal representatives to contact. In particular,

the NAHC requested that the Moronga Band of Mission Indians and the San Manuel Band of Mission Indians be contacted and informed of the proposed project. Tribes were contacted via email and/or USPS mail between December 31, 2019 and January 3, 2020.

The following email responses were received:

BobbyRay Esparza of the Cahuilla Band of Indians responded and indicated that he has received and reviewed the project. "We do not have knowledge of any cultural resource within or near the project area. Although this project is outside the Cahuilla reservation boundary, it is within the Cahuilla traditional land use area. Therefore, we would like to express interest in this project. We request that tribal monitors from Cahuilla be present during all ground disturbing activities and to be notified of all updates with the project moving forward. The Cahuilla Band appreciates your help in preserving Tribal Cultural Resources in your project."

Ms. McCleary of the San Manuel Band of Mission Indians states that "the project is in Serrano Ancestral Territory and is therefore of interest to the tribe. We do have concerns regarding the likelihood of buried cultural resources in the project area, as it is located approximately 0.5 miles away from the village of Yucaipat (SBR-1000) and is also quite close to a water source (0.15 miles from the Oak Glen Creek). Ms. Jessica Mauck will be interfacing with the Lead Agency during the consultation process."

Mr. Onitveros of the Soboba Band of Luiseno Indians responded in an email stating that: "Soboba does have concern for the project and will be drafting a formal response."

Ms. Padilla of the Agua Caliente Band of Cahuilla Indians responded in an email inquiring: "Is the lead agency for this project SB County or the City of Yucaipa?"

Mark Cochrane of the Serrano Nation of Mission Indians request that he be notified if any cultural resources are identified during the course of the project's construction.

Mr. Mirelez of the Torres-Martinez Desert Cahuilla Indians indicated his tribe defers to Soboba.

Ms. Yocum of the San Fernando Band of Mission Indians indicated that her Tribe defers to the San Manuel Band of Mission Indians.

Any additional responses will be forwarded to the City of Yucaipa Planning Division.

5.0 FIELD INVESTIGATION

5.1 FIELD METHODS

On November 9, 2019, Ms. Austerman conducted a pedestrian survey of the project area. The undeveloped portions of the property were surveyed in systematic parallel transects spaced by approximately 15 meters (approximately 45 feet). Special attention was paid to areas of exposed soil for surface artifacts and features and to stratigraphy and rodent burrows for evidence of buried midden. The purpose of this survey was to identify and document, prior to the beginning of ground-disturbing activities, any cultural resources that might be exposed and to locate areas within the project area that might be sensitive for cultural resources.

5.2 FIELD RESULTS

The field survey revealed that the project is currently developed with a single-family residence and outbuilding consisting of a large storage structure with an attached open-sided hay barn (Figures 5-1 to 5-3). The majority of the project site is developed an open field (Figures 5-4 and 5-5). The ground surface visibility throughout the project was good, with approximately 60 percent of the surface visible. Dry grasses and puncturevine covered the field, which is currently fallow and empty of animals, behind and beside the house; evidence of weed abatement activity was noted. Several concrete standpipes were noted near the structures.

APN 0318-013-11

The buildings located at APN 0318-013-11 are comprised of a single-family residence constructed in 1950 and an associated storage/hay barn constructed ca. 1950.

The single-family residence is a one-story minimal traditional style residence constructed in 1950. It features a low-pitched cross-gable roof with asphalt shingle paper. A brick chimney is centered on the roof. The building is of wood construction with horizontal wood siding. The north elevation features windows that have been filled with plywood. A framed vent is located beneath the peak of the gable on the elevation. The east elevation features windows filled with plywood and a framed vent located beneath the peak of the gable. Potential entry doors may be located behind plywood. The south elevation features two windows filled with plywood and a framed vent located beneath the peak of the gable. The west elevation features windows boarded with plywood. A shed roof addition with windows filled with plywood is located on the northern portion of the elevation.

The storage/hay barn is a one-story agricultural building constructed ca. 1950. The building features a rectangular plan with an irregular cross-gabled roof with asphalt shingle paper. The building is of wood construction with horizontal wood siding. The north elevation features windows filled with plywood and a garage door located off-center on the elevation. A framed vent is located beneath the peak of the gable. The west elevation features non-historic vinyl windows and windows that have been filled with plywood. The center portion of the elevation is recessed. The east elevation features an entrance door and windows filled with plywood. The south elevation features windows and a doorway filled with plywood. A covered driveway with a gable roof extends from the elevation.

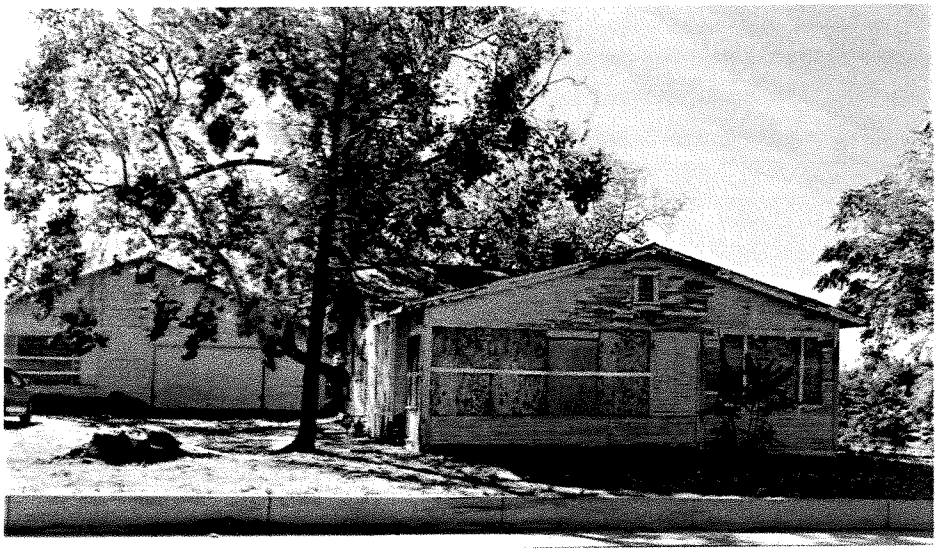

Figure 5-1 Single Family Residence in Project Site, Facing South

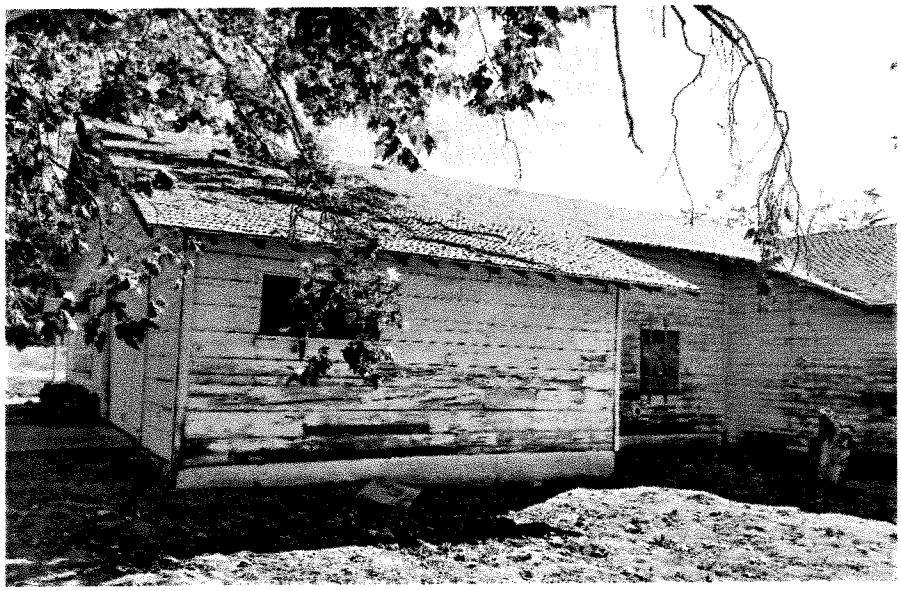

Figure 5-2 Storage and Hay Barn in Project Site, Facing East

Figure 5-3 Storage and Hay Barn in Project Site, Facing East

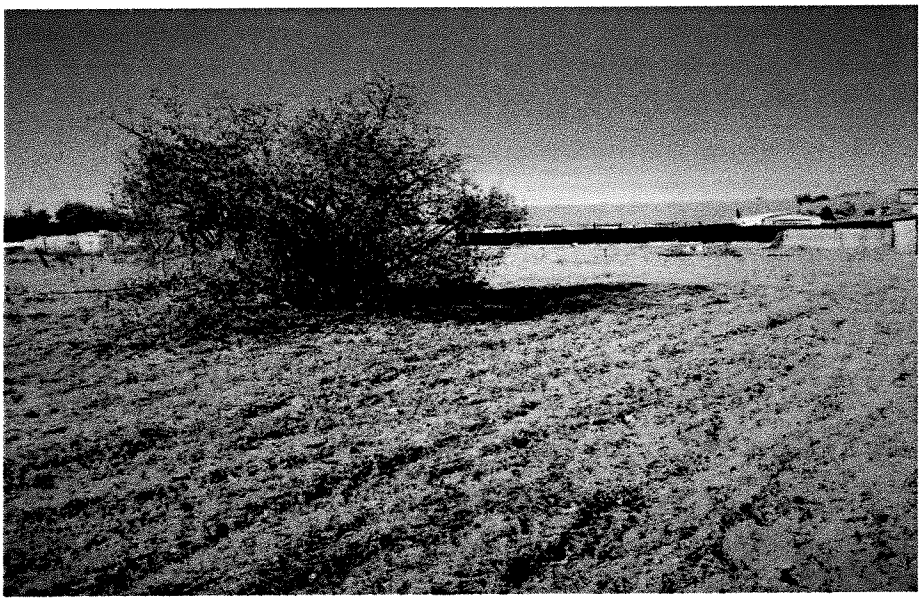

Figure 5-4 Field in Project Site, Facing East

Figure 5-5 Field in Project Site, Facing Southwest

California Register of Historical Resources Evaluation

The following presents an assessment of the historical significance of APN 0318-013-11 by applying the procedure and criteria for the CRHR. The purpose of this assessment is to evaluate the eligibility of the resource for listing on the CRHR.

CRHR Criterion 1: The buildings located at APN 0318-013-11 do not meet CRHR Criterion 1 for association with events that have made a significant contribution to the broad patterns of California's history and cultural heritage. The buildings are one of many single-family residence and agricultural properties constructed throughout California and the United States during the mid-twentieth century. Research has yielded no information to suggest that any significant events associated with the history of Yucaipa, California, or the United States are specifically associated with this property. Therefore, the buildings located at APN 0318-013-11 are not eligible for the CRHR under Criterion 1.

CRHR Criterion 2: The buildings located at APN 0318-013-11 do not meet CRHR Criterion 2 for any direct associations with the productive lives of persons important in local, state, or national history. Research has yielded little information regarding the owners and/or tenants of the property prior to 1976 when it was owned by Paul T. and Roberta L. Monk. Research has yielded no information to suggest that any persons of historical significance are specifically associated with these buildings. Therefore, the buildings located at APN 0318-013-11 are not eligible for the CRHR under Criterion 2.

CRHR Criterion 3: The buildings located at APN 0318-013-11 do not to meet CRHR Criterion 3 for embodying the distinctive characteristics of a type, period, and method of construction, or as the work of an important creative individual, or as having high artistic value. The buildings are unremarkable and common examples of a minimal traditional single-family residence and

associated agricultural building. These buildings are among many single-family residence and agricultural buildings constructed throughout southern California in this style during the mid-twentieth century. While the architects and builder of the building were not identified, it is unlikely that the building represents the work of a master. Therefore, the buildings located at APN 0318-013-11 are not eligible for the CRHR under Criterion 3.

CRHR Criterion 4: The buildings located at APN 0318-013-11 do not meet CRHR Criterion 4 since it is unlikely to yield information important to prehistory or history. It is unlikely that this property has the potential to broaden our understanding of mid-twentieth century building construction, farming, or the history of Yucaipa. Therefore, the buildings located at APN 0318-013-11 are not eligible for the CRHR under Criterion 4.

6.0 MANAGEMENT RECOMMENDATIONS

The foregoing report has provided background information on the project area, outlined the methods used in the current study, and presented the results of the various avenues of research.

The buildings located at APN 0318-013-11 were evaluated for historical significance by applying the criteria of the CRHR using data gathered during the pedestrian survey and information acquired through historical research. PaleoWest recommends that the buildings located at APN 0318-013-11 **are not eligible** for the CRHR under any criteria. Therefore, the buildings located at APN 0318-013-11 are not considered a historical resource for the purposes of CEQA.

Numerous historic-period sites have been previously documented within one mile of the project area, all of which are 0.5 mile or more from the project. Review of the historic maps indicates the presence of a residence within the project since 1955. A review of the historic aerial photographs indicates that a residence was present in 1938 and the adjoining field was utilized initially for as a grove. After 1959 the field appears to have been cross-fenced and maintained intermittently for animal keeping and grazing. The aerial photographs indicate that weed abatement has occurred periodically throughout the property since 2009. This historic use of the property as well as continual weed-abatement of the field has resulted in disturbance of the ground surface. Despite this disturbance, the potential for intact subsurface cultural material is **moderate**.

Therefore, PaleoWest recommends that all **initial ground-disturbing activities** be monitored by a qualified archaeologist. In the event cultural materials are encountered during earthmoving operations associated with the project, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the find and appropriate treatment of the discovery can be determined (California Code of Regulations, Title 14, Chapter 3, Section 15064.5(f)).

In the event human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be Native American, the County Coroner will notify the NAHC, which will determine and notify an MLD. With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The MLD recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials, preservation of Native American human remains and associated items in place, relinquishment of Native American human remains and associated items to the descendants for treatment, or any other culturally appropriate treatment.

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Yucaipa Historic Society online website www.yucaipahistory.org

Appendix A. Native American Heritage Commission

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691 Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov

November 13, 2019

Gini Austerman
PaleoWest Archaeology

VIA Email to: gausterman@paleowest.com

RE: Yucaipa Senior Housing Project, San Bernardino County

Dear Ms. Austerman:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were positive. Please contact the Morongo Band of Mission Indians and the San Manuel Band of Mission Indians on the attached list for more information. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Staff Services Analyst

Attachment

Native American Heritage Commission
Native American Contact List
San Bernardino County
11/13/2019

Agua Caliente Band of Cahuilla Indians
Patricia Garcia-Plotkin, Director
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6907
Fax: (760) 699-6924
ACBCI-THPO@aguacaliente.net

Agua Caliente Band of Cahuilla Indians
Jeff Grubbe, Chairperson
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6800
Fax: (760) 699-6919

Augustine Band of Cahuilla Mission Indians
Amanda Vance, Chairperson
P.O. Box 846 — Cahuilla
Coachella, CA, 92236
Phone: (760) 398 - 4722
Fax: (760) 369-7161
hhaines@augustinetribe.com

Cabazon Band of Mission Indians
Doug Welmas, Chairperson
84-245 Indio Springs Parkway — Cahuilla
Indio, CA, 92203
Phone: (760) 342 - 2593
Fax: (760) 347-7880
jstapp@cabazonindians-nsn.gov

Cahuilla Band of Indians
Daniel Salgado, Chairperson
52701 U.S. Highway 371 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 5549
Fax: (951) 763-2808
Chairman@cahuilla.net

Los Coyotes Band of Cahuilla and Cupeño Indians
Shane Chapparosa, Chairperson
P.O. Box 189 — Cahuilla
Warner Springs, CA, 92086-0189
Phone: (760) 782 - 0711
Fax: (760) 782-0712

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Rroad — Cahuilla
Banning, CA, 92220 — Serrano
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Morongo Band of Mission Indians
Denisa Torres, Cultural Resources Manager
12700 Pumarra Rroad — Cahuilla
Banning, CA, 92220 — Serrano
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Ramona Band of Cahuilla
John Gomez, Environmental Coordinator
P. O. Box 391670 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
jgomez@ramona-nsn.gov

Ramona Band of Cahuilla
Joseph Hamilton, Chairperson
P.O. Box 391670 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
admin@ramona-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Yucaipa Senior Housing Project, San Bernardino County.

Native American Heritage Commission
Native American Contact List
San Bernardino County
11/13/2019

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
P.O. Box 221838 — Kitanemuk
Newhall, CA, 91322 — Vanyume
Phone: (503) 539 - 0933 — Tataviam
Fax: (503) 574-3308
ddyocum@comcast.net

San Manuel Band of Mission Indians
Lee Clauss, Director of Cultural Resources
26569 Community Center Drive — Serrano
Highland, CA, 92346
Phone: (909) 864 - 8933
Fax: (909) 864-3370
lclauss@sanmanuel-nsn.gov

Santa Rosa Band of Cahuilla Indians
Steven Estrada, Chairperson
P.O. Box 391820 — Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
mflaxbeard@santarosacahuilla-nsn.gov

Santa Rosa Band of Cahuilla Indians
Mercedes Estrada,
P. O. Box 391820 — Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
mercedes.estrada@santarosacahuilla-nsn.gov

Serrano Nation of Mission Indians
Mark Cochrane, Co-Chairperson
P. O. Box 343 — Serrano
Patton, CA, 92369
Phone: (909) 528 - 9032
serranonation1@gmail.com

Serrano Nation of Mission Indians
Wayne Walker, Co-Chairperson
P. O. Box 343 — Serrano
Patton, CA, 92369
Phone: (253) 370 - 0167
serranonation1@gmail.com

Soboba Band of Luiseno Indians
Scott Cozart, Chairperson
P. O. Box 487 — Cahuilla
San Jacinto, CA, 92583 — Luiseno
Phone: (951) 654 - 2765
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 — Cahuilla
San Jacinto, CA, 92581 — Luiseno
Phone: (951) 663 - 5279
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Torres-Martinez Desert Cahuilla Indians
Michael Mirelez, Cultural Resource Coordinator
P.O. Box 1160 — Cahuilla
Thermal, CA, 92274
Phone: (760) 399 - 0022
Fax: (760) 397-8146
mmirelez@tmdci.org

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Yucaipa Senior Housing Project, San Bernardino County.

PALEOWEST

T: 917.789.1237
info@paleowest.com

LOS ANGELES
917 S. Ivy
Monrovia, CA 91016

December 31, 2019

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Road
Banning, CA 92220

Re: Cultural Resource Investigation for the Yucaipa Senior Housing Project, Yucaipa, San Bernardino County, California

Dear Mr. Martin,

On behalf of Teck Properties, PaleoWest is conducting a cultural resource investigation, in compliance with the California Environmental Quality Act. The proposed project is a senior housing development on Assessor's Parcel Number (APN) 0318-013-11. Plotted on the attached map is the location of the proposed project in San Bernardino County, California. Specifically, the project is located in Township 1 and 2 South, Range 2 West of the San Bernardino Landgrant as depicted on the *Yucaipa, California* USGS 7.5-minute Topographic Quadrangle Map. There will be ground disturbance associated with the project.

A cultural resource literature review and records search conducted at the South Central Coast Information Center (SCCIC) housed at the California State University Fullerton, indicates that 42 cultural resource studies have been conducted within one mile of the Project area; none of which are in or adjacent to the project boundary. The records search indicated that no prehistoric archaeological resources have been identified the Project area or the immediate vicinity; however, three (3) prehistoric archaeological resources and nine (9) historic-period archaeological resource have been identified within a one-mile radius of the Project area. PaleoWest conducted a survey of the Project and did not identify any archaeological resources as a result of the survey.

As part of the cultural resource investigation of the Project area, PaleoWest requested a search of the Native American Heritage Commission's (NAHC's) *Sacred Lands File* on November 1, 2019. The NAHC responded on November 14, 2019 indicating that the results of the file search for the Project area were positive. The NAHC indicated that the Morongo Band of Mission Indians should be contacted for more information. The NAHC provided a contact list of additional tribal representatives that may have information about the Project area. Should your records show that cultural properties exist within or near the Project area (see enclosed map), please contact me at (951) 264-4287 or gausterman@paleowest.com. I will follow-up in two weeks with a phone call or email if I do not hear from you.

Your comments are very important to us, and to the successful completion of this Project. I look forward to hearing from you in the near future. Thank you, in advance, for taking the time to review this request.

Respectfully yours,

Gini Austerman, M.A. RPA
Senior Archaeologist
PaleoWest Archaeology

PALEOWEST

T: 917.769.1237
info@paleowestcom

LOS ANGELES
617 S. Ivy
Monrovia, CA 91016

December 31, 2019

Morongo Band of Mission Indians
Denisa Torres, Cultural Resources Manager
12700 Pumarra Road

Re: Cultural Resource Investigation for the Yucaipa Senior Housing Project, Yucaipa, San Bernardino County, California

Dear Ms. Torres,

On behalf of Teck Properties, PaleoWest is conducting a cultural resource investigation, in compliance with the California Environmental Quality Act. The proposed project is a senior housing development on Assessor's Parcel Number (APN) 0318-013-11. Plotted on the attached map is the location of the proposed project in San Bernardino County, California. Specifically, the project is located in Township 1 and 2 South, Range 2 West of the San Bernardino Landgrant as depicted on the *Yucaipa, California* USGS 7.5-minute Topographic Quadrangle Map. There will be ground disturbance associated with the project.

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Your comments are very important to us, and to the successful completion of this Project. I look forward to hearing from you in the near future. Thank you, in advance, for taking the time to review this request.

Respectfully yours,

Gini Austerman, M.A. RPA
Senior Archaeologist
PaleoWest Archaeology

PALEOWEST

T: 917.769.1237
info@paleowest.com

LOS ANGELES
517 S. 17
Monrovia, CA 91016

December 31, 2019

San Manuel Band of Mission Indians
Lee Clauss, Director of Cultural Resources
26569 Community Center Drive
Highland, CA 92346

Re: Cultural Resource Investigation for the Yucaipa Senior Housing Project, Yucaipa, San Bernardino County, California

Dear Ms. Clauss,

On behalf of Teck Properties, PaleoWest is conducting a cultural resource investigation, in compliance with the California Environmental Quality Act. The proposed project is a senior housing development on Assessor's Parcel Number (APN) 0318-013-11. Plotted on the attached map is the location of the proposed project in San Bernardino County, California. Specifically, the project is located in Township 1 and 2 South, Range 2 West of the San Bernardino Landgrant as depicted on the *Yucaipa, California* USGS 7.5-minute Topographic Quadrangle Map. There will be ground disturbance associated with the project.

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Respectfully yours,

Gini Austerman, M.A. RPA
Senior Archaeologist
PaleoWest Archaeology

Appendix B.
Department of Parks and Recreation
Form 523

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code | Reviewer | Date

 *Resource Name or #: APN 0318-013-11

P1. Other Identifier: N/A

***P2. Location:** ☐ Not for Publication ■ Unrestricted **and** (P2b and P2c or P2d. Attach a Location Map as necessary.)

***a. County:** San Bernardino

***b. USGS 7.5' Quad:** Yucaipa **Date:** 1980 **T** S; **R** W; ¼ **of** ¼ **of Sec** ; SB **B.M.**

c. Address: N/A City: Yucaipa Zip: 92399

d. UTM: Zone: 11N; 492583 mE/ 3765880 mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)
The property is located at Assessor Parcel Number (APN) 0318-013-11

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The buildings located at APN 0318-013-11 are comprised of a single-family residence constructed in 1950 and an associated storage/hay barn constructed ca. 1950.

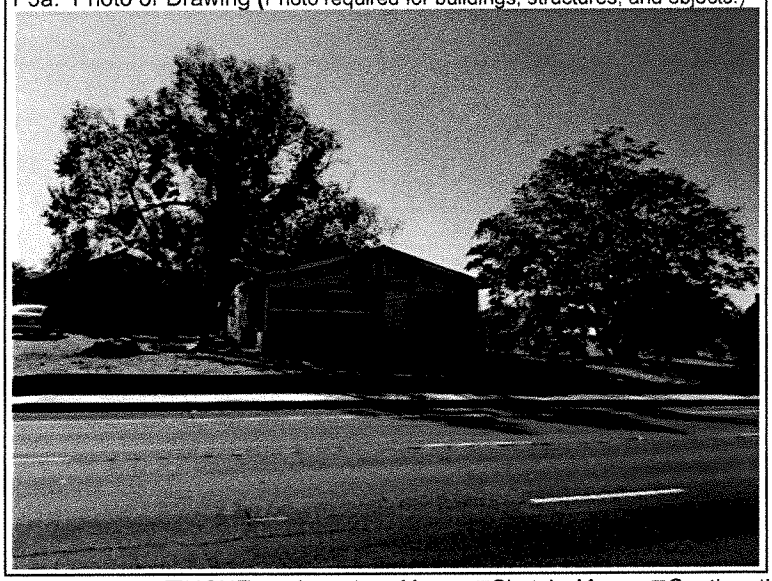
The single-family residence is a one-story minimal traditional style residence constructed in 1950. It features a low-pitched cross-gable roof with asphalt shingle paper. A brick chimney is centered on the roof. The building is of wood construction with horizontal wood siding. The north elevation features windows that have been filled with plywood. A framed vent is located beneath the peak of the gable on the elevation. The east elevation features windows filled with plywood and a framed vent located beneath the peak of the gable. Potential entry doors may be located behind plywood. The south elevation features two windows filled with plywood and a framed vent located beneath the peak of the gable. The west elevation features windows boarded with plywood. A shed roof addition with windows filled with plywood is located on the northern portion of the elevation.

The storage/hay barn is a one-story agricultural building constructed ca. 1950. The building features a rectangular plan with an irregular cross-gabled roof with asphalt shingle paper. The building is of wood construction with horizontal wood siding. The north elevation features windows filled with plywood and a garage door located off-center on the elevation. A framed vent is located beneath the peak of the gable. The west elevation features non-historic vinyl windows and windows that have been filled with plywood. The center portion of the elevation is recessed. The east elevation features an entrance door and windows filled with plywood. The south elevation features windows and a doorway filled with plywood. A covered driveway with a gable roof extends from the elevation.

***P3b. Resource Attributes:** (List attributes and codes) HP33. Farm/ranch

***P4. Resources Present:** ■Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #)
View of north elevation, facing south, November 9, 2019

***P6. Date Constructed/Age and Sources:**
■Historic
☐Prehistoric ☐Both
1950 (San Bernardino County Assessor)

***P7. Owner and Address:**
Teck Properties

***P8. Recorded by:** (Name, affiliation, and address)
PaleoWest
3990 Old Town Avenue, Suite C101
San Diego, CA 92110

***P9. Date Recorded:** December 2019

***P10. Survey Type:** (Describe)
Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Cultural Resources Survey for the Yucaipa Senior Housing Project, Yucaipa, San Bernardino County, California. PaleoWest, 2019

***Attachments:** ☐NONE ■Location Map ■Sketch Map ■Continuation Sheet ■Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Primary #
HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

*Resource Name or # (Assigned by recorder) APN 0318-013-11
*Recorded by: PaleoWest Archaeology
*Date: November 2019

B1. Historic Name: N/A
B2. Common Name: APN 0318-013-11
B3. Original Use: Farm
B4. Present Use: Abandoned
***B5. Architectural Style:** Minimal traditional
***B6. Construction History:** (Construction date, alterations, and date of alterations)
Constructed 1950 (San Bernardino County Assessor)

***B7. Moved?** ■No □Yes □Unknown **Date:** N/A **Original Location:** N/A
***B8. Related Features:** N/A
B9a. Architect: Unknown
b. Builder: Unknown
***B10. Significance: Theme:** N/A
Area: N/A
Period of Significance: N/A
Property Type: Recreational facility
Applicable Criteria: N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

In California, the historic era is generally divided into three periods: the Spanish Period (1769 to 1821), the Mexican Period (1821 to 1848), and the American Period (1848 to present).

The Spanish Period, 1769-1821, is characterized by exploration of southern California and the establishment of missions in the San Diego and Los Angeles regions. Early exploration of the San Bernardino County area began slowly until 1772 when Captain Pedro Fages and his men crossed through the Gorgonio Pass on an exploratory trip northward. With the Spanish intrusion of the late 18th century came a drastic change in lifestyle for the natives of southern California. Incorporation of the indigenous populations into the mission system generally led to the disruption of native cultures and changes in subsistence and land use practices (Harley 1988). An asistencia of the Mission San Gabriel was established in the San Bernardino area in 1819 at the Indian village of *Guachama* and later named San Bernardino by the Catholic padres (Gudde 1998). Another village, *Yu'kaipa't*, was located in the vicinity of the project site. The Spanish utilized this area primarily for grazing cattle (www.yucaipahistory.org).

In 1821, Mexico overthrew Spanish rule and the missions began to decline. By 1833, the Mexican government passed the Secularization Act, and the missions, reorganized as parish churches, lost their vast land holdings, and released their neophytes (Cleland 1962). In 1834, a prominent group of Californians coerced Governor Figueroa in to creating the "Provisional Regulations." These regulations made mission lands available for their occupation (Beattie and Beattie 1939).

(See Continuation Sheet)

(Sketch Map with north arrow required.)

Please see attached

B11. Additional Resource Attributes: (List attributes and codes) N/A

***B12. References:**
Refer to Continuation Sheet

B13. Remarks: N/A

***B14. Evaluator:** J. Castells, MA

***Date of Evaluation:** December 2019

*Required information

***D6. Significance (Continued):**

During the Mexican Period, the ranchos were predominantly devoted to cattle, with great tracts of land used for grazing. The area in the vicinity of the proposed project was surrounded by several ranchos during the Mexican Period. These included the El Muscupiabe Rancho of Miguel Blanco (Michael White) and Henry Hancock to the northwest, the Bandini and Rubidoux Ranchos to the south, and the Cucamongo Rancho to the west. The project is within the original San Bernardino Land Grant, granted to Don Antonio Maria Lugo by Governor Juan Alvarez in 1842. Diego Sepulveda, nephew of Lugo, was given the area that is now west Yucaipa and built an adobe house there. This rancho holding consisted of 37,700 acres that encompassed the entire San Bernardino Valley. Much of the rancho acreage was used for cattle grazing (Ingersoll 1904; Beattie 1925; Beattie and Beattie 1951).

During this period cattle ranching, including trade in tallow and hides, was more prevalent than agricultural activities. Livestock and horticulture were substantial businesses until the Gold Rush of 1849. Hostilities arose between the Mexicans and the newly arriving Americans from the east; in 1848 the United States officially obtains California from Mexico through the Treaty of Guadalupe Hidalgo in 1848 (Cleland 1962).

The American Period, 1848-Present, began with the Treaty of Guadalupe Hidalgo. In 1850, California was accepted into the Union as the 31st state, driven by the increase in population due to the Gold Rush.

Among the first Anglo-Americans to cross the area were Jedediah Smith and his party traveling through the Mojave Desert on their way to Mission San Gabriel, stopping to camp near the present-day Rialto, west of the project (Stoebe and Bemis 1976). As travel along the Santa Fe Trail during the early American Period brought more settlers, the pattern of settlement developed along the San Bernardino Mountain foothills and drainages. A colony was established in 1851 by a large group of Mormons who eventually purchased land, including the Lugo rancho holdings, in present-day San Bernardino (Stoebe and Bemis 1976).

The completion of the Southern Pacific Railroad line from Los Angeles through the San Gorgonio Pass in 1876 brought a huge influx of new arrivals from the East. The trains transported settlers into the area, creating a period of agricultural and land development, ultimately resulting in the establishment of San Bernardino County in 1853. Smaller railroad lines were constructed to connect the outlying communities with the larger transportation corridors. Transportation, agriculture, and the control of water have continued to be central themes in the settlement, development, and growth of San Bernardino County (Robinson 1979).

San Bernardino County. Captain Jefferson Hunt of the Mormon Battalion led a group of settlers into San Bernardino in 1851, and the Mormon Colony purchased land that same year. Brigham Young recalled the Mormons to Salt Lake City six years later (Haenszel 1992). San Bernardino County was created from parts of Los Angeles, San Diego, and Mariposa Counties in 1853. Gold was discovered in Holcomb and Bear Valleys in the San Bernardino Mountains in 1860. Silver was being mined at Ivanpah in 1870, and the rich silver mines of the Calico district were developed in the 1880s. Borax was first discovered in 1862 in the Searles Dry Lake area near Trona (Hoover et al. 1990). By the early 1880s, citriculture was established as the economic base of the community. Produce ultimately assumed prominence as the county's economic base, with thousands of acres under cultivation by the beginning of World War I (McGroarty 1911).

Yucaipa. This section was taken largely from the Yucaipa Historical Society website. In 1851, the Mormons sold some of their recently obtained Rancho San Bernardino acreage to American settlers. James Waters purchased land in the lower Yucaipa area, including the Sepulveda adobe. Utilizing these bricks, he constructed a new home, now known as the Yucaipa Adobe. Settlers to the area planted grain and groves of fruit and citrus in the lower areas as well as orchards of apples and cherries in the higher elevations. In 1910, a subdivision of 11,000 acres of the Yucaipa area was offered in 5, 10, and 20-acre lots by the Redlands and Yucaipa Land Company. Following World War II, fruit production dropped; groves were replaced by chicken and egg ranches and small residential tracts, as well as trailer parks. The City of Yucaipa was incorporated in 1989; housing developments eventually replaced the chicken ranches, agricultural fields and citrus groves (www.yucaipahistory.org).

(See Continuation Sheet)

***D6. Significance (Continued):**

APN 0318-013-11. In November 2109 Ms. Austerman reviewed historic aerials and maps of the project area. The aerial photographs indicate that a residence and outbuildings were present on the project as early as 1938 through to the present; however it appears that the extant buildings on the property were constructed between 1938 and 1959 (Nationwide Environmental Title Research, LLC. Aerial Photographs for T1S, R2W, San Bernardino Base Meridian available at www.historicaerials.com). A review of the San Bernardino County Tax Assessor Property Information Management Internet website for the project APN indicates the construction date of the residence as 1950. The maps that were reviewed include the 1901 edition of the U.S. Department of the Interior Geologic Study *San Bernardino, California* 7.5-minute Quadrangle, and historic topographic maps and aerial photographs available on Historic Aerials online maps and (www.historicaerials.com). The 1955 topographic map indicates the presence of groves and a structure on the project site.

Ownership history for the property lists Paul T. and Roberta L. Monk as owners from 1976 to 2006, at which time the ownership transferred to the Roberta L. Monk Trust. Ownership transferred again in 2019. A search of Ancestry.com and FamilySearch websites reveal that Paul T. (b. 2/1933; d. 12/2006) and Roberta L. Monk (b. 5/1937; d. 2007) were married in Los Angeles, California in 1961 and were residing in Yucaipa by 1976. No information was identified to indicate that the Monks were important to the settlement of the area. Research has yielded no additional information regarding any owners, tenants, or persons associated with the buildings located at APN 0318-013-11

CRHR Evaluation

The historical significance of the subject property was determined by applying the procedure and criteria forth by the California Register of Historical Resources (CRHR).

CRHR Criterion 1: The buildings located at APN 0318-013-11 do not meet CRHR Criterion 1 for association with events that have made a significant contribution to the broad patterns of California's history and cultural heritage. The buildings are one of many single-family residence and agricultural properties constructed throughout California and the United States during the mid-twentieth century. Research has yielded no information to suggest that any significant events associated with the history of Yucaipa, California, or the United States are specifically associated with this property. Therefore, the buildings located at APN 0318-013-11 are not eligible for the CRHR under Criterion 1.

CRHR Criterion 2: The buildings located at APN 0318-013-11 do not meet CRHR Criterion 2 for any direct associations with the productive lives of persons important in local, state, or national history. Research has yielded little information regarding the owners and/or tenants of the property prior to 1976 when it was owned by Paul T. and Roberta L. Monk. Research has yielded no information to suggest that any persons of historical significance are specifically associated with these buildings. Therefore, the buildings located at APN 0318-013-11 are not eligible for the CRHR under Criterion 2.

CRHR Criterion 3: The buildings located at APN 0318-013-11 do not to meet CRHR Criterion 3 for embodying the distinctive characteristics of a type, period, and method of construction, or as the work of an important creative individual, or as having high artistic value. The buildings are unremarkable and common examples of a minimal traditional single-family residence and associated agricultural building. These buildings are among many single-family residence and agricultural buildings constructed throughout southern California in this style during the mid-twentieth century. While the architects and builder of the building were not identified, it is unlikely that the building represents the work of a master. Therefore, the buildings located at APN 0318-013-11 are not eligible for the CRHR under Criterion 3.

CRHR Criterion 4: The buildings located at APN 0318-013-11 do not meet CRHR Criterion 4 since it is unlikely to yield information important to prehistory or history. It is unlikely that this property has the potential to broaden our understanding of mid-twentieth century building construction, farming, or the history of Yucaipa. Therefore, the buildings located at APN 0318-013-11 are not eligible for the CRHR under Criterion 4.

***B12. References (Continued):**

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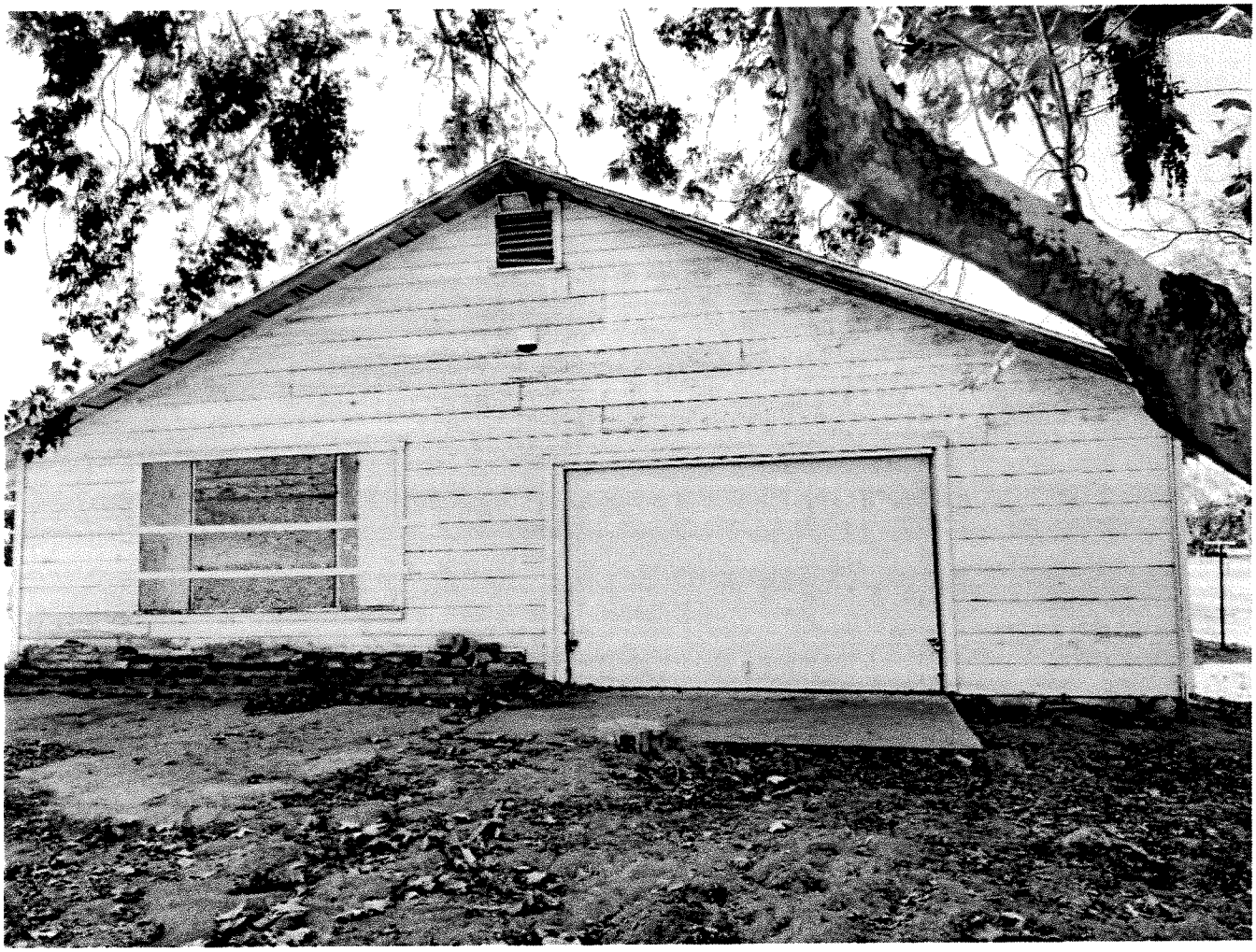
East elevation of single-family residence, facing southwest

South elevation, facing north

West elevation of single-family residence, facing east



North elevation of storage/hay barn, facing south

South elevation of storage/hay barn, facing north

State of California — The Resources Agency	Primary #
DEPARTMENT OF PARKS AND RECREATION	HRI#
LOCATION MAP	Trinomial

Page 11 of 12 *Resource Name or # (Assigned by recorder) APN 0318-013-11

*Recorded by: PaleoWest Archaeology *Date: November 2019 ■Continuation ☐ Update

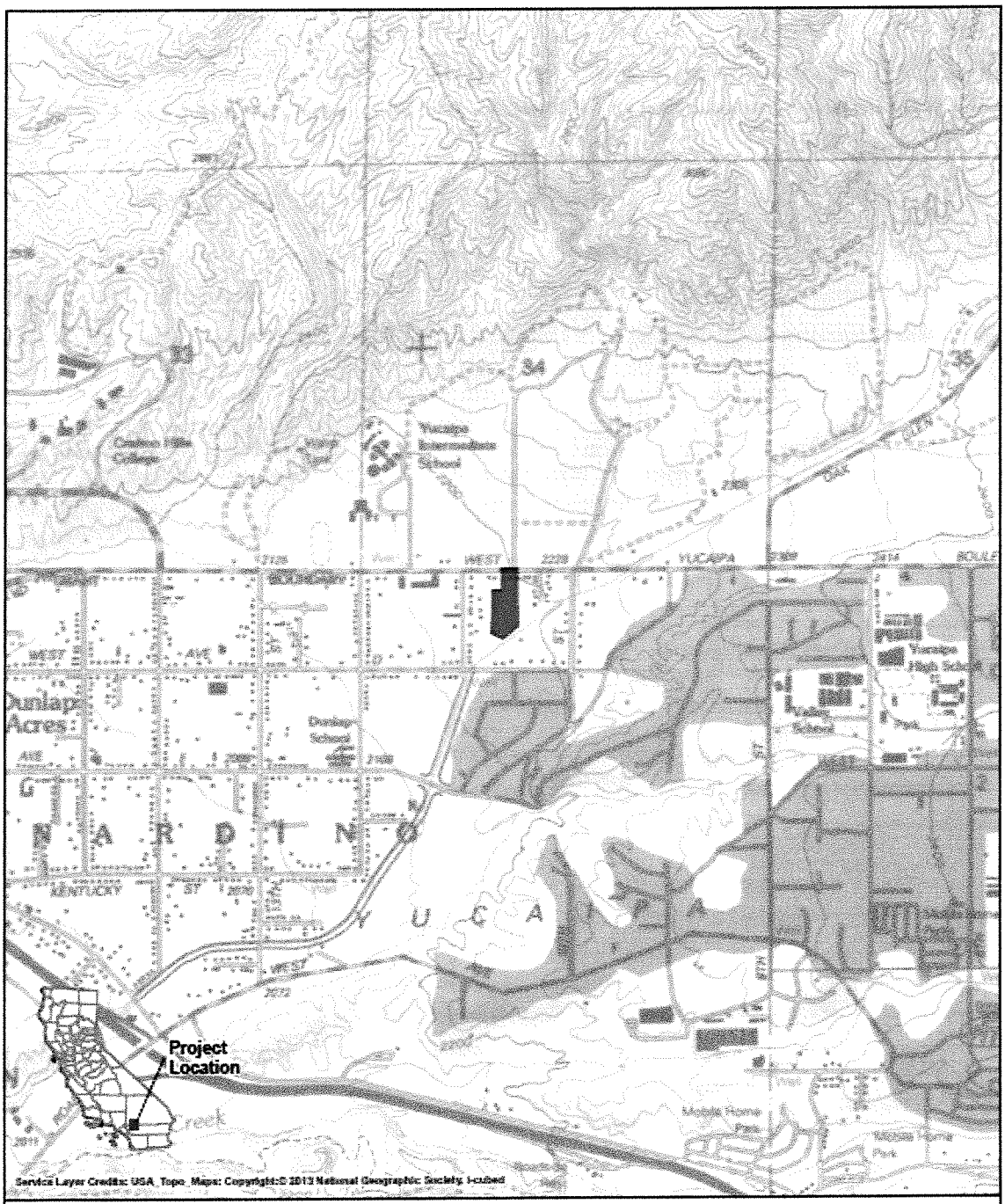


Figure 2
Project Location Map
USGS 7.5' Quadrangle: Yucaipa, Ca (1980)
T1S R2W Sec 34 and San Bernardino Land Grant
NAD 83 UTM Zone 11

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary #
HRI#
Trinomial

 *Resource Name or # (Assigned by recorder) APN 0318-013-11

*Recorded by: PaleoWest Archaeology *Date: November 2019 ■Continuation □ Update

Figure 3
Project Area Map
USGS 7.5' Quadrangle: Yucaipa, Ca (1980)
T1S R2W Sec 34 and San Bernardino Land Grant
NAD 83 UTM Zone 11

*Required information

Biological Technical Report
for the
Yucaipa Business Park Project

San Bernardino County, California

Prepared For:

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P.O. Box 639
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Prepared By:

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April 2024

TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1 Project Description and Location 1
2.0 SPECIAL-STATUS SPECIES REGULATIONS 1
2.1 Federal Regulations 1
2.1.1 The Federal Endangered Species Act 1
2.1.2 Migratory Bird Treaty Act 4
2.1.3 Federal Clean Water Act 4
2.2 State and Local Regulations 6
2.2.1 California Endangered Species Act 6
2.2.2 Fully Protected Species 6
2.2.3 California Fish and Game Code 7
2.2.4 Porter-Cologne Water Quality Act 8
2.2.5 California Desert Native Plants Act 9
2.2.6 San Bernardino County Protections 9
2.2.7 City of Yucaipa 10
3.0 METHODS 10
3.1 Literature Review 10
3.2 Field Survey 12
3.2.1 Biological Reconnaissance Survey 12
4.0 RESULTS 12
4.1 Literature Review 12
4.1.1 Special-Status Plants and Wildlife 12
4.1.2 U.S. Fish and Wildlife Service Designated Critical Habitat 13
4.1.3 Preliminary Aquatic Resources Delineation Literature Review 13
4.2 Biological Reconnaissance Survey 14
4.2.1 Property Characteristics 14
4.2.2 Vegetation Communities 14
4.2.3 Plants 15
4.2.4 Wildlife 17
4.2.5 Potential for Special-Status Plant and Wildlife Species to Occur on the Project Site 17
4.2.6 Preliminary Aquatic Resources Delineation 23
4.2.7 Raptors and Migratory Birds 23
4.2.8 Wildlife Movement Corridors, Linkages, and Significant Ecological Areas 23

4.2.9 Local Policies and Ordinances 24
5.0 RECOMMENDATIONS 24
5.1 Crotch Bumble Bee Pre-Construction Survey 24
5.2 Pre-Construction Surveys for Burrowing Owl 25
5.3 Pre-Construction Nesting Bird Survey 25
5.4 Pre-Construction Bat Surveys 26
5.5 Avoidance of Wilson Creek 26
5.6 Additional Recommendations 27
6.0 CERTIFICATION 28
7.0 LITERATURE CITED 29

LIST OF TABLES

Table 1. Weather Conditions During the Survey 14
Table 2. CNPS Status Designations 17

LIST OF FIGURES

Figure 1. Project Vicinity 2
Figure 2. Project Location 3
Figure 3. Biological Survey Results 16

LIST OF APPENDICES

Appendix A – Representative Site Photographs
Appendix B – Plant Species Observed
Appendix C – Wildlife Species Observed
Appendix D – Potential for Occurrence of Sensitive Plant Species
Appendix E – Potential for Occurrence of Sensitive Wildlife Species

LIST OF ACRONYMS AND ABBREVIATIONS

Term	Definition
˚F	Degrees Fahrenheit
BMPs	Best Management Practices
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations

Term	Definition
City	City of Yucaipa
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CNPSEI	California Native Plan Society's Electronic Inventory
CRPR	California Rare Plant Rank
CWA	Clean Water Act
ESA	Endangered Species Act
FR	Federal Register
GPS	Global Positioning System
MBTA	Migratory Bird Treaty Act
mph	miles per hour
NHD	National Hydrology Dataset
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	Ordinary High Water Mark
Project	Yucaipa Business Park
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SSC	California Species of Special Concern
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WBWG	Western Bat Working Group
WL	State Watch List
WMMM	Western Monarch Milkweed Mapper
WOTUS	Waters of the U.S.

1.0 INTRODUCTION

ECORP Consulting, Inc. conducted a biological reconnaissance survey at an approximately 5.7-acre property (Assessor Parcel Number 0318-013-11) in the City of Yucaipa, in San Bernardino County, California (Figure 1*)*. The survey was conducted to identify any potential biological resources that could be affected by the proposed Yucaipa Business Park Project (Project), and for the purposes of identifying any biological constraints that would affect the proposed site plan for the Project. The Project will be subject to county, state, and federal regulations regarding compliance with the federal Endangered Species Act (ESA), California ESA, Migratory Bird Treaty Act (MBTA), and California Fish and Game Code.

1.1 Project Description and Location

The Proposed Project is located on a 5.7-acre site on the south side of Yucaipa Boulevard between 10th street and 11th street in the City of Yucaipa (City; see Figure 2). The Project site is predominately vacant although there are two dilapidated structures (condemned residences) clustered at the northeastern portion of the site, adjacent to Yucaipa Boulevard. It is assumed that these structures would be demolished as part of the Project.

The Project site is bounded by a golf course and residential development to the north, across Yucaipa Boulevard; residential and commercial development to the west, including a tow and storage yard; San Bernardino County Flood Control Channel (Wilson Creek) and residential development to the south; and an undeveloped parcel and residential development to the east. The Project site is designated by the City General Plan as "General Commercial." The elevation at the Project site is approximately 2,200 feet (670 meters) above mean sea level.

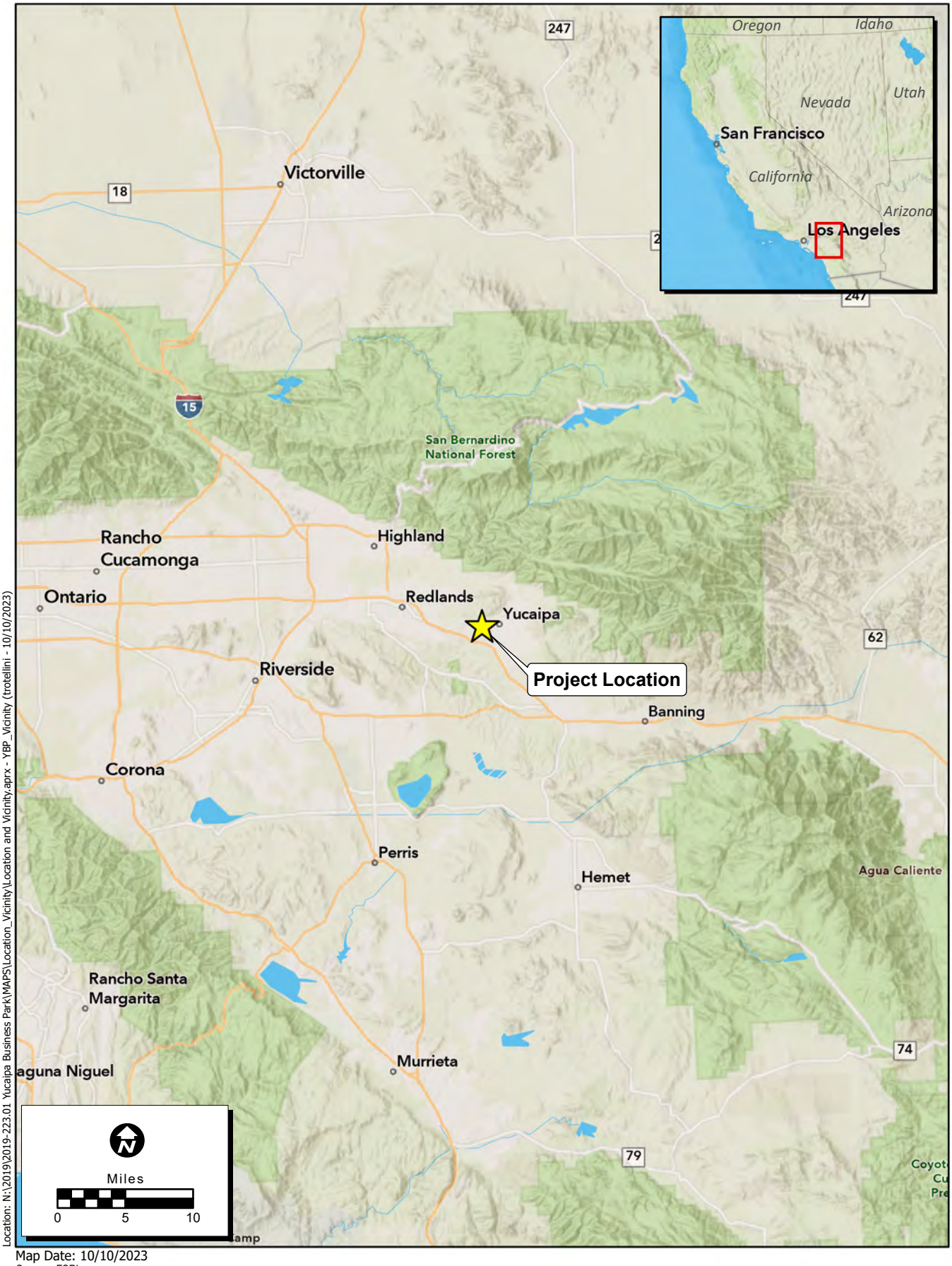
2.0 SPECIAL-STATUS SPECIES REGULATIONS

This biological reconnaissance survey was conducted to identify potential biological resource constraints and ensure compliance with state and federal regulations regarding listed, protected, and sensitive species. The regulations are detailed below.

2.1 Federal Regulations

2.1.1 The Federal Endangered Species Act

The federal ESA protects plants and animals that are listed as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service. Section 9 of the ESA prohibits the taking of endangered wildlife, where taking is defined as "*harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct*" (50 Code of Federal Regulations [CFR] 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 U.S. Code 1538). Under



Location: N:\2019\2019-223.01 Yucaipa Business Park\MAPS\Location_Vicinity\Location and Vicinity.aprx - YBP_Vicinity (trotellini - 10/10/2023)

Map Date: 10/10/2023

Sources: ESRI

Figure 1. Project Vicinity

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2019-223.02 Yucaipa Business Park

Location: N:\2019\2019-223.01 Yucaipa Business Park\MAPS\Location_Vicinity\Location and Vicinity.aprx - YBP_Location (trotellini - 10/10/2023)

Map Date: 10/10/2023

Sources: ESRI, Maxar (2023)

Figure 2. Project Location

Section 7 of the ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of the ESA provides for issuance of Incidental Take Permits where no other federal actions are necessary provided a Habitat Conservation Plan is developed.

2.1.2 Migratory Bird Treaty Act

The MBTA implements international treaties between the U.S. and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities including hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR Part 13 General Permit Procedures and 50 CFR Part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

2.1.3 Federal Clean Water Act

The purpose of the federal Clean Water Act (CWA) is to "*restore and maintain the chemical, physical, and biological integrity of the nation's waters.*" Section 404 of the CWA prohibits the discharge of dredged or fill material into Waters of the U.S. without a permit from the U.S. Army Corps of Engineers (USACE).

Under Section 404 of the federal CWA, potential Waters of the U.S., including wetlands, may be regulated by the (USACE). The limit of USACE jurisdiction for non-tidal watercourses (without adjacent wetlands) is defined in 33 CFR 328.4(c)(1) as the Ordinary High Water Mark (OHWM).

The OHWM is defined as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. The upstream limits of other waters are defined as the point where the OHWM is no longer perceptible.

Jurisdictional Waters of the U.S. (WOTUS) are delineated in accordance with the "Revised Definition of 'Waters of the United States'" rule, published in the Federal Register (FR) in 2022 and which became final on January 18, 2023. This rule, set forth by the U.S. Environmental Protection Agency (USEPA) and USACE, was consistent with the pre-2015 regulatory definition as all waters that are currently used, or were used in the past, or may be susceptible to use in interstate commerce, including all waters subject to the ebb and flow of the tide. This definition also includes all interstate waters, including interstate wetlands, interstate lakes, rivers, streams (including all intermittent and ephemeral streams), mudflats, sand flats, sloughs, and prairie potholes, wet meadows, playa lakes, or natural ponds where the use, degradation, or

destruction of which could affect interstate or foreign commerce. Under this rule, WOTUS do not include prior converted cropland.

The definition of WOTUS in accordance with this rule (40 CFR 230.3[s]), is summarized below.

> "1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
>
> 2. All interstate waters including interstate wetlands;
>
> 3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters: (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) Which are used or could be used for industrial purpose by industries in interstate commerce;
>
> 4. All impoundments of waters otherwise defined as waters of the U.S. under the definition;
>
> 5. Tributaries of waters identified in paragraphs (s)(1)-(4) of this section;
>
> 6. The territorial sea; and
>
> 7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not WOTUS."

On May 25, 2023, the U.S. Supreme Court adopted a narrower definition of WOTUS in the case *Sackett v. Environmental Protection Agency*. Under the majority opinion, WOTUS refers to "geographical features that are described in ordinary parlance as 'streams, oceans, rivers, and lakes' and to adjacent wetlands that are 'indistinguishable' from those bodies of water due to a continuous surface connection." On August 29, 2023, the agencies issued a final rule to amend the final "Revised Definition of 'Waters of the United States'" rule to conform the definition of "waters of the United States" to the U.S. Supreme Court's May 25, 2023, decision in the case of *Sackett v. Environmental Protection Agency*.

Parts of the January 2023 Rule are invalid under the U.S. Supreme Court's interpretation of the CWA in the *Sackett* decision. Therefore, the agencies have amended key aspects of the regulatory text to conform to the Court's decision. Key changes under the amendment include:

- Definition of "adjacent" is now "having a continuous surface connection;"
- Only tributaries that are relatively permanent, standing or continuously flowing bodies of water (or tributaries with a continuous surface connection to those) are considered jurisdictional;

- Interstate wetlands are no longer jurisdictional just by virtue of being interstate; and
- Significant nexus test is eliminated.

Where areas jurisdictional to the USACE are present, and will be impacted by a project, the project proponent must usually apply for permitting with the agency, which generally consists of submittal of a Pre-Construction Notification under Section 404 of the CWA. As of the writing of this report, we do not know the details of how the individual USACE offices will implement the conforming rule for permitting purposes.

2.2 State and Local Regulations

2.2.1 California Endangered Species Act

The California ESA generally parallels the main provisions of the ESA but, unlike its federal counterpart, the California ESA applies the take prohibitions to species proposed for listing (called "candidates" by the state). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the California Fish and Game Code as "*hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill*." The California ESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with the California Department of Fish and Wildlife (CDFW) to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

2.2.2 Fully Protected Species

The State of California first began to designate species as *fully protected* prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians, reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the federal and/or California ESA. Previously, the regulations that implement the Fully Protected Species Statute (California Fish and Game Code § 4700) provide that fully protected species may not be taken or possessed at any time. However, as of July 10, 2023 Senate Bill 147 (SB147) was signed into law, authorizing CDFW to issue take permits under the California ESA for fully protected species for qualifying projects through 2033. As stated in section 2081.15 of SB147, qualifying projects include:

- A maintenance, repair, or improvement project to the State Water Project, including existing infrastructure, undertaken by the Department of Water Resources;
- A maintenance, repair, or improvement project to critical regional or local water agency infrastructure;
- A transportation project, including any associated habitat connectivity and wildlife crossing project, undertaken by a state, regional, or local agency, which does not increase highway or street capacity for automobile or truck travel;

- A wind project and any appurtenant infrastructure improvement, and any associated electric transmission project carrying electric power from a facility that is located in the state to a point of junction with any California based balancing authority; and

A solar photovoltaic project and any appurtenant infrastructure improvement, and any associated electric transmission project carrying electric power from a facility that is located in the state to a point of junction with any California-based balancing authority.

2.2.3 California Fish and Game Code

2.2.3.1 Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code Sections 1900-1913) was created with the intent to "*preserve, protect and enhance rare and endangered plants in this State*." The NPPA is administered by CDFW. The California Fish and Game Commission (Commission) has the authority to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. The California ESA of 1984 (California Fish and Game Code Section 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

2.2.3.2 Streambed Alteration Agreement

Pursuant to Section 1602 of the California Fish and Game Code, a Streambed Alteration Agreement (SAA) application must be submitted for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake" (CDFW 2021). In Title 14 of the California Code of Regulations (CCR), Section 1.72, the CDFW defines a *stream* (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation."

In Chapter 9, Section 2785 of the Fish and Game Code, *riparian habitat* is defined as "lands which contain habitat which grows close to, and which depends upon, soil moisture from a nearby freshwater source."

The CDFW's jurisdiction includes drainages with a definable bed, bank, or channel and areas associated with a drainage channel that support intermittent, perennial, or subsurface flows; supports fish or other aquatic life; or supports riparian or hydrophytic vegetation. It also includes areas that have a hydrologic source.

The CDFW will determine if the proposed actions will result in diversion, obstruction, or change of the natural flow, bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. If warranted, the CDFW will issue an SAA that includes measures to protect affected fish and wildlife resources; this SAA is the final proposal agreed upon by the CDFW and the applicant.

2.2.3.3 Migratory Birds

The CDFW enforces the protection of nongame native birds in Sections 3503, 3503.5, and 3800 of the California Fish and Game Code. Section 3513 of the California Fish and Game Code prohibits the possession or take of birds listed under the MBTA. These sections mandate the protection of California nongame native birds' nests and also make it unlawful to take these birds. All raptor species are protected from "take" pursuant to California Fish and Game Code Section 3503.5 and are also protected at the federal level by the MBTA of 1918 (USFWS 1918).

2.2.3.4 Bats and Bat Roosts

Bats in California are currently protected directly and indirectly by the California Fish and Game Code, Sections 86, 1600, 2000, 2014, 3007, and 4150; California Public Resources Code, Division 14, Section 21000 et seq.; and CCR, Title 14 including, but not limited to Section 251.1, California Environmental Quality Act regulations (Section 15000 et seq.), and Section 15382 – Significant Effect on the Environment.

Regulations of particular relevance to the protection of bats and bat roosts include Title 14, Section 251.1 of the CCR, which prohibits harassment (defined in that section as an intentional act that disrupts an animal's normal behavior patterns, including breeding, feeding, or sheltering) of nongame mammals (e.g., bats), and California Fish and Game Code Section 4150, which prohibits *take* or possession of all nongame mammals or parts thereof. Any activities resulting in bat mortality (e.g., the destruction of an occupied bat roost that results in the death of bats), disturbance that causes the loss of a maternity colony of bats (resulting in the death of young), or various modes of nonlethal pursuit or capture may be considered *take* as defined in Section 86 of the California Fish and Game Code.

2.2.4 Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Control Act requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the State to file a report of discharge" with the Regional Water Quality Control Board (RWQCB) through State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures) (CCR, title 23, § 3855; State Water Resources Control Board 2021). *Waters of the State* is defined as any surface water or groundwater, including saline waters, within the boundaries of the State (California Water Code § 13050[e]). Pollution is defined as an alteration of the quality of the waters of the state by waste to a degree that unreasonably affects its beneficial uses (California Water Code § 13050) and includes filling in waters of the State. Note that CCR, title 23, § 3855 applies only to individual water quality certifications, but the new Procedures extend the application of § 3855 to individual waste discharge requirements for discharges of dredged or fill material to Waters of the State and waivers thereof.

A permit for impacts to Waters of the State of California would likely be required under the CWA and/or Porter-Cologne Water Quality Control Act. To determine whether a project should be regulated pursuant to the Porter-Cologne Water Quality Control Act, the RWQCB considers whether project activities could impact the quality of Waters of the State.

On September 27, 2023, the USEPA published its final 2023 Clean Water Act Section 401 Quarter Quality Certification Improvement Rule (88 FR 66558.) The final 2023 Rule revises and replaces the 2020 Rule's regulatory requirements for water quality certification that were adopted by the prior federal administration. The updates realign the scope of the Section 401 certification process with established practices, while also restoring the roles of states, territories, and authorized Tribes as certifying agencies

2.2.5 California Desert Native Plants Act

The California Desert Native Plants Act is outlined in Division 23 of the California Food and Agriculture Code (Sections 80001-80201). This Act serves to protect California desert native plants from unlawful harvesting on both public and privately owned lands throughout Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego Counties. In order to harvest a protected plant, a permit must be issued by the county's commissioner or sheriff. Native plants protected under this Act include, but are not limited to, Sahuaro cactus (*Carnegiea gigantea*), bristlecone pine (*Pinus longaeva*), fan palm (*Washingtonia filifera*), and all species of the family Agavaceae.

2.2.6 San Bernardino County Protections

2.2.6.1 San Bernardino County Biotic Resources Overlay

The San Bernardino County Biotic Resources Overlay was established by the Land Use Plan and Land Use Zoning Districts (§§ 82.01.020) and the Overlays (§§ 82.01.0230) of the County of San Bernardino. The purpose of the Biotic Resources Overlay is to implement General Plan policies regarding the "protection and conservation of beneficial rare and endangered plants and animal resources and their habitats" (San Bernardino County 2023). Projects within the County of San Bernardino are required to address the biological resources that appear within the Biotic Resources Overlay and overlap with their project site. Further, project proponents must identify mitigation measures that will reduce or eliminate impacts to the identified resources.

2.2.6.2 Desert Native Plant Protection

All species of the family Agavaceae, all Joshua trees, all species of the genus *Prosopis* (mesquites), and all species of the genus *Cercidium* (palo verdes) are considered regulated desert native plants under the *San Bernardino County Development Code – Plant Protection and Management (Chapter 88.01*) (San Bernardino County 2009).

The Development Code Plant Protection and Management Chapter 88.01 requires that a Tree or Plant Removal Permit be obtained prior to the removal of a regulated tree or plant identified in the chapter on public or private land, which includes the western Joshua tree (Section 88.01.050). Projects that will result in the removal of any species protected under this development code must seek prior approval from San Bernardino County via a Tree or Plant Removal Permit prior to the start of ground-disturbing activities. During the permit review process, the County may require certification from an appropriate arborist, registered professional forester, or a Desert Native Plant Expert that any proposed plant removal activities

are appropriate, supportive of a healthy environment, and in compliance with Chapter 88.01 of the Development Code, which may require a health assessment of the affected plant(s).

2.2.7 City of Yucaipa

2.2.7.1 Yucaipa Development Code – Oak Tree Conservation (Chapter 5)

Chapter 5 (Sections 89.0501 to 89.0535) of the Yucaipa Development Code outlines oak tree conservation within the City (City of Yucaipa 2021). This Chapter aims to conserve oak trees within the City by regulating the removal, cutting, pruning, and/or encroachment into the protected zone of oak trees. In order for any of these actions to occur, a valid oak tree permit issued by the City and pursuant to this Chapter and the Oak Tree Conservation and Protection Guidelines, must be obtained and a fee paid. This Chapter applies to any oaks in the genus Quercus except for scrub oak (*Quercus dumosa*). Additional exemptions to a permit are outlined in the Chapter and include, but are not limited to, trees that do not exceed two inches (5 centimeters) in diameter at breast height (approximately 4.5 feet (1.5 meters) high).

3.0 METHODS

3.1 Literature Review

Prior to conducting the biological reconnaissance survey, ECORP biologists performed a literature review using the CDFW's California Natural Diversity Database (CNDDB; CDFW 2024a), USFWS Species Occurrence Data (USFWS 2024a), and the California Native Plant Society's (CNPS) Electronic Inventory (CNPSEI; CNPS 2024) to determine the special-status plant and wildlife species that have been documented near the Project site. ECORP searched CNDDB, USFWS, and CNPSEI records within the Project site boundaries as depicted on U.S. Geological Survey (USGS) 7.5-minute Yucaipa topographic quadrangle, plus all records documented within five miles of the Project site. The CNDDB, USFWS, and CNPSEI contain records of reported occurrences of federally or state-listed endangered, threatened, proposed endangered or threatened species, California Species of Special Concern (SSC), and/or other special-status species or habitat that may occur within or near the Project. Additional information was gathered from the following sources and includes, but is not limited to:

- State and Federally Listed Endangered and Threatened Animals of California (CDFW 2024b);
- Special Animals List (CDFW 2024c);
- The Jepson Manual: Vascular Plants of California (Baldwin et al. 2012);
- The Manual of California Vegetation, 2nd Edition (Sawyer et al. 2009);
- Countywide – All Biotic Resources Overlay Map (San Bernardino County 2012); and
- various online websites (e.g., Calflora 2024).

Using this information and observations in the field, a list of special-status plant and animal species that have the potential to occur on or near the Project site was generated. For the purposes of this assessment, special-status species are defined as plants or animals that:

- have been designated as either rare, threatened, or endangered by CDFW, CNPS, or the USFWS, and/or are protected under either the federal ESA or California ESA;
- are candidate species being considered or proposed for listing under these same acts;
- are fully protected by the California Fish and Game Code, Sections 3511, 4700, 5050, or 5515; and/or
- are of expressed concern to resource and regulatory agencies or local jurisdictions.

Special-status species reported for the region in the literature review or for which suitable habitat occurs on the site were assessed for their potential to occur within the Project site based on the following guidelines:

Present: The species was observed on site during a site visit or focused survey.

High: Habitat (including soils and elevation factors) for the species occurs within the Project site and a known occurrence has recently been recorded (within the last 20 years) within five miles of the area.

Moderate: Habitat (including soils and elevation factors) for the species occurs within the Project site and a documented observation occurs within the database search, but not within five miles of the area; a historic documented observation (more than 20 years old) was recorded within five miles of the Project site; or a recently documented observation occurs within five miles of the area and marginal or limited amounts of habitat occurs in the Project site.

Low: Limited or marginal habitat for the species occurs within the Project site and a recently documented observation occurs within the database search, but not within five miles of the area; a historic documented observation (more than 20 years old) was recorded within five miles of the Project site; or suitable habitat strongly associated with the species occurs on site, but no records or only historic records were found within the database search.

Presumed Absent: Species was not observed during a site visit, or focused surveys conducted in accordance with protocol guidelines at an appropriate time for identification; habitat (including soils and elevation factors) does not exist on site; or the known geographic range of the species does not include the Project site.

Note that location information on some special-status species may be of questionable accuracy or unavailable. Therefore, for survey purposes, the environmental factors associated with a species' occurrence requirements may be considered sufficient reason to give a species a positive potential for occurrence. In addition, just because a record of a species does not exist in the databases does not mean it does not occur. In many cases, records may not be present in the databases because an area has not been surveyed for that species.

A review of the Natural Resources Conservation Service (NRCS; NRCS 2024), National Wetlands Inventory (NWI; USFWS 2024b), National Hydrology Dataset (NHD; USGS 2024), and the corresponding USGS topographic maps was also conducted to determine if there were any blue line streams or drainages present on the Project site that potentially fall under the jurisdiction of either federal or state agencies.

3.2 Field Survey

3.2.1 Biological Reconnaissance Survey

The biological reconnaissance survey was conducted by walking the entire Project site and a 500-foot buffer to determine the vegetation communities and wildlife habitats present on and adjacent to the site. Areas that were not accessible by foot were scanned using binoculars for suitable habitat. The biologist documented the plant and wildlife species present on and adjacent to the Project site. The location and condition of the Project site were assessed for the potential to provide habitat for special-status plant and wildlife species. Data were recorded on a Global Positioning System (GPS) unit, field notebooks, and/or maps. Photographs were also taken during the survey to provide visual representation of the conditions within the Project site. The Project site was also examined to assess its potential to facilitate wildlife movement or function as a movement corridor for wildlife moving throughout the region. In addition, the biologist documented the vegetation communities present on and adjacent to the Project site.

Plant nomenclature follows that of *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012). Wildlife nomenclature follows Society for the Study of Amphibians and Reptiles (Society for the Study of Amphibians and Reptiles 2017), *Checklist of North American Birds* (Chesser et al. 2023), and the *Revised Checklist of North American Mammals North of Mexico* (Bradley et al. 2014).

In instances where a special-status species was observed, the date, species, location and habitat, and GPS coordinates were recorded. The locations of special-status species observations were recorded in the field using ArcGIS™ Field Maps on a device (smartphone or tablet) and entered information in their field notes.

A bat habitat assessment of structures and trees that were accessible within the Project site and 500-foot buffer was also conducted during the biological reconnaissance survey. The interior and exterior of unoccupied buildings were examined for bat roosting habitat and bat signs (e.g., guano, staining), where accessible. Inaccessible areas where additional follow-up assessments are recommended were noted. During the assessment, potential roosting structures where follow-up nighttime emergence and/or acoustic surveys are recommended, were documented.

4.0 RESULTS

Summarized below are the results of the literature review and field surveys, including site characteristics, vegetation communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors).

4.1 Literature Review

4.1.1 Special-Status Plants and Wildlife

The literature review and database searches identified 12 special-status plant species and 27 special-status wildlife species that could occur on or near the Project site. A list was generated from the results of the literature review and the Project site was evaluated for suitable habitat that could support any of the special-status plant or wildlife species on the list. Recent and historic aerial imagery from the site was

reviewed during the analysis. Based on aerial imagery records, weed abatement such as mowing and/or discing, appears to have occurred on the Project site annually since 2000. The Project site is located within the San Bernardino County biotic overlay for burrowing owl (*Athene cunicularia*) (San Bernardino County 2012).

For the purposes of this study, the results of the literature review were limited to plant and wildlife species occurring within five miles of the Project site. With various habitat types occurring within five miles, several species appeared in the literature review results that had no potential to occur on or near the Project site. Plant species with a CNPS California Rare Plant Rank (CRPR) of 1A species were eliminated from the analysis because they are presumed to be extirpated from California; and CNPS Rare Plant Rank 4.3 species were eliminated from the analysis because these rankings are considered a watch list and not very threatened in California. Wildlife species with a State Watch List (WL) status were eliminated from the analysis because they are not considered very threatened in California. Federal Candidate species were also eliminated from the analysis because they are not protected until they are listed under the federal ESA.

Three large natural areas are present within five miles of the Project site including Crafton Hills Preserve, Redlands Conservancy land, and Wildwood Canyon State Park. The Crafton Hills Preserve is located approximately 0.5 mile north of the Project site. The Redlands Conservancy land includes areas such as San Timoteo Nature Sanctuary and Herngt' Aki' Preserve, located approximately 2.5 miles southwest of the Project site. The Wildwood Canyon State Park is located approximately 3.5 miles east of the Project site. Many of the species documented in the literature review results were documented in these large natural areas.

4.1.2 U.S. Fish and Wildlife Service Designated Critical Habitat

The Project site is not located within or near any USFWS-designated critical habitat (USFWS 2024c).

4.1.3 Preliminary Aquatic Resources Delineation Literature Review

The NRCS, NWI, NHD, and USGS mapping did not depict any aquatic features directly within the Project site. However, one riverine feature, Wilson Creek, was documented in the buffer, adjacent to the Project site's southern boundary, in a San Bernardino County Flood Control channel. Wilson Creek generally runs northeast to southwest.

A review of the NRCS mapped two soil types within the Project site: Hanford coarse sandy loam, 2 to 9 percent slopes and Psamments, Fluvents and Frequently flooded soils (NRCS 2024). Psamments, Fluvents and Frequently flooded soils is listed as a hydric soil in the NRCS list of hydric soils, however during the biological reconnaissance survey, no hydric soil conditions or indicators were observed onsite. Additionally, it is important to note that soil maps are done at a large scale and may not always be an accurate representation of soil types on the ground.

4.2 Biological Reconnaissance Survey

The biological reconnaissance survey was conducted on February 28, 2024, by ECORP biologist Alden Lovaas. Ms. Lovaas has extensive experience conducting reconnaissance- and protocol-level surveys for wildlife and plant species. Summarized below are the results of the biological reconnaissance survey, including site characteristics, plant communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors). Weather conditions during the survey are summarized in Table 1.

Table 1. Weather Conditions During the Survey

Date	Time		Temperature (˚F)		Cloud Cover (%)		Wind Speed (mph)	
	Start	End	Start	End	Start	End	Start	End
2/28/2024	0800	1100	52	63	0	0	0-1	1-4

Notes: ˚F = degrees; mph = miles per hour

4.2.1 Property Characteristics

The Project site consists primarily of a disturbed, undeveloped lot; however, there are two dilapidated structures located in the northeastern corner of the Project site. Multiple fences and scattered trash were documented throughout the Project site. The entire Project site has evidence of mechanical disturbance (e.g., discing), with the northern portion of the Project site appearing to have been more recently disturbed than the southern portion of the Project site. The areas without evidence of recent mechanical disturbance primarily consisted of Fiddleneck Fields (*Amsinckia* sp. Herbaceous Alliance).

The Project site is primarily surrounded by residential and commercial development with an undeveloped area to the east. The undeveloped area to the east of the Project site is similar to the Project site and primarily consists of Fiddleneck Fields with evidence of previous mechanical disturbance. A San Bernardino County Flood Control District channel called Wilson Creek parallels the southern boundary of the Project site. Although separated from the Project site by fencing, the fencing has gaps and is degraded throughout. The channel has an earthen bottom with riprap placed perpendicular to the length of the channel every 100 feet (30 meters). Dirt access roads are present along either side of the flood control channel. The Project site is generally surrounded by development. Representative site photographs are presented in Appendix A.

4.2.2 Vegetation Communities

One native vegetation community was present on the Project site, Fiddleneck Fields. Two land cover types were mapped: Disturbed (Ruderal) within the Project site and 500-foot buffer, and Urban/Developed within the 500-foot buffer.

4.2.2.1 Fiddleneck Fields (Amsinckia sp. Herbaceous Alliance)

This vegetation community is dominated by fiddleneck (*Amsinckia* sp.) and occurs with other species including wild oat (*Avena* sp.), brome (*Bromus* sp.), and stork's bill (*Erodium* sp.). This community typically occurs in well drained loamy soils with an intermittent to continuous herbaceous layer of seasonal herbs and nonnative grasses (Sawyer et al. 2009). This community covered the southern portion of the Project site and was also documented in the buffer area, east of the Project site. Within the Project site, species observed in this community included fiddleneck, common stork's bill (*Erodium cicutarium*), London rocket (*Sisymbrium irio*), and various nonnative grasses.

4.2.2.2 Disturbed (Ruderal)

Disturbed (Ruderal) is not a vegetation classification, but rather a land cover type. The northeast portion of the Project site and a portion of the northwest 500-foot buffer are classified as Disturbed (Ruderal). Within the Project site, Disturbed (Ruderal) is present in the northeast, near the dilapidated structures, as depicted in Figure 3. Plants present in this land cover type include nonnative weedy species such as common stork's bill, Russian thistle, and brome grasses. Within the 500-foot buffer, Disturbed (Ruderal) is also located near the dilapidated structures.

These areas are Disturbed (Ruderal) because they are subject to repeated disturbances (e.g., mowing/discing), largely devoid of native vegetation, and are dominated by open areas or nonnative weedy and ruderal vegetation. The disturbed designation indicates a location that has experienced disturbances, typically associated with human activities. Disturbed areas may be actively maintained to be free of vegetation or have been compacted or disced to such a degree that native vegetation is very sparse

4.2.2.3 Urban/Developed

Urban/Developed does not constitute a vegetation classification, but rather a land cover type. Areas mapped as Urban/Developed have been constructed upon or otherwise physically altered to an extent that natural vegetation communities are no longer supported. Urban/Developed areas were present within the northeastern portion of the Project site at the two dilapidated structures. Outside of the Project site, the developed areas consist primarily of paved roads, buildings, and a golf course.

4.2.3 Plants

Plant species observed on and adjacent to the Project site were typical of disturbed, urban areas. Dominant species included fiddleneck, common stork's bill, London rocket, and various nonnative grasses. A coast live oak tree (*Quercus agrifolia*) was documented directly adjacent to the Project site, with branches hanging over the fence into the Project site; this species is protected under Chapter 5's Oak Tree Conservation of the Yucaipa Development Code. The location of coast live oak tree is documented in Figure 3. A full list of plant species observed on and immediately adjacent to the Project site is included in Appendix B.

Parking Lot
Bayhill Rd
Eagle Point Dr
Eagle Point Dr
Southwind Way
Wallace Way
Glacier Ct
Yucaipa Blvd
Yucaipa Blvd
Borden Ln
Wilson Creek
10th St
11th St
Wilson Creek
Windsor Dr
Wilson Creek
Avenue D
Avenue D
Oak Glen Rd
Camelot Dr
10th St
Oak Glen Rd

Map Contents

- Project Site
- 500-foot Buffer

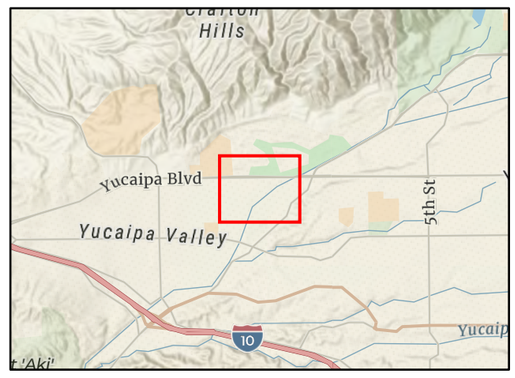
Vegetative Communities and Land Cover Types

- Disturbed/Ruderal
- Fiddleneck fields *(Amsinckia sp. Herbaceous Alliance)*
- Urban/Developed

Biological Survey Results

- Dilapidated building
- Coast Live Oak *(Quercus agrifolia)*
- Mexican Fan Palm *(Washingtonia robusta)*

Sources: ESRI, SB County Orthos (2023)



Location: N:\2019\2019-223.02 Yucaipa Business Park 2024\MAPS\Biological_Resources\YBP Biological Resources.aprx - YBP Bio Survey Results 20240405 (mwilliams - 4/11/2024)

Map Date: 4/5/2024

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 300

Figure 3. Biological Survey Results

2019-223.02 Yucaipa Business Park 2024

4.2.4 Wildlife

Wildlife species observed and detected on the Project site were characteristic of wildlife found in urban areas in the region. Species observed on and/or in the vicinity of the Project site included mourning dove (*Zenaida macroura*), house finch (*Haemorhous mexicanus*), Say's phoebe (*Sayornis saya*), western side-blotched lizard (*Uta stansburiana elegans*), monarch butterfly (*Danaus plexippus*), and California ground squirrel (*Otospermophilus beecheyi*). A complete list of wildlife species observed on or immediately adjacent to the Project site is included in Appendix C.

4.2.5 Potential for Special-Status Plant and Wildlife Species to Occur on the Project Site

The literature review and database searches identified 12 special-status plant species and 27 special-status wildlife species that could occur on or near the Project site. Due to the current lack of suitable habitat for special-status plant and wildlife species, many of the species are presumed absent from the Project site.

4.2.5.1 Special-Status Plants

There were 12 special-status plant species that appeared in the literature review and database searches for the Project site (CDFW 2024a; CNPS 2024). A list was generated from the results of the literature review and the Project was evaluated for suitable habitat that could support any of the special-status plant species on the list. Descriptions of the CNPS designations are found in Table 2. Of the 12 special-status plants identified, all are presumed absent from the Project site.

Table 2. CNPS Status Designations

List Designation	Meaning
1A	Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
1B	Plants Rare, Threatened, or Endangered in California and Elsewhere
2A	Plants Presumed Extirpated in California, But Common Elsewhere
2B	Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3	Plants about which more information is needed; a review list
4	Plants of limited distribution; a watch list
List 1B, 2, and 4 extension meanings:	
.1	Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
.2	Moderately threatened in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat)
.3	Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Note: According to California Native Plant Society (CNPS, Skinner and Pavlik 1994), plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10, of the California Fish and Game Code (California Department of Fish and Game [CDFG] 1984). This interpretation is inconsistent with other definitions.

4.2.5.2 Plant Species Presumed Absent

Although historic or recent records for these species may have been documented in CNDDB or Calflora, the following species were presumed absent from the Project site due to the lack of suitable habitat (including elevation and soils) on the Project site or because the Project is located outside of the known range for the species:

- Yucaipa onion (*Allium marvinii*), CRPR 1B.2;
- Plummer's mariposa lily (*Calochortus plummerae*), CRPR 4.2;
- smooth tarplant (*Centromadia pungens* ssp. *laevis*), CRPR 1B.2;
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*), CRPR 1B.1;
- white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), CRPR 1B.2;
- slender-horned spineflower (*Dodecahema leptoceras*), CRPR 1B.1, federally and state-listed Endangered;
- Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*), CRPR 1B.1, federally and state-listed Endangered;
- California satintail (*Imperata brevifolia*), CRPR 2B.1;
- Hall's monardella (*Monardella macrantha* ssp. *hallii*), CRPR 1B.3;
- Parish's checkerbloom (*Sidalcea hickmanii* ssp. *parishii*), CRPR 1B.2, state-listed Rare;
- salt spring checkerbloom (*Sidalcea neomexicana*), CRPR 2B.2; and
- San Bernardino aster (*Symphyotrichum defoliatum*), CRPR 1B.2.

4.2.5.3 Special-Status Wildlife

Of the 27 special-status wildlife species identified in the literature review, one species was found present during the biological survey, one has a moderate potential to occur, and four have low potential to occur on the Project site. The remaining 22 species are presumed absent from the Project site. One federal Candidate species, monarch butterfly, was observed on the Project site during the survey.

4.2.5.4 Wildlife Species Present in the Project Site

The monarch butterfly was observed within the Project site during the biological survey. A brief account of its natural history and the results of the literature review and survey are provided below.

Monarch Butterfly (*Danaus plexippus*)

Monarch butterfly (*Danaus plexippus*) is a Candidate for listing under the Federal ESA. The monarch butterfly occurs from northern Mendocino to Baja California and is known to roost in wind-protected tree

groves. This species overwinters in California and primarily in eucalyptus along the Pacific coast. The larvae of this species rely on milkweed plant species, although the adults can obtain nectar from a variety of plant sources.

This species was observed flying over the Project site during the biological survey. The Project site does contain nectar sources in the form of Amsinckia fields and sheltering sites in the form of eucalyptus trees present at the southwest corner of the Project site. *Amsinkia* sp. does provide a food source for adults of this species. The eucalyptus trees may provide sheltering sites but due to development and disturbances nearby, these are not expected to provide overwintering or breeding habitat or the species.

No occurrences were documented in CNDDB within the vicinity of the Project site. According to the Western Monarch Milkweed Mapper (WMMM), numerous occurrences of monarch larvae have been documented within approximately 5 miles of the Project site (WMMM 2024). The nearest record consisted of one monarch larvae observed approximately 0.5 mile southwest of the Project site in 2022.

4.2.5.5 Wildlife Species with a Moderate Potential to Occur

Southern California legless lizard has a moderate potential to occur on the Project site because either habitat for the species occurs onsite and a known occurrence has been reported in the database, but not within five miles of the site; a historic documented observation was recorded within five miles of the Project site; or a known recently documented occurrence has been reported within five miles of the site and marginal or limited amounts of habitat occurs onsite.

Southern California Legless Lizard (*Anniella stebbinsi*)

Southern California Legless Lizard is a CDFW SSC. The Southern California legless lizard is found in a portion of southwestern San Bernardino County, western Riverside County, southern Los Angeles County. Orange County, and San Diego County. This species occurs in moist, warm, loose soil with plant cover. This species can also be found in a variety of habitats including coastal sand dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, alluvial fans, and stream terraces with sycamores, cottonwoods, or oaks. According to California Herps, this species is sometimes found in suburban gardens in Southern California (CaliforniaHerps 2024). The CNDDB documented seven records of this species within five miles of the Project Site (Occurrence #s 12, 13, 14, 153, 385, 391, and 392) (CDFW 2024a). Occurrence # 391 was the closest and most recent record, documented in 2018 approximately 1.2 miles east of the Project site, in an urban area. Of the seven CNDDB records, five were recent and two were historic. Despite previous mechanical discing of the Project site, due to the presence of suitable habitat and recent records within five miles of the Project site, this species has a moderate potential to occur.

4.2.5.6 Wildlife Species with a Low Potential to Occur

The following species have a low potential to occur on the Project site because limited or marginal habitat for the species occurs within the Project Site and a recently documented observation occurs within the database search, but not within 5 miles of the area; a historic documented observation (more than 20 years old) was recorded within 5 miles of the Project Site; or suitable habitat strongly associated with the species occurs on site, but no records or only historic records were found within the database search.

Burrowing owl (*Athene cunicularia*)

Burrowing owl is a CDFW SSC. The burrowing owl is found in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Burrowing owls make use of mammal burrows (e.g., California ground squirrel) and can also be found nesting in burrows made under concrete or other anthropogenic features and are often found near human activity. Although a focused survey for the species was not conducted, no burrowing owl or burrowing owl sign (e.g., pellets, whitewash) were identified during the survey. Additionally, due to the density of the Fiddleneck Fields, suitable potential burrows were not documented during the biological survey and presumably obscured by the dense vegetation. However, California ground squirrels were observed throughout the Project site and are presumably burrowing within and adjacent to the Project site.

The presence of friable soils and California ground squirrels, and thereby their burrows, establishes the Project site and immediate vicinity as a suitable habitat for burrowing owls. Burrowing owls are mobile and can fly over the Project site at any time. Additionally, they commonly modify existing burrows, such as those by California ground squirrels. Although the literature review did not identify any records of this species within five miles, the Project site has suitable habitat for this species. The Project site is also located within the San Bernardino County-designated Biotic Overlay for Burrowing Owl (San Bernardino County 2012).

Coastal Whiptail (*Aspidoscelis tigris stejnegeri*)

The coastal whiptail is a California SSC reptile found in woodland, riparian, and arid open areas with sparse vegetation (CDFW 2024c). Marginally suitable open habitat occurs within the disturbed portions of the Project site. The CNDDB documented two recent records of this species within 5 miles of the Project site (CDFW 2024a). Occurrence # 120 was documented in 2015 approximately 4.1 miles southwest of the Project site. Occurrence # 125 was documented in 2014 approximately 4.5 miles north of the Project site.

Crotch Bumble Bee (*Bombus crotchii*)

The Crotch bumble bee (*Bombus crotchii*) was petitioned for listing under the California ESA in October 2018 (Hatfield et al. 2018), advancing to candidacy in June 2019. This candidacy was challenged in courts, temporarily stayed beginning in February 2021, and was recently reinstated in September 2022 (CDFW 2023). This species is associated with open grassland and scrub habitats and occurs primarily in California, including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills through most of southwestern California (Williams et al. 2014). Crotch bumble bees primarily nest underground, and may occupy cavities in a variety of substrates including thatched grasses, abandoned rodent burrows or bird nests, brush piles, rock piles, and fallen logs (Alford 1975; Free and Colin Gasking Alford 1959; Fussell and Corbet 1992; Lye et al. 2012; Sladen 1912; Williams et al. 2014) and have also been found nesting in manmade structures such as walls, rubble or abandoned furniture (Fussell and Corbet 1992; Williams et al. 2014). Bumble bee nests are annual and conclude with deaths of the queen, workers, and drones at the end of the season with only the mated gyne (future queen) surviving the winter (overwintering) in order to emerge the following spring to start the next year's colony. Similar to

other bumble bee species, Crotch bumble bee is a generalist forager and reportedly visits a variety of flowering plants, including *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia,* and *Salvia*.

The Project site contains marginally suitable habitat for this species. Previous mechanical disturbances, such as annual discing, decrease the likelihood of suitable nesting habitat (e.g., burrows, leaf litter) occurring within the Project site. Additionally, discing results in monotypic foraging resources that are unlikely to sustain a nesting colony for an entire season. However, this species has the potential to be present along the edges of these areas and in areas less frequently disturbed. Further, although small mammal burrows were not documented during the survey, California ground squirrel activity suggests that there are burrows within and adjacent to the Project site that are currently obscured by the dense vegetation. These small mammal burrows could provide marginal nesting and overwintering habitat for Crotch bumble bees.

The CNDDB documented two records of this species within five miles of the Project site (CDFW 2024a). Occurrence # 180 was observed in 1977 approximately 4.4 miles east of the Project site. Occurrence # 181 was observed in 1975 approximately 1.2 miles southeast of the Project site.

Bat Species

It is important to note that documented occurrences of bat species are underrepresented in databases such as CNDDB, and the CNDDB records should not be solely used to determine potential for occurrence. The potential for occurrence for bat species should consider the ecology of the species and presence of suitable roosting and foraging habitat.

During the bat habitat assessment, a suitable roosting habitat for bat species was documented in the Project site in the form of dilapidated structures at the north end of the Project site. Crevices and openings that allow access into the interior of the structures were observed. Additionally, a suitable foraging habitat for bat species was documented in the Fiddleneck Fields. No signs of bats (e.g., guano, staining) or live bats were documented during the assessment.

The literature review identified two bat species with potential to occur within the Project site: western yellow bat (*Lasiurus xanthinus*) and lesser long-nosed bat (*Leptonycteris yerbabuenae*). Both are CDFW SSC. The lesser long-nosed bat is presumed absent due to the lack of a suitable roosting habitat (i.e., caves or mines) and the range of this species occurring primarily near San Diego. However, western bats have a low potential to occur.

Western yellow bat is often discernable from other bat species due to their distinct yellow fur along with their larger size and short ears (Western Bat Working Group [WBWG] 2017). This species occurs throughout the southwestern United States and into northwestern Mexico. As a tree roosting species, western yellow bat most commonly roosts between the fronds of intact frond skirts of both native and non-native palm trees. This species has also been documented roosting in trees in riparian woodland habitats such as cottonwood trees (*Populus* sp.). It is suspected that this species may be non-colonial, roosting as individuals in trees or hanging from the underside of a leaf (WBWG 2017). Western yellow bats are insectivores and have been documented foraging in areas with water features and in open

grassland and riparian habitats (WBWG 2017). They are known to occur in urban and suburban areas when there is appropriate roosting and foraging habitat.

Suitable roosting habitat for western yellow bat is not present within the Project site; however, suitable roosting habitat is present less than 300 feet (91 meters) from the Project site in the form of mature palm trees with intact frond skirts. Suitable foraging habitat for this species is present within the Project site in the form of Fiddleneck Fields. The CNDDB documented one historic record (Occurrence # 41) of this species within five miles of the Project site (CDFW 2024a). The record was documented in 1991 approximately 1.1 miles east of the Project site.

4.2.5.7 Wildlife Species Presumed Absent

The following species were presumed absent from the Project site due to lack or suitable habitat and absence of species records in the vicinity of the Project site:

- steelhead - southern California Distinct Population Segment (*Oncorhynchus mykiss irideus* pop. 10), federally Endangered and state-listed Candidate;
- Santa Ana speckled dace (*Rhinichthys osculus* ssp. 3), state-listed SSC;
- southern mountain yellow-legged frog (*Rana muscosa*), federally and state-listed Endangered;
- western spadefoot (*Spea hammondii*), federal Candidate and state-listed SSC;
- southern rubber boa (*Charina umbratica*), state-listed Threatened;
- red-diamond rattlesnake (*Crotalus ruber*), state-listed SSC;
- western pond turtle (*Emys marmorata*), federal Candidate and state-listed SSC;
- coast horned lizard (*Phrynosoma blainvillii*), state-listed SSC;
- coast patch-nosed snake (*Salvadora hexalepis virgultea*), state-listed SSC;
- tri-color blackbird (*Agelaius tricolor*), state-listed Threatened and SSC;
- golden eagle (*Aquila chrysaetos*), federally listed U.S.C. 668-668c and state-listed Fully Protected;
- Swainson's hawk (*Buteo swainsoni*), state-listed Threatened;
- white-tailed kite (*Elanus leucurus*), state-listed Fully Protected;
- southwestern willow flycatcher (*Empidonax traillii extimus*), federally and state-listed Endangered;
- yellow-breasted chat (*Icteria virens*), state-listed SSC;
- coastal California gnatcatcher (*Polioptila californica californica*), federally listed Threatened and state-listed SSC;
- yellow warbler (*Setophaga petechia*), state-listed SSC;
- least Bell's vireo (*Vireo bellii pusillus*), federally and state-listed Endangered;

- San Bernardino kangaroo rat (*Dipodomys merriami parvus*), federally and state-listed Endangered, state-listed SSC;
- lesser long-nosed bat (*Leptonycteris yerbabuenae*), federally Delisted, state-listed SSC;
- San Diego desert woodrat (*Neotoma lepida intermedia*), state-listed SSC; and
- Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), state-listed SSC.

4.2.6 Preliminary Aquatic Resources Delineation

Although a formal aquatic resources delineation was not performed during the survey, the site was evaluated for the presence of potential jurisdictional features. No potential jurisdictional features were found or identified on the Project site at the time of the reconnaissance survey. One offsite riverine feature, Wilson Creek, was documented adjacent to the Project site's southern boundary. Wilson Creek is also a San Bernardino County Flood Control District Channel.

No aquatic features were observed on the Project site. No riparian vegetation was observed within the Project site boundaries.

4.2.7 Raptors and Migratory Birds

Suitable nesting habitat for numerous species of migratory birds protected under the federal MBTA and California Fish and Game Code is present on the Project site in the form of Fiddleneck Fields, bare ground, dilapidated structures, and various trees and shrubs. This habitat is also present adjacent to the Project site. Therefore, nesting birds could use the Project site during the nesting bird season (typically February 1 through August 31).

4.2.8 Wildlife Movement Corridors, Linkages, and Significant Ecological Areas

The concept of habitat corridors addresses the linkage between large blocks of habitat that allow the safe movement of mammals and other wildlife species from one habitat area to another. The definition of a corridor varies, but corridors may include such areas as greenbelts, refuge systems, underpasses, and biogeographic land bridges. In general, a corridor is described as a linear habitat, embedded in a dissimilar matrix, which connects two or more large blocks of habitat. Wildlife movement corridors are critical for the survivorship of ecological systems for several reasons. Corridors can connect water, food, and cover sources, spatially linking these three resources with wildlife in different areas. In addition, wildlife movement between habitat areas provides for the potential of genetic exchange between wildlife species populations, thereby maintaining genetic variability and adaptability to maximize the success of wildlife responses to changing environmental conditions. This is especially critical for small populations subject to loss of variability from genetic drift and effects of inbreeding. The nature of corridor usage and wildlife movement patterns vary greatly among species.

The Project site was assessed for its ability to function as a wildlife corridor. Although the Project site does consist of open and undeveloped land, it is completely surrounded by urban development and is isolated from large, contiguous blocks of native habitat. The nearest natural area is Crafton Hills approximately 0.6 mile north of the northern extent of the Project site. Wildlife commonly found in urban areas (e.g., coyote

[*Canis latrans*] and raccoons [*Procyon lotor*]) could use the Project site or areas immediately adjacent to the Project site, such as Wilson Creek, for local travel but the Project site itself does not provide wildlife movement corridor or linkage opportunities. Therefore, the Project site would not need to be preserved as a wildlife movement corridor, linkage, or significant ecological area.

The Project site was also assessed for its ability to function as a native wildlife nursery site. Suitable habitat for bird species was documented within and adjacent to the Project site. However, due to the level of development and disturbance within and adjacent to the Project site, nursery site habitat for bird species (e.g., heron rookery) is not anticipated to occur. Suitable bat roosting habitat was observed within the Project site in the form of dilapidated structures within and adjacent to the Project site, and the trees adjacent to the Project site. These have the potential to serve as bat maternity roosts during the bat maternity season (April 1 to August 31).

4.2.9 Local Policies and Ordinances

4.2.9.1 San Bernardino County– Biotic Resources Overlay Maps

The Project site is located within the San Bernardino County-designated Biotic Overlay: Burrowing Owl (San Bernardino County 2012). Although no burrowing owls or their sign were documented within the Project site during the biological survey, the Project site provides suitable habitat for this species in the form of friable soils, areas of bare ground, and small mammal burrows (e.g., California ground squirrel).

4.2.9.2 Yucaipa Development Code—Oak Tree Conservation (Chapter 5)

One coast live oak was documented adjacent to the Project site. Although this species is not listed, it is still considered protected under the Yucaipa Development Code's Chapter 5—Oak Tree Conservation (City of Yucaipa 2021). The location of the coast live oak is depicted on Figure 3.

5.0 RECOMMENDATIONS

The following are recommended to protect biological resources from potential impacts that may be associated with future development and implementation of the Project:

5.1 Crotch Bumble Bee Pre-Construction Surveys

If the Crotch bumble bee is no longer a Candidate or formally listed species under the California ESA at the time ground-disturbing activities occur, then no additional protection measures are proposed for the species.

If the Crotch bumble bee is legally protected under the California ESA as a Candidate or Listed species at the time ground-disturbing activities are scheduled to begin, it is recommended that pre-construction surveys be conducted in accordance with CDFW's Survey Considerations for California ESA Candidate Bumble Bee Species (CDFW 2023) the season immediately prior to Project-related ground disturbing activities (including but not limited to vegetation clearing, fence installation, and grading). If the species is observed within the Project site, coordination with CDFW will be required to develop

appropriate avoidance and minimization measures and determine if an Incidental Take Permit would be necessary.

If the Project site conditions remain disturbed and overwintering habitat for the species is not present on the Project site, then ground-disturbing activities may occur once the bloom period for bee nectar sources is over and no foraging habitat for the species is present on the Project site.

5.2 Pre-Construction Surveys for Burrowing Owl

Pre-construction surveys for burrowing owl should be conducted in accordance with the methods described in the CDFW's *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). Two surveys should be conducted, with the first survey being scheduled between 30 and 14 days before initial ground disturbance (grading, grubbing, and construction), and the second survey being conducted no more than 24 hours prior to initial ground disturbance. If burrowing owls and/or suitable burrowing owl burrows are identified on the Project site during the survey, additional protection measures will need to be implemented, such as non-disturbance buffers around active burrows, biological monitoring during construction activities, or seasonal restrictions to project construction. It is recommended that a biologist be retained for the Project to provide recommendations and assist in the implementation of appropriate protection measures. If appropriate, the Project biologist will coordinate with CDFW if additional protection measures (such as passive relocation) need to be implemented.

5.3 Pre-Construction Nesting Bird Survey

Nesting bird and raptor surveys should be performed by a qualified avian biologist during the nesting bird and raptor season (generally February 1 through August 31) to ensure that active bird nests will not be disturbed or destroyed. The survey should be completed no more than three days prior to initial ground disturbance (e.g., grubbing, vegetation removal, grading, fence installation). The nesting bird survey should include the Project site and adjacent areas where Project activities have the potential to affect active nests, either directly or indirectly, due to construction activity, noise, human activity, or ground disturbance.

If an active nest is identified, the qualified avian biologist should establish an appropriately sized non-disturbance buffer around the nest using flagging or staking. Project-related activities should not occur within any non-disturbance buffer zones until the nest is deemed inactive or if it is confirmed that the young have fledged by the qualified avian biologist. Active nests and adequacy of the established buffer distance will be monitored daily by a qualified biologist until a qualified avian biologist has determined the young have fledged or the Project has been completed.

If any special-status avian species is identified during the preconstruction survey and Project-related impacts to that species are unavoidable, consultation with the appropriate agency (e.g., USFWS, CDFW) may need to occur to develop additional avoidance and minimization measures.

5.4 Pre-Construction Bat Surveys

Potential bat roosting habitat is present within and immediately adjacent to the Project site in the form of dilapidated structures and palm trees. Although no visible sign of bat roosting was observed during the biological reconnaissance survey (e.g., guano, staining, or live bats), there is potential for the structures and palm trees to be used by both day- and night-roosting bats. Due to the palm trees occurring outside of the Project site, no follow-up surveys are recommended for those. However, due to the dilapidated buildings occurring within and immediately adjacent to the Project site, follow-up surveys are recommended at these locations. Within 14 days prior to the start of ground-disturbing activities, a qualified bat biologist should conduct a follow-up bat survey at the structures identified during the biological reconnaissance survey as having potential for roosting bats, to determine if any change in bat use at the structures has occurred since the biological reconnaissance survey.

If suitable evidence of bat occupation is present (e.g., guano or live bats are observed or heard), the biologist will conduct follow-up nighttime emergence survey(s) to determine the species present and evaluate the size and significance of the colony. If roosting bats are determined to be present, additional protection measures may be required such as, but not limited to, the preparation of a Bat Management Plan that outlines project-specific protective measures to avoid and minimize impacts to roosting bats during project construction.

5.5 Avoidance of Wilson Creek

One riverine feature, Wilson Creek, was documented adjacent to the Project site's southern boundary. Wilson Creek is also a San Bernardino County Flood Control District Channel. Fencing was observed during the biological survey delineating the Project site and therefore adjacent to this Channel; however, fencing was degraded in many areas and had gaps. To prevent potential Project impacts to this feature, the following Best Management Practices (BMPs) are recommended:

- The Project will avoid aquatic resources to the extent feasible. Aquatic resources located within 50 feet (15 meters) of the Project footprint should be clearly demarcated with orange construction fencing or other visible barriers, and no Project-related activities should be permitted within the delineated area.
- To minimize potential indirect effects, the applicant should prepare and implement an Erosion and Sediment Control Plan to avoid and minimize erosion and runoff to waters that are within or adjacent to the Project site.
- If the Project will disturb at least 1 acre of land, the project applicant will need to obtain coverage under the General Construction Storm Water Permit from the RWQCB by preparing a Stormwater Pollution Prevention Plan and implementing BMPs to minimize soil erosion during construction and avoid any stormwater runoff into potentially jurisdictional features.
- All staging of construction materials should be located within the Project boundaries and outside of potentially jurisdictional features.

- Schedule operations for when rain, runoff, or wet soils, are less likely. Follow seasonal restrictions in the wet weather operation section of the Erosion and Sediment Control Plan.

5.6 Compliance with Yucaipa Development Code for Oak Tree Conservation

It is recommended that the Project comply with the protection measures outlined in Chapter 5 of the Yucaipa Development Code for Oak Tree Conservation including the payment of a fee for a necessary oak tree permit.

5.7 Additional Recommendations

The following BMPs are not resource-specific but are recommended to further reduce impacts to species that have potential to occur on the property:

- Confine all work activities to a pre-determined work area.
- To prevent inadvertent entrapment of wildlife during the construction phase of a Project, all excavated, steep-walled holes or trenches more than two feet (0.6 meter) deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen fill or wooden planks will be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals.
- Wildlife is often attracted to burrow- or den-like structures such as pipes and may enter stored pipes and become trapped or injured. To prevent wildlife use of these structures, all construction pipes, culverts, or similar structures with a diameter of four inches (10 centimeters) or greater should be capped while stored onsite.
- All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from the construction or Project site.
- Use of rodenticides and herbicides on the Project site should be restricted. This is necessary to prevent primary or secondary poisoning of wildlife, and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the USEPA, California Department of Food and Agriculture, and other state and federal legislation. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to predatory wildlife.

6.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the Project applicant or the applicant's representative and that I have no financial interest in the Project.

SIGNED:

DATE: 04/12/2024

Alden Lovaas
Staff Biologist
ECORP Consulting, Inc.

Under the direction of:

Kristen Wasz
Senior Biologist
ECORP Consulting, Inc.

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LIST OF APPENDICES

Appendix A – Representative Site Photographs

Appendix B – Plant Species Observed

Appendix C – Wildlife Species Observed

Appendix D – Potential for Occurrence of Sensitive Plant Species

Appendix E – Potential for Occurrence of Sensitive Wildlife Species

APPENDIX A

Representative Site Photographs

Photo 1. Northwest Corner of the Project Site, Recent Mechanical Disturbance (view south, February 28, 2024).

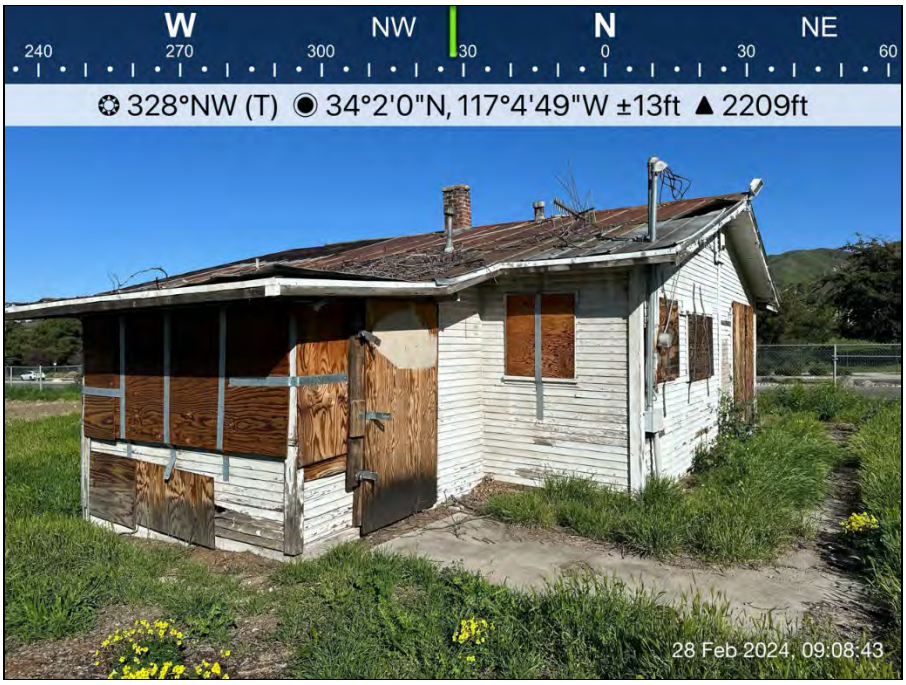

Photo 2. Example of a Dilapidated Structure in the Project Site, Located in the Northeast Corner (view northwest, February 28, 2024).

Photo 3. Northern Portion of the Project Site, Fiddleneck Fields (view south, February 28, 2024).

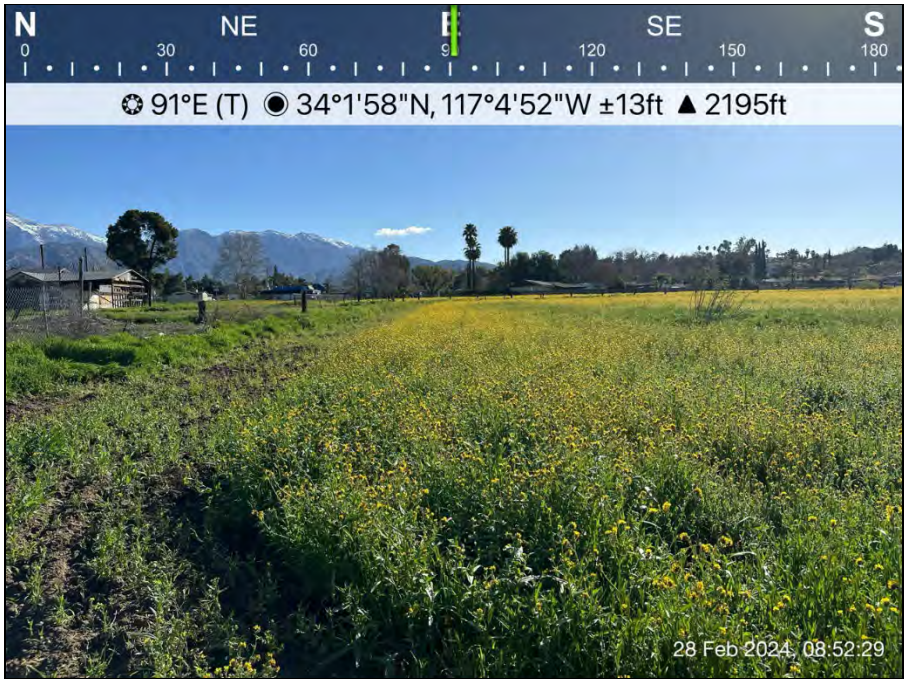

Photo 4. West Side of the Project Site, Fiddleneck Fields (view east, February 28, 2024).

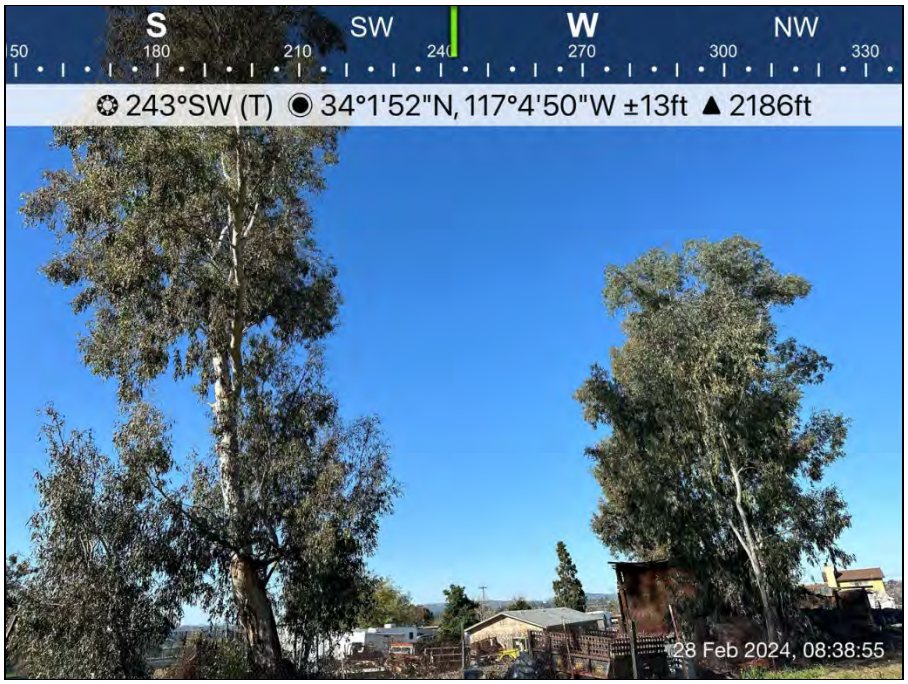

Photo 5. Eucalyptus Trees Present at the South End of the Project Site, Example of Suitable Nesting Bird and Raptor Habitat (view southwest, February 28, 2024).

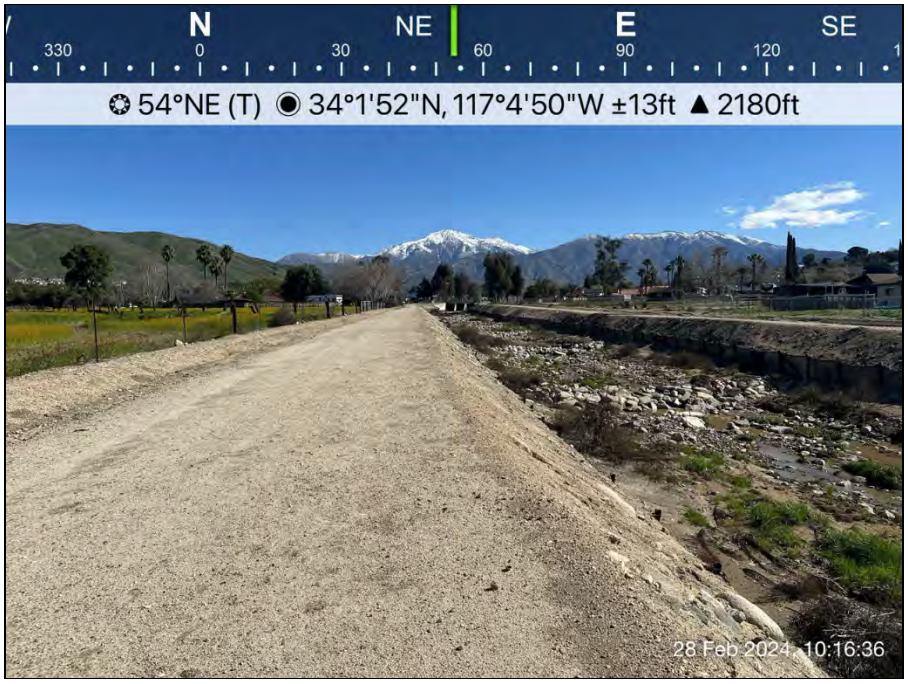

Photo 6. Wilson Creek Adjacent to the Southern Border of the Project Site (view northeast, February 28, 2024).

Photo 7. Within the Eastern 500-foot buffer, Palm Trees in the Background (view south, February 28, 2024).

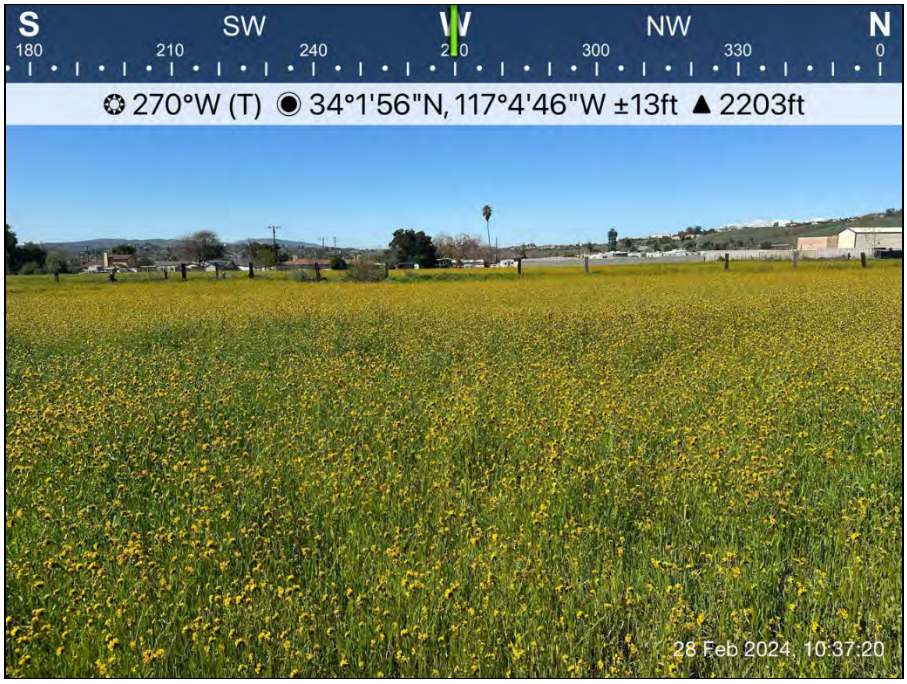

Photo 8. Within the Eastern 500-foot Buffer (view west, February 28. 2024).

Photo 9. View of the Western 500-foot Buffer, Development (view west, February 28, 2024).

Photo 10. Coast Live Oak (*Quercus agrifolia*) Present Immediately Adjacent to the Northeast Corner of the Project Site (view northeast, February 28, 2024).

APPENDIX B

Plant Species Observed

Scientific Name	Common Name
ANGIOSPERMS (DICOTYLEDONS)	
ADOXACEAE	**ADOXA FAMILY**
Sambucus mexicana	Blue elderberry
BORAGINACEAE	**BORAGE FAMILY**
Amsinckia sp.	Fiddleneck
RUTACEAE	**CITRUS FAMILY**
Citrus sinensis*	Sweet orange tree
CHENOPODIACEAE	**CHENOPOD FAMILY**
Salsola tragus*	Russian thistle
FAGACEAE	**OAK FAMILY**
Quercus agrifolia	Coast live oak
GERANIACEAE	**GERANIUM FAMILY**
Erodium cicutarium*	Redstem filaree
LYTHRACEAE	**LOOSESTRIFE FAMILY**
Punica granatum*	Pomegranate
MALVACEAE	**MALLOW FAMILY**
Malva parviflora*	Cheeseweed mallow
MYRTACEAE	**MYRTLE FAMILY**
Eucalyptus sp.*	Gum tree
BRASSICACEAE	**MUSTARD FAMILY**
Sisymbrium irio*	London rocket
PINACEAE	**PINE FAMILY**
Pinus sp.	Pine species
ANGIOSPERMS (MONOCOTYLEDONS)	
ANACARDIACEAE	**SUMAC FAMILY**
Schinus molle*	Peruvian pepper tree
ARECACEAE	**PALM FAMILY**
Washingtonia robusta*	Mexican fan palm
POACEAE	**GRASS FAMILY**
Bromus 0	Brome
Hordeum murinum*	Farmer's foxtail
GYMNOSPERMS	
CUPRESSACEAE	**CYPRESS FAMILY**
Calocedrus decurrens	Incense cedar

Note: * = Not native to California
Source: The Jepson Manual, 2nd Edition (Baldwin et al. 2012)

APPENDIX C

Wildlife Species Observed

Scientific Name	Common Name
INSECTA	**INSECTS**
Danaus plexippus (FC)	Monarch butterfly
REPTILIA	**REPTILES**
Uta stansburiana elegans	Western side-blotched lizard
AVES	**BIRDS**
Accipiter cooperii (WL)	Cooper's hawk
Anas platyrhynchos	Mallard
Aphelocoma californica	California scrub-jay
Ardea herodias	Great blue heron
Buteo jamaicensis	Red-tailed hawk
Buteo lineatus	Red-shouldered hawk
Calypte anna	Anna's hummingbird
Cathartes aura	Turkey vulture
Corvus brachyrhynchos	American crow
Corvus corax	Common raven
Falco sparverius	American kestrel
Haemorhous mexicanus	House finch
Melozone crissalis	California towhee
Mimus polyglottos	Northern mockingbird
Sayornis nigricans	Black phoebe
Sayornis saya	Say's phoebe
Setophaga coronata	Yellow-rumped warbler
Spinus lawrencei	Lawrence's goldfinch
Spinus psaltria	Lesser goldfinch
Sturnus vulgaris *	European starling
Zenaida macroura	Mourning dove
Zonotrichia leucophrys	White-crowned sparrow
MAMMALIA	**MAMMALS**
Otospermophilus beecheyi	California ground squirrel
Notes: * = Non-native species; FC = Candidate for Federal Listing; WL = State Watch List (CDFW) Sources: California Natural Diversity Data Base (CDFW 2024a)	

APPENDIX D

Potential for Occurrence of Sensitive Plant Species

Scientific Name **Common Name**	**Status**		**Blooming Period/ Elevation Range (meters)**	**Habitat Requirements**	**Records**	**Potential for Occurrence**
Allium marvinii Yucaipa onion	Fed: CA: CRPR:	none none 1B.2	Apr-May (760-1,065)	Occurs in openings within chaparral in clay soils. Known only from the Yucaipa and Beaumont area of the southern San Bernardino Mountains.	The CNDDB documented one record of the species within 5 miles of the Project site (Occurrence # 1). The record was documented in 2005 approximately 4.8 miles east of the Project site. Calflora documented one historic record (UCR-90187) in 1993 and one recent record (UCR-209392) in 2005 are within 5 miles of the Project site.	**Presumed Absent.** No suitable habitat is present on the Project site. Although recent and historic records of this species were documented within 5 miles of the Project site, the Project site is located outside the known elevation range for this species.
Calochortus plummerae Plummer's mariposa lily	Fed: CA: CRPR:	none none 4.2	May-Jul (100-1,700)	Occurs in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland in granitic, rocky soils.	The CNDDB documented four records of this species (Occurrence # 5, 10, 14, and 204) within 5 miles of the Project site. The closest record (Occurrence # 14) was documented in 1991 approximately 1.3 miles northwest of the Project site. The most recent records (Occurrence # 10 and 204) were both documented in 2010 approximately 4.7 and 4.8 miles east of the Project site. Multiple historic records are documented in Calflora within 5 miles of the Project site. The nearest	**Presumed Absent.** Although recent and historic records of this species were documented within 5 miles of the Project site, no suitable habitat is present in the Project site.

Scientific Name **Common Name**	**Status**		**Blooming Period/ Elevation Range (meters)**	**Habitat Requirements**	**Records**	**Potential for Occurrence**
					occurrence was documented in 1991 (UCR-68504) approximately 3 miles north of the Project site.	
Centromadia pungens ssp. laevis smooth tarplant	Fed: CA: CRPR:	none none 1B.1	Apr-Sep (0-640)	Occurs in alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodlands, and valley and foothill grassland.	The CNDDB documented four records of this species (Occurrence # 87, 102, 127, and 142) within 5 miles of the Project site. The closest record (Occurrence # 142) was documented in 2016 approximately 3.9 miles southwest of the Project site. The most recent record (Occurrence # 102) was documented in 2020 approximately 4.0 miles south of the Project site. No records in Calflora are	**Presumed Absent.** The Project site is outside the known elevation range for this species. Although recent records of this species are documented within 5 miles of the Project site, no suitable habitat is present on the Project site.

Scientific Name **Common Name**	**Status**		**Blooming Period/ Elevation Range (meters)**	**Habitat Requirements**	**Records**	**Potential for Occurrence**
					within 5 miles of the Project site.	
Chorizanthe parryi var. parryi Parry's spineflower	Fed: CA: CRPR:	none none 1B.1	Apr-Jun (275-1,220)	Occurs in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats in openings in sandy or rocky soils.	The CNDDB documented ten records of this species (Occurrence # 15, 17, 30, 82, 83, 84, 124, 127, 150, and 151) within 5 miles of the Project site. The closest record (Occurrence # 127) was observed in 2011 approximately 2.2 miles east of the Project site. The most recent record (Occurrence # 151) was documented in 2018 approximately 4.3 miles northwest of the Project site. Numerous recent and historic records are documented in Calflora within 5 miles of the Project site. The nearest record (1155885) was documented	**Presumed Absent.** Although recent records of this species are documented within 5 miles of the Project site, no suitable habitat is present on the Project site.

Scientific Name **Common Name**	**Status**		**Blooming Period/ Elevation Range (meters)**	**Habitat Requirements**	**Records**	**Potential for Occurrence**
					in 2010 approximately 2 miles northeast of the Project site.	
Chorizanthe xanti var. ***leucotheca*** white-bracted spineflower	Fed: CA: CRPR:	none none 1B.2	Apr-Jun (300-1,200)	Occurs on alluvial fans in coastal scrub habitat, Mojavean desert scrub, and pinyon and juniper woodland. Often found in sandy or gravelly soils.	The CNDDB documented one record of the species (Occurrence # 34) within 5 miles of the Project site. The record was documented in 2011 approximately 3.2 miles north of the Project site. Two recent records are documented in Calflora approximately 4 miles north of the Project site in 2008 (UCR-0091736 and UCR-0091737).	**Presumed Absent.** Although recent records of this species are documented within 5 miles of the Project site, no suitable habitat is present on the Project site.

Scientific Name **Common Name**	**Status**		**Blooming Period/ Elevation Range (meters)**	**Habitat Requirements**	**Records**	**Potential for Occurrence**
Dodecahema leptoceras Slender-horned spineflower	Fed: CA: CRPR:	**END** **END** 1B.1	Apr-Jun (200-760)	Occurs in chaparral, cismontane woodland, and alluvial fan coastal scrub in sandy soils.	The CNDDB documented two records of this species (Occurrence # 11 and 34) within 5 miles of the Project site. The closest record (Occurrence # 11) was observed in 1923 approximately 1.1 miles east of the Project site. The most recent record (Occurrence # 34) was documented in 1994 approximately 4.9 miles northwest of the Project site. No records in Calflora are within 5 miles of the Project site.	**Presumed Absent.** Although historic records of this species are documented within 5 miles of the Project site, no suitable habitat is present on the Project site.

Scientific Name **Common Name**	**Status**		**Blooming Period/ Elevation Range (meters)**	**Habitat Requirements**	**Records**	**Potential for Occurrence**
Eriastrum densifolium ssp. sanctorum Santa Ana River woollystar	Fed: CA: CRPR:	**END** **END** 1B.1	Apr-Sep (91-610)	Occurs in chaparral and alluvial fan coastal scrub in sandy or gravelly soils.	The CNDDB documented five records of this species (Occurrence # 5, 17, 34, 35, and 36) within 5-miles of the Project site. The closest record (Occurrence # 35) was documented in 1876 approximately 2.0 miles northwest of the Project site. The most recent record (Occurrence # 5) was documented in 2021 approximately 4.3 miles northwest of the Project site. The USFWS Species Occurrence data documented 6 records of this species within 5 miles of the Project site. The closest and most recent record was documented in 2008 approximately 4.4 miles northwest of the Project site near the Santa Ana River. No records in Calflora are within 5 miles of the Project site.	**Presumed Absent.** The Project site is outside the known elevation range for this species. No suitable habitat is present on the Project site. Although multiple records of this species were documented within 5 miles of the Project site, this species is primarily located within the Santa Ana River wash.

Scientific Name **Common Name**	**Status**		**Blooming Period/ Elevation Range (meters)**	**Habitat Requirements**	**Records**	**Potential for Occurrence**
Imperata brevifolia California satintail	Fed: CA: CRPR:	none none 2B.1	Sep-May (0-1,215)	Occurs in chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps that are often alkali, and riparian scrub.	The CNDDB documented one record of the species (Occurrence # 6) within 5 miles of the Project site. The record was documented in 1891 approximately 2.8 miles northwest of the Project site. No records in Calflora are within 5 miles of the Project site.	**Presumed Absent.** Although one historic record of this species is documented within 5 miles of the Project site, no suitable habitat is present on the Project site.
Monardella macrantha ssp. hallii Hall's monardella	Fed: CA: CRPR:	none none 1B.3	Jun-Oct (730-2,195)	Occurs in broadleafed upland forest, cismontane woodland, chapparal, lower montane coniferous forest, and valley and foothill grassland.	The CNDDB documented one record of the species (Occurrence # 45) within 5 miles of the Project site. The record was documented in 1993 approximately 4.6 miles northeast of the Project site. One historic record in Calflora (UC-25473) was documented in 1898 approximately 5 miles northwest of the Project site.	**Presumed Absent.** The Project site is outside the known elevation range for this species. Although historic records of this species are documented within 5 miles of the Project site, no suitable habitat is present on the Project site.

Scientific Name **Common Name**	**Status**		**Blooming Period/ Elevation Range (meters)**	**Habitat Requirements**	**Records**	**Potential for Occurrence**
Sidalcea hickmanii ssp. parishii Parish's checkerbloom	Fed: CA: CRPR:	none **RAR** 1B.2	Jun-Aug (1,000-2,499)	Occurs in chaparral, cismontane woodland, and lower montane coniferous forest.	One record of the species, Occurrence # 11, was observed in 1909 approximately 4.5 miles northeast of the Project site. Numerous recent and historic records are documented in Calflora approximately 5 miles northeast of the Project site along Yucaipa Ridge. The most recent was in 2022 (mg-167584).	**Presumed Absent.** The Project site is outside the known elevation range for this species. Although numerous recent and historic records of this species are documented within 5 miles of the Project site, no suitable habitat is present in the Project site. Additionally, many records are located within mountainous areas with habitat that is not present within the Project site.
Sidalcea neomexicana salt spring checkerbloom	Fed: CA: CRPR:	none none 2B.2	Mar-Jun (15-1,530)	Occurs in alkaline and mesic soils within chaparral, coastal sage scrub, lower montane coniferous forest, Mojavean desert scrub, and playas.	The CNDDB documented two records of this species (Occurrence # 22 and 23) within 5 miles of the Project site. Occurrence # 23 was the closest and most recent record, documented in 2011 approximately 2.6 miles north of the Project site. No records in Calflora are within 5 miles of the Project site.	**Presumed Absent.** Although a recent record is documented within 5 miles of the Project site, no suitable habitat is present on the Project site.
Symphyotrichum defoliatum San Bernardino aster	Fed: CA: CRPR:	none none 1B.2	Jul-Nov (2-2,040)	Occurs near ditches, streams, and springs in cismontane woodland, coastal sage scrub, lower montane coniferous forest, meadows and seeps, marshes and	The CNDDB documented one record of the species (Occurrence # 24) within 5 miles of the Project site. The record was documented in 1951 approximately 3.8 miles	**Presumed Absent.** Although one historic record is documented within 5 miles of the Project site, no suitable habitat is present on the Project site.

Scientific Name Common Name	Status		Blooming Period/ Elevation Range (meters)	Habitat Requirements	Records	Potential for Occurrence
				swamps, and valley and foothill grassland.	southwest of the Project site. No records in Calflora are within 5 miles of the Project site.	

Federal Designations:
(Federal Endangered Species Act, USFWS)
END: Federally-listed, Endangered
THR: Federally-listed, Threatened
FC: Federal Candidate Species
FSC: Federal Species of Concern
FPD: Federal Proposed for Delisting
DL: Federally-delisted

State Designations:
(California Endangered Species Act, CDFW)
END: State-listed, Endangered
THR: State-listed, Threatened
RAR: State-listed, Rare
SC: State Candidate Species
SSC: California Species of Special Concern
FP: Fully Protected Species

California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) Designations:
1A: Plants presumed extinct in California.
1B: Plants rare and endangered in CA and throughout their range.
2: Plants rare, threatened, or endangered in CA but more common elsewhere in their range.
3: Plants about which need more information; a review list.
4: Plants of limited distribution; a watch list.
Plants 1B, 2, and 4 extension meanings:
.1 Seriously endangered in CA (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 Fairly endangered in California (20-80% occurrences threatened)
.3 Not very endangered in CA (<20% of occurrences threatened or no current threats known)
*Note: according to CNPS [Skinner and Pavlik 1994], plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code (CDFG 2010b). This interpretation is inconsistent with other definitions.)

Other Designations:
SS: Bureau of Land Management Sensitive Species
S: U.S. Forest Service Sensitive Species
COV: Multiple Species Habitat Conservation Plan Covered Species

APPENDIX E

Potential for Occurrence of Sensitive Wildlife Species

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Database Records**	**Potential for Occurrence**
INVERTEBRATES					
Bombus crotchii Crotch bumble bee	Fed: CA:	none SC	Occurs in grasslands and shrublands. Nests and overwinters underground, often in abandoned rodent dens, but also rock piles, thatch, fallen logs, and brush piles. Generalist forager but reported food plants include *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia,* and *Salvia*.	The CNDDB documented two records of this species within 5 miles of the Project Site. Occurrence # 180 was observed in 1977 approximately 4.4 miles east of the Project Site. Occurrence # 181 was observed in 1975 approximately 1.2 miles southeast of the Project Site. Four "research grade" records were documented on iNaturalist within 5 miles of the Project site. The closest record was documented in 2022 approximately 1.1 miles northwest of the Project site, within the Crafton Hills Preserve. The most recent record was documented in 2023 approximately 1.4 miles north of the Project site, also within the Crafton Hills Preserve.	**Moderate.** Although the two CNDDB records were historic, multiple recent iNaturalist records were documented within 5 miles of the Project site. Low-quality nectaring and nesting habitat was present on site within the Amsinckia Fields. Additionally, the Project site is primarily surrounded by development and weed abatement (e.g., discing) has been document on site annually.
FISH					
Oncorhynchus mykiss irideus pop. 10 steelhead - southern California DPS	Fed: CA:	END SC	Freshwater lagoons, river mouths/tidal rivers, bays/sounds, rivers, and creeks for breeding. Spawning streams are relatively warm. Migrate between freshwater breeding and marine non-breeding habitats. Marine habitat is pelagic and near shore.	The CNDDB documented one record (Occurrence # 18) of this species within 5 miles of the Project site. The record was documented in 1950 approximately 4.9 miles north of the Project Site.	**Presumed Absent.** No suitable habitat was present on the Project site.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Database Records**	**Potential for Occurrence**
Rhinichthys osculus ssp. 3 Santa Ana speckled dace	Fed: CA:	none SSC	Permanent flowing creeks and streams with shallow gravel and cobble riffles.	The CNDDB documented one record (Occurrence # 9) of this species within 5 miles of the Project site. The record was documented in 1999 approximately 3.0 miles north of the Project Site.	**Presumed Absent.** No suitable habitat was present on the Project site.
AMPHIBIANS					
Rana muscosa southern mountain yellow-legged frog	Fed: CA:	END END	Ponds, streams, lakes, and isolated pools in southern Sierra Nevada Mountains and rocky streams within narrow canyons and the chaparral belt in Southern California mountains.	The CNDDB documented one record (Occurrence # 26) of this species within 5 miles of the Project site. The record was documented in 1905 approximately 4.0 miles northwest of the Project Site.	**Presumed Absent.** No suitable habitat was present on the Project site.
Spea hammondii western spadefoot	Fed: CA:	FC SSC	Open areas with sandy soils in a wide range of habitats including lowlands to foothills, coastal sage scrub, chaparral, mixed woodlands, alluvial fans, and grasslands.	The CNDDB documented seven records of this species within 5 miles of the Project Site (Occurrence # 455, 456, 457, 458, 459, 464, and 467). The closest and most recent record (Occ # 464) was documented in 2019 approximately 3.0 miles north of the Project Site.	**Presumed Absent.** No suitable habitat was present on the Project site.
REPTILES					
Anniella stebbinsi southern California legless lizard	Fed: CA:	none SSC	Occurs in moist warm loose soil with plant cover. Can occur in sparsely vegetated areas of coastal sand dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, alluvial fans, and stream terraces with sycamores, cottonwoods, or oaks.	The CNDDB documented seven records of this species within 5 miles of the Project Site (Occurrence # 12, 13, 14, 153, 385, 391, and 392). Occurrence # 391 was the closest and most recent record, documented in 2018 approximately 1.2 miles east of the Project site, in an urban area. Of the seven CNDDB records, five were recent and two were historic.	**Moderate.** Multiple recent records of this species were documented within 5 miles of the Project site. Additionally, suitable habitat was present on the Project site in the Amsinckia Fields.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Database Records**	**Potential for Occurrence**
Aspidoscelis tigris stejnegeri coastal whiptail	Fed: CA:	none SSC	Arid habitats including chaparral, woodlands, and dry riparian areas.	The CNDDB documented two recent records of this species within 5 miles of the Project Site. Occurrence # 120 was documented in 2015 approximately 4.1 miles southwest of the Project Site. Occurrence # 125 was documented in 2014 approximately 4.5 miles north of the Project Site.	**Low.** Although two recent records of this species were documented within 5 miles of the Project site, the habitat present on the Project site was only marginally suitable for this species.
Charina umbratica southern rubber boa	Fed: CA:	none THR	Under rocks, woody debris, or in crevices in conifer or conifer-mixed semi open forests and woodlands, patchy chaparral/shrublands, and meadows.	The CNDDB documented two records of this species within 5 miles of the Project Site; however, the Project site is located outside the known elevation range for this species. Occurrence # 25 was observed in the 1970's at least 4.5 miles east of the Project Site. Occurrence # 80 was observed in 1995 at least 4.5 miles east of the Project Site.	**Presumed Absent.** No suitable habitat was present on the Project site.
Crotalus ruber red-diamond rattlesnake	Fed: CA:	none SSC	Found in coastal chaparral, arid scrub, rocky grassland, oak and pine woodlands, desert mountain slopes and rocky desert flats.	The CNDDB documented one record of this species (Occurrence # 177) within 5 miles of the Project site. The record was documented in 2016 approximately 4.2 miles southwest of the Project Site.	**Presumed Absent.** No suitable habitat was present on the Project site.
Emys marmorata *[Actinemys pallida]* western pond turtle	Fed: CA:	FC SSC	Ponds, lakes, rivers, streams, marshes, and other water sources with rocky or muddy substrate. Basks on logs, rocks, and exposed banks.	The CNDDB documented one record of this species (Occurrence # 1286) within 5 miles of the Project site. The record was documented in 2016 approximately 4.2 miles southwest of the Project Site.	**Presumed Absent.** No suitable habitat was present on the Project site.
Phrynosoma blainvillii coast horned lizard	Fed: CA:	none SSC	Open areas of valleys, foothills, and semiarid mountains with sandy soil and low vegetation	The CNBBD documented one record (Occurrence # 433) of this species within 5 miles of the Project site. The record was documented in 1991	**Presumed Absent.** No suitable habitat was present on the Project site.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Database Records**	**Potential for Occurrence**
			including chaparral, woodlands, and grasslands.	approximately 4.2 miles northwest of the Project Site.	
Salvadora hexalepis virgultea coast patch-nosed snake	Fed: CA:	none SSC	Inhabits semi-arid brushy areas and chaparral in canyons, rocky hillsides and plains.	The CNDDB documented two records of this species within 5 miles of the Project Site. Occurrence # 23 was observed in 2016 approximately 4.8 miles southwest of the Project Site. Occurrence # 24 was observed in 2014 approximately 3.1 miles northeast of the Project Site.	**Presumed Absent.** No suitable habitat was present on the Project site.
BIRDS					
Agelaius tricolor tri-color blackbird (nesting colony)	Fed: CA:	none THR/SSC	Freshwater marshes with dense cattails, bulrushes, sedges, and tule. Forages in open habitat such as cultivated fields and pastures.	The CNDDB documented one record (Occurrence # 363) of this species within 5 miles of the Project site. The record was documented in 2013 approximately 3.7 miles south of the Project Site.	**Presumed Absent.** No suitable habitat was present on the Project site.
Aquila chrysaetos golden eagle (nesting & wintering)	Fed: CA:	U.S.C. 668-668c FP	Open country including prairies, sagebrush, savannah or sparse woodlands, and barren hills or mountainous areas. Nests on rocky cliff edges or in large trees such as eucalyptus or oak.	The CNDDB documented one record (Occurrence # 302) of this species within 5 miles of the Project site. The record was documented in 1980 approximately 3.3 miles south of the Project Site.	**Presumed Absent.** No suitable habitat was present on the Project site.
Athene cunicularia burrowing owl (burrow & some wintering sites)	Fed: CA:	none SSC	Open grasslands including prairies, plains, and savannah, or vacant lots and airports. Nests in abandoned dirt burrows.	The CNDDB did not document any records of this species within 5 miles of the Project site.	**Low.** Although suitable habitat is present on the Project site, the database searches did not document any records of this species within 5 miles of the Project site.
Buteo swainsoni Swainson's hawk (nesting)	Fed: CA:	none THR	Open pine-oak woodland, savannah, and agricultural fields with scattered trees. Nests in solitary bush or tree, or in small groves.	The CNDDB documented one record (Occurrence # 2550) of this species within 5 miles of the Project site. The record was documented in	**Presumed Absent.** No suitable habitat was present on the Project site.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Database Records**	**Potential for Occurrence**
			Nesting trees can include willow, black locust, oak, aspen, cottonwood, and conifers.	1900 approximately 1.1 miles east of the Project Site.	
Elanus leucurus white-tailed kite (nesting)	Fed: CA:	none FP	Open habitat in lowlands including savanna, open woodlands, marshes, and agricultural fields. Nests in trees near a marsh.	The CNDDB documented three records of this species within 5 miles of the Project Site. Occurrence # 147 was documented in 2006 approximately 3.6 miles south of the Project Site. Occurrence # 166 was documented in 2016 approximately 4.2 miles south of the Project Site. Occurrence # 167 was documented in 2016 approximately 3.8 miles south of the Project Site.	**Low.** No suitable nesting habitat was present on the Project site, however, suitable habitat was documented in the buffer, in trees adjacent to the Project site.
Empidonax traillii extimus southwestern willow flycatcher (nesting)	Fed: CA:	END END	Riparian woodlands particularly with willow thickets. Nests in densest areas of shrubs and trees with low-density canopies.	The USFWS Species occurrence data documented five records of this species within 5-miles of the Project Site. The closest record was documented in 2000 approximately 4.0 miles northeast of the Project site near Mill Creek. The most recent record was documented in 2016 approximately 4.1 miles southwest of the Project site near San Timoteo Canyon.	**Presumed Absent.** No suitable habitat was present on the Project site.
Icteria virens yellow-breasted chat (nesting)	Fed: CA:	none SSC	Riparian and upland thickets, and dry overgrown pastures. Prefers to nest in dense scrub along streams or at the edges of ponds or swamps.	The CNDDB documented one record (Occurrence # 116) of this species within 5 miles of the Project site. The record was documented in 2016 approximately 4.0 miles south of the Project Site.	**Presumed Absent.** No suitable habitat was present on the Project site.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Database Records**	**Potential for Occurrence**
Polioptila californica californica coastal California gnatcatcher	Fed: CA:	THR SSC	Dry coastal slopes, washes, and mesas with areas of low vegetation and coastal sage scrub.	The CNDDB documented one record (Occurrence # 916) of this species within 5 miles of the Project site, the record was documented in 2008 approximately 4.7 miles northwest of the Project Site. The USFWS Species Occurrence Data documented 26 records of this species within 5-miles of the Project site. The most recent record was documented in 2020 approximately 4.0 miles northwest of the Project site. The closest record was documented in 1996 approximately 2.5 miles north of the Project site.	**Presumed Absent.** No suitable habitat was present on the Project site.
Setophaga petechia yellow warbler	Fed: CA:	none SSC	In southern California, this species breeds in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland. During migration, they occur in lowland and foothill woodland habitats such as desert oases, riparian woodlands, oak woodlands, mixed deciduous-coniferous woodlands, suburban and urban gardens and parks, groves of exotic trees, farmyard windbreaks, and orchards (Small 1994).	The CNDDB documented one record (Occurrence # 112) of this species within 5 miles of the Project site. The record was documented in 2016 approximately 3.7 miles south of the Project Site.	**Presumed Absent.** No suitable habitat was present on the Project site.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Database Records**	**Potential for Occurrence**
Vireo bellii pusillus least Bell's vireo (nesting)	Fed: CA:	END END	Occurs in dense riparian habitats often below 2,000 feet but can also occur up to 4,270 feet. Breeds in low riparian vegetation with a dense understory and stratified canopy along water or dry intermittent streams often composed of southern willow scrub, cottonwood forest, mule fat scrub, alluvial woodland, coast live oak riparian forest, and arroyo willow riparian forest. Forages in adjacent upland habitats.	The CNDDB documented three records (Occurrence # 11, 571, and 574) of this species within 5 miles of the Project Site. Occurrence # 11 was observed in 2013 approximately 3.7 miles southwest of the Project Site. Occurrence # 571 was observed in 1900 approximately 2.4 miles northwest of the Project Site. Occurrence # 574 was observed in 2011 approximately 4.6 miles north of the Project Site. The USFWS Species Occurrence Data documented 81 records of this species within 5-miles of the Project site. The closest record was documented in 2010 approximately 3.1 miles north of the Project site, near Mill Creek. The most recent record was documented in 2017 approximately 4.4 miles south of the Project site near San Timoteo Canyon Road.	**Presumed Absent.** No suitable habitat was present on the Project site.
MAMMALS					
Dipodomys merriami parvus San Bernardino kangaroo rat	Fed: CA:	END END/SSC	Alluvial sage scrub, flood plains, washes, and upland areas adjacent to desert habitat.	The CNDDB documented six records of this species within 5 miles of the Project Site (Occurrence # 3, 14, 16, 22, 91, and 94). Occurrence # 94 was the closest record, documented approximately 3.0 miles north of the Project site in 2011. Occurrence # 3 was the most recent record, documented approximately 4.2 miles northwest of the Project site in 2017. The USFWS Species Occurrence Data documented 272	**Presumed Absent.** No suitable habitat was present on the Project site.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Database Records**	**Potential for Occurrence**
				records of this species within 5-miles of the Project site. The closest record was documented in 2001 approximately 3.0 miles north of the Project site, near Greenspot Road. The most recent record was documented in 2022 approximately 3.2 miles northwest of the Project site near Mill Creek.	
Lasiurus xanthius western yellow bat	Fed: CA:	none SSC	Roosts in trees, especially in fan palms with intact dead frond skirts. Has also been found roosting in cottonwood trees. Found in riparian woodlands in arid regions, oak or pinyon-juniper woodlands, and human developed areas.	The CNDDB documented one record (Occurrence # 41) of this species within 5 miles of the Project site. The record was documented in 1991 approximately 1.1 miles east of the Project Site.	**Low**. No suitable habitat was present on the Project site, however, suitable habitat was documented in the buffer adjacent to the Project site. The suitable habitat in the buffer consisted of palm trees adjacent to the Project site.
Leptonycteris yerbabuenae lesser long-nosed bat	Fed: CA:	DL SSC	Roost in caves and old mines at the base of mountains adjacent to alluvial fans with yucca, agave, organ pipe cactus, and saguaro. Range in California is limited to southernmost regions (San Diego region).	The CNDDB documented one record (Occurrence # 1) of this species within 5 miles of the Project site. The record was documented in 1993 approximately 1.1 miles east of the Project Site.	**Presumed Absent.** No suitable habitat was present on the Project site.
Neotoma lepida intermedia San Diego desert woodrat	Fed: CA:	none SSC	Coastal chaparral, sagebrush scrub, sandy desert and boulder habitats. May also be found in woodlands of Joshua trees or pinyon-juniper pine.	The CNDDB documented two records of this species within 5 miles of the Project Site. Occurrence # 46 was documented in 2007 approximately 4.7 miles northwest of the Project Site. Occurrence # 111 was documented in 2000	**Presumed Absent.** No suitable habitat was present on the Project site.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Database Records**	**Potential for Occurrence**
				approximately 1.9 miles north of the Project Site.	
Perognathus longimembris brevinasus Los Angeles pocket mouse	Fed: CA:	none SSC	Habitats with sandy and fine soils, including grasslands, coastal sage scrub, and alluvial sage scrub.	The USFWS Species occurrence data revealed three records of this species documented within 5-miles of the Project Site. The closest and most recent record was documented in 2010 approximately 3.0 miles north of the Project site.	**Presumed Absent.** No suitable habitat was present on the Project site.

Federal Designations:
(Federal Endangered Species Act, USFWS)
END: Federally-listed, Endangered
THR: Federally-listed, Threatened
FC: Federal Candidate Species
FSC: Federal Species of Concern
FPD: Federal Proposed for Delisting
DL: Federally-delisted

State Designations:
(California Endangered Species Act, CDFW)
END: State-listed, Endangered
THR: State-listed, Threatened
SC: State Candidate Species
SSC: California Species of Special Concern
FP: Fully Protected Species

Source: California Natural Diversity Data Base (CNDDB) Yucaipa, Redlands, Forest Falls, Sunnymead, El Casco, and Beaumont 7.5 minute quads.

Preliminary Water Quality Management Plan

For:

Yucaipa Business Park

Development File No. 20-099

Prepared for:

Teck Properties, LLC

PO Box 674

Forest Falls, CA 92339

Contact: Glenn Schmidt

(909) 240-9132

Prepared by:

MTH2 Engineering, Inc.

639 Lakewood Drive

Riverside, CA 92506

(951) 850-2190

Submittal Date: Jan 11, 2024

Revision Date:

Approval Date: _____

Project Owner's Certification

This Water Quality Management Plan (WQMP) has been prepared for Teck Properties, LLC by MTH2 Engineering, Inc. The WQMP is intended to comply with the requirements of the City of Yucaipa and the NPDES Areawide Stormwater Program requiring the preparation of a WQMP. The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with San Bernardino County's Municipal Storm Water Management Program and the intent of the NPDES Permit for San Bernardino County and the incorporated cities of San Bernardino County within the Santa Ana Region. Once the undersigned transfers its interest in the property, its successors in interest and the city/county shall be notified of the transfer. The new owner will be informed of its responsibility under this WQMP. A copy of the approved WQMP shall be available on the subject site in perpetuity.

"I certify under a penalty of law that the provisions (implementation, operation, maintenance, and funding) of the WQMP have been accepted and that the plan will be transferred to future successors."

.Project Data			
Permit/Application Number(s):	20-099	Grading Permit Number(s):	
Tract/Parcel Map Number(s):		Building Permit Number(s):	
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			APN 0318-013-11

Owner's Signature			
Owner Name: Patricia Carbajal			
Title			
Company	Teck Properties, LLC		
Address	PO Box 674, Forest Falls, CA 92339		
Email	pcarbajal@allcountiesengineering.com		
Telephone #			
Signature		Date	

Preparer's Certification

Project Data			
Permit/Application Number(s):	20-099	Grading Permit Number(s):	
Tract/Parcel Map Number(s):		Building Permit Number(s):	
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			APN 0318-013-11

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan were prepared under my oversight and meet the requirements of Regional Water Quality Control Board Order No. R8-2010-0036."

Engineer: Marten L. Anderson		PE Stamp Below
Title	President	
Company	MTH2 Engineering, Inc.	
Address	639 Lakewood Drive, Riverside, CA 92506	
Email	marten@mth2engineering.com	
Telephone #	(951) 850-2190	
Signature		
Date	Jan 11, 2024	

Table of Contents

Section 1 Discretionary Permit(s) 1-1

Section 2 Project Description 2-1

- 2.1 Project Information 2-1
- 2.2 Property Ownership/Management 2-2
- 2.3 Potential Stormwater Pollutants 2-3
- 2.4 Water Quality Credits 2-4

Section 3 Site and Watershed Description 3-1

Section 4 Best Management Practices (BMP) 4-1

- 4.1 Source Control BMP 4-1
- 4.2 Project Performance Criteria 4-7
- 4.3 Project Conformance Analysis 4-12
- 4.4 Alternative Compliance Plan (if applicable) 4-25

Section 5 Inspection and Maintenance Responsibility for Post Construction BMP 5-1

Section 6 WQMP Attachments 6-1

- 6.1. Site Plan and Drainage Plan 6-1
- 6.2 Electronic Data Submittal 6-1
- 6.3 Post Construction 6-1
- 6.4 Other Supporting Documentation 6-1

Forms

Form 1-1 Project Information 1-1
Form 2.1-1 Description of Proposed Project 2-1
Form 2.2-1 Property Ownership/Management 2-2
Form 2.3-1 Pollutants of Concern 2-3
Form 2.4-1 Water Quality Credits 2-4
Form 3-1 Site Location and Hydrologic Features 3-1
Form 3-2 Hydrologic Characteristics 3-2
Form 3-3 Watershed Description 3-3
Form 4.1-1 Non-Structural Source Control BMP 4-2
Form 4.1-2 Structural Source Control BMP 4-4
Form 4.1-3 Site Design Practices Checklist 4-6
Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume 4-7
Form 4.2-2 Summary of HCOC Assessment 4-8
Form 4.2-3 HCOC Assessment for Runoff Volume 4-9
Form 4.2-4 HCOC Assessment for Time of Concentration 4-10
Form 4.2-5 HCOC Assessment for Peak Runoff 4-11
Form 4.3-1 Infiltration BMP Feasibility 4-13
Form 4.3-2 Site Design Hydrologic Source Control BMP 4-14
Form 4.3-3 Infiltration LID BMP 4-17

Form 4.3-4 Harvest and Use BMP 4-18
Form 4.3-5 Selection and Evaluation of Biotreatment BMP 4-19
Form 4.3-6 Volume Based Biotreatment – Bioretention and Planter Boxes w/Underdrains ... 4-20
Form 4.3-7 Volume Based Biotreatment- Constructed Wetlands and Extended Detention.....4-21
Form 4.3-8 Flow Based Biotreatment 4-22
Form 4.3-9 Conformance Summary and Alternative Compliance Volume Estimate 4-23
Form 4.3-10 Hydromodification Control BMP 4-24
Form 5-1 BMP Inspection and Maintenance 5-1

Section 1 Discretionary Permit(s)

Form 1-1 Project Information					
Project Name:	Yucaipa Business Park				
Project Owner Contact Name:	Teck Properties, LLC				
Mailing Address:	PO Box 674 Forest Falls, CA 92339	E-mail Address:	pcarbajal@allcountiesengineering.com	Tele:	
Permit/Application Number(s):	20-099		Tract/Parcel Map Number(s):		
Additional Information/ Comments:					
Description of Project:	The overall site of approximately 5.704 acres, will be developed into an Office Park. The project will consist of approximately 83,760 SDF of buildings, 140,028 SF of concrete and asphalt surfacing for parking lots, driveways and walkways, and 24,691 SF of landscaping.				
Provide summary of Conceptual WQMP conditions (if previously submitted and approved). Attach complete copy.	No Conceptual WQMP conditions for the project.				

Section 2 Project Description

2.1 Project Information

This section of the WQMP should provide the information listed below. The information provided for Conceptual/ Preliminary WQMP should give sufficient detail to identify the major proposed site design and LID BMPs and other anticipated water quality features that impact site planning. Final Project WQMP must specifically identify all BMP incorporated into the final site design and provide other detailed information as described herein.

The purpose of this information is to help determine the applicable development category, pollutants of concern, watershed description, and long term maintenance responsibilities for the project, and any applicable water quality credits. This information will be used in conjunction with the information in Section 3, Site Description, to establish the performance criteria and to select the LID BMP or other BMP for the project or other alternative programs that the project will participate in, which are described in Section 4.

Form 2.1-1 Description of Proposed Project

1 Development Category (Select all that apply):

☐ Significant re-development involving the addition or replacement of 5,000 ft² or more of impervious surface on an already developed site	☒ New development involving the creation of 10,000 ft² or more of impervious surface collectively over entire site	☐ Automotive repair shops with standard industrial classification (SIC) codes 5013, 5014, 5541, 7532- 7534, 7536-7539	☐ Restaurants (with SIC code 5812) where the land area of development is 5,000 ft² or more
☐ Hillside developments of 5,000 ft² or more which are located on areas with known erosive soil conditions or where the natural slope is 25 percent or more	☐ Developments of 2,500 ft² of impervious surface or more adjacent to (within 200 ft) or discharging directly into environmentally sensitive areas or waterbodies listed on the CWA Section 303(d) list of impaired waters.	☒ Parking lots of 5,000 ft² or more exposed to storm water	☐ Retail gasoline outlets that are either 5,000 ft² or more, or have a projected average daily traffic of 100 or more vehicles per day

☐ Non-Priority / Non-Category Project *May require source control LID BMPs and other LIP requirements. Please consult with local jurisdiction on specific requirements*.

2 Project Area (ft2):	248,479	**3** Number of Dwelling Units:	NA	**4** SIC Code:	6512

5 Is Project going to be phased? Yes ☐ No ☒ *If yes, ensure that the WQMP evaluates each phase as a distinct DA, requiring LID BMPs to address runoff at time of completion.*

6 Does Project include roads? Yes ☐ No ☒ *If yes, ensure that applicable requirements for transportation projects are addressed (see Appendix A of TGD for WQMP)*

2.2 Property Ownership/Management

Describe the ownership/management of all portions of the project and site. State whether any infrastructure will transfer to public agencies (City, County, Caltrans, etc.) after project completion. State if a homeowners or property owners association will be formed and be responsible for the long-term maintenance of project stormwater facilities. Describe any lot-level stormwater features that will be the responsibility of individual property owners.

Form 2.2-1 Property Ownership/Management

Describe property ownership/management responsible for long-term maintenance of WQMP stormwater facilities:
Maintenance of the WQMP facilities will be the sole responsibility of the property owner. The owner may choose to contract out the maintenance of the storm water facilities to a contractor with the proper equipment.

2.3 Potential Stormwater Pollutants

Determine and describe expected stormwater pollutants of concern based on land uses and site activities (refer to Table 3-3 in the TGD for WQMP).

Form 2.3-1 Pollutants of Concern			
Pollutant	Please check: E=Expected, N=Not Expected		Additional Information and Comments
Pathogens (Bacterial / Virus)	E ☒	N ☐	Per Table 3-3 of the TGD
Nutrients - Phosphorous	E ☒	N ☐	Per Table 3-3 of the TGD
Nutrients - Nitrogen	E ☒	N ☐	Per Table 3-3 of the TGD
Noxious Aquatic Plants	E ☐	N ☒	The proposed development does not include any areas where water will be standing long enough to allow the growth of aquatic plants.
Sediment	E ☒	N ☐	Per Table 3-3 of the TGD
Metals	E ☒	N ☐	Per Table 3-3 of the TGD
Oil and Grease	E ☒	N ☐	Per Table 3-3 of the TGD
Trash/Debris	E ☒	N ☐	Per Table 3-3 of the TGD
Pesticides / Herbicides	E ☒	N ☐	Per Table 3-3 of the TGD
Organic Compounds	E ☒	N ☐	Per Table 3-3 of the TGD
Other:	E ☒	N ☐	Per Table 3-3 of the TGD
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	

2.4 Water Quality Credits

A water quality credit program is applicable for certain types of development projects if it is not feasible to meet the requirements for on-site LID. Proponents for eligible projects, as described below, can apply for water quality credits that would reduce project obligations for selecting and sizing other treatment BMP or participating in other alternative compliance programs. Refer to Section 6.2 in the TGD for WQMP to determine if water quality credits are applicable for the project.

Form 2.4-1 Water Quality Credits

1 Project Types that Qualify for Water Quality Credits: *Select all that apply*

☐ Redevelopment projects that reduce the overall impervious footprint of the project site. [Credit = % impervious reduced]	Higher density development projects ☐ Vertical density [20%] ☐ 7 units/ acre [5%]	☐ Mixed use development, (combination of residential, commercial, industrial, office, institutional, or other land uses which incorporate design principles that demonstrate environmental benefits not realized through single use projects) [20%]	☐ Brownfield redevelopment (redevelop real property complicated by presence or potential of hazardous contaminants) [25%]
☐ Redevelopment projects in established historic district, historic preservation area, or similar significant core city center areas [10%]	☐ Transit-oriented developments (mixed use residential or commercial area designed to maximize access to public transportation) [20%]	☐ In-fill projects (conversion of empty lots & other underused spaces < 5 acres, substantially surrounded by urban land uses, into more beneficially used spaces, such as residential or commercial areas) [10%]	☐ Live-Work developments (variety of developments designed to support residential and vocational needs) [20%]

2 Total Credit % *(Total all credit percentages up to a maximum allowable credit of 50 percent)*

Description of Water Quality Credit Eligibility (if applicable)	The project will not utilize water quality credits.

Section 3 Site and Watershed Description

Describe the project site conditions that will facilitate the selection of BMP through an analysis of the physical conditions and limitations of the site and its receiving waters. Identify distinct drainage areas (DA) that collect flow from a portion of the site and describe how runoff from each DA (and sub-watershed DMAs) is conveyed to the site outlet(s). Refer to Section 3.2 in the TGD for WQMP. The form below is provided as an example. Then complete Forms 3.2 and 3.3 for each DA on the project site. ***If the project has more than one drainage area for stormwater management, then complete additional versions of these forms for each DA / outlet.***

Form 3-1 Site Location and Hydrologic Features

Site coordinates *take GPS measurement at approximate center of site*	Latitude 34°01'57.25"	Longitude 117°04'50.75" W	Thomas Bros Map page

1 San Bernardino County climatic region: ☒ Valley ☐ Mountain

2 Does the site have more than one drainage area (DA): Yes☐ No☒ *If no, proceed to Form 3-2. If yes, then use this form to show a conceptual schematic describing DMAs and hydrologic feature connecting DMAs to the site outlet(s). An example is provided below that can be modified for proposed project or a drawing clearly showing DMA and flow routing may be attached*

Example only – modify for project specific WQMP using additional form

Form 3-2 Existing Hydrologic Characteristics for Drainage Area 1

For Drainage Area 1's sub-watershed DMA, provide the following characteristics	DMA A	DMA B	DMA C	DMA D
1 DMA drainage area (ft^2)	96,232	152,247		
2 Existing site impervious area (ft^2)	0	0		
3 Antecedent moisture condition *For desert areas, use http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_map.pdf*	2	2		
4 Hydrologic soil group *Refer to Watershed Mapping Tool – http://permitrack.sbcounty.gov/wap/*	A & B	A & B		
5 Longest flowpath length (ft)	~500	~500		
6 Longest flowpath slope (ft/ft)	0.0055	0.0055		
7 Current land cover type(s) *Select from Fig C-3 of Hydrology Manual*	Natural	Natural		
8 Pre-developed pervious area condition: *Based on the extent of wet season vegetated cover good >75%; Fair 50-75%; Poor <50% Attach photos of site to support rating*	Fair	Fair		

Form 3-3 Watershed Description for Drainage Area

Receiving waters *Refer to Watershed Mapping Tool - http://permitrack.sbcounty.gov/wap/* *See 'Drainage Facilities" link at this website*	Wilson Creek Live Oak Creek San Timoteo Creek Santa Ana River Reach 5 Santa Ana River, Reach 4 Santa Ana River, Reach 3 Prado Dam
Applicable TMDLs *Refer to Local Implementation Plan*	San Timoteo Creek: Indicator Bacteria Santa Ana River, Reach 4: Indicator Bacteria Santa Ana River, Reach 3: Copper, Indicator Bacteria, Lead Prado Dam: pH, Indicator Bacteria
303(d) listed impairments *Refer to Local Implementation Plan and Watershed Mapping Tool – http://permitrack.sbcounty.gov/wap/ and State Water Resources Control Board website – http://www.waterboards.ca.gov/santaana/water_issues/programs/tmdl/index.shtml*	San Timoteo Creek: Indicator Bacteria Santa Ana River, Reach 4: Indicator Bacteria Santa Ana River, Reach 3: Copper, Indicator Bacteria, Lead Prado Dam: pH, Indicator Bacteria
Environmentally Sensitive Areas (ESA) *Refer to Watershed Mapping Tool – http://permitrack.sbcounty.gov/wap/*	Potentially Sensitive Area: None
Unlined Downstream Water Bodies *Refer to Watershed Mapping Tool – http://permitrack.sbcounty.gov/wap/*	Wilson Creek Live Oak Creek San Timoteo Wash Santa Ana River, Reach 5 Santa Ana River, Reach 4 Santa Ana River, Reach 3
Hydrologic Conditions of Concern	☐ Yes *Complete Hydrologic Conditions of Concern (HCOC) Assessment. Include Forms 4.2-2 through Form 4.2-5 and Hydromodification BMP Form 4.3-10 in submittal* ☒ No
Watershed–based BMP included in a RWQCB approved WAP	☐ Yes *Attach verification of regional BMP evaluation criteria in WAP* • *More Effective than On-site LID* • *Remaining Capacity for Project DCV* • *Upstream of any Water of the US* • *Operational at Project Completion* • *Long-Term Maintenance Plan* ☒ No

Section 4 Best Management Practices (BMP)

4.1 Source Control BMP

4.1.1 Pollution Prevention

Non-structural and structural source control BMP are required to be incorporated into all new development and significant redevelopment projects. Form 4.1-1 and 4.1-2 are used to describe specific source control BMPs used in the WQMP or to explain why a certain BMP is not applicable. Table 7-3 of the TGD for WQMP provides a list of applicable source control BMP for projects with specific types of potential pollutant sources or activities. The source control BMP in this table must be implemented for projects with these specific types of potential pollutant sources or activities.

The preparers of this WQMP have reviewed the source control BMP requirements for new development and significant redevelopment projects. The preparers have also reviewed the specific BMP required for project as specified in Forms 4.1-1 and 4.1-2. All applicable non-structural and structural source control BMP shall be implemented in the project.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N1	Education of Property Owners, Tenants and Occupants on Stormwater BMPs	☒	☐	Provide property owner and tenants with educational pamphlets.
N2	Activity Restrictions	☒	☐	Do not allow unpermitted uses. CC&R's to be prepared to indicate unpermitted uses
N3	Landscape Management BMPs	☒	☐	Inspect irrigation system and health of landscaping. Provide routine maintenance per CASQA SC-73 fact sheet.
N4	BMP Maintenance	☒	☐	Maintained via the O&M plan.
N5	Title 22 CCR Compliance (How development will comply)	☒	☐	Comply with Title 22 CCR and California Health and Safety Code regarding any hazardous waste.
N6	Local Water Quality Ordinances	☒	☐	Comply with local water quality ordinances, if required.
N7	Spill Contingency Plan	☐	☒	No hazardous liquids are proposed to be stored onsite.
N8	Underground Storage Tank Compliance	☐	☒	No underground storage tanks are proposed onsite.
N9	Hazardous Materials Disclosure Compliance	☐	☒	No hazardous materials are proposed to be stored onsite.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N10	Uniform Fire Code Implementation	☒	☐	Comply with Article 80 of the Uniform Fire Code enforced by the fire protection agency.
N11	Litter/Debris Control Program	☒	☐	Site trash enclosures provided, Owner to implement trash management and litter control procedures.
N12	Employee Training	☒	☐	Owner prepared materials for employees or future site owner.
N13	Housekeeping of Loading Docks	☒	☐	No loading docks proposed.
N14	Catch Basin Inspection Program	☒	☐	Remove debris and sediment on a periodic basis and before storm events per the O&M Plan.
N15	Vacuum Sweeping of Private Streets and Parking Lots	☒	☐	Sweep parking lot on a periodic basis and before storm events per the O&M Plan.
N16	Other Non-structural Measures for Public Agency Projects	☐	☒	Not a public agency project.
N17	Comply with all other applicable NPDES permits	☐	☒	Permittees shall comply with other NPDES permits; a SWPPP will be prepared.

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S1	Provide storm drain system stencilling and signage (CASQA New Development BMP Handbook SD-13)	☒	☐	Apply stencils prohibiting the dumping of improper materials in storm drain inlets.
S2	Design and construct outdoor material storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-34)	☐	☒	No outdoor material storage proposed onsite.
S3	Design and construct trash and waste storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-32)	☒	☐	Trash enclosure provided with a solid roof.
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control (Statewide Model Landscape Ordinance; CASQA New Development BMP Handbook SD-12)	☒	☐	Irrigation system specifically designed for the project site and discreet areas and will include a rain-triggered shutoff device.
S5	Finish grade of landscaped areas at a minimum of 1-2 inches below top of curb, sidewalk, or pavement	☒	☐	Finished grade of landscape areas are a min 1” below hardscape or curb.
S6	Protect slopes and channels and provide energy dissipation (CASQA New Development BMP Handbook SD-10)	☒	☐	Rock used on slope areas at concentrated flow locations.
S7	Covered dock areas (CASQA New Development BMP Handbook SD-31)	☐	☒	No covered loading docks proposed onsite.
S8	Covered maintenance bays with spill containment plans (CASQA New Development BMP Handbook SD-31)	☐	☒	No maintenance bays proposed onsite.
S9	Vehicle wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☐	☒	No vehicle wash areas proposed onsite.
S10	Covered outdoor processing areas (CASQA New Development BMP Handbook SD-36)	☐	☒	No outdoor processing areas proposed onsite.

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S11	Equipment wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☐	☒	No equipment wash areas proposed onsite.
S12	Fueling areas (CASQA New Development BMP Handbook SD-30)	☐	☒	No fueling wash areas proposed onsite.
S13	Hillside landscaping (CASQA New Development BMP Handbook SD-10)	☐	☒	Hillside landscaping not proposed onsite.
S14	Wash water control for food preparation areas	☐	☒	No food preparation areas proposed onsite.
S15	Community car wash racks (CASQA New Development BMP Handbook SD-33)	☐	☒	No community car wash racks proposed onsite.

4.1.2 Preventative LID Site Design Practices

Site design practices associated with new LID requirements in the MS4 Permit should be considered in the earliest phases of a project. Preventative site design practices can result in smaller DCV for LID BMP and hydromodification control BMP by reducing runoff generation. Describe site design and drainage plan including:

- A narrative of site design practices utilized or rationale for not using practices
- A narrative of how site plan incorporates preventive site design practices
- Include an attached Site Plan layout which shows how preventative site design practices are included in WQMP

Refer to Section 5.2 of the TGD for WQMP for more details.

Form 4.1-3 Preventative LID Site Design Practices Checklist

Site Design Practices *If yes, explain how preventative site design practice is addressed in project site plan. If no, other LID BMPs must be selected to meet targets*
Minimize impervious areas: Yes ☐ No ☒ Explanation:
Maximize natural infiltration capacity: Yes ☒ No ☐ Explanation: Infiltration chambers are used to store and infiltrate site runoff in DMA A and DMA B.
Preserve existing drainage patterns and time of concentration: Yes ☐ No ☒ Explanation: The general existing drainage pattern mimics the existing drainage pattern.
Disconnect impervious areas: Yes ☐ No ☒ Explanation:
Protect existing vegetation and sensitive areas: Yes ☐ No ☒ Explanation:
Re-vegetate disturbed areas: Yes ☒ No ☐ Explanation: Landscaping to be installed as part of the project development.
Minimize unnecessary compaction in stormwater retention/infiltration basin/trench areas: Yes ☒ No ☐ Explanation: Compaction of graded areas under the infiltration chambers will be minimized.
Utilize vegetated drainage swales in place of underground piping or imperviously lined swales: Yes ☒ No ☐ Explanation: Vegetated swales will be utilized where feasible onsite.
Stake off areas that will be used for landscaping to minimize compaction during construction : Yes ☒ No ☐ Explanation: Landscape will be identified to minimize compaction during construction.

4.2 Project Performance Criteria

The purpose of this section of the Project WQMP is to establish targets for post-development hydrology based on performance criteria specified in the MS4 Permit. These targets include runoff volume for water quality control (referred to as LID design capture volume), and runoff volume, time of concentration, and peak runoff for protection of any downstream waterbody segments with a HCOC. ***If the project has more than one outlet for stormwater runoff, then complete additional versions of these forms for each DA / outlet.***

Methods applied in the following forms include:

- For LID BMP Design Capture Volume (DCV), the San Bernardino County Stormwater Program requires use of the P_6 method (MS4 Permit Section XI.D.6a.ii) – Form 4.2-1
- For HCOC pre- and post-development hydrologic calculation, the San Bernardino County Stormwater Program requires the use of the Rational Method (San Bernardino County Hydrology Manual Section D). Forms 4.2-2 through Form 4.2-5 calculate hydrologic variables including runoff volume, time of concentration, and peak runoff from the project site pre- and post-development using the Hydrology Manual Rational Method approach. For projects greater than 640 acres (1.0 mi^2), the Rational Method and these forms should not be used. For such projects, the Unit Hydrograph Method (San Bernardino County Hydrology Manual Section E) shall be applied for hydrologic calculations for HCOC performance criteria.

Refer to Section 4 in the TGD for WQMP for detailed guidance and instructions.

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DA 1)

1 Project area DA 1 (ft^2): 248,479 SF	**2** Imperviousness after applying preventative site design practices (Imp%): 90%	**3** Runoff Coefficient (Rc): 0.731 *$R_c = 0.858(Imp\%)^{\wedge 3}-0.78(Imp\%)^{\wedge 2}+0.774(Imp\%)+0.04$*
4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): 0.535 *http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html*		
5 Compute P_6, Mean 6-hr Precipitation (inches): 0.792 *P_6 = Item 4 *C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Valley = 1.4807; Mountain = 1.909; Desert = 1.2371)*		
6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
7 Compute design capture volume, DCV (ft^3): 23,544 CF *DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

Form 4.2-2 Summary of HCOC Assessment (DA 1)

Does project have the potential to cause or contribute to an HCOC in a downstream channel: Yes ☐ No ☒

Go to: *http://permitrack.sbcounty.gov/wap/*

If "Yes", then complete HCOC assessment of site hydrology for 2yr storm event using Forms 4.2-3 through 4.2-5 and insert results below

(Forms 4.2-3 through 4.2-5 may be replaced by computer software analysis based on the San Bernardino County Hydrology Manual)

If "No," then proceed to Section 4.3 Project Conformance Analysis

Condition	Runoff Volume (ft^3)	Time of Concentration (min)	Peak Runoff (cfs)
Pre-developed	**1** *Form 4.2-3 Item 12*	**2** *Form 4.2-4 Item 13*	**3** *Form 4.2-5 Item 10*
Post-developed	**4** *Form 4.2-3 Item 13*	**5** *Form 4.2-4 Item 14*	**6** *Form 4.2-5 Item 14*
Difference	**7** *Item 4 – Item 1*	**8** *Item 2 – Item 5*	**9** *Item 6 – Item 3*
Difference (as % of pre-developed)	**10** % *Item 7 / Item 1*	**11** % *Item 8 / Item 2*	**12** % *Item 9 / Item 3*

Form 4.2-3 HCOC Assessment for Runoff Volume (DA 1)

Weighted Curve Number Determination for: Pre-developed DA	DMA A	DMA B	DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1a Land Cover type								
2a Hydrologic Soil Group (HSG)								
3a DMA Area, ft^2 *sum of areas of DMA should equal area of DA*								
4a Curve Number (CN) *use Items 1 and 2 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								
Weighted Curve Number Determination for: Post-developed DA	DMA A	DMA B	DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1b Land Cover type								
2b Hydrologic Soil Group (HSG)								
3b DMA Area, ft^2 *sum of areas of DMA should equal area of DA*								
4b Curve Number (CN) *use Items 5 and 6 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								

5 Pre-Developed area-weighted CN:	**7** Pre-developed soil storage capacity, S (in): *S = (1000 / Item 5) - 10*	**9** Initial abstraction, I_a (in): *I_a = 0.2 * Item 7*
6 Post-Developed area-weighted CN:	**8** Post-developed soil storage capacity, S (in): *S = (1000 / Item 6) - 10*	**10** Initial abstraction, I_a (in): *I_a = 0.2 * Item 8*

11 Precipitation for 2 yr, 24 hr storm (in):
Go to: http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html

12 Pre-developed Volume (ft^3):
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 9)^2 / ((Item 11 – Item 9 + Item 7)*

13 Post-developed Volume (ft^3):
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 10)^2 / ((Item 11 – Item 10 + Item 8)*

14 Volume Reduction needed to meet HCOC Requirement, (ft^3):
*V_{HCOC} = (Item 13 * 0.95) – Item 12*

Form 4.2-4 HCOC Assessment for Time of Concentration (DA 1)

Compute time of concentration for pre and post developed conditions for each DA *(For projects using the Hydrology Manual complete the form below)*

Variables	Pre-developed DA1 *Use additional forms if there are more than 4 DMA*				Post-developed DA1 *Use additional forms if there are more than 4 DMA*			
	DMA A	DMA B	DMA C	DMA D	DMA A	DMA B	DMA C	DMA D
1 Length of flowpath (ft) *Use Form 3-2 Item 5 for pre-developed condition*								
2 Change in elevation (ft)								
3 Slope (ft/ft), S_o = *Item 2 / Item 1*								
4 Land cover								
5 Initial DMA Time of Concentration (min) *Appendix C-1 of the TGD for WQMP*								
6 Length of conveyance from DMA outlet to project site outlet (ft) *May be zero if DMA outlet is at project site outlet*								
7 Cross-sectional area of channel (ft^2)								
8 Wetted perimeter of channel (ft)								
9 Manning's roughness of channel (n)								
10 Channel flow velocity (ft/sec) V_{fps} = *(1.49 / Item 9) * (Item 7/Item 8)^0.67 * (Item 3)^0.5*								
11 Travel time to outlet (min) T_t = *Item 6 / (Item 10 * 60)*								
12 Total time of concentration (min) T_c = *Item 5 + Item 11*								

13 Pre-developed time of concentration (min): *Minimum of Item 12 pre-developed DMA*

14 Post-developed time of concentration (min): *Minimum of Item 12 post-developed DMA*

15 Additional time of concentration needed to meet HCOC requirement (min): $T_{C\text{-}HCOC}$ = *(Item 13 * 0.95) – Item 14*

Form 4.2-5 HCOC Assessment for Peak Runoff (DA 1)

Compute peak runoff for pre- and post-developed conditions

Variables		Pre-developed DA to Project Outlet (*Use additional forms if more than 3 DMA)*			Post-developed DA to Project Outlet (*Use additional forms if more than 3 DMA)*		
		DMA A	DMA B	DMA C	DMA A	DMA B	DMA C
1 Rainfall Intensity for storm duration equal to time of concentration *I_{peak} = 10^(LOG Form 4.2-1 Item 4 - 0.6 LOG Form 4.2-4 Item 5 /60)*							
2 Drainage Area of each DMA (Acres) *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
3 Ratio of pervious area to total area *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
4 Pervious area infiltration rate (in/hr) *Use pervious area CN and antecedent moisture condition with Appendix C-3 of the TGD for WQMP*							
5 Maximum loss rate (in/hr) *F_m = Item 3 * Item 4* *Use area-weighted F_m from DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
6 Peak Flow from DMA (cfs) *Q_p =Item 2 * 0.9 * (Item 1 - Item 5)*							
7 Time of concentration adjustment factor for other DMA to site discharge point *Form 4.2-4 Item 12 DMA / Other DMA upstream of site discharge point (If ratio is greater than 1.0, then use maximum value of 1.0)*	DMA A	*n/a*			*n/a*		
	DMA B		*n/a*			*n/a*	
	DMA C			*n/a*			*n/a*

8 Pre-developed Q_p at T_c for DMA A: *Q_p = Item 6_{DMAA} + [Item 6_{DMAB} * (Item 1_{DMAA} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAA/2}$] + [Item 6_{DMAC} * (Item 1_{DMAA} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAA/3}$]*	**9** Pre-developed Q_p at T_c for DMA B: *Q_p = Item 6_{DMAB} + [Item 6_{DMAA} * (Item 1_{DMAB} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAB/1}$] + [Item 6_{DMAC} * (Item 1_{DMAB} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAB/3}$]*	**10** Pre-developed Q_p at T_c for DMA C: *Q_p = Item 6_{DMAC} + [Item 6_{DMAA} * (Item 1_{DMAC} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAC/1}$] + [Item 6_{DMAB} * (Item 1_{DMAC} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAC/2}$]*
10 Peak runoff from pre-developed condition confluence analysis (cfs): *Maximum of Item 8, 9, and 10 (including additional forms as needed)*		
11 Post-developed Q_p at T_c for DMA A: *Same as Item 8 for post-developed values*	**12** Post-developed Q_p at T_c for DMA B: *Same as Item 9 for post-developed values*	**13** Post-developed Q_p at T_c for DMA C: *Same as Item 10 for post-developed values*
14 Peak runoff from post-developed condition confluence analysis (cfs): *Maximum of Item 11, 12, and 13 (including additional forms as needed)*		
15 Peak runoff reduction needed to meet HCOC Requirement (cfs): *$Q_{p\text{-}HCOC}$ = (Item 14 * 0.95) – Item 10*		

4.3 Project Conformance Analysis

Complete the following forms for each project site DA to document that the proposed LID BMPs conform to the project DCV developed to meet performance criteria specified in the MS4 Permit (WQMP Template Section 4.2). For the LID DCV, the forms are ordered according to hierarchy of BMP selection as required by the MS4 Permit (see Section 5.3.1 in the TGD for WQMP). The forms compute the following for on-site LID BMP:

- Site Design and Hydrologic Source Controls (Form 4.3-2)
- Retention and Infiltration (Form 4.3-3)
- Harvested and Use (Form 4.3-4) or
- Biotreatment (Form 4.3-5).

At the end of each form, additional fields facilitate the determination of the extent of mitigation provided by the specific BMP category, allowing for use of the next category of BMP in the hierarchy, if necessary.

The first step in the analysis, using Section 5.3.2.1 of the TGD for WQMP, is to complete Forms 4.3-1 and 4.3-3) to determine if retention and infiltration BMPs are infeasible for the project. For each feasibility criterion in Form 4.3-1, if the answer is "Yes," provide all study findings that includes relevant calculations, maps, data sources, etc. used to make the determination of infeasibility.

Next, complete Forms 4.3-2 and 4.3-4 to determine the feasibility of applicable HSC and harvest and use BMPs, and, if their implementation is feasible, the extent of mitigation of the DCV.

If no site constraints exist that would limit the type of BMP to be implemented in a DA, evaluate the use of combinations of LID BMPs, including all applicable HSC BMPs to maximize on-site retention of the DCV. If no combination of BMP can mitigate the entire DCV, implement the single BMP type, or combination of BMP types, that maximizes on-site retention of the DCV within the minimum effective area.

If the combination of LID HSC, retention and infiltration, and harvest and use BMPs are unable to mitigate the entire DCV, then biotreatment BMPs may be implemented by the project proponent. If biotreatment BMPs are used, then they must be sized to provide sufficient capacity for effective treatment of the remainder of the volume-based performance criteria that cannot be achieved with LID BMPs (TGD for WQMP Section 5.4.4.2). **Under no circumstances shall any portion of the DCV be released from the site without effective mitigation and/or treatment**.

Form 4.3-1 Infiltration BMP Feasibility (DA 1)

Feasibility Criterion – Complete evaluation for each DA on the Project Site

[1] Would infiltration BMP pose significant risk for groundwater related concerns? Yes ☐ No ☒
Refer to Section 5.3.2.1 of the TGD for WQMP

If Yes, Provide basis: (attach)

[2] Would installation of infiltration BMP significantly increase the risk of geotechnical hazards? Yes ☐ No ☒
(Yes, if the answer to any of the following questions is yes, as established by a geotechnical expert):

- The location is less than 50 feet away from slopes steeper than 15 percent
- The location is less than eight feet from building foundations or an alternative setback.
- A study certified by a geotechnical professional or an available watershed study determines that stormwater infiltration would result in significantly increased risks of geotechnical hazards.

If Yes, Provide basis: (attach)

[3] Would infiltration of runoff on a Project site violate downstream water rights? Yes ☐ No ☒

If Yes, Provide basis: (attach)

[4] Is proposed infiltration facility located on hydrologic soil group (HSG) D soils or does the site geotechnical investigation indicate presence of soil characteristics, which support categorization as D soils? Yes ☐ No ☒

If Yes, Provide basis: (attach)

[5] Is the design infiltration rate, after accounting for safety factor of 2.0, below proposed facility less than 0.3 in/hr (accounting for soil amendments)? Yes ☐ No ☒

If Yes, Provide basis: (attach)

[6] Would on-site infiltration or reduction of runoff over pre-developed conditions be partially or fully inconsistent with watershed management strategies as defined in the WAP, or impair beneficial uses? Yes ☐ No ☒
See Section 3.5 of the TGD for WQMP and WAP

If Yes, Provide basis: (attach)

[7] Any answer from Item 1 through Item 3 is "Yes": Yes ☐ No ☒
If yes, infiltration of any volume is not feasible onsite. Proceed to Form 4.3-4, Harvest and Use BMP. If no, then proceed to Item 8 below.

[8] Any answer from Item 4 through Item 6 is "Yes": Yes ☐ No ☒
If yes, infiltration is permissible but is not required to be considered. Proceed to Form 4.3-2, Hydrologic Source Control BMP.
If no, then proceed to Item 9, below.

[9] All answers to Item 1 through Item 6 are "No":
Infiltration of the full DCV is potentially feasible, LID infiltration BMP must be designed to infiltrate the full DCV to the MEP.
Proceed to Form 4.3-2, Hydrologic Source Control BMP.

4.3.1 Site Design Hydrologic Source Control BMP

Section XI.E. of the Permit emphasizes the use of LID preventative measures; and the use of LID HSC BMPs reduces the portion of the DCV that must be addressed in downstream BMPs. Therefore, all applicable HSC shall be provided except where they are mutually exclusive with each other, or with other BMPs. Mutual exclusivity may result from overlapping BMP footprints such that either would be potentially feasible by itself, but both could not be implemented. Please note that while there are no numeric standards regarding the use of HSC, if a project cannot feasibly meet BMP sizing requirements or cannot fully address HCOCs, feasibility of all applicable HSC must be part of demonstrating that the BMP system has been designed to retain the maximum feasible portion of the DCV. Complete Form 4.3-2 to identify and calculate estimated retention volume from implementing site design HSC BMP. Refer to Section 5.4.1 in the TGD for more detailed guidance.

Form 4.3-2 Site Design Hydrologic Source Control BMPs (DA 1)

1 Implementation of Impervious Area Dispersion BMP (i.e. routing runoff from impervious to pervious areas), excluding impervious areas planned for routing to on-lot infiltration BMP: Yes ☐ No ☒ *If yes, complete Items 2-5; If no, proceed to Item 6*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Total impervious area draining to pervious area (ft^2)			
3 Ratio of pervious area receiving runoff to impervious area			
4 Retention volume achieved from impervious area dispersion (ft^3) *V = Item2 * Item 3 * (0.5/12), assuming retention of 0.5 inches of runoff*			
5 Sum of retention volume achieved from impervious area dispersion (ft^3):		$V_{retention}$ *=Sum of Item 4 for all BMPs*	
6 Implementation of Localized On-lot Infiltration BMPs (e.g. on-lot rain gardens): Yes ☐ No ☒ *If yes, complete Items 7-13 for aggregate of all on-lot infiltration BMP in each DA; If no, proceed to Item 14*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
7 Ponding surface area (ft^2)			
8 Ponding depth (ft)			
9 Surface area of amended soil/gravel (ft^2)			
10 Average depth of amended soil/gravel (ft)			
11 Average porosity of amended soil/gravel			
12 Retention volume achieved from on-lot infiltration (ft^3) $V_{retention}$ *= (Item 7 *Item 8) + (Item 9 * Item 10 * Item 11)*			
13 Runoff volume retention from on-lot infiltration (ft^3):		$V_{retention}$ *=Sum of Item 12 for all BMPs*	

Form 4.3-2 cont. Site Design Hydrologic Source Control BMPs (DA 1)

14 Implementation of evapotranspiration BMP (green, brown, or blue roofs): Yes ☐ No ☒ *If yes, complete Items 15-20. If no, proceed to Item 21*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
15 Rooftop area planned for ET BMP (ft^2)			
16 Average wet season ET demand (in/day) *Use local values, typical ~ 0.1*			
17 Daily ET demand (ft^3/day) *Item 15 * (Item 16 / 12)*			
18 Drawdown time (hrs) *Copy Item 6 in Form 4.2-1*			
19 Retention Volume (ft^3) $V_{retention}$ *= Item 17 * (Item 18 / 24)*			
20 Runoff volume retention from evapotranspiration BMPs (ft^3): $V_{retention}$ *=Sum of Item 19 for all BMPs*			
21 Implementation of Street Trees: Yes ☐ No ☒ *If yes, complete Items 22-25. If no, proceed to Item 26*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
22 Number of Street Trees			
23 Average canopy cover over impervious area (ft^2)			
24 Runoff volume retention from street trees (ft^3) $V_{retention}$ *= Item 22 * Item 23 * (0.05/12) assume runoff retention of 0.05 inches*			
25 Runoff volume retention from street tree BMPs (ft^3): $V_{retention}$ *= Sum of Item 24 for all BMPs*			
26 Implementation of residential rain barrel/cisterns: Yes ☐ No ☒ *If yes, complete Items 27-29; If no, proceed to Item 30*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
27 Number of rain barrels/cisterns			
28 Runoff volume retention from rain barrels/cisterns (ft^3) $V_{retention}$ *= Item 27 * 3*			
29 Runoff volume retention from residential rain barrels/Cisterns (ft3): $V_{retention}$ *=Sum of Item 28 for all BMPs*			
30 Total Retention Volume from Site Design Hydrologic Source Control BMPs: *Sum of Items 5, 13, 20, 25 and 29*			

4.3.2 Infiltration BMPs

Use Form 4.3-3 to compute on-site retention of runoff from proposed retention and infiltration BMPs. Volume retention estimates are sensitive to the percolation rate used, which determines the amount of runoff that can be infiltrated within the specified drawdown time. The infiltration safety factor reduces field measured percolation to account for potential inaccuracy associated with field measurements, declining BMP performance over time, and compaction during construction. Appendix D of the TGD for WQMP provides guidance on estimating an appropriate safety factor to use in Form 4.3-3.

If site constraints limit the use of BMPs to a single type and implementation of retention and infiltration BMPs mitigate no more than 40% of the DCV, then they are considered infeasible and the Project Proponent may evaluate the effectiveness of BMPs lower in the LID hierarchy of use (Section 5.5.1 of the TGD for WQMP)

If implementation of infiltrations BMPs is feasible as determined using Form 4.3-1, then LID infiltration BMPs shall be implemented to the MEP (section 4.1 of the TGD for WQMP).

Form 4.3-3 Infiltration LID BMP - including underground BMPs (DA 1)

1 Remaining LID DCV not met by site design HSC BMP (ft³): 23,544 CF *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30*

BMP Type *Use columns to the right to compute runoff volume retention from proposed infiltration BMP (select BMP from Table 5-4 in TGD for WQMP) - Use additional forms for more BMPs*	DA 1 DMA A BMP Type Underground Infiltration Chamber	DA 1 DMA B BMP Type Underground Infiltration Chamber	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Infiltration rate of underlying soils (in/hr) *See Section 5.4.2 and Appendix D of the TGD for WQMP for minimum requirements for assessment methods*	3.0	3.0	
3 Infiltration safety factor *See TGD Section 5.4.2 and Appendix D*	2	2	
4 Design percolation rate (in/hr) *P_{design} = Item 2 / Item 3*	1.5	1.5	
5 Ponded water drawdown time (hr) *Copy Item 6 in Form 4.2-1*	NA	NA	
6 Maximum ponding depth (ft) *BMP specific, see Table 5-4 of the TGD for WQMP for BMP design details*	NA	NA	
7 Ponding Depth (ft) *d_{BMP} = Minimum of (1/12*Item 4*Item 5) or Item 6*	NA	NA	
8 Infiltrating surface area, SA_{BMP} (ft²) *the lesser of the area needed for infiltration of full DCV or minimum space requirements from Table 5.7 of the TGD for WQMP*	NA	NA	
9 Amended soil depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 in the TGD for WQMP for reference to BMP design details*	NA	NA	
10 Amended soil porosity	NA	NA	
11 Gravel depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 of the TGD for WQMP for BMP design details*	NA	NA	
12 Gravel porosity	NA	NA	
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*	NA	NA	
14 Above Ground Retention Volume (ft³) *$V_{retention}$ = Item 8 * [Item7 + (Item 9 * Item 10) + (Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*	0	0	
15 Underground Retention Volume (ft³) *Volume determined using manufacturer's specifications and calculations*	8,549	15,309	

16 Total Retention Volume from LID Infiltration BMPs: 23,858 *(Sum of Items 14 and 15 for all infiltration BMP included in plan)*

17 Fraction of DCV achieved with infiltration BMP: 101.3% *Retention% = Item 16 / Form 4.2-1 Item 7*

18 Is full LID DCV retained onsite with combination of hydrologic source control and LID retention/infiltration BMPs? Yes ☒ No ☐

If yes, demonstrate conformance using Form 4.3-10; If no, then reduce Item 3, Factor of Safety to 2.0 and increase Item 8, Infiltrating Surface Area, such that the portion of the site area used for retention and infiltration BMPs equals or exceeds the minimum effective area thresholds (Table 5-7 of the TGD for WQMP) for the applicable category of development and repeat all above calculations.

4.3.3 Harvest and Use BMP

Harvest and use BMP may be considered if the full LID DCV cannot be met by maximizing infiltration BMPs. Use Form 4.3-4 to compute on-site retention of runoff from proposed harvest and use BMPs.

Volume retention estimates for harvest and use BMPs are sensitive to the on-site demand for captured stormwater. Since irrigation water demand is low in the wet season, when most rainfall events occur in San Bernardino County, the volume of water that can be used within a specified drawdown period is relatively low. The bottom portion of Form 4.3-4 facilitates the necessary computations to show infeasibility if a minimum incremental benefit of 40 percent of the LID DCV would not be achievable with MEP implementation of on-site harvest and use of stormwater (Section 5.5.4 of the TGD for WQMP).

Form 4.3-4 Harvest and Use BMPs (DA 1)

1 Remaining LID DCV not met by site design HSC or infiltration BMP (ft^3):
V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30 – Form 4.3-3 Item 16

BMP Type(s) *Compute runoff volume retention from proposed harvest and use BMP (Select BMPs from Table 5-4 of the TGD for WQMP) - Use additional forms for more BMPs*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Describe cistern or runoff detention facility			
3 Storage volume for proposed detention type (ft^3) *Volume of cistern*			
4 Landscaped area planned for use of harvested stormwater (ft^2)			
5 Average wet season daily irrigation demand (in/day) Use local values, typical ~ 0.1 in/day			
6 Daily water demand (ft^3/day) *Item 4 * (Item 5 / 12)*			
7 Drawdown time (hrs) *Copy Item 6 from Form 4.2-1*			
8 Retention Volume (ft^3) *$V_{retention}$ = Minimum of (Item 3) or (Item 6 * (Item 7 / 24))*			

9 Total Retention Volume (ft^3) from Harvest and Use BMP *Sum of Item 8 for all harvest and use BMP included in plan*

10 Is the full DCV retained with a combination of LID HSC, retention and infiltration, and harvest & use BMPs? Yes ☐ No ☐
If yes, demonstrate conformance using Form 4.3-10. If no, then re-evaluate combinations of all LID BMP and optimize their implementation such that the maximum portion of the DCV is retained on-site (using a single BMP type or combination of BMP types). If the full DCV cannot be mitigated after this optimization process, proceed to Section 4.3.4.

4.3.4 Biotreatment BMP

Biotreatment BMPs may be considered if the full LID DCV cannot be met by maximizing retention and infiltration, and harvest and use BMPs. A key consideration when using biotreatment BMP is the effectiveness of the proposed BMP in addressing the pollutants of concern for the project (see Table 5-5 of the TGD for WQMP).

Use Form 4.3-5 to summarize the potential for volume based and/or flow based biotreatment options to biotreat the remaining unmet LID DCV w. Biotreatment computations are included as follows:

- Use Form 4.3-6 to compute biotreatment in small volume based biotreatment BMP (e.g. bioretention w/underdrains);
- Use Form 4.3-7 to compute biotreatment in large volume based biotreatment BMP (e.g. constructed wetlands);
- Use Form 4.3-8 to compute sizing criteria for flow-based biotreatment BMP (e.g. bioswales)

Form 4.3-5 Selection and Evaluation of Biotreatment BMP (DA 1)

<table>
<tr><td colspan="2">1 Remaining LID DCV not met by site design HSC, infiltration, or harvest and use BMP for potential biotreatment (ft³): Form 4.2-1 Item 7 - Form 4.3-2 Item 30 – Form 4.3-3 Item 16- Form 4.3-4 Item 9</td><td colspan="2">List pollutants of concern Copy from Form 2.3-1.</td></tr>
<tr><td rowspan="2">2 Biotreatment BMP Selected (Select biotreatment BMP(s) necessary to ensure all pollutants of concern are addressed through Unit Operations and Processes, described in Table 5-5 of the TGD for WQMP)</td><td>Volume-based biotreatment Use Forms 4.3-6 and 4.3-7 to compute treated volume</td><td colspan="2">Flow-based biotreatment Use Form 4.3-8 to compute treated volume</td></tr>
<tr><td>☐ Bioretention with underdrain
☐ Planter box with underdrain
☐ Constructed wetlands
☐ Wet extended detention
☐ Dry extended detention</td><td colspan="2">☐ Vegetated swale
☐ Vegetated filter strip
☐ Proprietary biotreatment</td></tr>
<tr><td colspan="2">3 Volume biotreated in volume based biotreatment BMP (ft³): Form 4.3-6 Item 15 + Form 4.3-7 Item 13</td><td>4 Compute remaining LID DCV with implementation of volume based biotreatment BMP (ft³): Item 1 – Item 3</td><td>5 Remaining fraction of LID DCV for sizing flow based biotreatment BMP: % Item 4 / Item 1</td></tr>
<tr><td colspan="4">6 Flow-based biotreatment BMP capacity provided (cfs): Use Figure 5-2 of the TGD for WQMP to determine flow capacity required to provide biotreatment of remaining percentage of unmet LID DCV (Item 5), for the project's precipitation zone (Form 3-1 Item 1)</td></tr>
<tr><td colspan="4">7 Metrics for MEP determination:
• Provided a WQMP with the portion of site area used for suite of LID BMP equal to minimum thresholds in Table 5-7 of the TGD for WQMP for the proposed category of development: ☐ If maximized on-site retention BMPs is feasible for partial capture, then LID BMP implementation must be optimized to retain and infiltrate the maximum portion of the DCV possible within the prescribed minimum effective area. The remaining portion of the DCV shall then be mitigated using biotreatment BMP.</td></tr>
</table>

Form 4.3-6 Volume Based Biotreatment (DA 1) – Bioretention and Planter Boxes with Underdrains

Biotreatment BMP Type *(Bioretention w/underdrain, planter box w/underdrain, other comparable BMP)*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
1 Pollutants addressed with BMP *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in Table 5-5 of the TGD for WQMP*			
2 Amended soil infiltration rate *Typical ~ 5.0*			
3 Amended soil infiltration safety factor *Typical ~ 2.0*			
4 Amended soil design percolation rate (in/hr) P_{design} *= Item 2 / Item 3*			
5 Ponded water drawdown time (hr) *Copy Item 6 from Form 4.2-1*			
6 Maximum ponding depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
7 Ponding Depth (ft) d_{BMP} *= Minimum of (1/12 * Item 4 * Item 5) or Item 6*			
8 Amended soil surface area (ft^2)			
9 Amended soil depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
10 Amended soil porosity, *n*			
11 Gravel depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
12 Gravel porosity, *n*			
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*			
14 Biotreated Volume (ft^3) $V_{biotreated}$ *= Item 8 * [(Item 7/2) + (Item 9 * Item 10) +(Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*			
15 Total biotreated volume from bioretention and/or planter box with underdrains BMP: *Sum of Item 14 for all volume-based BMPs included in this form*			

Form 4.3-7 Volume Based Biotreatment (DA 1) – Constructed Wetlands and Extended Detention

Biotreatment BMP Type *Constructed wetlands, extended wet detention, extended dry detention, or other comparable proprietary BMP. If BMP includes multiple modules (e.g. forebay and main basin), provide separate estimates for storage and pollutants treated in each module.*	DA DMA BMP Type		DA DMA BMP Type *(Use additional forms for more BMPs)*	
	Forebay	Basin	Forebay	Basin
1 Pollutants addressed with BMP forebay and basin *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in Table 5-5 of the TGD for WQMP*				
2 Bottom width (ft)				
3 Bottom length (ft)				
4 Bottom area (ft^2) A_{bottom} = *Item 2 * Item 3*				
5 Side slope (ft/ft)				
6 Depth of storage (ft)				
7 Water surface area (ft^2) $A_{surface}$ =*(Item 2 + (2 * Item 5 * Item 6)) * (Item 3 + (2 * Item 5 * Item 6))*				
8 Storage volume (ft^3) *For BMP with a forebay, ensure fraction of total storage is within ranges specified in BMP specific fact sheets, see Table 5-6 of the TGD for WQMP for reference to BMP design details* V =*Item 6 / 3 * [Item 4 + Item 7 + (Item 4 * Item 7)^0.5]*				
9 Drawdown Time (hrs) *Copy Item 6 from Form 2.1*				
10 Outflow rate (cfs) Q_{BMP} = *(Item* $8_{forebay}$ + *Item* 8_{basin}*) / (Item 9 * 3600)*				
11 Duration of design storm event (hrs)				
12 Biotreated Volume (ft^3) $V_{biotreated}$ = *(Item* $8_{forebay}$ + *Item* 8_{basin}*) +(Item 10 * Item 11 * 3600)*				
13 Total biotreated volume from constructed wetlands, extended dry detention, or extended wet detention : *(Sum of Item 12 for all BMP included in plan)*				

Form 4.3-8 Flow Based Biotreatment (DA 1)

Biotreatment BMP Type *Vegetated swale, vegetated filter strip, or other comparable proprietary BMP*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
1 Pollutants addressed with BMP *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in TGD Table 5-5*			
2 Flow depth for water quality treatment (ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
3 Bed slope (ft/ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
4 Manning's roughness coefficient			
5 Bottom width (ft) b_w *= (Form 4.3-5 Item 6 * Item 4) / (1.49 * Item 2^1.67 * Item 3^0.5)*			
6 Side Slope (ft/ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
7 Cross sectional area (ft^2) *A = (Item 5 * Item 2) + (Item 6 * Item 2^2)*			
8 Water quality flow velocity (ft/sec) *V = Form 4.3-5 Item 6 / Item 7*			
9 Hydraulic residence time (min) *Pollutant specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
10 Length of flow based BMP (ft) *L = Item 8 * Item 9 * 60*			
11 Water surface area at water quality flow depth (ft^2) SA_{top} *= (Item 5 + (2 * Item 2 * Item 6)) * Item 10*			

4.3.5 Conformance Summary

Complete Form 4.3-9 to demonstrate how on-site LID DCV is met with proposed site design hydrologic source control, infiltration, harvest and use, and/or biotreatment BMP. The bottom line of the form is used to describe the basis for infeasibility determination for on-site LID BMP to achieve full LID DCV, and provides methods for computing remaining volume to be addressed in an alternative compliance plan. If the project has more than one outlet, then complete additional versions of this form for each outlet.

Form 4.3-9 Conformance Summary and Alternative Compliance Volume Estimate (DA 1)

1 Total LID DCV for the Project DA-1 (ft^3): 23,544 *Copy Item 7 in Form 4.2-1*

2 On-site retention with site design hydrologic source control LID BMP (ft^3): 0 *Copy Item 30 in Form 4.3-2*

3 On-site retention with LID infiltration BMP (ft^3): 23,858 *Copy Item 16 in Form 4.3-3*

4 On-site retention with LID harvest and use BMP (ft^3): 0 *Copy Item 9 in Form 4.3-4*

5 On-site biotreatment with volume based biotreatment BMP (ft^3): 0 *Copy Item 3 in Form 4.3-5*

6 Flow capacity provided by flow based biotreatment BMP (cfs): 0 *Copy Item 6 in Form 4.3-5*

7 LID BMP performance criteria are achieved if answer to any of the following is "Yes":

- Full retention of LID DCV with site design HSC, infiltration, or harvest and use BMP: Yes ☒ No ☐
  If yes, sum of Items 2, 3, and 4 is greater than Item 1
- Combination of on-site retention BMPs for a portion of the LID DCV and volume-based biotreatment BMP that address all pollutants of concern for the remaining LID DCV: Yes ☐ No ☐
  If yes, a) sum of Items 2, 3, 4, and 5 is greater than Item 1, and Items 2, 3 and 4 are maximized; or b) Item 6 is greater than Form 4.3--5 Item 6 and Items 2, 3 and 4 are maximized
- On-site retention and infiltration is determined to be infeasible and biotreatment BMP provide biotreatment for all pollutants of concern for full LID DCV: Yes ☐ No ☐
  If yes, Form 4.3-1 Items 7 and 8 were both checked yes

8 If the LID DCV is not achieved by any of these means, then the project may be allowed to develop an alternative compliance plan. Check box that describes the scenario which caused the need for alternative compliance:

- Combination of HSC, retention and infiltration, harvest and use, and biotreatment BMPs provide less than full LID DCV capture: ☐
  *Checked yes for Form 4.3-5 Item 7, Item 6 is zero, and sum of Items 2, 3, 4, and 5 is less than Item 1. If so, apply water quality credits and calculate volume for alternative compliance, V_{alt} = (Item 1 – Item 2 – Item 3 – Item 4 – Item 5) * (100 - Form 2.4-1 Item 2)%*
- An approved Watershed Action Plan (WAP) demonstrates that water quality and hydrologic impacts of urbanization are more effective when managed in at an off-site facility: ☐
  Attach appropriate WAP section, including technical documentation, showing effectiveness comparisons for the project site and regional watershed

4.3.6 Hydromodification Control BMP

Use Form 4.3-10 to compute the remaining runoff volume retention, after LID BMP are implemented, needed to address HCOC, and the increase in time of concentration and decrease in peak runoff necessary to meet targets for protection of waterbodies with a potential HCOC. Describe hydromodification control BMP that address HCOC, which may include off-site BMP and/or in-stream controls. Section 5.6 of the TGD for WQMP provides additional details on selection and evaluation of hydromodification control BMP.

Form 4.3-10 Hydromodification Control BMPs (DA 1)

1 Volume reduction needed for HCOC performance criteria (ft^3): *(Form 4.2-2 Item 4 * 0.95) – Form 4.2-2 Item 1*	**2** On-site retention with site design hydrologic source control, infiltration, and harvest and use LID BMP (ft^3): *Sum of Form 4.3-9 Items 2, 3, and 4 Evaluate option to increase implementation of on-site retention in Forms 4.3-2, 4.3-3, and 4.3-4 in excess of LID DCV toward achieving HCOC volume reduction*
3 Remaining volume for HCOC volume capture (ft^3): *Item 1 – Item 2*	**4** Volume capture provided by incorporating additional on-site or off-site retention BMPs (ft^3): *Existing downstream BMP may be used to demonstrate additional volume capture (if so, attach to this WQMP a hydrologic analysis showing how the additional volume would be retained during a 2-yr storm event for the regional watershed)*

5 If Item 4 is less than Item 3, incorporate in-stream controls on downstream waterbody segment to prevent impacts due to hydromodification ☐ *Attach in-stream control BMP selection and evaluation to this WQMP*

6 Is Form 4.2-2 Item 11 less than or equal to 5%: Yes ☐ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate increase in time of concentration achieved by proposed LID site design, LID BMP, and additional on-site or off-site retention BMP ☐
  BMP upstream of a waterbody segment with a potential HCOC may be used to demonstrate increased time of concentration through hydrograph attenuation (if so, show that the hydraulic residence time provided in BMP for a 2-year storm event is equal or greater than the addition time of concentration requirement in Form 4.2-4 Item 15)
- Increase time of concentration by preserving pre-developed flow path and/or increase travel time by reducing slope and increasing cross-sectional area and roughness for proposed on-site conveyance facilities ☐
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

7 Form 4.2-2 Item 12 less than or equal to 5%: Yes ☐ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate reduction in peak runoff achieved by proposed LID site design, LID BMPs, and additional on-site or off-site retention BMPs ☐
  BMPs upstream of a waterbody segment with a potential HCOC may be used to demonstrate additional peak runoff reduction through hydrograph attenuation (if so, attach to this WQMP, a hydrograph analysis showing how the peak runoff would be reduced during a 2-yr storm event)
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

4.4 Alternative Compliance Plan (if applicable)

Describe an alternative compliance plan (if applicable) for projects not fully able to infiltrate, harvest and use, or biotreat the DCV via on-site LID practices. A project proponent must develop an alternative compliance plan to address the remainder of the LID DCV. Depending on project type some projects may qualify for water quality credits that can be applied to reduce the DCV that must be treated prior to development of an alternative compliance plan (see Form 2.4-1, Water Quality Credits). Form 4.3-9 Item 8 includes instructions on how to apply water quality credits when computing the DCV that must be met through alternative compliance. Alternative compliance plans may include one or more of the following elements:

- On-site structural treatment control BMP - All treatment control BMP should be located as close to possible to the pollutant sources and should not be located within receiving waters;
- Off-site structural treatment control BMP - Pollutant removal should occur prior to discharge of runoff to receiving waters;
- Urban runoff fund or In-lieu program, if available

Depending upon the proposed alternative compliance plan, approval by the executive officer may or may not be required (see Section 6 of the TGD for WQMP)

Section 5 Inspection and Maintenance Responsibility for Post Construction BMP

All BMP included as part of the project WQMP are required to be maintained through regular scheduled inspection and maintenance (refer to Section 8, Post Construction BMP Requirements, in the TGD for WQMP). Fully complete Form 5-1 summarizing all BMP included in the WQMP. Attach additional forms as needed. The WQMP shall also include a detailed Operation and Maintenance Plan for all BMP and may require a Maintenance Agreement (consult the jurisdiction's LIP). If a Maintenance Agreement is required, it must also be attached to the WQMP.

Form 5-1 BMP Inspection and Maintenance (use additional forms as necessary)

BMP	Reponsible Party(s)	Inspection/ Maintenance Activities Required	Minimum Frequency of Activities
Underground Chambers	Property Owner	Refer to manufacturer's inspection and maintenance guides. Verify pre- and post-storm retention level. Vacuum sediment row.	Prior to a storm event, and as directed by manufacturer.
Storm Drain Inlets	Property Owner	Inspect storm drain inlets and clean out debris and sediment.	Monthly and prior to a storm event.
Parking Lot Sweeping	Property Owner	Sweep parking and drive areas by hand or machine sweeper.	Monthly and prior to a storm event.
Litter/Debris Control	Property Owner	Remove litter and place in covered containers. Sweep trash enclosure area and close all bin lids.	Weekly.
Landscape Management	Property Owner	Provide routine maintenance per CASQA SC-73 fact sheet.	Weekly.

Section 6 WQMP Attachments

6.1. Site Plan and Drainage Plan

Include a site plan and drainage plan sheet set containing the following minimum information:

- Project location
- Site boundary
- Land uses and land covers, as applicable
- Suitability/feasibility constraints
- Structural Source Control BMP locations
- Site Design Hydrologic Source Control BMP locations
- LID BMP details
- Drainage delineations and flow information
- Drainage connections

6.2 Electronic Data Submittal

Minimum requirements include submittal of PDF exhibits in addition to hard copies. Format must not require specialized software to open. If the local jurisdiction requires specialized electronic document formats (as described in their Local Implementation Plan), this section will describe the contents (e.g., layering, nomenclature, geo-referencing, etc.) of these documents so that they may be interpreted efficiently and accurately.

6.3 Post Construction

Attach all O&M Plans and Maintenance Agreements for BMP to the WQMP.

6.4 Other Supporting Documentation

- Geotechnical Report
- Infiltration Testing Report
- Underground Chamber Volume Calculations

WAC GEOTECHNICAL
INC.

PRELIMINARY SOILS INVESTIGATION

PROJECT NUMBER: 19-1229

DATE: JANUARY 6, 2020

JOBSITE: 33193 YUCAIPA BLVD. YUCAIPA, CA. 92399

APN: 0318-013-11-0000

LATITUDE: 34.03243399 N LONGITUDE: -117.080677 W

SITE ELEVATION: 2,210 FEET ABOVE SEA LEVEL

PREPARED FOR

MR. GLENN SCHMIDT (909) 240-9132

VIA E-MAIL: evd1877@hotmail.com

PREPARED BY

WAC GEOTECHNICAL, INC.

2900 ADAMS STREET SUITE C-35

RIVERSIDE, CA. 92504

PREPARED FOR:

MR. GLENN SCHMIDT (909) 240-9132
VIA E-MAIL: evd1877@hotmail.com

SUBJECT:

PRELIMINARY GEOLOGIC SOILS INVESTIGATION

JOBSITE:

33193 YUCAIPA BLVD. YUCAIPA, CA. 92399
APN: 0318-013-11-0000

LADIES AND GENTLEMEN,

WAC GEOTECHNICAL, INC. IS PLEASED TO PROVIDE THE RESULTS OF OUR PRELIMINARY SOILS INVESTIGATION FOR THE PROPOSED SENIOR HOUSING FACILITY TO BE CONSTRUCTED ON THE PARCEL IN QUESTION. THIS REPORT PRESENTS OUR FINDINGS AND REVIEW OF THE SITE SOILS, AVAILABLE DATA, RECORDS AND SUBSEQUENT LABORATORY ANALYSIS. GEOTECHNICAL ENGINEERING RECOMMENDATIONS FOR SITE PREPARATION, FOUNDATION DESIGN AND CONSTRUCTION.

BASED ON THE RESULTS OF OUR INVESTIGATION AND EVALUATION, THE PROPOSED DEVELOPMENT APPEARS FEASIBLE FROM A GEOTECHNICAL PERSPECTIVE, PROVIDED THE RECOMMENDATIONS PRESENTED IN THIS REPORT ARE INCORPORATED INTO THE DESIGN AND CONSTRUCTION.

THE FINDINGS OF THIS REPORT ARE VALID AS OF THIS PRESENT DATE. HOWEVER, CHANGES IN THE CONDITIONS OF A PROPERTY CAN OCCUR WITH THE PASSAGE OF TIME, WHETHER THEY DUE TO NATURAL PROCESS OR THE WORKS OF MAN ON THIS OR ADJACENT PROPERTIES. IN ADDITION, CHANGES IN APPLICABLE OR APPROPRIATE STANDARDS MAY OCCUR FROM LEGISLATION OR BROADENING OF KNOWLEDGE. ACCORDINGLY, THE FINDINGS OF THIS REPORT MAY BE INVALIDATED WHOLLY OR PARTIALLY BY CHANGE OUTSIDE OF OUR CONTROL. THEREFORE, THIS REPORT IS SUBJECT TO REVIEW AND SHOULD BE UP-DATED AFTER A PERIOD OF ONE YEAR.

IF THE REGULATORY AGENCIES INVOLVED WITH THIS PROJECT REQUEST OR REQUIRE ANY ADDITIONAL WORK, I.E. REVIEWING, STAMPING AND SEALING OF PLANS, ADDITIONAL TESTING ETC. NOT PROVIDED IN THIS REPORT, THE ADDITIONAL WORK SHALL BE BILLED ACCORDINGLY. GRADING SUPERVISION AND FINAL COMPACTION APPROVAL REPORT SHALL BE BILLED SEPARATELY AND IS AT AN ADDITIONAL COST TO THE CLIENT. PLEASE SEE THE FEE SCHEDULE ATTACHED.

THANK YOU FOR THE OPPORTUNITY TO BE OF SERVICE ON YOUR PROJECT. SHOULD YOU HAVE ANY QUESTIONS REGARDING THIS REPORT, PLEASE CALL THE UNDERSIGNED AT YOUR CONVENIENCE.

RESPECTFULLY SUBMITTED,

WAC GEOTECHNICAL, INC.

21020

DAVID E. BALLINGER, PRESIDENT
W A C GEOTECHNICAL, INC.

REGISTERED PROFESSIONAL ENGINEER
GEORGE E. HAWES
No.C034779
9 30 21
STATE OF CALIFORNIA

GEORGE E. HAWES, VICE PRESIDENT
RCE C034779, STATE OF CALIFORNIA
LIC. EXP. 9-30-21

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TABLE OF CONTENTS

A. FRONT PAGE----1

B. INTRODUCTION AND SUMMARY, SIGNATURES AND SEAL----2

C. TABLE OF CONTENTS----3-5

1. PURPOSE AND SCOPE OF SERVICES----6

2. SITE DESCRIPTION AND PROPOSED DEVELOPMENT----6

2.1 SITE DESCRIPTION----6

2.2 PROPOSED DEVELOPMENT----6

3. PREVIOUS GEOTECHNICAL DOCUMENTATION----6

4. FIELD EXPLORATION AND LABORATORY TESTING----6

4.1 FIELD EXPLORATION----6

4.2 LABORATORY TESTING----7

5. GEOLOGIC AND SOILS CONDITIONS----7

5.1 REGIONAL SETTING----7

5.2 GENERAL SOIL – GEOLOGIC CONDITIONS----8

5.2.1 SOIL CORROSIVITY----8

5.2.2 ENGINEERED FILL----8

5.3 SURFACE AND GROUNDWATER----8

5.3.1 SURFACE WATER----8

5.3.2 GROUNDWATER----8

5.4 SEISMICITY AND FAULTING----9

5.4.1 SEISMIC DESIGN PARAMETERS----9

5.5 LIQUEFACTION AND LATERAL SPREAD----9

5.6 OTHER PERTINENT SEISMIC HAZARDS----10

6. CONCLUSIONS AND RECOMMENDATIONS----10

6.1 GENERAL----10

6.2 EARTHWORK CONSIDERATIONS----10

6.2.1 SITE CLEARING AND DEMOLITION----10

6.2.2 BUILDING AREAS----11

6.2.3 SUBSURFACE VARIATIONS----11

6.2.4 SUB-GRADE PREPARATIONS FOR STRUCTURAL PADS----11

6.2.5 OVER EXCAVATION AND REMOVALS----11

6.3 FOUNDATION DESIGN RECOMMENDATIONS----12

6.3.1 OTHER DESIGN RECOMMENDATIONS----12

6.3.2 UNDER SLAB TREATMENT----13

6.3.3 RESISTANCE TO LATERAL LOAD----13

7.0 CONSTRUCTION CONSIDERATIONS ----14

7.1.1 UNSUPPORTED EXCAVATIONS----14

7.1.2 SUPPORTED EXCAVATIONS ----14

7.1.3 SITE PREPARATION----14

7.1.4 SOIL CAVING ----14

7.1.5 RETAINING WALL DESIGN CONSIDERATIONS----14

7.1.6 UTILITY TRENCH BACKFILL----15

7.1.7 PRECONSTRUCTION MEETING----15

7.1.8 SEASONAL LIMITATIONS----15

7.1.9 PLANTERS----15

7.1.10 LANDSCAPE MAINTENANCE AND DRAINAGE----15

8.0 OBSERVATION AND TESTING DURING CONSTRUCTION----15

9.0 GENERAL GRADING RECOMMENDATIONS ----16

9.1.1 STRUCTURAL BACKFILL----17

9.1.2 SITE DRAINAGE----18

9.1.3 UTILITY TRENCHES----18

10.0 CLOSURE----18

11.0 BORING AND TRENCH LOGS----APPENDIX

12.0 LABORATORY TESTING----20

14.0 PROFESSIONAL LIMITATIONS----21

14.1.1 RECOMMENDED SERVICES----21

16.0 APPENDICES----22-END

ENCLOSURES

FIGURE 1 – SITE LOCATION SHOWN ON GENERAL SITE TOPOGRAPHY MAP

FIGURE 2 – TRENCHING/BORING LOCATION MAP

FIGURE 3 – GEOLOGIC MAP

APPENDIX A – TRENCH/BORING LOGS

APPENDIX B – LABORATORY TEST RESULTS

APPENDIX C – WEB SITE SEISMIC SOILS DATA

1.0 PURPOSE AND SCOPE OF SERVICES

THE PURPOSE OF THIS STUDY IS TO EVALUATE THE NATURE AND ENGINEERING PROPERTIES OF THE SUBSURFACE SOILS, AND TO PROVIDE NECESSARY GEOTECHNICAL RECOMMENDATIONS FOR FOUNDATION DESIGN, BUILDING PAD GRADING, UTILITY TRENCH BACKFILL, AND FIELD REVIEW DURING CONSTRUCTION. THE FINDINGS AND RECOMMENDATIONS HEREIN ARE BASED ON THE 2016 CALIFORNIA BUILDING CODE, TITLE 24 AND 2016 IBC.

OUR EVALUATION INCLUDED SUBSURFACE EXPLORATION, SOIL SAMPLING, LABORATORY TESTING, ENGINEERING ANALYSES AND PREPARATION OF THIS REPORT. THE RECOMMENDATIONS CONTAINED HEREIN REFLECT OUR PROFESSIONAL OPINIONS FOR THE SUBSURFACE SOIL CONDITIONS ENCOUNTERED DURING FIELD INVESTIGATION. GEOTECHNICAL INVESTIGATION FOR THE SUBJECT SITE INCLUDED SUBSURFACE EXPLORATION UTILIZING A TRUCK MOUNTED MOBILE DRILL B-34 AUGER DRILL RIG, SOIL SAMPLING, LABORATORY TESTING, ENGINEERING ANALYSES AND PREPARATION OF THIS REPORT.

2.0 SITE DESCRIPTION AND PROPOSED DEVELOPMENT

2.1 SITE DESCRIPTION

THE SUBJECT PROPERTY IS LOCATED AT 33193 YUCAIPA BLVD. YUCAIPA, CA. 92399. THE PARCEL APPEARS TO HAVE BEEN AN OLD FARMSTEAD. AN OLD FARM HOUSE AND COVERED CONCRETE PAD IS NOTED ON THE PARCEL. NUMEROUS MATURE TREES WERE NOTED. THE PROPERTY IS FENCED AND CROSS FENCED. THE PARCEL FRONTS YUCAIPA BLVD. ALONG THE NORTHERLY LOT LINE OF THE PARCEL TESTED. THE PARCEL IS A 5.72-ACRE PROPERTY. THIS IS A WELL DEVELOPED, OLDER MIXED RESIDENTIAL/COMMERCIAL AREA IN THE CITY OF YUCAIPA, COUNTY OF SAN BERNARDINO, CA.

GROUNDCOVER CONSISTS OF NATIVE GRASSES AND WEEDS. NO BEDROCK OUTCROPS OR SEASONAL DRAINAGES WERE NOTED. NO WATER WELLS WERE NOTED. TOPOGRAPHY IS NOTED AS FALLING FROM THE NORTHEAST DOWN TO THE SOUTHWEST APPROXIMATELY 10 FEET OVERALL. A GRADING PLAN HAS BEEN PREPARED AND WAS PROVIDED TO THIS OFFICE FOR REVIEW.

2.2 PROPOSED DEVELOPMENT

BASED ON THE INFORMATION SUPPLIED TO THIS OFFICE, IT IS PROPOSED TO CONSTRUCT A SENIOR HOUSING FACILITY CONSISTING OF NUMEROUS STRUCTURES ON THE PROPERTY TESTED. RECENT PLANS PROVIDED SHOW A THREE STORY BUILDING. IT IS OUR OPINION THAT THE SITE SHOULD BE CONSIDERED SUITABLE FOR THE PLANNED DEVELOPMENT, PROVIDED THE RECOMMENDATIONS PRESENTED HEREIN ARE INCORPORATED INTO DESIGN AND IN CONSTRUCTION.

3. PREVIOUS GEOTECHNICAL DOCUMENTATION

NO PREVIOUS DOCUMENTATION OR REPORTS WERE NOTED BY THIS OFFICE'S REVIEW OR THE CLIENTS PROVISION.

4. FIELD EXPLORATION AND LABORATORY TESTING

4.1 FIELD EXPLORATION

THE RESULTS OF OUR INVESTIGATION INDICATE THAT THE SOILS UNDERLYING THE PROPOSED BUILDING AREA ARE COMPRISED OF SILTY SANDS (SM) FINE TO COARSE GRAINED, BROWN, IN A LOOSE AND MOIST STATE.

BASED UPON INFORMATION SUPPLIED TO THIS OFFICE (VERBALLY AND PLANS), IT IS PROPOSED TO CONSTRUCT A SENIOR HOUSING FACILITY CONSISTING OF NUMEROUS STRUCTURES ON THE PROPERTY.

TWO EXPLORATORY BORINGS WERE EXCAVATED USING A B-34 DRILL RIG, ADVANCED TO A MAXIMUM DEPTH OF 15 FEET BELOW THE EXISTING GRADE. SEE ATTACHED GRADING PLAN (PLATE #1) AND BORING LOGS B-1 AND B-2, APPENDIX SECTION. DURING EXPLORATION, ENCOUNTERED SUBSURFACE SOILS WERE LOGGED BASED UPON VISUAL AND TACTILE METHODS WITH BULK SAMPLES AND IN-PLACE RING SAMPLES OBTAINED AT SUBSURFACE ZONES AT OR NEAR THE PROPOSED PAD GRADE. COLLECTED SAMPLES WERE TRANSFERRED TO A GEOTECHNICAL LABORATORY FOR TESTING AND ANALYSES.

AN INFILTRATION/PERCOLATION INVESTIGATION WAS PERFORMED SIMULTANEOUSLY WITH THIS SOILS REPORT. DESCRIPTIONS OF ENCOUNTERED SUBSURFACE SOILS ARE PROVIDED ON THE BORING LOGS IN THE APPENDIX SECTION. THE APPROXIMATE LOCATIONS OF THE TEST BORINGS ARE SHOWN ON THE ATTACHED PLANS.

4.2 LABORATORY TESTING

LABORATORY TESTING WAS CONDUCTED ON SELECTED BULK, REMOLDED AND IN-PLACE RING SAMPLES ACCORDING TO THE PROJECT REQUIREMENTS. THE LABORATORY TESTING INCLUDED EVALUATIONS OF MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT AND SOIL SHEAR STRENGTH (BASED UPON REMOLDED AND IN-SITU SAMPLES) UNDER ANTICIPATED STRUCTURAL LOADINGS AND EXPANSION INDEX. A CORROSION SERIES WAS ALSO PERFORMED. DESCRIPTIONS OF THE TEST PROCEDURES USED AND TEST RESULTS ARE PROVIDED IN APPENDIX SECTION.

BASED ON OBTAINED DATA RESULTING FROM OUR FIELD INVESTIGATION, LABORATORY TESTING AND ENGINEERING ANALYSES, THIS REPORT PRESENTS THIS FIRMS RECOMMENDATIONS FOR FOUNDATION DESIGN, SITE PREPARATION, GRADING AND FIELD REVIEWS NECESSARY DURING SITE CONSTRUCTION. CALCULATIONS ARE BASED ON THE MINIMUM RECOMMENDATIONS SET FORTH IN THE 2016 CALIFORNIA BUILDING CODE, TITLE 24 AND THE 2016 IBC.

5. GEOLOGIC AND SOILS CONDITIONS

5.1 REGIONAL SETTING

THE SUBJECT PROPERTY IS SITUATED IN THE PENINSULAR RANGES GEOMORPHIC PROVINCE. THE PENINSULAR RANGES PROVINCE IS ONE OF THE LARGEST GEOMORPHIC UNITS IN WESTERN NORTH AMERICA. IT EXTENDS APPROXIMATELY 975 MILES SOUTH OF THE TRANSVERSE RANGES GEOMORPHIC PROVINCE TO THE TIP OF BAJA CALIFORNIA. THIS PROVINCE VARIES IN WIDTH FROM ABOUT 30 MILES TO 100 MILES. IT IS BOUNDED ON THE WEST BY THE PACIFIC OCEAN, ON THE SOUTH BY THE GULF OF CALIFORNIA AND ON THE EAST BY THE COLORADO DESERT PROVINCE.

THE PENINSULAR RANGES ARE ESSENTIALLY A SERIES OF NORTHWEST-SOUTHEAST ORIENTED FAULT BLOCKS. SEVERAL MAJOR FAULT ZONES ARE FOUND IN THIS PROVINCE. THE ELSINORE FAULT ZONE AND THE SAN JACINTO FAULT ZONE TREND NORTHWEST-SOUTHEAST AND ARE FOUND NEAR THE MIDDLE OF THE PROVINCE. THE SAN ANDREAS FAULT ZONE BORDERS THE NORTHEASTERLY MARGIN OF THE PROVINCE.

MORE SPECIFIC TO THE SUBJECT PROPERTY, THE SITE IS LOCATED IN AN AREA GEOLOGICALLY MAPPED TO BE UNDERLAIN BY "Qa" ALLUVIUM, "ALLUVIAL FAN GRAVEL AND SAND OF THE VALLEY AREAS, DERIVED FROM BASEMENT ROCKS OF THE SAN BERNARDINO MOUNTAINS AND CRAFTON HILLS."

PER THE GEOLOGIC MAP OF THE YUCAIPA QUADRANGLE, RIVERSIDE COUNTY, CALIFORNIA 2004. (DIBBLEE, T. W. AND MINCH, J.A. MAP DF-124; INDICATES THE SITE SOILS ARE "Qa".

THE SITE LIES APPROXIMATELY 1000 FEET WEST, BY NORTHWEST OF A MAPPED SAN BERNARDINO COUNTY EARTHQUAKE FAULT ZONE NOTED ON THE GEOLOGIC HAZARD MAP # FH32 C. A COPY OF THE SBDO CO. GEOLOGIC HAZARD MAP # FH32 C IS ATTACHED TO THIS REPORT. BASED ON THIS HAZARD MAP THE SITE IS NOT WITHIN A LIQUEFACTION ZONE, FAULT ZONE OR SUSCEPTIBLE TO LANDSLIDE AND SUBSIDENCE. NO OTHER GEOLOGIC HAZARDS WERE NOTED ON THIS MAP. SEE THE USGS INTERACTIVE FAULT MAP AND COUNTY OF SAN BERNARDINO GEOLOGIC HAZARD MAP SNIP, WITHIN THE APPENDIX OF THIS REPORT.

5.2 GENERAL SOIL/GEOLOGIC CONDITIONS

A BRIEF DESCRIPTION OF THE SOILS ENCOUNTERED ON THE SITE IS PRESENTED IN THE FOLLOWING SECTIONS. BASED ON OUR FIELD EXPLORATIONS AND OBSERVATIONS, THE SITE IS GENERALLY UNDERLAIN BY ALLUVIAL AND COLLUVIAL DEPOSITS OF GRANITIC SANDS. THE GEOLOGIC MAP IS PRESENTED ON FIGURE 3.

OUR EVALUATION OF THE SITE SUBSOIL CONDITIONS IS BASED UPON SUBSURFACE SOIL EXPLORATION AND NOTED LABORATORY TESTING. BASED UPON OUR FIELD INVESTIGATION, SOIL SAMPLING AND SUBSEQUENT LABORATORY AND ENGINEERING ANALYSES, THE FOLLOWING CHARACTERISTICS FOR THE SITE SOILS ARE OBSERVED:

IN GENERAL, THE UPPER 3-5 FEET OF THE SITE SOILS APPEARS TO BE UNSUITABLE FOR THE SUPPORT OF A STRUCTURE. THE SUPPORTING SOIL, SILTY SANDS (SM) FINE TO COARSE GRAINED, IS GENERALLY LOOSE AND POROUS FROM PAST FARMING ACTIVITIES. THIS NATIVE SOIL IS CLASSIFIED AS SITE CLASS D, PER THE 2016 CALIFORNIA BUILDING CODE TABLE 1613.A.3.2.

5.2.1 SOIL CORROSIVITY

THE SOIL EXHIBITED A MODERATE CORROSIVE POTENTIAL. THIS OFFICE RECOMMENDS THAT ALL METAL USED IN CONJUNCTION WITH THE CONCRETE FOUNDATION SHOULD BE PROTECTED FROM THE SOIL. SEE THE CORROSION SERIES ANALYTICAL REPORT ATTACHED IN THE APPENDIX OF THIS REPORT.

5.2.2 ENGINEERED FILL

NO ENGINEERED FILL WAS NOTED ON THE LOT.

5.3 SURFACE WATER AND GROUND WATER

5.3.1. SURFACE WATER

SURFACE WATER WAS NOT OBSERVED DURING OUR SITE REVIEW. IF ENCOUNTERED DURING EARTHWORK CONSTRUCTION, SURFACE WATER ON THIS SITE IS THE RESULT OF PRECIPITATION OR SURFACE RUN-OFF FROM SURROUNDING AREAS. PROVISIONS FOR SURFACE DRAINAGE WILL NEED TO BE ACCOUNTED FOR BY THE PROJECT CIVIL ENGINEER.

5.3.2. GROUNDWATER

GROUND WATER WAS NOT ENCOUNTERED IN OUR SUBSURFACE DRILLING EXCAVATIONS. GROUND WATER IS NOT EXPECTED TO BE A PROBLEM FOR PROPOSED DEVELOPMENT. THIS OFFICE HAS NOTED HISTORIC HIGH GROUNDWATER TO BE AT THE DEPTH OF APPROXIMATELY 100 FEET BGS, IN THE AREA TESTED.

WATER WELLS IN THE VICINITY OF THE SITE HAVE REPORTED RECENT WELL-WATER LEVELS TO BE 200-300 FEET BELOW THE GROUND SURFACE.
(http://wdl.water.ca.gov/waterdatalibrary/).

5.4 FAULTING AND SEISMICITY

THE GEOLOGIC STRUCTURE OF THE ENTIRE SOUTHERN CALIFORNIA AREA IS DOMINATED MAINLY BE NORTHWEST TRENDING FAULTS ASSOCIATED WITH THE SAN ANDREAS SYSTEM. THE SITE IS IN A SEISMICALLY ACTIVE REGION. THIS PARCEL IS NOTED TO BE WITHIN 1,000 FEET OF A MAPPED SAN BERNARDINO COUNTY FAULT ZONE.

A COPY OF THE GEOLOGIC HAZARD MAP # FH32 C IS ATTACHED TO THIS REPORT. SAN BERNARDINO COUNTY MAP FH32 C NOTES THE SITE PARCEL AS NOT WITHIN A FAULT ZONE, LIQUEFACTION SUSCEPTIBILITY ZONE, LANDSLIDE OR SUBSIDENCE ZONE. SEE THE MAP COPY ATTACHED. HOWEVER, THE SITE IS NOTED TO BE IN A SEISMIC SITE CLASS E LOCATION NO OTHER GEOLOGIC HAZARDS WERE NOTED ON THIS MAP. SEE THE USGS INTERACTIVE FAULT MAP AND COUNTY OF SAN BERNARDINO GEOLOGIC HAZARD MAP SNIP, WITHIN THE APPENDIX OF THIS REPORT.

5.4.1 SEISMIC DESIGN PARAMETERS

SITE IS LOCATED AT APPROXIMATELY, LATITUDE: 34.03243399 N, LONGITUDE:-117.080677 W. THE SPECTRAL ACCELERATIONS (S_S AND S_1) FOR 0.2 AND 1.0 SECOND PERIODS FOR A SEISMIC CLASS E SOILS SITE, WERE DETERMINED FROM THE S.E.A., OSHPD WEB SITE FOR SEISMIC DESIGN INFORMATION. REFERENCING THE ASCE 7-10 STANDARD. THE RESULTS ARE SHOWN BELOW AND THE WEB DOWNLOAD IS LOCATED IN THE APPENDIX OF THIS REPORT.

SEISMIC DESIGN PARAMETERS ARE BASED UPON THE 2016 CBC. THIS PROJECT IS LOCATED IN SEISMIC REGION 1. FOR CALCULATIONS THE SEISMIC DESIGN PARAMETERS ARE PER TABLE 1613.A.1, 1613.A.2 & 1613.A.3 OF THE 2016 CBC.

A COPY OF THE USGS, FAULT SOURCE ZONE MAP, SEISMIC DESIGN PAGES AND SAN BERNARDINO COUNTY GEOLOGIC HAZARD MAP SNIP ARE ALSO ATTACHED TO THIS REPORT.

FOR CALCULATIONS THE SEISMIC DESIGN PARAMETERS ARE PER STRUCTURAL ENGINEERS ASSOCIATES , OSHPD WEB SITE "DESIGN MAP SUMMARY" ATTACHED. THE DESIGN CRITERIA IS BASED ON CLASS D SOILS AND THE 2016 CBC.

S_S = 1.767 (g) S_{MS} = 1.767 (g) S_{DS} = 1.178 (g)

S_1 = 0.842 (g) S_{M1} = 1.263 (g) S_{D1} = 0.842 (g)

FINAL SELECTION OF THE APPROPRIATE SEISMIC DESIGN COEFFICIENTS SHOULD BE MADE BY THE PROJECT STRUCTURAL ENGINEER BASED ON LOCAL PRACTICES AND ORDINANCES, EXPECTED BUILDING RESPONSE AND DESIRED LEVEL OF CONSERVATISM.

5.5 LIQUEFACTION AND LATERAL SPREAD

LIQUEFACTION IS CAUSED BY THE BUILD UP OF EXCESS HYDROSTATIC PRESSURE IN SATURATED COHESIONLESS SOILS DUE TO CYCLIC STRESS GENERATED BY GROUND SHAKING DURING AN EARTHQUAKE. THE SIGNIFICANT FACTORS ON WHICH LIQUEFACTION POTENTIAL OF A SOIL DEPOSIT DEPENDS, AMONG OTHERS INCLUDE, SOIL TYPE, RELATIVE SOIL DENSITY, INTENSITY OF EARTHQUAKE, DURATION OF GROUND SHAKING, AND DEPTH OF GROUND WATER.

LIQUEFACTION POTENTIAL IS CONSIDERED "NONE" FOR THIS PARCEL. GROUND WATER WAS NOT ENCOUNTERED IN OUR SUBSURFACE EXPLORATION PROGRAM TO A DEPTH OF 15 FEET BGS. HISTORIC HIGH WELL-WATER IS DETERMINED TO BE 200-300 FEET BGS.

PER THE SAN BERNARDINO GEOLOGIC HAZZARD MAP FH32C; THE POTENTIAL FOR LIQUEFACTION IS "NONE" AND THE SITE IS NOTED AS NOT SUSCEPTIBLE TO SUBSIDENCE. A FORMAL LIQUEFACTION INVESTIGATION WAS NOT WITHIN THE SCOPE OF THIS WORK.

BASED ON THE SOIL TYPE AND GRADATION, LATERAL SPREAD SHOULD NOT BE A CONSIDERATION IN THE DESIGN OF THE STRUCTURE.

5.6 OTHER SEISMIC HAZARDS

AS NO SIGNIFICANT NATURAL SLOPES WERE PRESENT ON THE SUBJECT SITE THE POTENTIAL FOR LANDSLIDE IS NONE. THE POTENTIAL FOR SECONDARY SEISMIC HAZARDS SUCH AS A SEICHE OR TSUNAMI IS CONSIDERED NEGLIGIBLE DUE TO THE SITE ELEVATION AND DISTANCE TO AN OPEN BODY OF WATER.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 GENERAL

BASED ON THIS FIRM'S FIELD INVESTIGATION, LABORATORY TESTING AND SUBSEQUENT ENGINEERING ANALYSIS, IT IS OUR OPINION THAT, FROM A GEOTECHNICAL VIEWPOINT, THE SITE SHOULD BE CONSIDERED SUITABLE FOR THE PLANNED DEVELOPMENT, PROVIDED THE RECOMMENDATIONS PRESENTED HEREIN, ARE INCORPORATED INTO FINAL DESIGN AND IN CONSTRUCTION.

SITE PREPARATION AND GRADING SHOULD BE PERFORMED IN ACCORDANCE WITH THE ENCLOSED RECOMMENDATIONS OF *SECTION 9, EARTHWORK/GENERAL GRADING RECOMMENDATIONS* OF THIS REPORT, EXCEPT AS MODIFIED IN THE MAIN TEXT AND WITH THE APPLICABLE PORTIONS OF APPENDIX J OF THE CURRENT UBC OR APPLICABLE LOCAL ORDINANCE.

STRUCTURAL DESIGN CONSIDERATIONS SHOULD INCLUDE THE PROBABILITY OF MODERATE PEAK GROUND ACCELERATIONS FROM RELATIVELY ACTIVE REGIONAL EARTHQUAKE FAULTS.

6.2 EARTHWORK AND GRADING CONSIDERATIONS

A GRADING PLAN HAS BEEN PREPARED BY LEH AND ASSOCIATES, JOB NUMBER 19-623, DATED 9-29-19. THE PLAN SPECIFIES APPROXIMATELY 12,500 CUBIC YARDS OF CUT/FILL WITH 230 CUBIC YARDS OF EXPORT. A COPY OF THE GRADING PLAN IS ATTACHED TO THIS REPORT IN THE APPENDIX SECTION.

CONSIDERING THE REMOVAL DEPTH AND ABSENCE OF SURFICIAL BEDROCK, IT IS OUR OPINION THAT ANY GRADING AND EXCAVATION FOR THE PROJECT MAY BE ACCOMPLISHED USING CONVENTIONAL CONSTRUCTION EQUIPMENT TO THE PROPOSED DESIGN GRADES AND RECOMMENDED REMOVAL DEPTHS. HEAVY RIPPING AND JACK HAMMERING SHOULD NOT BE REQUIRED. A RIP-ABILITY STUDY WAS NOT WITHIN THE SCOPE OF WORK FOR THIS PROJECT.

EARTHWORK AND GRADING SHOULD BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE GRADING ORDINANCES OF THE CITY OF YUCAIPA, COUNTY OF SAN BERNARDINO, THE 2016 CALIFORNIA BUILDING CODE (CBC) AND RECOMMENDATIONS CONTAINED IN THIS REPORT. THE GRADING GUIDELINES INCLUDED IN SECTION 6.2 OUTLINE GENERAL PROCEDURES AND DO NOT ANTICIPATE ALL SITE-SPECIFIC SITUATIONS.

6.2.1 SITE CLEARING AND DEMOLITION

IN AREAS OF PLANNED FINE GRADING AND IMPROVEMENTS, THE SITE SHOULD BE CLEARED OF VEGETATION AND DELETERIOUS MATERIALS. DEBRIS SHOULD BE PROPERLY DISPOSED OF OFF-SITE. VOIDS RESULTING FROM SITE CLEARING SHOULD BE BACKFILLED WITH ENGINEERED FILL.

6.2.2 BUILDING AREAS

THE SUB-SOILS WILL REQUIRE REMOVAL TO COMPETENT BEARING SUB-GRADE FOR FOUNDATION SUPPORT. SEE SECTION 6.2.4 FOR SPECIFIC REQUIREMENTS. THESE IN PLACE SUB-SOILS MAY BE CONSIDERED SUITABLE FOR USE AS STRUCTURAL FILLS INTENDED TO SUPPORT PROPOSED STRUCTURE OR FILL SLOPES. AT TIME OF CONSTRUCTION, ACTUAL FIELD EXPOSURES WILL DICTATE SITE SUITABILITY BASED UPON FIELD REVIEW BY THE PROJECT SOILS ENGINEERING CONSULTANT / REPRESENTATIVE.

6.2.3 SUB-SURFACE VARIATIONS

BASED UPON THE RESULTS OF OUR SUBSURFACE INVESTIGATION AND ON PAST EXPERIENCE, IT IS THE OPINION OF THIS FIRM THAT VARIATIONS IN THE CONTINUITY AND DEPTHS OF SUBSOIL DEPOSITS MAY BE EXPECTED. DUE TO THE NATURE AND CHARACTERISTICS OF THE SOILS UNDERLYING THE SUBJECT SITE, CARE SHOULD BE EXERCISED IN INTERPOLATING OR EXTRAPOLATING THE CONDITIONS AND PROPERTIES OF THE SUB-SOILS BEYOND THE BORING LOCATIONS.

6.2.4 SUB-GRADE PREPARATIONS FOR STRUCTURAL PADS

PROGRAMMED AREAS FOR BUILDING SUPPORT WILL REQUIRE A MINIMUM REMOVAL OF SOIL AND MATERIALS IN THE UPPER 5 FEET TO A COMPETENT IN-PLACE SUB-GRADE. REMOVAL SHALL BE VERIFIED AND APPROVED IN THE FIELD BY A REPRESENTATIVE OF WAC GEOTECHNICAL, INC. PRIOR TO REPLACING AND COMPACTING REMOVED MATERIAL. A REPRESENTATIVE OF WAC GEOTECHNICAL, INC. SHALL VERIFY THAT ALL REPLACED MATERIAL HAS BEEN COMPACTED TO AT LEAST 90% RELATIVE COMPACTION PER ASTM D-1557-91 FOR STRUCTURAL SUPPORT OF THE PROPOSED FILL AND FOUNDATIONS.

6.2.5 OVER EXCAVATION/REMOVALS

IT IS ANTICIPATED REMOVAL DEPTHS WILL BE A MINIMUM OF 5 FEET. SUB-SOILS SOIL SHOULD BE SCARIFIED 6-INCHES AND MOISTURE CONDITIONED TO INSURE A UNIFORM FILL MAT FOR BUILDING SUPPORT.

OVER EXCAVATION SHOULD INCLUDE THE AREA 5-FEET OUTSIDE THE BUILDING FOOTPRINT. ACTUAL DEPTH OF REMOVALS WILL BE PREDICATED ON EXPOSED FIELD CONDITIONS AND APPROVAL BY A REPRESENTATIVE OF WAC GEOTECHNICAL, INC.

ALL FILLS SHALL BE PLACED IN 6 TO 8 INCH LAYERS, MOISTURE CONDITIONED TO AT LEAST OPTIMUM MOISTURE CONTENT AND COMPACTED TO 90% OF MAXIMUM DRY DENSITY PER ASTM D-1557-91.

FILL PLACEMENT SHALL BE OBSERVED BY AND COMPACTION TESTING PERFORMED BY A REPRESENTATIVE OF THE PROJECT SOILS ENGINEERING CONSULTANT AND AS NOTED IN SECTION 9.0 "GENERAL GRADING RECOMMENDATIONS".

6.3 FOUNDATION DESIGN RECOMMENDATIONS

FOR ADEQUATE SUPPORT, THE PROPOSED STRUCTURE MAY BE CONSTRUCTED ON CONTINUOUS AND/OR ISOLATED SPREAD FOOTINGS FOUNDED EXCLUSIVELY INTO FIELD APPROVED COMPACTED FILL MATERIALS.

FOUNDATIONS MAY BE DESIGNED BASED UPON THE FOLLOWING VALUES:

ALLOWABLE BEARING: 3,800 LBS./SQ. FT.
LATERAL BEARING: 191 LBS./SQ. FT. PER FT. OF DEPTH TO A MAX. OF 300 LBS./SQ. FT.
SLIDING COEFFICIENT: 0.31

ALLOWABLE BEARING MAY BE INCREASED TO 20 % OF THE ABOVE DESIGNATED VALUE FOR EACH ADDITIONAL FOOT OF DEPTH OR WIDTH, UP TO THREE TIMES THE DESIGNATED VALUE. ADDITIONALLY, AN INCREASE OF 1/3 SHALL BE PERMITTED WHEN CONSIDERING LOAD COMBINATIONS, INCLUDING WIND OR EARTHQUAKE LOADS, AS PERMITTED BY 2016 CBC.

LABORATORY SHEAR TESTS CONDUCTED ON THE IN-SITU RING SAMPLES AND REMOLDED SAMPLES, INDICATE AVERAGE SHEAR STRENGTHS UNDER INCREASED MOISTURE CONDITIONS. IF IMPORT SOILS ARE PROPOSED FOR THIS CONSTRUCTION AND FILL, THE MOST CONSERVATIVE TEST RESULT WILL APPLY TO DESIGNS. THE SOIL IS CONSIDERED MODERATELY CORROSIVE. THUS, ALL METAL SHOULD BE PROTECTED FROM THE SOIL. RESULTS OF THE LABORATORY SHEAR TESTS ARE PROVIDED IN THE APPENDIX SECTION.

6.3.1 OTHER DESIGN RECOMMENDATIONS

FOOTING DEPTH

EXTERIOR - 12-INCHES BELOW LOWEST ADJACENT GRADE FOR A ONE-STORY STRUCTURE

24-INCHES FOR A TWO-STORY STRUCTURE, ALL (IN APPROVED COMPACTED FILL MATERIALS)

36-INCHES FOR A THREE-STORY STRUCTURE, ALL (IN APPROVED COMPACTED FILL MATERIALS)

INTERIOR - 12-INCHES BELOW LOWEST ADJACENT GRADE FOR A ONE-STORY STRUCTURE

24-INCHES BELOW LOWEST ADJACENT GRADE FOR A TWO-STORY STRUCTURE ALL (IN APPROVED DENSE COMPACTED FILL MATERIALS)

36-INCHES BELOW LOWEST ADJACENT GRADE FOR A THREE-STORY STRUCTURE ALL (IN APPROVED DENSE COMPACTED FILL MATERIALS).

FOOTING WIDTH

EXTERIOR - 12-INCHES MINIMUM FOR ONE-STORY, 18-INCHES MINIMUM FOR 2-STORY

INTERIOR - 12-INCHES MINIMUM FOR ONE AND 18-INCHES FOR 2-STORY, RESPECTIVELY.

- 18-INCHES FOR 3-STORY FOUNDED ON PROPERLY COMPACTED FILL MATERIAL.

FOOTING REINFORCEMENT

EXTERIOR & INTERIOR - ALL CONTINUOUS; THE FOUNDATION IS TO BE REINFORCED PER DESIGN BY THE STRUCTURAL ENGINEER.

CONCRETE SLABS: - SLAB THICKNESS AND REINFORCEMENT PER DESIGN BY THE STRUCTURAL ENGINEER.

6.3.2 UNDER-SLAB TREATMENT

THE STRUCTURE SLAB IS TO BE A MINIMUM OF 4" THICK WITH #4 REBAR @18 INCHES ON CENTERS EACH WAY, OVER A 10-MIL POLYETHYLENE (HDPE) VAPOR BARRIER, LAPPED A MINIMUM OF 12 INCHES AND SEALED, COVER WITH AT LEAST 2 INCHES OF SAND. SUB-GRADE SOILS SHOULD BE PRESOAKED TO CONTAIN AT LEAST OPTIMUM MOISTURE CONTENT IMMEDIATELY PRIOR TO PLACING VAPOR BARRIER AND TO BE VERIFIED BY THE SOILS ENGINEERING CONSULTANT.

THE SAND COVER SHOULD BE MOISTENED PRIOR TO PLACING CONCRETE. OPTIMUM MOISTURE CONTENT IN SUB-GRADE SOIL VERIFIED BY THE SOILS ENGINEERING CONSULTANT.

THE SETTLEMENT OF PROPERLY DESIGNED AND CONSTRUCTED FOUNDATIONS SUPPORTED ON APPROVED EARTH MATERIALS, CARRYING MAXIMUM ANTICIPATED VERTICAL LOADINGS, ARE EXPECTED TO BE WITHIN TOLERABLE LIMITS. ESTIMATED TOTAL AND DIFFERENTIAL SETTLEMENTS SHOULD BE NO MORE THAN 3/4 AND 1/2-INCH, RESPECTIVELY.

6.3.3 RESISTANCE TO LATERAL LOADS

RESISTANCE TO LATERAL LOADS CAN BE RESTRAINED BY FRICTION ACTING AT THE BASE OF FOUNDATIONS AND BY PASSIVE EARTH PRESSURE. REFER TO SECTION 4.2 FOR VALUES.

THE MAXIMUM LATERAL PASSIVE EARTH PRESSURE IS RECOMMENDED NOT TO EXCEED 200 POUNDS. FOR DESIGN, LATERAL EARTH PRESSURES OF LOCAL SOILS WHEN USED AS LEVEL BACKFILL MAY BE ESTIMATED FROM THE FOLLOWING EQUIVALENT FLUID DENSITY:

ACTIVE: 36 PCF
PASSIVE: 200 PCF
AT REST: 55 PCF

7.0 CONSTRUCTION CONSIDERATIONS

7.1.1 UNSUPPORTED EXCAVATION

TEMPORARY CONSTRUCTION EXCAVATION UP TO A MAXIMUM DEPTH OF 5 FEET MAY BE MADE WITHOUT ANY LATERAL SUPPORT. IT IS RECOMMENDED THAT NO SURCHARGE LOADS SUCH AS CONSTRUCTION EQUIPMENT, BE ALLOWED WITHIN A LINE DRAWN UPWARD AT 45 DEGREE FROM THE TOE OF EXCAVATION. USE OF SLOPING FOR DEEP EXCAVATION MAY BE APPLICABLE WHERE PLAN DIMENSIONS OF THE EXCAVATION ARE NOT CONSTRAINED BY ANY EXISTING STRUCTURE.

7.1.2 SUPPORTED EXCAVATIONS

IF VERTICAL EXCAVATIONS EXCEEDING 5 FEET IN DEPTH BECOME WARRANTED, USE OF SHORING TO SUPPORT SIDE WALLS IS RECOMMENDED.

7.1.3 SITE PREPARATION

SITE PREPARATIONS SHOULD INCLUDE CUT SUB-EXCAVATIONS, IMPORT SOILS, AND PLACEMENT OF SOILS AS ENGINEERED FILL. SUCH EARTH WORK SHOULD BE IN ACCORDANCE WITH THE APPLICABLE GRADING RECOMMENDATIONS PROVIDED IN THE 2016 CBC AND AS RECOMMENDED IN SECTION 5.0 OF THIS REPORT.

THIS OFFICE SHOULD BE NOTIFIED 72 HOURS IN ADVANCE OF IMPORTING SOILS TO SITE FOR PLACEMENT AS COMPACTED FILL. IT WILL BE NECESSARY FOR THE PROJECT SOILS ENGINEERING CONSULTANT TO SAMPLE IMPORT SOILS WITH SUBSEQUENT LABORATORY TESTING TO ASSESS THE SUITABILITY OF IMPORT SOILS FOR PROJECT CONSTRUCTION. IT IS STRONGLY RECOMMENDED THAT IMPORT SOILS BE SIMILAR TO SITE SOILS. THE USE OF CLAYEY SOILS FOR PAD CONSTRUCTION IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE SOILS ENGINEERING CONSULTANT.

7.1.4 SOIL CAVING

DURING EXCAVATIONS FOR DEEP UTILITY TRENCHES, 'SOME' CAVING MAY BE EXPECTED. ALL TEMPORARY DEEP EXCAVATIONS SHOULD BE MADE AT A 2:1 (HORIZONTAL TO VERTICAL) SLOPE RATIO OR FLATTER, AND/OR AS PER THE CONSTRUCTION GUIDELINES PROVIDED BY CAL-OSHA.

7.1.5 RETAINING WALL

RETAINING STRUCTURES, IF PLANNED, SHOULD BE DESIGNED USING THE FOLLOWING EQUIVALENT FLUID DENSITY:

SLOPE SURFACE OF RETAINED MATERIAL (HORIZONTAL TO VERTICAL)	EQUIVALENT FLUID DENSITY (PCF)	
	IMPORTED CLEAN SAND	LOCAL SITE SOIL
LEVEL	30	70
2:1	35	75

ONLY FREE-DRAINING GRANULAR MATERIALS (SAND OR GRAVEL) ARE TO BE USED AS RETAINING WALL BACKFILL. BACK-DRAINS AND / OR OMISSION OF HEAD JOINTS @ 32" O.C. IN THE FIRST COURSE ABOVE GRADE ARE REQUIRED BEHIND ALL RETAINING WALLS.

7.1.6 UTILITY TRENCH BACKFILL

UTILITY TRENCH BACKFILL WITHIN THE STRUCTURAL PAD AND BEYOND, SHOULD BE PLACED IN ACCORDANCE WITH THE FOLLOWING RECOMMENDATIONS:

* EXTERIOR TRENCHES ALONG A FOUNDATION OR A TOE OF A SLOPE AND EXTENDING BELOW A 1:1 IMAGINARY LINE PROJECTED FROM THE OUTSIDE BOTTOM EDGE OF THE FOOTING OR TOE OF THE SLOPE, SHOULD BE COMPACTED TO A MINIMUM 90 PERCENT.
* ALL EXCAVATED TRENCHES SHOULD CONFORM TO THE REQUIREMENTS AND SAFETY AS SPECIFIED BY CAL-OSHA.

7.1.7 PRE-CONSTRUCTION MEETING

IT IS RECOMMENDED THAT NO CLEARING OF THE SITE OR ANY GRADING OPERATION BE PERFORMED WITHOUT THE PRESENCE OF A REPRESENTATIVE OF THIS OFFICE. AN ON-SITE PRE-GRADING MEETING SHOULD BE ARRANGED BETWEEN THE SOILS ENGINEERING CONSULTANT AND THE GRADING CONTRACTOR PRIOR TO ANY CONSTRUCTION.

7.1.8 SEASONAL LIMITATIONS

NO STRUCTURAL FILL SHALL BE PLACED, SPREAD OR ROLLED DURING UNFAVORABLE WEATHER CONDITIONS. WHERE THE WORK IS INTERRUPTED BY HEAVY RAINS, FILL OPERATIONS SHALL NOT BE RESUMED UNTIL MOISTURE CONDITIONS ARE CONSIDERED FAVORABLE BY THE SOILS ENGINEERING CONSULTANT.

7.1.9 PLANTERS

TO MINIMIZE POTENTIAL SETTLEMENT TO FOUNDATIONS DUE TO MIGRATING IRRIGATION WATER, PLANTERS REQUIRING IRRIGATION SHOULD BE RESTRICTED FROM USE IF ADJACENT TO FOOTINGS. IF UNAVOIDABLE, PLANTER BOXES WITH SEALED BOTTOMS AND DRAIN OUTLETS TO APPROVED AREAS AWAY FROM THE FOUNDATION, SHOULD BE CONSTRUCTED.

7.1.10 LANDSCAPE MAINTENANCE/DRAINAGE

ONLY THE AMOUNT OF IRRIGATION NECESSARY TO SUSTAIN PLANT LIFE SHOULD BE PROVIDED. PAD DRAINAGE SHOULD BE DIRECTED TOWARDS STREETS AND/OR TO OTHER APPROVED AREAS AWAY FROM FOUNDATIONS. SLOPE AREAS, WHEN APPLICABLE, SHOULD BE PLANTED WITH DRAUGHT RESISTANT VEGETATION.

8.0 OBSERVATIONS AND TESTING DURING CONSTRUCTION

RECOMMENDATIONS PROVIDED IN THIS REPORT ARE BASED UPON THE ASSUMPTION THAT ALL FOUNDATIONS WILL BE PLACED UPON FIELD APPROVED FILL MATERIALS FOR STRUCTURES. EXCAVATED FOOTINGS SHALL BE FIELD REVIEWED, VERIFIED AND CERTIFIED BY SOILS ENGINEERING CONSULTANT PRIOR TO FORMING, STEEL AND CONCRETE PLACEMENT TO ENSURE THEIR SUFFICIENT EMBEDMENT AND PROPER BEARING ON APPROVED DENSE COMPACTED FILL MATERIALS.

ADDITIONAL FIELD REVIEWS BY SOILS ENGINEERING CONSULTANT ARE RECOMMENDED TO VERIFY FOOTING EXCAVATIONS BEING FREE OF LOOSE AND DISTURBED MATERIAL. ALL STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED UNDER DIRECT OBSERVATION AND TESTING BY THIS FACILITY. EXCESS SOILS GENERATED FROM FOOTING EXCAVATIONS SHOULD BE REMOVED FROM PAD AREAS AND SHOULD NOT BE ALLOWED ON SUB GRADES AS UN-COMPACTED FILL FOR AREAS PROGRAMMED TO RECEIVE CONCRETE SLAB-ON-GRADE.

9.0 EARTH WORK/GENERAL GRADING RECOMMENDATIONS

GENERAL GRADING RECOMMENDATIONS:

RECOMMENDED GENERAL SPECIFICATIONS FOR SURFACE PREPARATION TO RECEIVE FILL AND COMPACTION FOR STRUCTURAL AND UTILITY TRENCH BACKFILL AND OTHERS, ARE PRESENTED BELOW.

1. AREAS TO BE GRADED, BACKFILLED OR PAVED, SHALL BE GRUBBED, STRIPPED AND CLEANED OF ALL BURIED AND UNDETECTED DEBRIS, STRUCTURES, CONCRETE, VEGETATION AND OTHER DELETERIOUS MATERIALS PRIOR TO GRADING.

2. WHERE COMPACTED FILL IS TO PROVIDE VERTICAL SUPPORT FOR FOUNDATIONS, ALL LOOSE, SOFT AND OTHER INCOMPETENT SOILS SHOULD BE REMOVED TO FULL DEPTH AS APPROVED BY SOILS ENGINEERING CONSULTANT, OR AT LEAST UP TO THE DEPTH AS PREVIOUSLY DESCRIBED IN THIS REPORT. THE AREAS OF SUCH REMOVAL SHOULD EXTEND AT LEAST 5 FEET BEYOND THE PERIMETER OF EXTERIOR FOUNDATION LIMIT OR TO THE EXTENT AS APPROVED BY SOILS ENGINEERING CONSULTANT DURING GRADING.

3. THE REQUIRED COMPACTION FOR FILL TO SUPPORT FOUNDATIONS AND SLAB-ON-GRADE IS 90% OF THE MAXIMUM DRY DENSITY AT OR NEAR OPTIMUM MOISTURE CONTENT. TO MINIMIZE ANY POTENTIAL DIFFERENTIAL SETTLEMENT FOR FOUNDATIONS AND SLAB-ON-GRADE STRADDLING OVER DAYLIGHT LINES, THE CUT PORTION SHOULD BE OVER EXCAVATED A MINIMUM OF 3 FEET AND REPLACED AS COMPACTED FILL, COMPACTED TO AT LEAST 90% OF THE MAXIMUM DRY DENSITY AS DESCRIBED IN THIS REPORT.

4. UTILITY TRENCHES WITHIN BUILDING PAD AREAS AND BEYOND, SHOULD BE BACKFILLED WITH GRANULAR MATERIAL AND SUCH SHOULD BE COMPACTED TO AT LEAST 90% OF THE MAXIMUM DENSITY FOR THE MATERIAL USED.

5. FIELD DENSITY FOR ALL STRUCTURAL FILLS SHALL BE COMPARED TO THE MAXIMUM DRY DENSITY AS EVALUATED BY ASTM D1557-90 COMPACTION METHODS. ALL IN-SITU FIELD DENSITY OF COMPACTED FILL SHALL BE DETERMINED BY THE ASTM D1556 STANDARD METHODS OR BY OTHER APPROVED PROCEDURES.

6. ALL NEW IMPORTED SOILS, IF REQUIRED, SHALL BE CLEAN, GRANULAR, NON-EXPANSIVE MATERIAL OR AS APPROVED BY THE SOILS ENGINEERING CONSULTANT.

7. ALL FILLS SHALL BE PLACED IN 6 TO 8 INCH LAYERS, MOISTURE CONDITIONED TO AT LEAST OPTIMUM MOISTURE CONTENT AND COMPACTED TO 90% OF MAXIMUM DRY DENSITY PER ASTM D 1557-91

8. NO ROCKS OVER EIGHT INCHES IN DIAMETER, SHALL BE PERMITTED IN FILL SLOPES OR WITHIN 3 FEET OF THE SURFACE WITHOUT PRIOR APPROVAL OF THE SOILS ENGINEERING CONSULTANT.

9. NO JETTING AND/OR WATER TAMPING MAY BE CONSIDERED FOR BACKFILL COMPACTION FOR UTILITY TRENCHES WITHOUT PRIOR APPROVAL OF THE SOILS ENGINEERING CONSULTANT. FOR SUCH BACKFILL, HAND TAMPING WITH FILL LAYERS OF 8 TO 12 INCHES IN THICKNESS, OR AS APPROVED BY THE SOILS ENGINEERING CONSULTANT, IS RECOMMENDED.

10. ANY AND ALL UTILITY TRENCHES AT DEPTH, AS WELL AS CESSPOOL AND ABANDONED SEPTIC TANKS WITHIN BUILDING PAD AREA AND BEYOND, SHOULD EITHER BE COMPLETELY EXCAVATED AND REMOVED FROM THE SITE OR AS APPROVED BY SOILS ENGINEERING CONSULTANT.

11. ANY AND ALL IMPORT SOILS IF REQUIRED DURING GRADING, SHALL BE EQUIVALENT TO THE SITE SOILS OR BETTER. SUCH SHOULD BE APPROVED BY THE SOILS ENGINEERING CONSULTANT PRIOR TO IMPORT. AT LEAST 72 HOURS OF ADVANCE NOTICE IS REQUIRED PRIOR TO IMPORTING SOILS FOR SITE USE TO ALLOW THE SOILS ENGINEERING CONSULTANT TIME TO SAMPLE AND ANALYZE THE IMPORT SOILS.

12. ANY AND ALL GRADING REQUIRED FOR PAVEMENT, SIDEWALK OR OTHER FACILITIES TO BE USED BY GENERAL PUBLIC, SHOULD BE CONSTRUCTED UNDER DIRECT OBSERVATION OF SOILS ENGINEERING CONSULTANT, OR AS REQUIRED BY THE LOCAL PUBLIC AGENCIES.

13. A SITE MEETING (PRE-GRADE MEETING) SHALL BE HELD BETWEEN THE GRADING CONTRACTOR AND SOILS ENGINEERING CONSULTANT PRIOR TO ACTUAL CONSTRUCTION. THREE DAYS OF PRIOR NOTICE WILL BE REQUIRED FOR SUCH MEETING.

14. ALL FILL SLOPES ARE TO BE KEYED INTO FIELD APPROVED DENSE EARTH MATERIALS AND APPROVED BY THE PROJECT SOILS CONSULTANTS. KEYWAY IS TO BE 1/2 THE SLOPE HEIGHT IN WIDTH OR 15 FEET, WHICHEVER IS GREATER. HEEL SHALL HAVE A 1-FOOT DIFFERENTIAL FROM TOE (SLOPING TO HEEL).

15. FILL OVER CUT SHALL BE BENCHED INTO APPROVED DENSE EARTH MATERIALS AND FOUNDED UPON A KEYWAY, A MINIMUM WIDTH OF 10-FEET WITH THE HEEL 1-FOOT DEEPER THAN TOE (SLOPING TO HEEL).

16. FOR GRADIENTS STEEPER THAN 5:1, FILL SHALL BE BENCHED A MINIMUM OF 4-FEET HORIZONTALLY INTO NATIVE EARTH MATERIALS FOR EVERY 4 VERTICAL FEET OF FILL PLACED.

9.1.1 STRUCTURAL BACKFILL:

DURING GRADING, EXCAVATED SITE SOILS MAY BE CONSIDERED SUITABLE FOR REUSE AS BACKFILL MATERIAL. LOOSE SOILS, FORMWORK AND DEBRIS SHOULD BE REMOVED PRIOR TO BACKFILLING THE WALLS. ON-SITE SAND BACKFILL SHOULD BE PLACED AND COMPACTED IN ACCORDANCE WITH THE RECOMMENDED SPECIFICATIONS PROVIDED BELOW.

WHERE SPACE LIMITATIONS DO NOT ALLOW CONVENTIONAL BACKFILLING OPERATIONS, SPECIAL BACKFILL MATERIALS AND PROCEDURES MAY BE REQUIRED. PEA GRAVEL OR OTHER SELECT BACKFILL CAN BE USED IN LIMITED SPACE AREAS. RECOMMENDATIONS FOR PLACEMENT AND DENSIFICATION OF PEA GRAVEL OR OTHER SPECIAL BACKFILL CAN BE PROVIDED DURING CONSTRUCTION.

9.1.2 SITE DRAINAGE:

ADEQUATE POSITIVE DRAINAGE SHOULD BE PROVIDED AWAY FROM THE STRUCTURES TO PREVENT WATER FROM PONDING AND TO REDUCE PERCOLATION OF WATER INTO SUBSOIL AT FOUNDATION AREAS. A DESIRABLE SLOPE FOR SURFACE DRAINAGE SHOULD BE A MINIMUM OF 2 PERCENT IN LANDSCAPE AREAS AND 1 PERCENT IN PAVED AREAS.

PLANTERS AND LANDSCAPED AREAS ADJACENT TO BUILDING PERIMETER SHOULD BE AVOIDED OR DESIGNED BY A QUALIFIED LANDSCAPE ARCHITECT UTILIZING A SEALED PLANTER BOX WITH DRAINS AWAY FROM FOOTINGS TO MINIMIZE WATER FILTRATION INTO SUB-SOILS.

9.1.3 UTILITY TRENCHES:

BURIED UTILITY CONDUITS SHOULD BE BEDDED AND BACKFILLED AROUND THE CONDUIT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. WHERE CONDUIT UNDERLIES CONCRETE SLAB-ON-GRADE AND PAVEMENT, THE REMAINING TRENCH BACKFILL ABOVE THE PIPE SHOULD BE PLACED AND COMPACTED IN ACCORDANCE WITH THE FOLLOWING GRADING SPECIFICATIONS.

10.0 CLOSURE

THE CONCLUSIONS AND RECOMMENDATIONS CONTAINED HEREIN, ARE BASED UPON THE FINDINGS AND OBSERVATIONS MADE AT THE TIME OF THE SUBSURFACE INVESTIGATION.

THE RECOMMENDATIONS PRESENTED, SHOULD BE CONSIDERED "PRELIMINARY" SINCE THEY ARE BASED ON SOIL SAMPLES ONLY. IF DURING CONSTRUCTION, THE SUBSOIL CONDITIONS APPEAR TO BE DIFFERENT FROM THOSE DISCLOSED DURING FIELD INVESTIGATION, THIS OFFICE SHOULD BE NOTIFIED TO CONSIDER ANY POSSIBLE NEED FOR MODIFICATION FOR THE GEOTECHNICAL RECOMMENDATIONS PROVIDED IN THIS REPORT.

RECOMMENDATIONS PROVIDED ARE BASED ON THE ASSUMPTIONS THAT STRUCTURAL FOOTINGS WILL BE ESTABLISHED EXCLUSIVELY INTO FIELD APPROVED, COMPACTED FILL.

IT IS RECOMMENDED THAT FINAL PRECISE GRADING AND/OR FOUNDATION PLANS SHOULD BE REVIEWED BY THIS OFFICE WHEN THEY BECOME AVAILABLE (IF DIFFERENT THAN NOTED PLAN REVIEW UTILIZED FOR THIS REPORT). SITE GRADING MUST BE PERFORMED UNDER REVIEW BY GEOTECHNICAL REPRESENTATIVES OF THIS OFFICE. ALL FOOTING EXCAVATIONS SHOULD BE FIELD REVIEWED (BY THIS OFFICE) PRIOR TO FORMING, STEEL AND CONCRETE PLACEMENT TO ENSURE THAT FOUNDATIONS ARE FOUNDED INTO SATISFACTORY SOILS AND EXCAVATIONS ARE FREE OF LOOSE AND DISTURBED MATERIALS.

THIS REPORT HAS BEEN PREPARED EXCLUSIVELY FOR THE USE OF THE ADDRESSEE FOR THE PROJECT REFERENCED IN CONTEXT. IT SHALL NOT BE TRANSFERRED OR BE USED BY OTHER PARTIES WITHOUT WRITTEN CONSENT BY WAC GEOTECHNICAL, INC. WE CANNOT BE RESPONSIBLE FOR USE OF THIS REPORT BY OTHERS WITHOUT REVIEW OF THE GRADING OPERATION BY OUR PERSONNEL.

SHOULD THE PROJECT BE DELAYED BEYOND ONE YEAR AFTER THE DATE OF THIS REPORT, THE RECOMMENDATIONS PRESENTED SHALL BE REVIEWED TO CONSIDER ANY POSSIBLE CHANGE IN SITE CONDITIONS OR CODE REQUIREMENTS.

THE RECOMMENDATIONS PRESENTED ARE BASED ON THE ASSUMPTION THAT THE NECESSARY GEOTECHNICAL OBSERVATIONS AND TESTING DURING CONSTRUCTION WILL BE PERFORMED BY A REPRESENTATIVE OF THIS OFFICE. THE FIELD OBSERVATIONS ARE CONSIDERED A CONTINUATION OF THE GEOTECHNICAL INVESTIGATION PERFORMED.

IF ANOTHER FIRM IS RETAINED FOR GEOTECHNICAL OBSERVATIONS AND TESTING, OUR PROFESSIONAL LIABILITY AND RESPONSIBILITY SHALL BE DEEMED TO HAVE BEEN ASSUMED BY THE FIRM REPLACING WAC GEOTECHNICAL, INC. EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF WAC GEOTECHNICAL, INC.

IF THE REGULATORY AGENCIES INVOLVED WITH THIS PROJECT REQUEST OR REQUIRE ANY ADDITIONAL WORK, I.E. REVIEWING, STAMPING AND SEALING OF PLANS, ADDITIONAL TESTING ETC. NOT PROVIDED IN THIS REPORT, THE ADDITIONAL WORK SHALL BE BILLED ACCORDINGLY.

GRADING SUPERVISION AND FINAL COMPACTION APPROVAL REPORT SHALL BE BILLED SEPARATELY AND IS AT AN ADDITIONAL COST TO THE CLIENT.

11.0 BORING LOGS

SEE ATTACHMENT IN THE APPENDIX SECTION OF THIS REPORT

12.0 LABORATORY TESTING

LABORATORY TESTS WERE CONDUCTED ON REPRESENTATIVE SOILS FOR THE PURPOSE OF CLASSIFICATION AND FOR THE ASSESSMENT OF THE PHYSICAL PROPERTIES AND ENGINEERING CHARACTERISTICS. THE NUMBER AND SELECTION OF THE TYPES OF TESTING FOR A GIVEN STUDY ARE BASED ON THE GEOTECHNICAL CONDITIONS OF THE SITE. A SUMMARY OF THE VARIOUS LABORATORY TESTS PERFORMED FOR THE PROJECT IS PRESENTED BELOW.

MAXIMUM DENSITY OPTIMUM MOISTURE CONTENT (ASTM D1557)

SOILS SAMPLES WERE OBTAINED USING A SPLIT SPOON SAMPLER. BULK SAMPLES WERE ALSO RETRIEVED AND TESTED IN OUR LABORATORY

MOISTURE CONTENT AND DRY DENSITY (ASTM D4643)

SOILS SAMPLES WERE OBTAINED USING A SPLIT SPOON SAMPLER. BULK SAMPLES WERE ALSO RETRIEVED AND TESTED IN OUR LABORATORY.

DIRECT SHEAR (ASTM D3080)

DATA OBTAINED FROM THIS TEST PERFORMED AT INCREASED MOISTURE CONDITIONS ON REMOLDED TO 90 % SOIL SAMPLES WERE USED TO EVALUATE SOIL SHEAR STRENGTHS. SAMPLES CONTAINED IN BRASS SAMPLER RINGS, PLACED DIRECTLY ON TEST APPARATUS ARE SHEARED AT A CONSTANT STRAIN RATE UNDER A NORMAL LOAD, APPROPRIATE TO REPRESENT ANTICIPATED STRUCTURAL LOADINGS. SHEARING DEFORMATIONS ARE RECORDED TO FAILURE. PEAK AND/OR RESIDUAL SHEAR STRENGTHS ARE OBTAINED FROM THE MEASURED SHEARING LOAD VERSUS DEFLECTION CURVE. TEST RESULTS, PLOTTED ON GRAPHICAL FORM, ARE PRESENTED ON PLATE A-1 OF THIS SECTION.

EXPANSION INDEX (ASTM D4829)

MAXIMUM DRY DENSITY/OPTIMUM MOISTURE CONTENT RELATIONSHIP(ASTM D1557-91)

SAMPLE LOCATION	MAX. DRY DENSITY	OPT. MOISTURE CONTENT
B-1, 1-3' (BULK SAMPLE)	130.5 (PCF)	8.0 %

SHEAR ANGLE OF INTERNAL FRICTION

B-1 REMOLDED/RING 2' = FRICTION ANGLE 32 DEGREES, COHESION (PSF): 70

EXPANSION INDEX = 9 (VERY LOW POTENTIAL FOR EXPANSION)

CORROSION SERIES

PH = 6.7 SOLUBLE SULFATES PPM = 312 SOLUBLE CHLORIDES PPM = 113
MIN. RESISTIVITY = 9,900

"MODERATELY CORROSIVE"

14.0 PROFESSIONAL LIMITATIONS

OUR INVESTIGATION WAS PERFORMED USING THE DEGREE OF CARE AND SKILL ORDINARILY EXERCISED, UNDER SIMILAR CIRCUMSTANCES BY OTHER REPUTABLE SOILS ENGINEERS PRACTICING IN THESE GENERAL OR SIMILAR LOCALITIES. NO OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE AS TO THE CONCLUSIONS AND PROFESSIONAL ADVICE INCLUDED IN THIS REPORT.

THE INVESTIGATIONS ARE BASED ON SOIL SAMPLES ONLY; CONSEQUENTLY THE RECOMMENDATIONS PROVIDED SHALL BE CONSIDERED 'PRELIMINARY'. THE SAMPLES TAKEN AND USED FOR TESTING AND THE OBSERVATIONS MADE ARE BELIEVED REPRESENTATIVE OF SITE CONDITIONS; HOWEVER, SOIL AND GEOLOGIC CONDITIONS CAN VARY SIGNIFICANTLY BETWEEN TEST BORINGS. AS IN MOST MAJOR PROJECTS, CONDITIONS REVEALED BY EXCAVATIONS MAY VARY WITH PRELIMINARY FINDINGS. IF THIS OCCURS, THE CHANGED CONDITIONS MUST BE EVALUATED BY THE PROJECT SOILS ENGINEERING CONSULTANT AND DESIGNS ADJUSTED AS REQUIRED OR ALTERNATE DESIGN RECOMMENDED.

THE REPORT IS ISSUED WITH THE UNDERSTANDING THAT IT IS THE RESPONSIBILITY OF THE OWNER, OR OF HIS REPRESENTATIVE, TO ENSURE THAT THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BROUGHT TO THE ATTENTION OF THE PROJECT ARCHITECT AND ENGINEERS. APPROPRIATE RECOMMENDATIONS SHOULD BE INCORPORATED INTO STRUCTURAL PLANS. THE NECESSARY STEPS SHOULD BE TAKEN TO SEE THAT THE CONTRACTOR AND SUBCONTRACTORS CARRY OUT SUCH RECOMMENDATIONS IN THE FIELD.

14.1 RECOMMENDED SERVICES

THE REVIEW OF GRADING PLANS AND SPECIFICATIONS, FIELD OBSERVATIONS AND TESTING BY THE GEOTECHNICAL REPRESENTATIVE IS AN INTEGRAL PART OF THE CONCLUSIONS AND RECOMMENDATIONS MADE IN THIS REPORT. IF WAC GEOTECHNICAL, INC. IS NOT RETAINED FOR THESE SERVICES, THE CLIENT AGREES TO RELIEVE WAC GEOTECHNICAL, INC. RESPONSIBILITY FOR ANY POTENTIAL CLAIMS THAT MAY ARISE DURING AND AFTER CONSTRUCTION, OR DURING THE LIFETIME USE OF THE STRUCTURE AND ITS APPURTENANTS. THE REQUIRED TESTS, OBSERVATIONS AND CONSULTATION BY THE GEOTECHNICAL CONSULTANT DURING CONSTRUCTION INCLUDES, BUT NOT BE LIMITED TO:

A. CONTINUOUS OBSERVATION AND TESTING DURING SITE PREPARATION AND GRADING, AND PLACEMENT OF ENGINEERED FILL.

B. OBSERVATION AND INSPECTION OF FOOTING TRENCH PRIOR TO STEEL AND CONCRETE PLACEMENT,

C. CONSULTATIONS AS REQUIRED DURING CONSTRUCTION, OR UPON YOUR REQUEST.

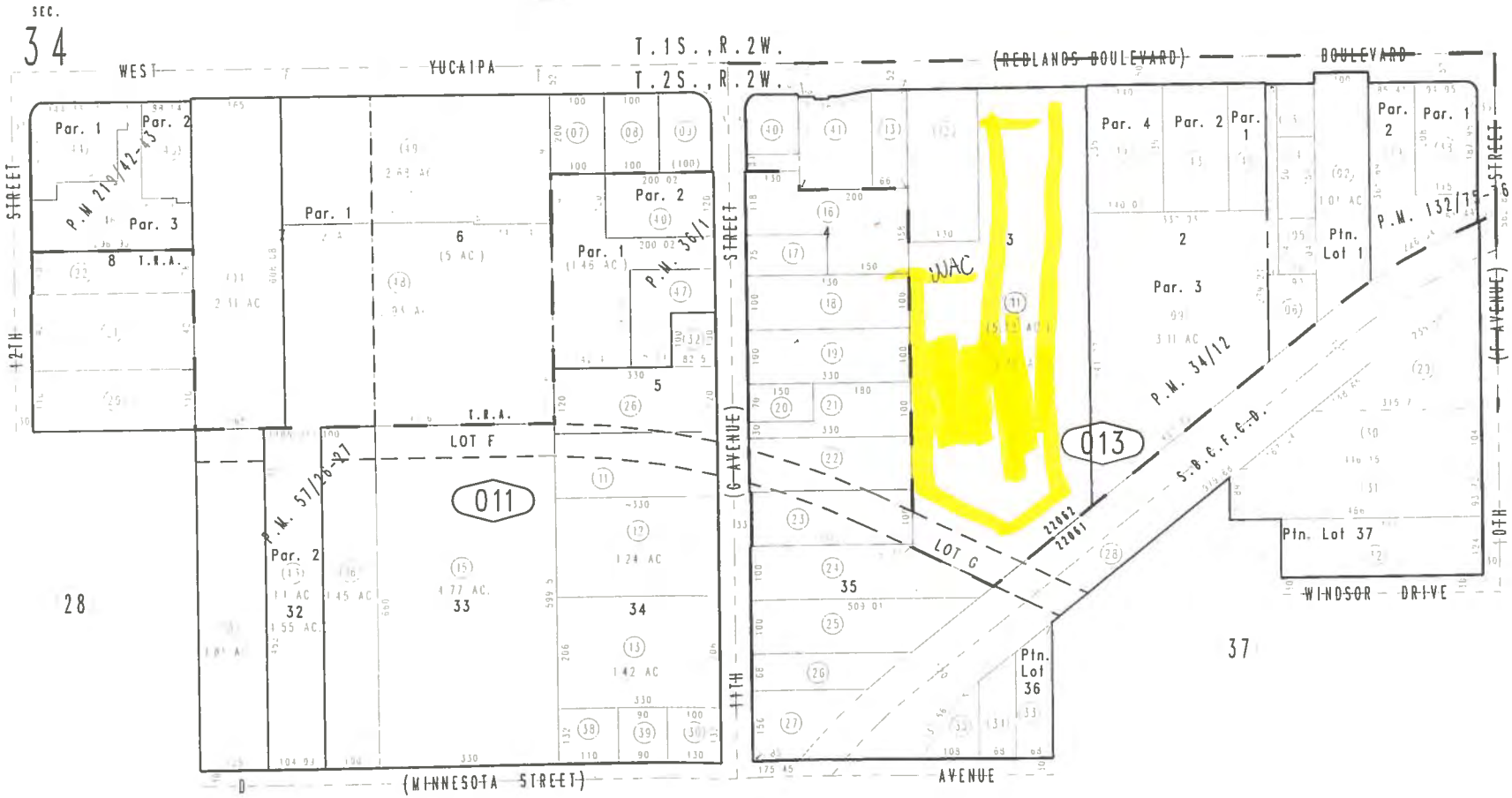
FIGURE 1, SITE LOCATION SHOWN ON GOOGLE EARTH MAPS

THIS MAP IS FOR THE PURPOSE OF AD VALOREM TAXATION ONLY

Ptn. Dunlap Ranch, Sub. No. 2
M.B. 20/47

City of Yucaipa
Tax Rate Area
22061,22062

0318 - 01



Parcel Map No. 3992, P.M. 219/42-43
Parcel Map No. 11558, P.M. 132/75-76
Parcel Map No. 5677, P.M. 57/26-27
Parcel Map No. 3974, P.M. 36/1

Ptn. N.W.1/4, Sec. 3
T.2S., R.2W.

Assessor's Map
Book 0318 Page 01
San Bernardino County

REVISED
09/06/17 GW
01/29/19 RD

19-14085
0318-013-11-0000
Legend
33193 Yucaipa Blvd
Feature 1
Feature 2
Yucaipa Blvd At 11th Eb Fs
Yucaipa Blvd
Borden Ln
10th St
11th St
33193 Yucaipa Blvd
Ave D
Google Earth
800 ft
N

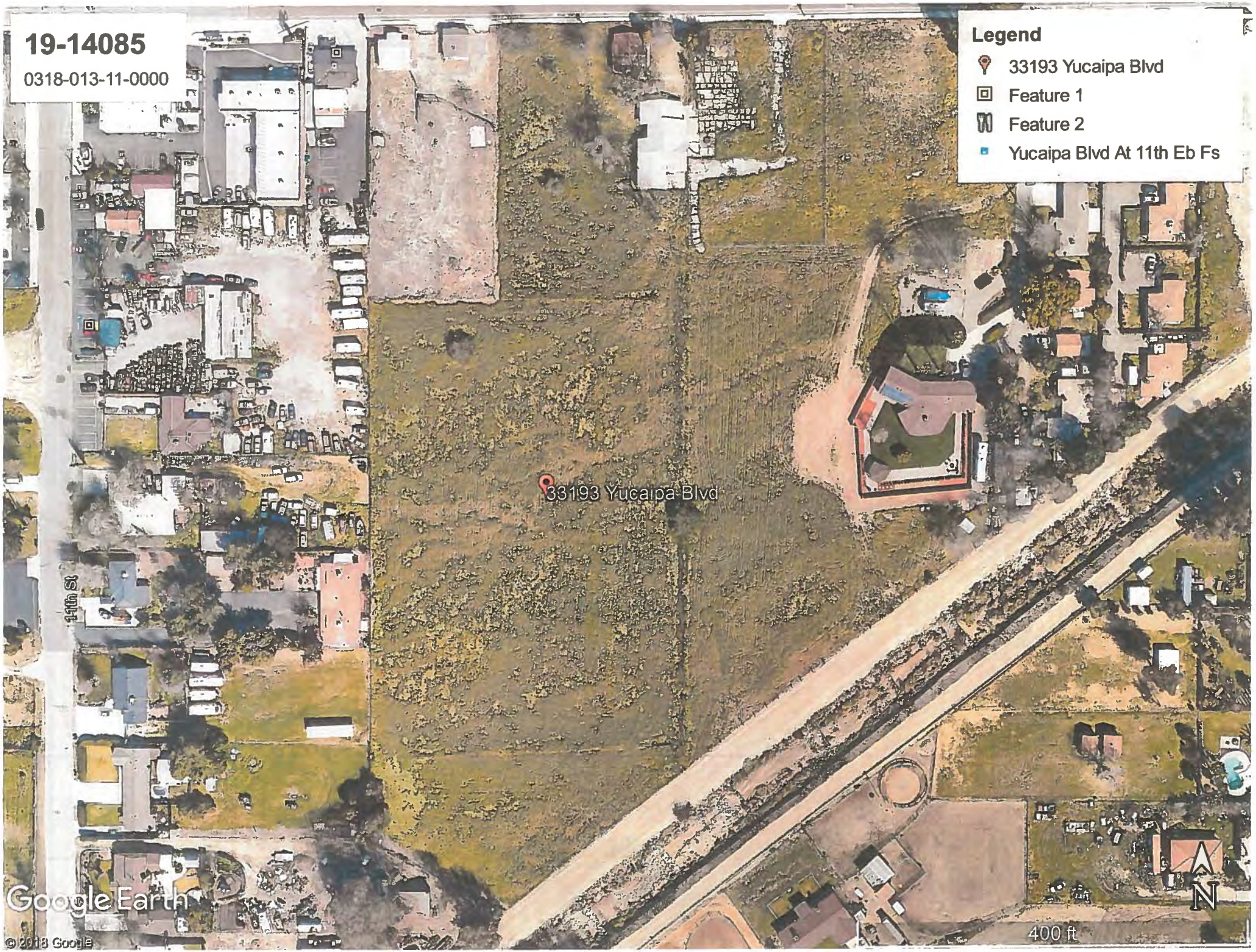

19-14085
0318-013-11-0000
Legend
33193 Yucaipa Blvd
Feature 1
Feature 2
Yucaipa Blvd At 11th Eb Fs
33193 Yucaipa Blvd
11th St
Google Earth
© 2018 Google
400 ft
N

FIGURE 2, TRENCHING/BORING LOCATION MAP

BASIS OF BEARINGS

THE BEARING OF EAST [illegible] ON THE CENTERLINE OF YUCAIPA BOULEVARD AS SHOWN ON PARCEL MAP NO. 3824 FILED IN BOOK 34 PAGE 12 OF PARCEL MAPS ON FILE OF THE OFFICE OF THE COUNTY RECORDER OF SAN BERNARDINO COUNTY WAS USED AS THE BASIS OF BEARINGS SHOWN HEREON

BENCH MARK

BENCH MARK

[illegible] TOP OF 3½" CAP STAMPED "LS 9" CORNER INTERSECTIONS WITH "ALLEY AND AVENUE D PER SAID REDLANDS COUNTY FIELD BOOK 4011 PAGE 1587 ELEVATION 3 [illegible]"

BASIS OF ELEVATION

2209.32 FEET

PARKING TABULATION

STANDARD SPACES @ 9'0"	88
HC VAN SPACES @ 9'0" W/ 5'-0" LOADING	10
MAINTENANCE YARD SPACES @ 9'0"	7
STACKED PARKING SPACES @ 9'0"	32
GARAGE SPACES (1 EA)	44
TOTAL SPACES	231
REGULAR UNITS	144
MANAGER UNITS	2
TOTAL UNITS	146
TOTAL BEDROOMS	192

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF YUCAIPA, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

BLOCK 3, ACCORDING TO MAP OF SUBDIVISION NO. 2 OF PART OF DUNLAP RANCH, AS PER PLAT RECORDED IN BOOK 20 OF MAPS, PAGE 47, RECORDS OF SAID COUNTY

EXCEPTING THAT PORTION DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE NORTHWEST CORNER OF SAID BLOCK, SAID POINT BEING IN THE CENTER LINE OF YUCAIPA BLVD. (FORMERLY REDLANDS BOULEVARD); THENCE SOUTH ALONG THE WEST BOUNDARY OF SAID BLOCK, 330 FEET; THENCE EAST AT RIGHT ANGLES 330 FEET; THENCE NORTH AT RIGHT ANGLES 330 FEET TO THE POINT IN THE CENTER LINE OF YUCAIPA BOULEVARD; THENCE WEST ALONG SAID CENTER LINE 330 FEET TO THE POINT OF BEGINNING

ALSO THAT PORTION OF BLOCK "E" LYING SOUTHERLY FROM AND ADJOINING SAID BLOCK 3, ACCORDING TO MAP OF SUBDIVISION, NO. 2, OF PART OF DUNLAP RANCH, AS PER PLAT RECORDED IN BOOK 20 OF MAPS, PAGE 47, RECORDS OF SAID COUNTY

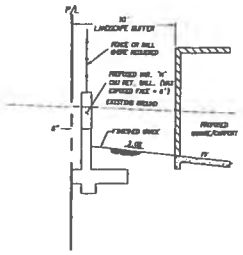
EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT BY DEED RECORDED SEPTEMBER 8, 1964, IN BOOK 6227, PAGE 200, OFFICIAL RECORDS.

THE MAP OF THE ABOVE DESCRIBED SUBDIVISION SHOWS THAT AREAS AND DISTANCES OF SAID LOTS ARE COMPUTED TO STREET CENTERS

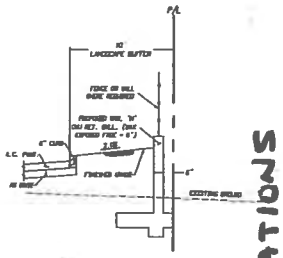
APN 0318-013-11-0-000

NOTES:

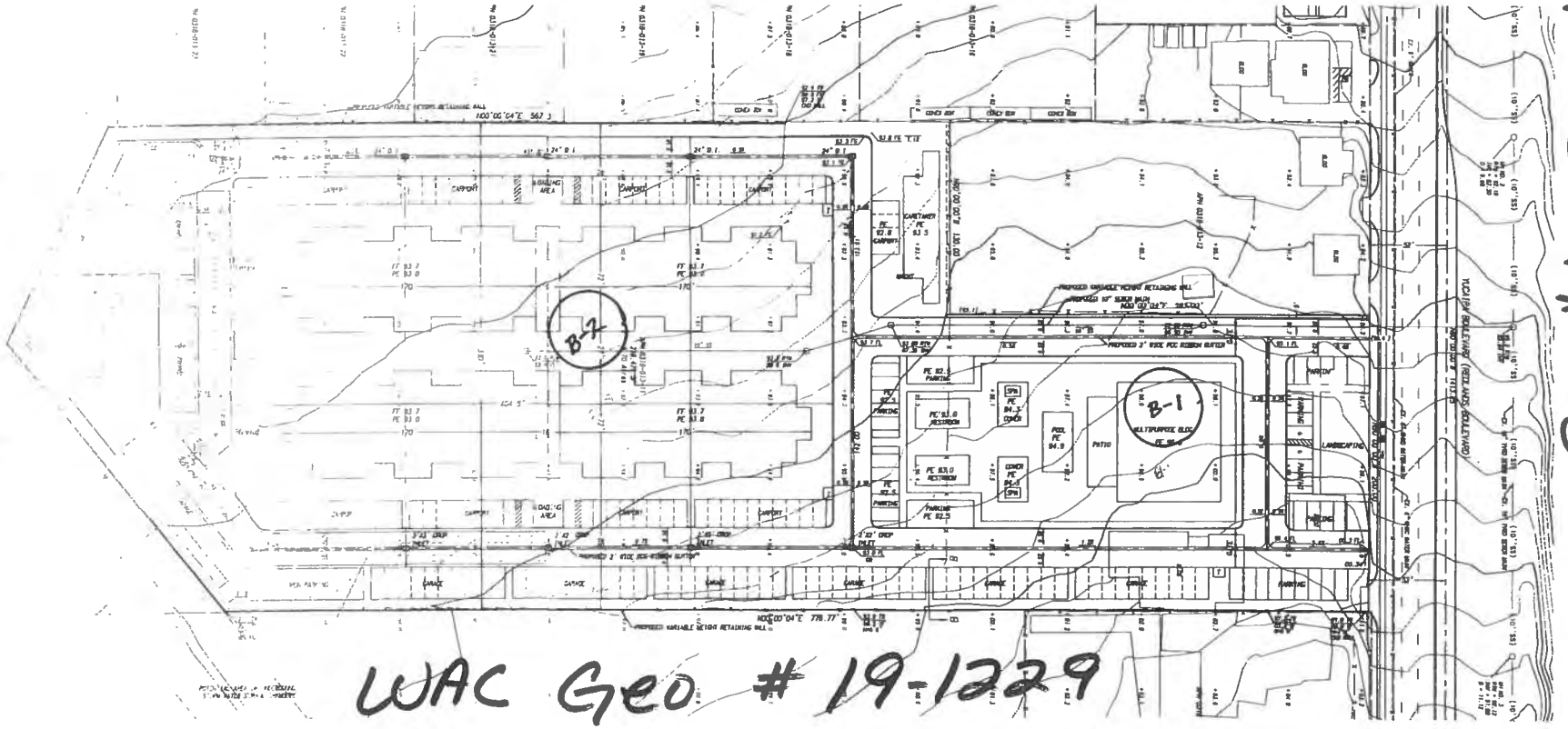
- ONSITE STORM WATER WILL BE TREATED USING UNDERGROUND DETENTION AND INFILTRATION SYSTEMS UNDER DRIVE AISLE'S OR OTHER APPROPRIATE LOCATIONS
- GRATED DROP INLETS INSTALLED ALONG RIBBON GUTTERS WILL CONNECT TO UNDERGROUND STORM WATER DETENTION AND INFILTRATION SYSTEMS
- TRASH ENCLOSURES TO CONSTRUCTED AT APPROPRIATE LOCATIONS
- EARTHWORK TO BALANCE ON-SITE



SECTION B – B
RET. WALL (TYP)
N.T.S.



SECTION A – A
RET. WALL (TYP)
N.T.S.



WAC GEO # 19-1229

WAC GEO PLATE # 1 TEST LOCATIONS

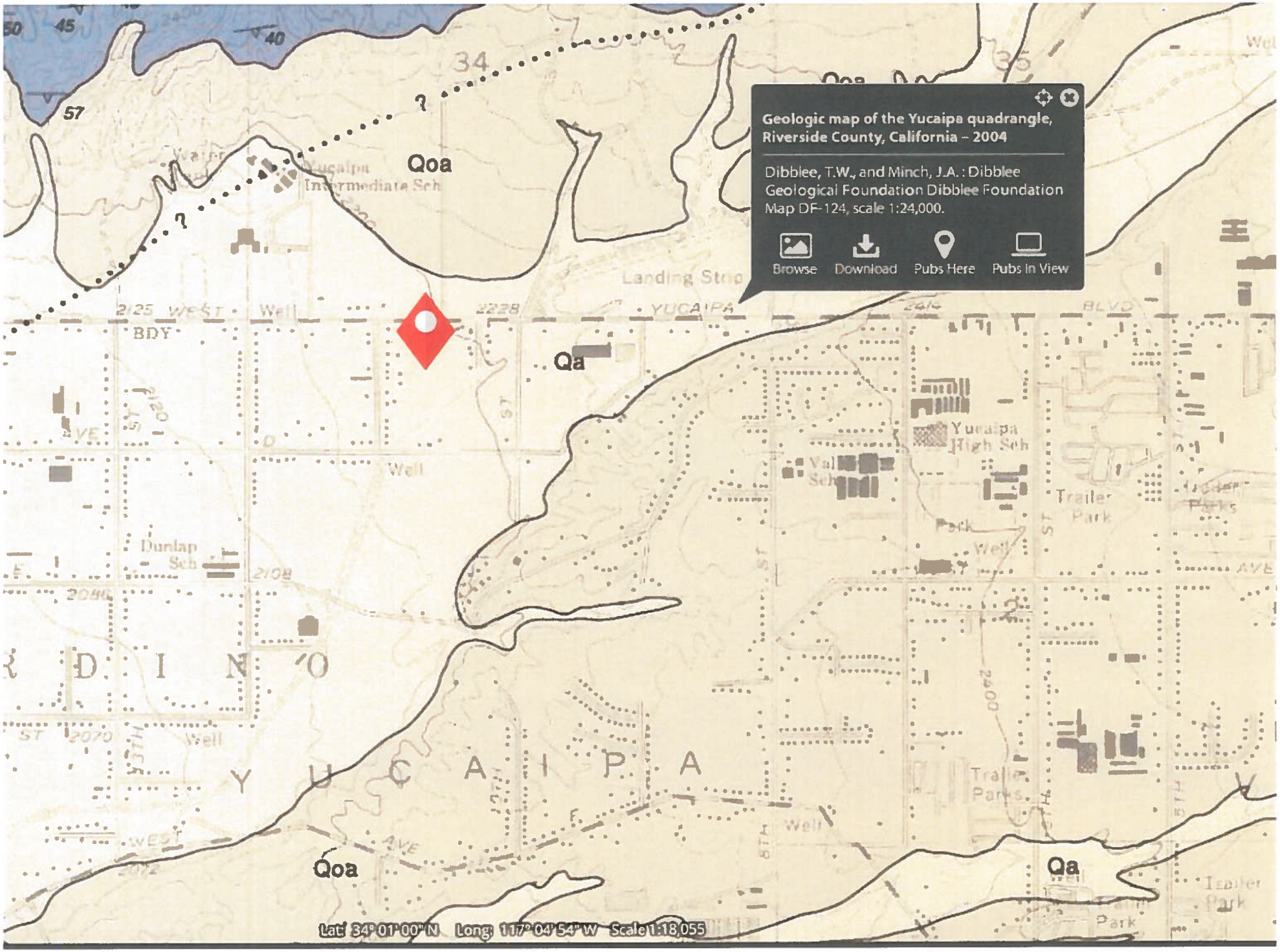
GRAPHIC SCALE
(IN FEET)

DESCRIPTION OF CHANGE	DATE	APP'D

LEH

CONCEPTUAL GRADING PLAN of
YUCAIPA SENIOR HOUSING

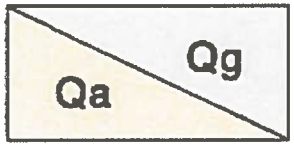
FIGURE 3, GEOLOGIC MAP



WAC Geo # 19-1229

YUCAIPA MAP (DF-124)

LEGEND



SURFICIAL SEDIMENTS

Unindurated, undissected alluvial sediments

Qg *Alluvial gravel and sand of stream channels*

Qa *Alluvial fan gravel and sand of valley areas, derived from basement rocks of San Bernardino Mountains and Crafton Hills*

APPENDIX A, TRENCH, BORING LOGS

Project: PRELIM/SOILS	Project Number: 19-1229	Client: SCHMIDT	Boring No. B-1
Address, City, State: 33193 YUCAIPA Blvd, YUCAIPA		Drilling Contractor: AM/PAC	Drill Rig Type: MD B-34
Logged By: D. BALLINGER	Date Started: 12-3-19	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB & EWB	Date Completed: 12-4-19	Hammer Type: AUTOMATIC	—
USA Ticket Number: —	Date Backfilled: 12-4-19	Hammer Weight: 140 #	Hammer Drop: 30"
—	Groundwater Depth: NONE to 20'	Elevation: 2,210'	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology: INFILTRATION TEST BORE to 20' Soil Group Name: modifier, color, moisture, density/consistency, grain size, other descriptors Rock Description: modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5'	B-1, 1-3' BULK / B-2 RINGS @ 2'		24		(SM) SILTY SANDS, FINE TO COARSE GRAINED, FEW GRAVELS BROWN, LOOSE & SLIGHTLY MOIST	130.5	8.0	Shear 70psf, 32° F.A. / E.I = 9
6'-10					(SM) FINE TO COARSE GRAINED FEW GRAVELS, FIRM & SLIGHTLY MOIST, TAN BROWN.			
10-15					(SM) FINE TO MEDIUM GRAINED SANDS, FEW GRAVELS, DENSE & SLIGHTLY MOIST. EOB @ 15'			

Wac Geotechnical, Inc.

Boring Log: Sheet 1 of 2

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project: PRELIM/SOILS	Project Number: 19-1229	Client: SCHMIDT	Boring No. B-2
Address, City, State: 33193 YUCAIPA Blvd, YUCAIPA		Drilling Contractor: AM/PAC	Drill Rig Type: MD B-34
Logged By: D. BALINGER	Date Started: 12-3-19	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB & EWB	Date Completed: 12-4-19	Hammer Type: AUTOMATIC	—
USA Ticket Number: —	Date Backfilled: 12-4-19	Hammer Weight: 140 #	Hammer Drop: 30"
—	Groundwater Depth: NONE to 20'	Elevation: 2,210'	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology — INFILTRATION TEST bore to 20'	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5'	B-1, 1-3' BULK, B-2 RINGS @ 2'		24		(SM) SILTY SANDS, FINE TO COARSE GRAINED, FEW GRAVELS BROWN, LOOSE & SLIGHTLY MOIST	130.5	8.0	
5-10					(SM) FINE TO COARSE GRAINED FEW GRAVELS, FIRM & SLIGHTLY MOIST, TAN BROWN.			
10-15					(SM) FINE TO MEDIUM GRAINED SANDS, FEW GRAVELS, DENSE & SLIGHTLY MOIST. EOB @ 15'			Shear 70psf, 32° F.O., E.I = 9

Wac Geotechnical, Inc.

Boring Log: Sheet 2 of 2

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

APPENDIX B, LABORATORY TEST RESULTS

Converse Consultants
Geotechnical Engineering, Environmental & Groundwater Science, Inspection & Testing Services

December 17, 2019

Mr. David E. Ballinger
WAC Geotechnical, Inc.
2900 Adams St. Suite C-35
Riverside, CA 92504

Subject: **LABORATORY TEST RESULTS**
WAC Project No. 19-1229
Converse Project No. 19-81-216-11

Dear Mr. Ballinger:

Attached are the results of the laboratory tests that you requested for the above-referenced project. We received the samples from your office on December 6, 2019. The following tests were performed in accordance with the relevant standards.

- One (1) Maximum Dry Density and Optimum Moisture Content Test (ASTM D1557).
- One (1) Direct Shear Test (ASTM D3080).
- One (1) Expansion Index Test (ASTM D4829).

We appreciate the opportunity to be of continued service to WAC Geotechnical, Inc. If you should have any questions or need additional information, please feel free to contact us at 909-796-0544.

CONVERSE CONSULTANTS

Hashmi Quazi, PhD, PE, GE
Regional Manager/Principal Engineer

KVG/AZ

Encl: Table No. 1, *Moisture-Density Relationship Test Result*
Table No. 2, *Direct Shear Test Result*
Table No. 3, *Expansion Index Test Result*
Drawing No. 1, *Moisture-Density Relationship Result*
Drawing No. 2, *Direct Shear Test Result*

Table No. 1, *Moisture-Density Test Result*

Boring/Type	Depth (feet)	Soil Description	Maximum Dry Density (pcf)	Optimum Moisture (%)
B-1/Bulk	1 - 3	Silty Sand (SM), Fine to Coarse Grained, Brown	130.5 (132.7*)	8.0 (7.4*)

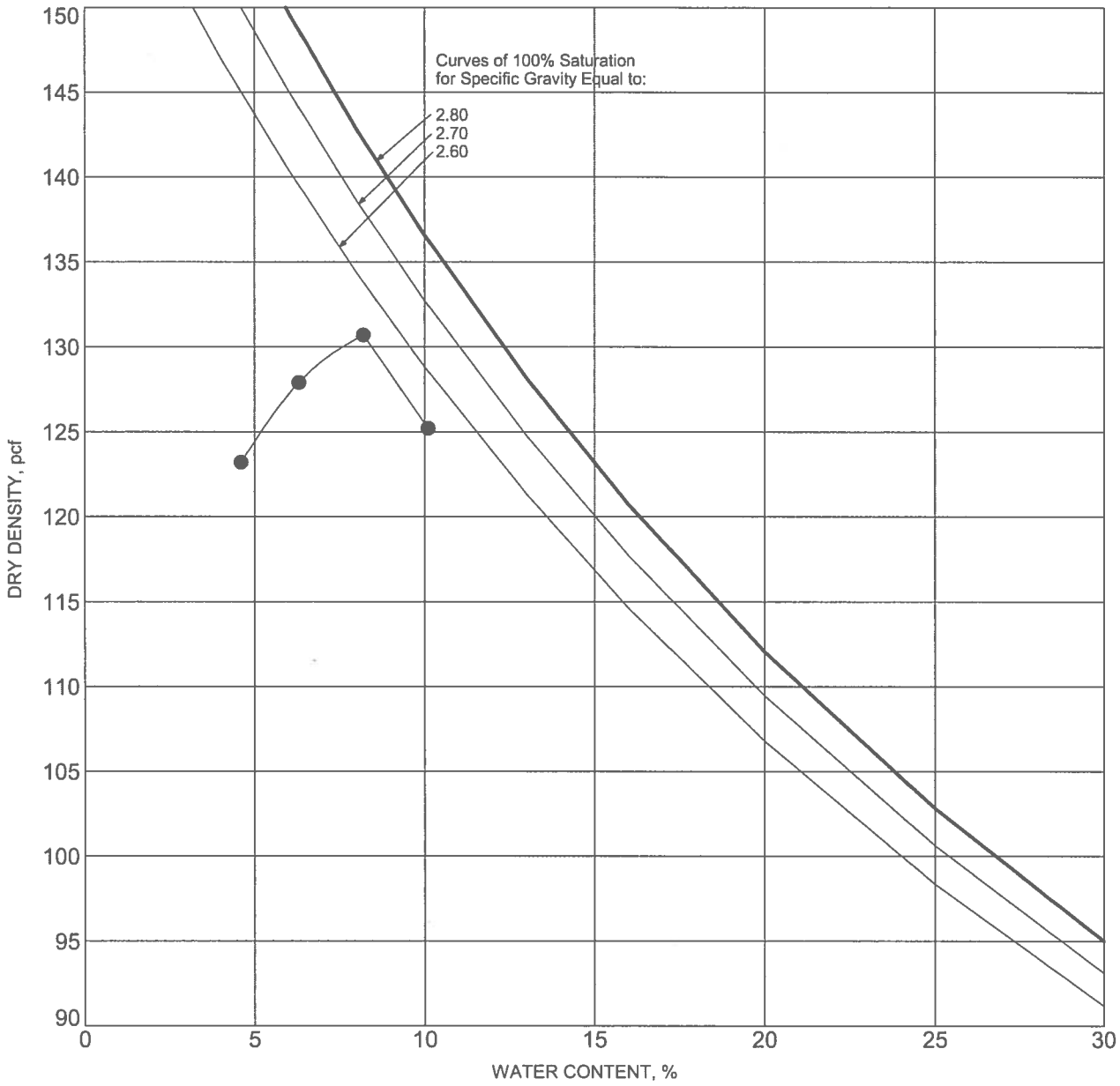
(*Rock Correction = 7.57%)

Table No. 2, *Direct Shear Test Result*

Boring/Type	Depth (feet)	Soil Description	Cohesion (psf)	Friction Angle (degrees)
B-1/Ring	2.0	Silty Sand (SM), Fine to Coarse Grained, Brown	70	32

Table No. 3, *Expansion Index Test Result*

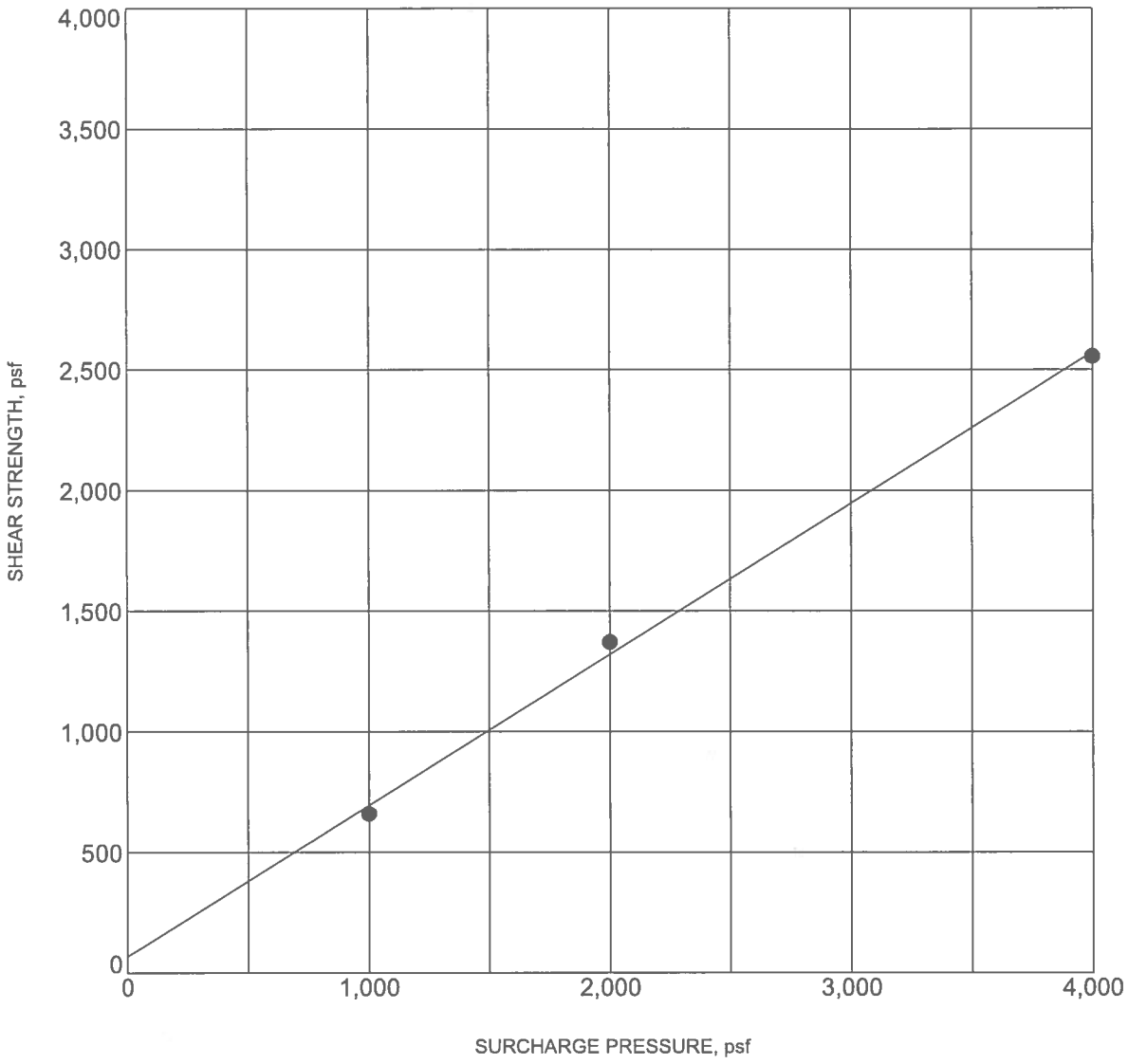
Boring/Type	Depth (feet)	Soil Description	Expansion Index	Expansion Potential
B-1/Bulk	1 - 3	Silty Sand (SM), Fine to Coarse Grained, Brown	9	Very Low



SYMBOL	BORING NO.	DEPTH (ft)	DESCRIPTION	ASTM TEST METHOD	OPTIMUM WATER, %	MAXIMUM DRY DENSITY, pcf
●	**B-1/Bulk**	**1 - 3**	**Silty Sand (SM), Fine to Coarse Grained, Brown**	**D1557 Method A**	**8.0 (7.4*)**	**130.5 (132.7*)**

(*Rock Correction = 7.57%)

MOISTURE-DENSITY RELATIONSHIP RESULTS



BORING NO.	:	**B-1/Ring**	DEPTH (ft)	:	**2.0**
DESCRIPTION	:	**Silty Sand (SM), Fine to Coarse Grained, Brown**			
COHESION (psf)	:	**70**	FRICTION ANGLE (degrees):		**32**
MOISTURE CONTENT (%)	:	**5.8**	DRY DENSITY (pcf)	:	**102.4**

NOTE: Ultimate Strength.

DIRECT SHEAR TEST RESULTS

Converse Consultants

WAC Geotechnical
WAC Project No. 19-1229

Project No. **19-81-216-11**

Drawing No. **2**

ANAHEIM TEST LAB, INC

196 Technology Drive, Unit D
Irvine, CA 92618
Phone (949) 336-6544

TO:

WAC GEOTECHNICAL
2900 ADAMS STREET, STE C-35
RIVERSIDE, CA 92504

DATE: 12/16/2019

P.O. NO: TRANSMITTAL

LAB NO: C-3444

SPECIFICATION: CTM-417/422/643

ATTN: Dave/Kathy

MATERIAL: Soil

Project No.: 19-1229
Apn No.: 0318-013-11-0000
Location: 33193 Yuciapa Blvd.
Yucaipa, CA 92399
Client: Glen Schmidt

ANALYTICAL REPORT

CORROSION SERIES
SUMMARY OF DATA

pH	SOLUBLE SULFATES per CT. 417 ppm	SOLUBLE CHLORIDES per CT. 422 ppm	MIN. RESISTIVITY per CT. 643 ohm-cm
6.7	312	113	9,900

RESPECTFULLY SUBMITTED

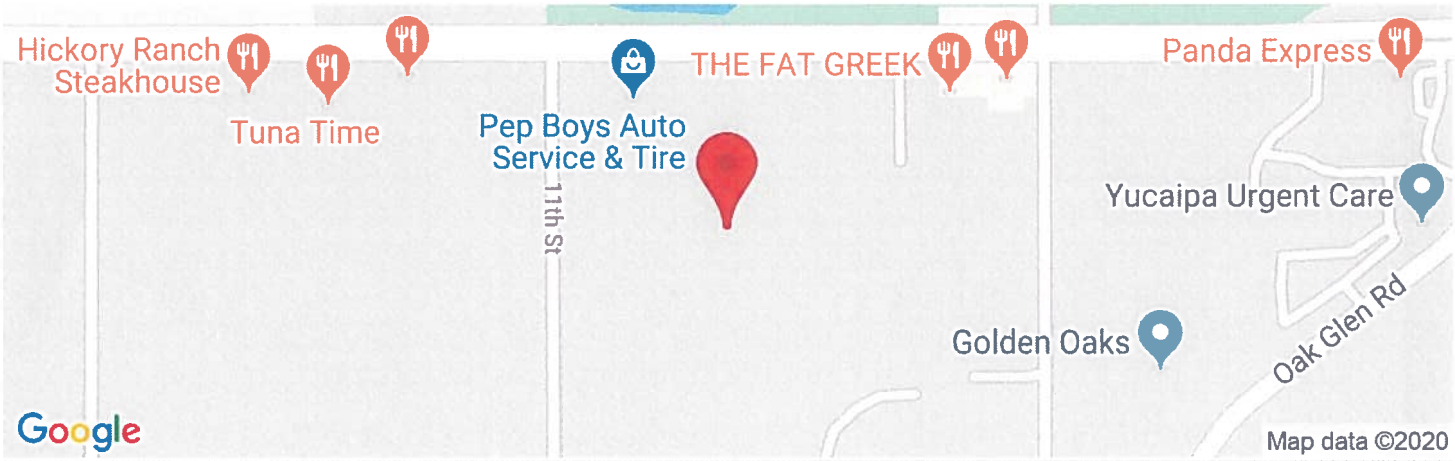
WES BRIDGER LAB MANAGER

APPENDIX C, WEB SITE SEISMIC AND PERTINENT DATA

WAC GEOTECHNICAL, INC. # 19-12229

33193 Yucaipa Blvd, Yucaipa, CA 92399, USA

Latitude, Longitude: 34.03243399999999, -117.080677



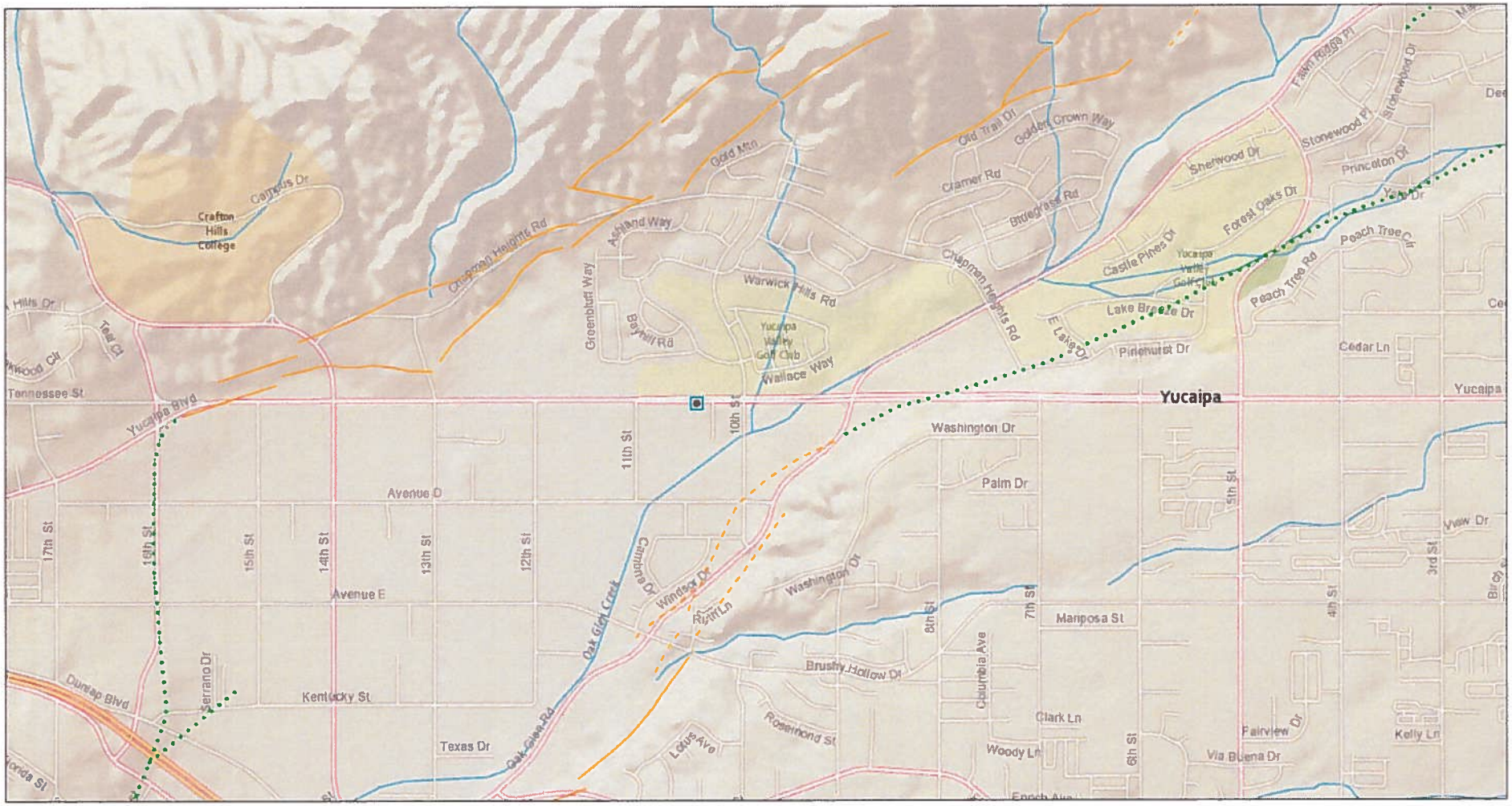
Date	1/24/2020, 9:51:04 AM
Design Code Reference Document	ASCE7-10
Risk Category	III
Site Class	D - Stiff Soil

Type	Value	Description
S_S	1.767	MCE_R ground motion. (for 0.2 second period)
S_1	0.842	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.767	Site-modified spectral acceleration value
S_{M1}	1.263	Site-modified spectral acceleration value
S_{DS}	1.178	Numeric seismic design value at 0.2 second SA
S_{D1}	0.842	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	E	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	1.5	Site amplification factor at 1.0 second
PGA	0.705	MCE_G peak ground acceleration
F_{PGA}	1	Site amplification factor at PGA
PGA_M	0.705	Site modified peak ground acceleration
T_L	8	Long-period transition period in seconds
SsRT	2.738	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	2.671	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.767	Factored deterministic acceleration value. (0.2 second)
S1RT	1.131	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	1.15	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.842	Factored deterministic acceleration value. (1.0 second)
PGAd	0.705	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	1.025	Mapped value of the risk coefficient at short periods

Geo HAZ MAP # FH32-C

U.S. Geological Survey Quaternary Faults



1/24/2020, 2:17:22 PM

1:18,056

0 0.17 0.35 0.7 mi

0 0.3 0.6 1.2 km

USGS, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

Fault Areas

- Historic (< 150 years)
- Latest Quaternary (< 15,000 years)
- Late Quaternary (< 130,000 years)
- Middle and Late Quaternary (< 750,000 years)
- Undifferentiated Quaternary (< 1.6 million years)

Quaternary Faults Database

- Historic (< 150 years), well constrained location
- Historic (< 150 years), moderately constrained location
- Historic (< 150 years), inferred location
- Latest Quaternary (<15,000 years), well constrained location
- Latest Quaternary (<15,000 years), moderately constrained location
- Latest Quaternary (<15,000 years), inferred location
- Late Quaternary (< 130,000 years), well constrained location
- Late Quaternary (< 130,000 years), moderately contrained location
- Late Quaternary (< 130,000 years), inferred location
- Middle and late Quaternary (< 750,000 years), well constrained location
- Middle and late Quaternary (< 750,000 years), moderately constrained location
- Middle and late Quaternary (< 750,000 years), inferred location

USGS

National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp. | USGS |

APPENDIX D, SITE PHOTOS ETC.

AM/PAC

1-800-564-7372
(951) 354-6500
FAX 354-8600

F

TESTING PROTOCOL FOR STORM WATER INFILTRATION BEST MANAGEMENT PRACTICES PERCOLATION TESTING IN A BORING.

PROJECT #: 19-14085 DATE: JANUARY 31, 2020

JOB SITE LOCATION:

33193 YUCAIPA BLVD. YUCAIPA, CA. 92339
APN: 0318-013-11-0000

PREPARED FOR:

PROPOSED YUCAIPA SENIOR HOUSING FACILITY
C/O EAST VALLEY DESIGN AND CONSTRUCTION
MR. GLENN SCHMIDT (909) 240-9132
1348 BERYL AVENUE MENTONE, CA. 92359
VIA E-MAIL: evd1877@hotmail.com

THIS SUBMITTAL HAS BEEN PREPARED FOR THE PROJECT NOTED ABOVE. IF YOU HAVE ANY QUESTIONS PLEASE DO NOT HESITATE TO CONTACT THE UNDERSIGNED AT YOUR CONVENIENCE.

GEORGE E. HAWES DATE:_____
REGISTERED PROFESSIONAL ENGINEER
R.C.E. C034779 LIC. EXP. 9/30/21

DAVID E. BALLINGER, PRESIDENT
AM/PAC AND ASSOCIATES, INC.

FILE COPY

FILE COPY

PROPOSED DEVELOPMENT:

THE CLIENT IS PROPOSING A SENIOR CARE FACILITY CONSISTING OF NUMEROUS SITE BUILT BUILDINGS OVER A 5.70 ACRE SITE. SEE THE PLAN ATTACHED FOR DETAILS. A SITE PLAN WAS PROVIDED TO THIS OFFICE PRIOR TO TESTING. CODE COMPLIANCE REQUIRES A WQMP STORM WATER INFILTRATION PERCOLATION REPORT TO AID IN BMP DESIGN AND VERIFICATION OF THE BMP SIZING.

PURPOSE AND SCOPE OF THIS REPORT:

TO PROVIDE THE CLIENT WITH THE REQUIRED SOIL BORING AND INFILTRATION TESTING DATA NECESSARY TO COMPLY WITH THE CITY OF YUCAIPA AND COUNTY OF SAN BERNARDINO STORM WATER INFILTRATION BEST MANAGEMENT PRACTICES PROGRAM. THIS DATA IS REQUIRED AND USED TO VERIFY AND PROVE THE SITE SOILS EVALUATION. THE DESIGN IS TO BE PREPARED BY OTHERS.

METHODOLOGY OF TESTING:

TESTING WAS PERFORMED CONFORMING TO THE PUBLISHED GUIDELINES FROM THE "TECHNICAL GUIDANCE DOCUMENT FOR WATER QUALITY MANAGEMENT PLANS" COUNTY OF SAN BERNARDINO. PREPARED BY CDM SMITH, INC. DATED JUNE 7, 2013 AND APPROVED FOR USE, EFFECTIVE SEPTEMBER 19, 2013.

CITED AS APPENDIX D OF THE AFOREMENTIONED DOCUMENT IS "APPENDIX VII, INFILTRATION RATE EVALUATION PROTOCOL AND FACTOR OF SAFETY RECOMMENDATIONS". PER TABLE VII.1: RECOMMENDED INFILTRATION METHODS, METHODS FOR ESTABLISHING DESIGN INFILTRATION RATE; THE SHALLOW BORING PERCOLATION TEST PROCEDURE (RIVERSIDE COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH) WAS USED.

FOUR (4) PERCOLATION TESTS WERE PERFORMED IN THE IMMEDIATE AREA OF THE PROPOSED INFILTRATION BASIN. TWO TESTS TO A DEPTH OF 5' BELOW THE EXISTING GRADE AND TWO TESTS 8' BELOW THE EXISTING GRADE. THE TEST HOLE BORING DIAMETER IS 8 INCHES. THE BASIN DEPTHS OR DESIGN WERE NOT NOTED ON THE SITE PLAN PREPARED BY OTHERS. A COPY OF THIS PLAN IS ATTACHED TO THIS REPORT.

PER SECTION VII., 1.3 "A NOTE ON "INFILTRATION RATE" VS. "PERCOLATION RATE", THE TESTED RATE HAS BEEN CONVERTED TO AN INFILTRATION RATE USING THE PORCHET METHOD OF CONVERSION. SEE THE DATA SHEETS ATTACHED.

CONCLUSIONS AND RECOMMENDATIONS:

THE EXCAVATED AND TESTED SOILS AT THE OBSERVED DEPTHS ARE HOMOGENEOUS AND CAN BE EXPECTED TO HAVE THE SAME OR VERY SIMILAR INFILTRATION, POROUS AND ABSORPTION QUALITIES. IT SHOULD BE NOTED THAT THE PORCHET METHOD OF CONVERSION HAS A FACTOR OF SAFETY OF 3 BUILT IN TO THE CALCULATIONS.

BORING LOGS:

TEST 1:

1-5' S/M SILTY-FINE TO MEDIUM GRAINED SANDS WITH FEW SUB-ROUNDED GRAVELS, LOOSE AND DAMP, DARK BROWN.

TEST 2:

1-5' S/M SILTY-FINE TO MEDIUM GRAINED SANDS WITH FEW SUB-ROUNDED GRAVELS, LOOSE AND DAMP, DARK BROWN.

TEST 3:

1-8' S/M SILTY-FINE TO MEDIUM GRAINED SANDS WITH FEW SUB-ROUNDED GRAVELS, FIRM AND DAMP, DARK BROWN.

TEST 4:

1-8' S/M SILTY-FINE TO MEDIUM GRAINED SANDS WITH MODERATE AMOUNTS OF SUB-ROUNDED GRAVELS, FIRM AND DAMP, DARK BROWN.

NO GROUNDWATER, EVIDENCE OF HIGH GROUNDWATER, SOIL MOTTLING, SOIL CONTAMINATION OR FILL MATERIAL WAS EVIDENT IN ANY SOIL BORING AT ANY DEPTH OBSERVED.

TEST DATA:

TEST 1: 5:00 MINUTES PER INCH PERCOLATION RATE.

12.0 INCHES PER HOUR

USING THE PORCHET METHOD OF CONVERSION, THIS TRANSLATES TO 3.08 INCHES PER HOUR INFILTRATION DESIGN RATE.

TEST 2: 5:00 MINUTES PER INCH PERCOLATION RATE.

12.00 INCHES PER HOUR

USING THE PORCHET METHOD OF CONVERSION, THIS TRANSLATES TO 3.08 INCHES PER HOUR INFILTRATION DESIGN RATE.

TEST 3: 4:00 MINUTES PER INCH PERCOLATION RATE.

15.0 INCHES PER HOUR

USING THE PORCHET METHOD OF CONVERSION, THIS TRANSLATES TO 3.97INCHES PER HOUR INFILTRATION DESIGN RATE.

TEST 4: 4:00 MINUTES PER INCH PERCOLATION RATE.

15.0 INCHES PER HOUR

USING THE PORCHET METHOD OF CONVERSION, THIS TRANSLATES TO 3.97 INCHES PER HOUR INFILTRATION DESIGN RATE.

ATTACHED TO THIS REPORT ARE SELECTED PAGES OF THE APPENDIX D REFERENCING THIS TYPE OF TESTING AND THE PROTOCOL AND PROCEDURE REQUIRED.

COPY OF SBDO GUIDELINES
APPENDIX – D, SECTION VII

APPENDIX VII. INFILTRATION RATE EVALUATION PROTOCOL AND FACTOR OF SAFETY RECOMMENDATIONS

VII.1. Introduction

Soil characterization and infiltration testing is required in order to properly size and locate stormwater management facilities. The purpose of this appendix is to provide guidance for investigating infiltration at both the project planning and design phases, as well as provide requirements for applying a factor of safety to testing results.

VII.1.1. Two phases of assessment

The role of soil characterization and infiltration testing differs with the phase of project development as described below.

Site Assessment / Project Planning Phase: Soil characterization or infiltration testing may be conducted to determine if infiltration is a potentially feasible BMP and/or where on the site infiltration is potentially infeasible. The intent of this investigation is to identify if the project site, or a portion of the site, has soils that are clearly unsuitable for infiltration. For those sites or portions of the site where soils are unsuitable, infiltration BMPs can be eliminated from consideration. The intent of this testing is not to prove definitively that infiltration is feasible. Simpler methods may be used to determine infiltration potential at this phase. The observed infiltration rate is adjusted to account for the type of test and the uncertainty of the testing method and reported as the *measured infiltration rate* for the purpose of evaluating feasibility. These methods are not appropriate to determine the *design infiltration rate*.

Site Planning / Design Phase: Where infiltration BMPs are selected, infiltration testing must be conducted to determine the *design infiltration rate* of proposed facilities, except in limited cases where infiltration rate is presumed to be sufficient as identified in Section **VII.1.2**. The required size of the proposed facilities strongly depends on the design infiltration rate; therefore, testing may be required at the preliminary site design phase to facilitate site planning. However, infiltration testing must be conducted as close to the proposed facility as possible, therefore, conducting testing after preliminary site design also has merits. Use of more sophisticated methods at this phase allows better confidence in testing and therefore a lower factor of safety on observed infiltration rates (and therefore smaller facility designs). Factors of safety are discussed in **VII.4**.

Soil characterization and infiltration testing can be considered to fulfill two functions:

1. Determine where infiltration is potentially feasible and must be considered (if other limitations, such as depth to groundwater or contamination, do not restrict infiltration). This role is satisfied through simple infiltration tests, or use of maps and available data.
2. Determine the design infiltration rate for proposed facilities. This function is satisfied through more sophisticated investigation methods, conducted by a qualified professional.

Table VII.1 provides required methods of assessing infiltration rate for each purpose.

Table VII.1: Recommended Infiltration Investigation Methods

Methods for Identifying Areas Potentially Feasible for Infiltration	• **Use of Regional Maps and "Available Data"**[1] **OR** • **Simple Open Pit Infiltration Test** **OR** • Any of the testing methods used to establish design infiltration rate (below)
Methods for Establishing Design Infiltration Rate	• **Open Pit Falling Head Procedure** • **Single Ring Infiltrometer Test** • **Double Ring Infiltrometer Test** • **Well Permeameter Method (USBR Procedure 7300-89)** • **Percolation Test Procedure** (Riverside County Department of Environmental Health) • Other analysis methods at the discretion of the project engineer and approval of the reviewing agency

[1]Available data is defined in Section **VII.2** below and does not require additional investigation.

VII.1.2. Waiver of Infiltration Testing Requirements

The infiltration testing requirements described in this appendix are not applicable for certain combinations of BMP type and general soil condition. In cases where available soils information indicates that the soils are clearly sufficient to support the level of infiltration required for proper function of the BMP and uncertainty in infiltration rate would not significantly influence the performance of the practice, it is not mandatory to conduct infiltration testing. Conditions under which infiltration testing requirements are waived include:

- **Impervious area dispersion** (See **HSC-2: Impervious Area Dispersion**): Testing requirements are waived for this BMP for all soil types. Soil amendments are required to use this practice where site soils are hydrologic soil group C or D.
- **Localized on-lot infiltration** (See **HSC-1: Localized On-Lot Infiltration**): Testing requirements are waived for this BMP for A, B, and C soil types if soil type and general drainage conditions are confirmed with site-specific information. This BMP is not suitable for D soils unless infiltration testing demonstrates that the ponded depth would drain within 24 hours.
- **Porous pavement designed to be self-retaining** (See **INF-6: Permeable Pavement (concrete, asphalt, and pavers)**): Testing requirements for this BMP are waived for A, B, and C soil types if soil type and general drainage conditions are confirmed with site-specific information. This waiver does not apply to porous pavement that accepts run-on from a tributary area larger than 50 percent of its area.
- **Bioinfiltration** (See **INF-4: Bioinfiltration Fact Sheet**). Based on the LID BMP hierarchy, this type of BMP may only be used if infiltration of the full DCV is not feasible; therefore exploratory infiltration rate assessment (Section **VII.2**) is required. However, testing to determine design infiltration rate (Section **VII.3**) is not required. See **Appendix XI** for instructions for sizing the infiltration component of a bioinfiltration BMP to achieve maximum feasible infiltration.

VII.1.3. A Note on "Infiltration Rate" vs. "Percolation Rate"

A common misunderstanding is that the "percolation rate" obtained from a percolation test is equivalent to the "infiltration rate" obtained from a single or double ring infiltrometer test. While the percolation rate is related to the infiltration rate, percolation rates tend to overestimate infiltration rates and can be off by a factor of ten or more because they incorporate both downward and horizontal fluxes of water, whereas infiltration only refers to a downward flux of water. When using borehole-type methods, the percolation rate obtained shall be converted to a reasonable estimate of the infiltration rate using the Porchet Method (aka Inverse Borehole Method) (See Example VII.1).

VII.1.4. Grading Plans

Many projects require a significant amount of grading prior to their construction. It is important to determine if the BMP will be placed in cut or fill since this may affect the performance of the BMP or even the soil. As such, preliminary site grading plans showing the proposed BMP locations are required along with section views through each BMP clearly identifying the extents of cut or fill. In addition, since it is imperative that any testing be performed at the proper elevations and locations, it is highly recommended that the preliminary site grading plans be provided to the engineer/geologist prior to any tests being performed.

VII.1.5. Cut Condition

Where the proposed infiltration BMP is to be located in a cut condition, the infiltration surface level at the bottom of the BMP might be far below the existing grade. For example, if the

VII.3.8. Percolation Test Procedure

The percolation test procedure below (per Riverside County Department of Environmental Health) should only be performed by those individuals trained and educated to perform, understand and evaluate the field conditions and tests. This would include those who hold one of the following State of California credentials and registrations: Professional Civil and Geotechnical Engineers, Certified Engineering Geologist and Certified Hydrogeologist.

The procedure for this test varies, depending on the depth of the hole to be used. Procedures for both scenarios (less than 10 feet or 10 - 40 feet deep) and diagrams (**Figure VII.15** to **Figure VII.17**) are included below. When the percolation testing has been completed, a 3 foot long surveyor's stake (lath) shall be flagged with highly visible banner tape and placed in the location of the test indicating date, test hole number as shown on the field data sheet, and firm performing the test.

VII.3.8.1. Shallow Percolation Test (less than 10 feet)

Test Preparation

1) The test hole opening shall be between 8 and 12 inches in diameter or between 7 and 11 inches on each side if square.

2) The bottom elevation of the test hole shall correspond to the bottom elevation of the proposed basin (infiltration surface). Keep in mind that this procedure will require the test hole to be filled with water to a depth of at least 5 times the hole's radius.

3) The bottom of the test hole shall be covered with 2 inches of gravel.

4) The sides of the hole shall remain undisturbed (not smeared) after drilling and any cobbles encountered left in place.

5) **Pre-soaking** shall be used with this procedure. Invert a full 5 gallon bottle (more if necessary) of clear water supported over the hole so that the water flow into the hole holds constant at a level at least 5 times the hole's radius above the gravel at the bottom of the hole. Testing may commence after all of the water has percolated through the test hole or after 15 hours has elapsed since initiating the pre-soak. However, to assure saturated conditions, testing must commence no later than 26 hours after all pre-soak water has percolated through the test hole. The use of the "continuous pre-soak procedure" is no longer accepted. When sandy soils (as described below) are present, the test shall be run immediately.

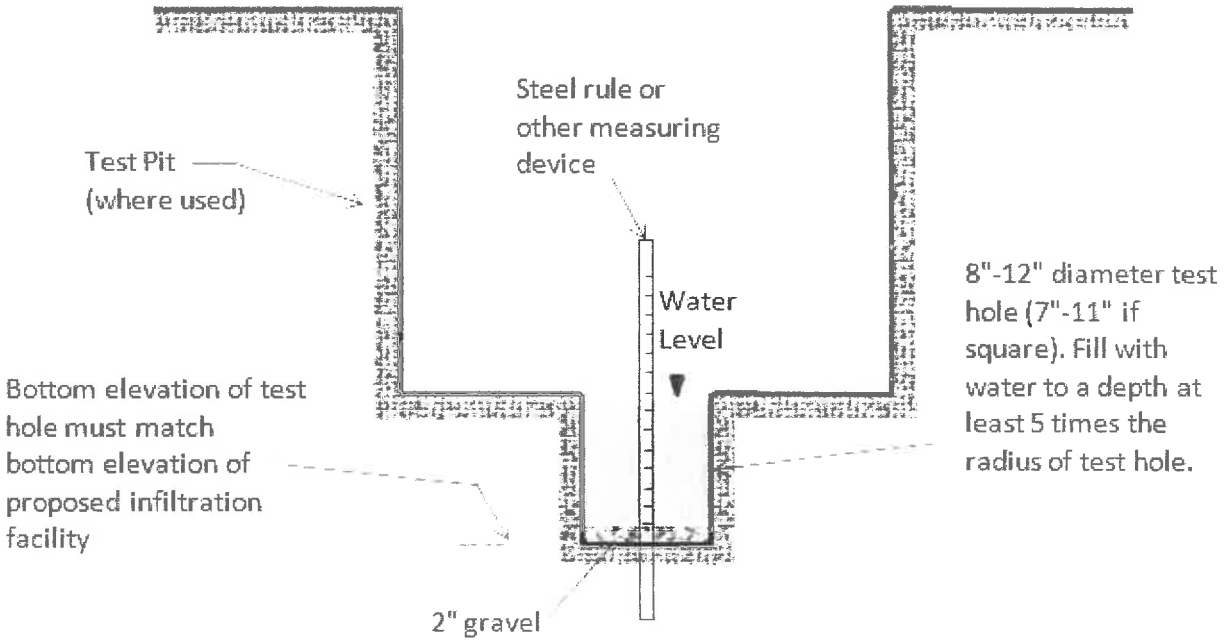
Test Procedure

Test hole shall be carefully filled with water to a depth equal to at least 5 times the hole's radius (H/r>5) above the gravel at the bottom of the test hole prior to each test interval.

- In **sandy soils**, when 2 consecutive measurements show that 6 inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements taken every 10 minutes. Measurements shall be taken with a precision of 0.25 inches or better. The drop that occurs during the final 10 minutes is used to calculate the percolation rate. Field data must show the two 25 minute readings and the six 10 minute readings.

- In **non-sandy soils**, obtain at least twelve measurements per hole over at least six hours with a precision of 0.25 inches or better. From a fixed reference point, measure the drop in water level over a 30 minute period for at least 6 hours, refilling after every 30 minute reading. The total depth of the hole must be measured at every reading to verify that collapse of the borehole has not occurred. The drop that occurs during the final reading is used to calculate the percolation rate.

Figure VII.15. Test Pit for Shallow Percolation Test



VII.3.8.2. Deep Percolation Test (10 - 40 feet)

Test Preparation

Example VII.1: Percolation Rate Conversion Example

(Porchet Method, aka Inverse Borehole Method):

The bottom of a proposed infiltration basin would be at 5.0 feet below natural grade. Percolation tests are performed within the boundaries of the proposed basin location with the depth of the test hole set at the infiltration surface level (bottom of the basin). The Percolation Test Data Sheet (Table 5) is prepared as the test is being performed. After the minimum required number of testing intervals, the test is complete. The data collected at the final interval is as follows:

Time interval, Δt = 10 minutes
Initial Depth to Water, D_0 = 12.25 inches
Final Depth to Water, D_f = 13.75 inches
Total Depth of Test Hole, D_T = 60 inches
[13]Test Hole Radius, r = 4 inches

The conversion equation is used:

$$I_t = \frac{\Delta H(60r)}{\Delta t(r + 2H_{avg})}$$

"H_o" is the initial height of water at the selected time interval.

$H_o = D_T - D_0 = 60 - 12.25 = 47.75$ inches

"H_f" is the final height of water at the selected time interval.

$H_f = D_T - D_0 = 60 - 13.75 = 46.25$ inches

"ΔH" is the change in height over the time interval.

$\Delta H = \Delta D = H_o - H_f = 47.75 - 46.25 = 1.5$ inches

"H_{avg}" is the average head height over the time interval.

$H_{avg} = (H_o - H_f)/2 = (47.75 - 46.25)/2 = 47.0$ inches

"I_t" is the tested infiltration rate.

$$I_t = \frac{\Delta H(60r)}{\Delta t(r + 2H_{avg})} = \frac{(1.5\ in)(\frac{60\ min}{hr})(4\ in)}{(10\ \text{min})((4\ in) + 2(47\ in))} = 0.37\ in/hr$$

[13] Where a rectangular test hole is used, an equivalent radius should be determined based on the actual area of the rectangular test hole (i.e., $r = (A/\pi)^{0.5}$).

APPENDIX – B

PERCOLATION TEST DATA SHEETS AND PORCHET CONVERSION SPREAD SHEETS

Project: WQMP	Project Number: 19-14085	Client: SCHMIDT	Boring No. B-1
Address, City, State: 33193 Yucaipa Blvd, Yucaipa		Drilling Contractor: AM/PAC	Drill Rig Type: MD B-34
Logged By: D. BALLINGER	Date Started: 12-3-19	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB & EWB	Completed: 12-4-19	Hammer Type: AUTOMATIC	—
USA Ticket Number: —	Backfilled: 12-4-19	Hammer Weight: 140 #	Hammer Drop: 30"
—	Groundwater Depth: None to 20'	Elevation: 2,210'	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology INFILTRATION TEST DOWN TO 20' **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5'	B-1, 1-3' BULK / B-2 RINGS @ 2'		24		(SM) SILTY SANDS, FINE TO COARSE GRAINED, FEW GRAVELS BROWN, LOOSE & SLIGHTLY MOIST	130.5	8.0	Shear 70psf, 32° F.O., E.I. = 9
6'-10					(SM) FINE TO COARSE GRAINED FEW GRAVELS, FIRM & SLIGHTLY MOIST, TAN BROWN.			
10-15					(SM) FINE TO MEDIUM GRAINED SANDS, FEW GRAVELS, DENSE & SLIGHTLY MOIST.			
					EOB @ 15'			

Wac Geotechnical, Inc.

Boring Log: Sheet 1 of 2

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Percolation Test Data Sheet

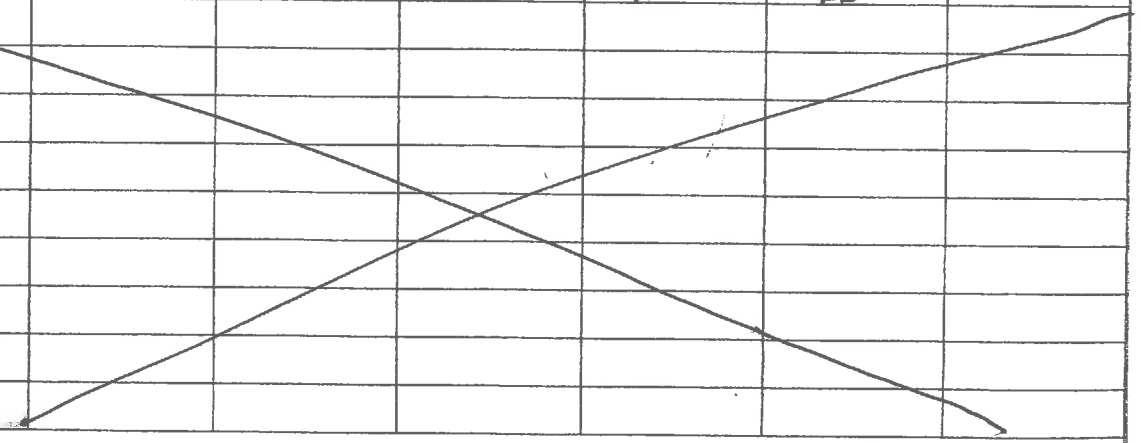
Project:	INFILTRATION	Project No:	19-14085	Date:	1-31-20
Test Hole No:	1	Tested By:	DAVE BALLINGER		
Depth of Test Hole, D_T:	60"	USCS Soil Classification:	(SM)		
Test Hole Dimensions (inches)			Length	Width	
Diameter (if round)=	8"	Sides (if rectangular)=	—	—	

Sandy Soil Criteria Test*

Trial No.	Start Time	Stop Time	Time Interval, (min.)	Initial Depth of Water (in.)	Final Depth of Water (in.)	Change in Water Level (in.)	Greater than or Equal to 6"? (y/n)
1	0915	0940	25	20"	0	20"	Y
2	0945	1010	25	20"	0	20"	Y

*If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements taken every 10 minutes. Other wise, pre-soak (fill) overnight. Obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25".

Trial No.	Start Time	Stop Time	Δt Time Interval (min.)	D_o Initial Depth of Water (in.)	D_f Final Depth to Water (in.)	ΔD Change in Water Level (in.)	Percolation Rate (min./in.)
1	1030	1040	10	20	12.4	7.4	
2	1043	1053	10	20	12.8	7.2	
3	1056	1104	10	20	13.-	7.0	
4	1112	1122	10	20	13.5	6.5	
5	1127	1137	10	20	14.5	5.5	
6	1141	1151	10	20	15"	5"	5:00
7							
8							
9							
10							
11							
12							
13							
14							
15							



COMMENTS:

DEPTH OF WATER 5 X R = 5 x 4 = 20"

Percolation Test Data Sheet

Project:	INFILTRATION	Project No:	19-14085	Date:	1-31-20
Test Hole No:	2	Tested By:	DAVE BALLINGER		
Depth of Test Hole, D_T:	60"	USCS Soil Classification:	(SM)		
Test Hole Dimensions (inches)			Length	Width	
Diameter (if round)=	8"	Sides (if rectangular)=	—	—	

Sandy Soil Criteria Test*

Trial No.	Start Time	Stop Time	Time Interval, (min.)	Initial Depth to Water (in.)	Final Depth to Water (in.)	Change in Water Level (in.)	Greater than or Equal to 6"? (y/n)
1	0918	0943	25	20"	0	20"	Y
2	0948	1013	25	20"	0	20"	Y

*If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements taken every 10 minutes. Other wise, pre-soak (fill) overnight. Obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25".

Trial No.	Start Time	Stop Time	Δt Time Interval (min.)	D_o Initial Depth to Water (in.)	D_f Final Depth to Water (in.)	ΔD Change in Water Level (in.)	Percolation Rate (min./in.)
1	1034	1044	10	20	12.9	7.1	
2	1048	1058	10	20	13.-	7.0	
3	1102	1112	10	20	15.7	6.3	
4	1117	1127	10	20	14.0	6.0	
5	1131	1141	10	20	14.5	5.5	
6	1146	1156	10	20	15"	5.0"	5:00
7							
8							
9							
10							
11							
12							
13							
14							
15							

COMMENTS:

DEPTH OF WATER 5 X R = 5 x 4 = 20"

Percolation Test Data Sheet

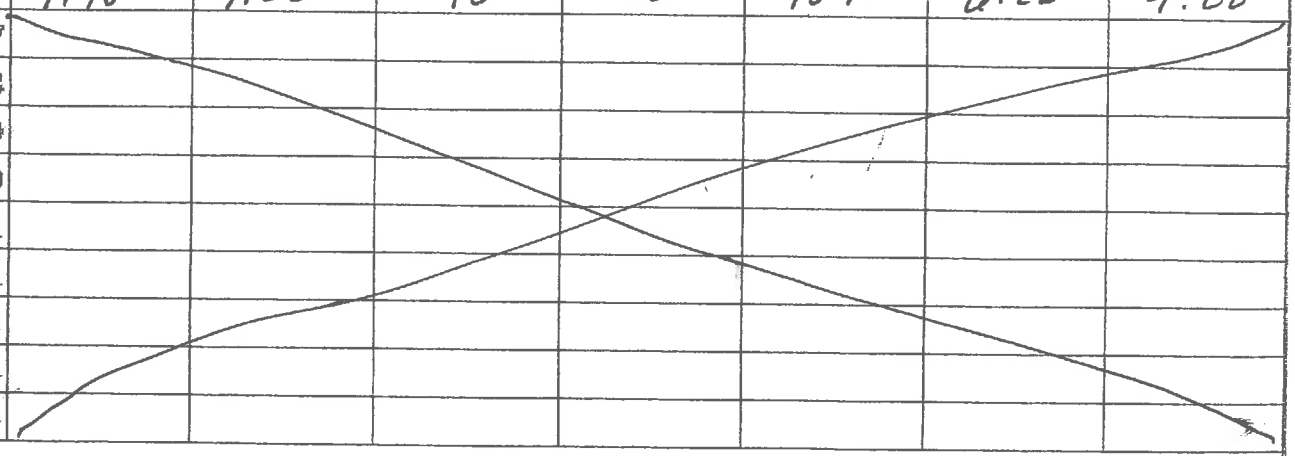
Project:	IN FILTRATION	Project No:	19-14085	Date:	1-31-20
Test Hole No:	3	Tested By:	DAVE BALLINGER		
Depth of Test Hole, D_T:	96"	USCS Soil Classification:	(SM)		
Test Hole Dimensions (inches)			Length	Width	
Diameter (if round)=	8"	Sides (if rectangular)=	—	—	

Sandy Soil Criteria Test*

Trial No.	Start Time	Stop Time	Time Interval, (min.)	Initial Depth OF Water (in.)	Final Depth OF Water (in.)	Change in Water Level (in.)	Greater than or Equal to 6"? (y/n)
1	0923	0948	25	20	0	20"	y
2	0953	1018	25	20	0	20"	y

*If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements taken every 10 minutes. Other wise, pre-soak (fill) overnight. Obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25".

Trial No.	Start Time	Stop Time	Δt Time Interval (min.)	D_o Initial Depth OF Water (in.)	D_f Final Depth to Water (in.)	ΔD Change in Water Level (in.)	Percolation Rate (min./in.)
1	1038	1048	10	20	12.0	8.0	
2	1052	1102	10	20	12.4	7.4	
3	1106	1116	10	20	13.0	7.0	
4	1120	1130	10	20	13.0	7.0	
5	1134	1144	10	20	13.5	6.5	
6	1148	1158	10	20	13.75	6.25	4:00
7							
8							
9							
10							
11							
12							
13							
14							
15							



COMMENTS: DEPTH OF WATER 5 X R = 5 X 4 = 20"

Percolation Test Data Sheet

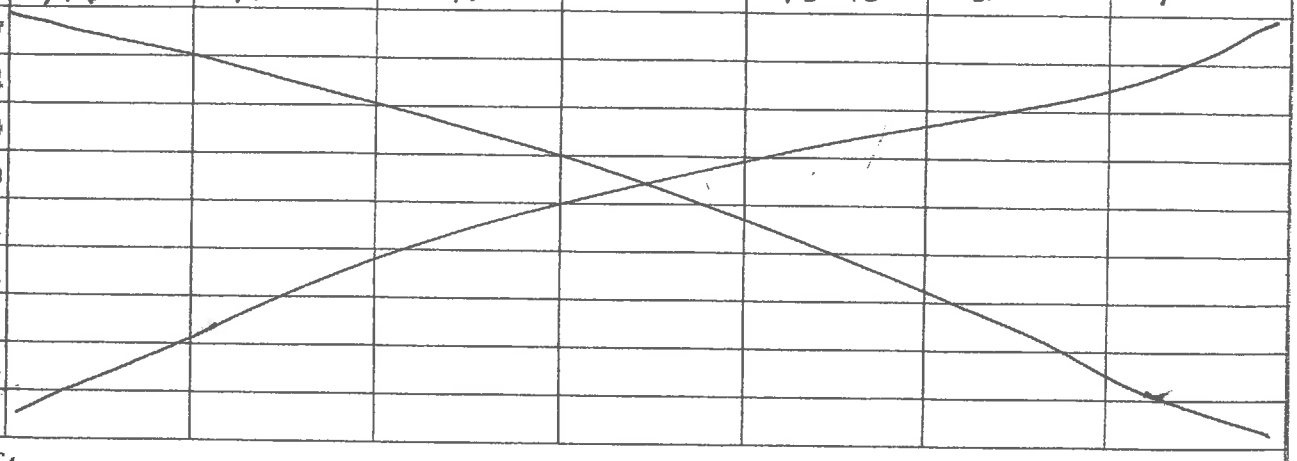
Project:	INFILTRATION	Project No:	19-14085	Date:	1-31-20
Test Hole No:	4	Tested By:	DAVE BALLINGER		
Depth of Test Hole, D_T:	96"	USCS Soil Classification:	(SM)		
Test Hole Dimensions (inches)			Length	Width	
Diameter (if round)=	8"	Sides (if rectangular)=	—	—	

Sandy Soil Criteria Test*

Trial No.	Start Time	Stop Time	Time Interval, (min.)	Initial Depth to Water (in.)	Final Depth to Water (in.)	Change in Water Level (in.)	Greater than or Equal to 6"? (y/n)
1	0927	0952	25	20"	20	20"	Y
2	0958	1023	25	20"	20	20"	Y

*If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements taken every 10 minutes. Other wise, pre-soak (fill) overnight. Obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25".

Trial No.	Start Time	Stop Time	Δt Time Interval (min.)	D_o Initial Depth ~~Of~~ Water (in.)	D_f Final Depth ~~Of~~ Water (in.)	ΔD Change in Water Level (in.)	Percolation Rate (min./in.)
1	1043	1053	10	20	12.0	8.0	
2	1057	1107	10	20	12.5	7.5	
3	1112	1122	10	20	13.0	7.0	
4	1126	1136	10	20	13.0	7.0	
5	1140	1150	10	20	13.70	6.30	
6	1156	1206	10	20	13.75	6.25	4:00
7							
8							
9							
10							
11							
12							
13							
14							
15							



COMMENTS:

DEPTH OF WATER $5 \times R = 5 \times 4 = 20"$

Porchet Method - Conversion of Percolation Rate to Infiltration Rate	Perc Test NO. 1 Average	Legend	Required Entry / Calculated Entry

Company Name: AM/PAC AND ASSOCIATES, INC. Date: 1/31/2020

Designed By: BALLINGER/HAWES County/City Case No: 19-14085

Percolation Test Conversion to Infiltration Rate

The conversion equation used is:

$$I_T(\text{in/hr}) = \frac{dH(\text{in}) \times 60\ (\text{min/hr}) \times r(\text{in})}{dt(\text{min}) \times [r(\text{in}) + 2H_{AVG}(\text{in})]}$$

Hole Radius	$r =$	4.00	inches
Time Interval	$dt =$	10.00	minutes
Initial height of water during selected time interval	$H_0 =$	20.00	inches
Final Height of water during selected time interval	$H_f =$	15.00	inches
Change in height of water during selected time interval	$dH =$	5.00	inches
Average head height over the selected time interval	$H_{AVG} =$	17.50	inches
Converted infiltration rate per test data	$I_T =$	3.08	inches/hour

Comments

Porchet Method - Conversion of Percolation Rate to Infiltration Rate	Perc Test NO: 2 Average	Legend	Required Entry / Calculated Entry

Company Name: AM/PAC AND ASSOCIATES, INC. Date: 1/31/2020

Designed By: BALLINGER/HAWES County/City Case No: 19-14085

Percolation Test Conversion to Infiltration Rate

The conversion equation used is:

$$I_T(\text{in/hr}) = \frac{dH(\text{in}) \times 60\ (\text{min/hr}) \times r(\text{in})}{dt(\text{min}) \times [r(\text{in}) + 2H_{AVG}(\text{in})]}$$

Hole Radius	$r =$	4.00	inches
Time Interval	$dt =$	10.00	minutes
Initial height of water during selected time interval	$H_0 =$	20.00	inches
Final Height of water during selected time interval	$H_f =$	15.00	inches
Change in height of water during selected time interval	$dH =$	5.00	inches
Average head height over the selected time interval	$H_{AVG} =$	17.50	inches
Converted infiltration rate per test data	$I_T =$	3.08	inches/hour

Comments

Porchet Method - Conversion of Percolation Rate to Infiltration Rate	Perc Test NO:3 Average	Legend	Required Entry / Calculated Entry

Company Name: AM/PAC AND ASSOCIATES, INC. Date: 1/31/2020

Designed By: BALLINGER/HAWES County/City Case No: 19-14085

Percolation Test Conversion to Infiltration Rate

The conversion equation used is:

$$I_T(in/hr) = \frac{dH(in) \times 60\ (min/hr) \times r(in)}{dt(min) \times [r(in) + 2H_{AVG}(in)]}$$

Hole Radius	$r =$	4.00	inches
Time Interval	$dt =$	10.00	minutes
Initial height of water during selected time interval	$H_0 =$	20.00	inches
Final Height of water during selected time interval	$H_f =$	13.75	inches
Change in height of water during selected time interval	$dH =$	6.25	inches
Average head height over the selected time interval	$H_{AVG} =$	16.88	inches
Converted infiltration rate per test data	$I_T =$	3.97	inches/hour

Comments

Porchet Method - Conversion of Percolation Rate to Infiltration Rate	Perc Test NO: 4 Average	Legend	Required Entry / Calculated Entry

Company Name: AM/PAC AND ASSOCIATES, INC. Date: 1/31/2020

Designed By: BALLINGER/HAWES County/City Case No: 19-14085

Percolation Test Conversion to Infiltration Rate

The conversion equation used is:

$$I_T(\text{in/hr}) = \frac{dH(\text{in}) \times 60\ (\text{min/hr}) \times r(\text{in})}{dt(\text{min}) \times [r(\text{in}) + 2H_{AVG}(\text{in})]}$$

Hole Radius	$r =$	4.00	inches
Time Interval	$dt =$	10.00	minutes
Initial height of water during selected time interval	$H_0 =$	20.00	inches
Final Height of water during selected time interval	$H_f =$	13.75	inches
Change in height of water during selected time interval	$dH =$	6.25	inches
Average head height over the selected time interval	$H_{AVG} =$	16.88	inches
Converted infiltration rate per test data	$I_T =$	3.97	inches/hour

Comments

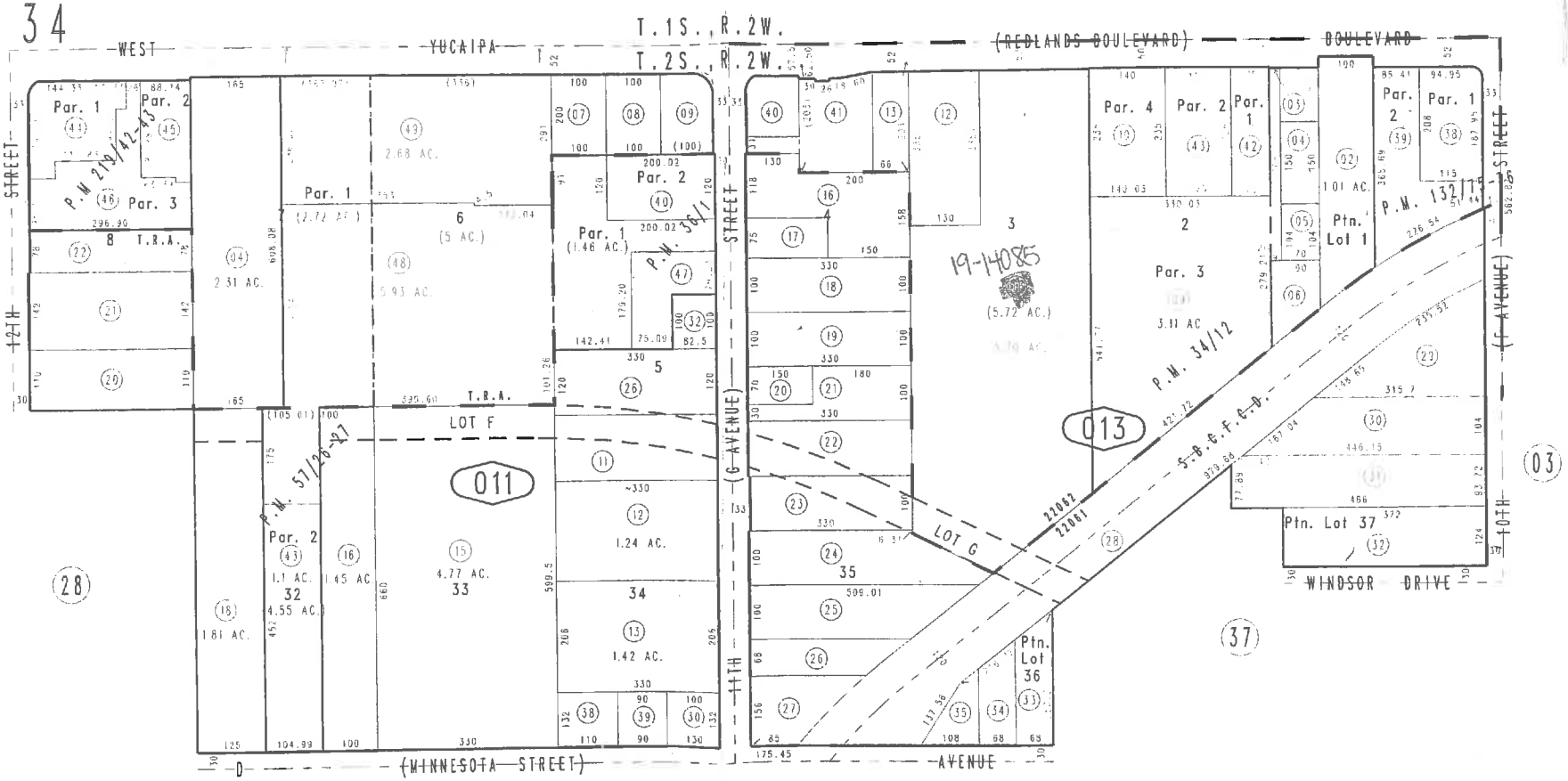
APPENDIX – C
MAPS, GIS DATA AND PHOTOS

THIS MAP IS FOR THE PURPOSE OF AD VALOREM TAXATION ONLY

Ptn. Dunlap Ranch, Sub. No. 2
M.B. 20/47

City of Yucaipa
Tax Rate Area
22061,22062

0318 - 01



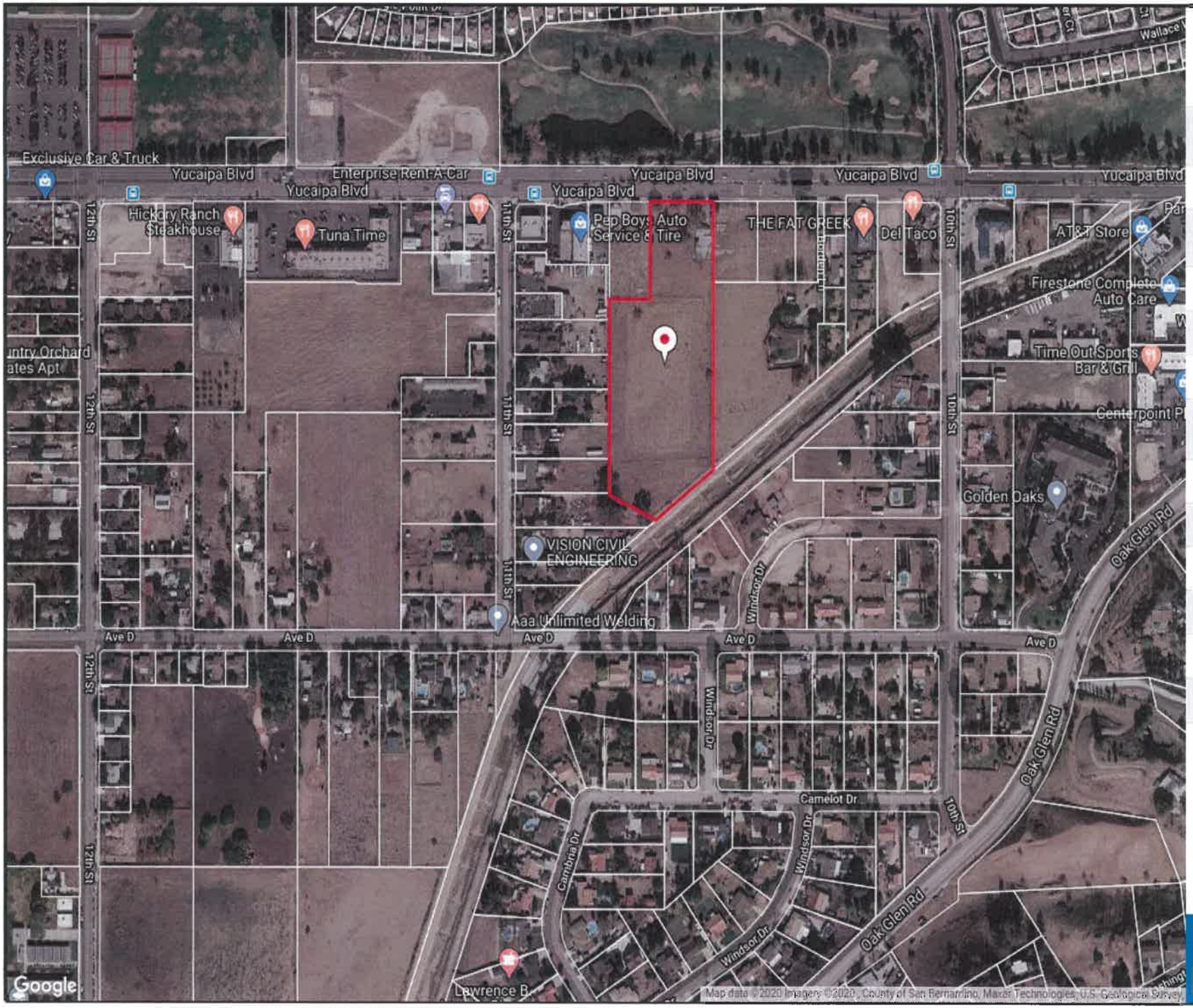
Parcel Map No. 13992, P.M. 219/42-43
Parcel Map No. 11558, P.M. 132/75-76
Parcel Map No. 5677, P.M. 57/26-27
Parcel Map No. 3974, P.M. 36/1
Ptn. Parcel Map No. 3621 P.M. 34/12

Ptn. N.W.1/4, Sec. 3
T.2S., R.2W.

Assessor's Map
Book 0318 Page 01
San Bernardino County

REVISED
09/06/17 GW
03/29/19 RU

February 2005



Property Data

Owner Name
TEEK PROPERTIES LLC

Situs Address
35193 YUCAIPA BLVD, YUCAIPA, CA 92399-1952

APN
0318013110000

Mailing Address
PO BOX 674, FOREST FALLS, CA 92339-0674

Approximate Size
5.7 AC

Year Built
1950

Land Value Assessed
71,473

Improvement Value Assessed
7,024

Total Value
78497

Deed ID
2019-0097765

Deed Date
20190329

Use Code
113

Use Description
Light Industrial

Zoning
[no data]

Assessor Parcel Map

ENPLAN

VICINITY MAP

Property Data

Owner Name
TEEK PROPERTIES LLC

Situs Address
33193 YUCAIPA BLVD, YUCAIPA, CA 92399-1952

APN
0318013110000

Mailing Address
PO BOX 674, FOREST FALLS, CA 92339-0674

Approximate Size
5.7 AC

Year Built
1950

Land Value Assessed
71,473

Improvement Value Assessed
7,024

Total Value
78497

Deed ID
2019-0097765

Deed Date
20190329

Use Code
113

Use Description
Light Industrial

Zoning
[no data]

Assessor Parcel Map

ENPLAN

AM/PAC # 19-14085

PRINSCO WATER MANAGEMENT SOLUTIONS

*Ensure correct unit type is selected

HydroStor™

PROJECT DESCRIPTION

Project Name: Teck Properties - Yucaipa Date: ___/___/___ City/State: ___/___ Phone #: ___

Engineer: MTH2 Engineering, Inc Contractor: ___ Designed By: MLA Prinsco Rep: ___

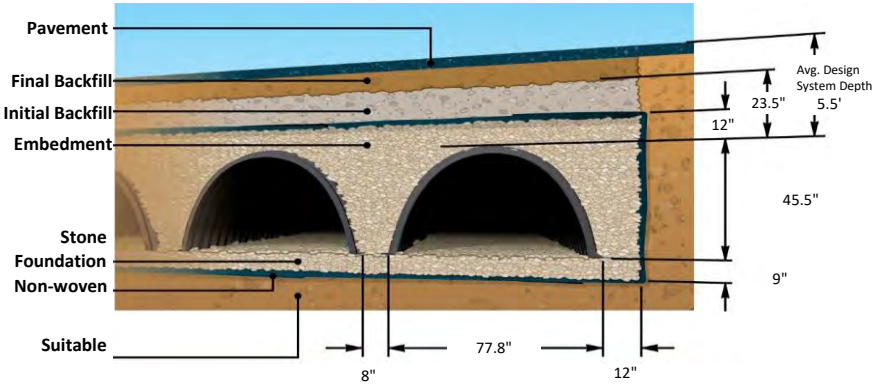
DESIGN CRITERIA - BASED ON STORAGE VOLUME

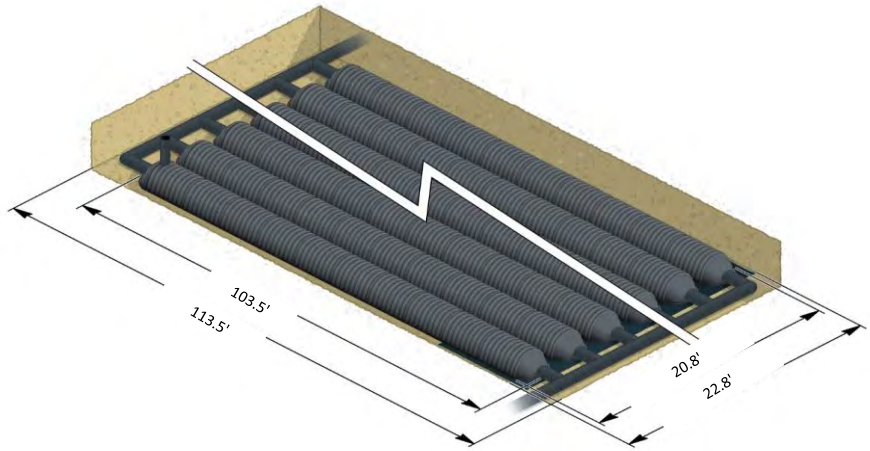
Chamber Size: HS180 Constraint on System Dimensions: Width Number of Manifolds: 2 Manifold Diameter: 24 (in) Include Manifold Volume?: Yes *Units: Standard

Target Storage Volume	8389 (cf)	Constraint Limit	25 (ft)	Stone Porosity	40 %	Bottom of Stone Elevation	0.00 (ft)	Max. Pavement Elevation	10.00 (ft)
Min. Pavement Elevation	10.00 (ft)								
Additional Stone Above Chamber*	0 (in)	Additional Stone Below Chamber*	0 (in)	Additional Stone Side of Chamber*	0 (in)	Additional Stone Between Chambers*	0 (in)		

* Minimum recommended values are already included in calculations

SYSTEM LAYOUT





NOTES ON COVER ABOVE CHAMBER:

Min. Burial Depth: 23.5"

Max. Burial Depth: 8'

SYSTEM STORAGE & QUANTITIES

System Layout: 2 rows of 14 chambers & 1 rows of 13 chambers

System Footprint	Stone Storage	Manifold Storage	Chamber Storage	Total System Storage
2534 (sf)	3688 (cf)	112 (cf)	4748 (cf)	8549 (cf)

Number of Chambers	Number of End Caps	Required Stone (For Embedment Backfill)	Non-Woven Geotextile (Includes 20% Overlap)	Woven Geotextile - Scour	Woven Geotextile - Sediment Row
41	6	342 (cy)	889 (sy)	54 (sy)	176 (sy)

ASSISTANCE: For assistance with design, drawings or pricing please have your completed system design aid ready, and contact your Prinsco sales representative

This tool is intended to assist in sizing stormwater management systems using Prinsco products. It should be used for estimating purposes only and is not intended to be a final design tool. The design engineer needs to verify all the values and ensure they meet all project design criteria.

PRINSCO WATER MANAGEMENT SOLUTIONS

*Ensure correct unit type is selected

HydroStor™

PROJECT DESCRIPTION

Project Name: Teck Properties - Yucaipa Date: ___/___/___ City/State: ___/___ Phone #: ___

Engineer: MTH2 Engineering, Inc Contractor: ___ Designed By: MLA Prinsco Rep: ___

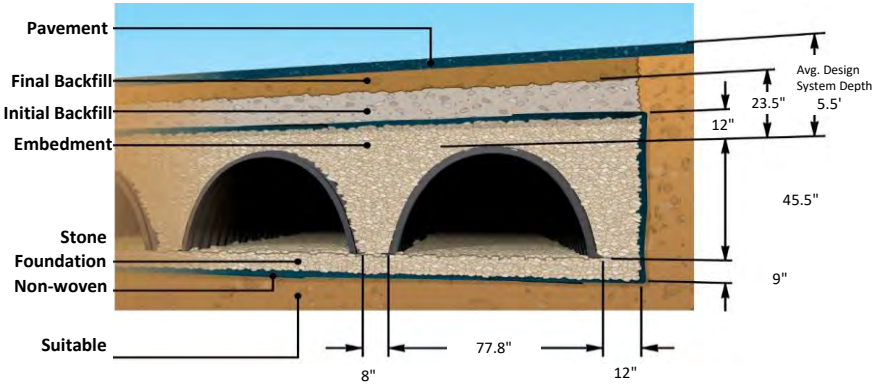
DESIGN CRITERIA - BASED ON STORAGE VOLUME

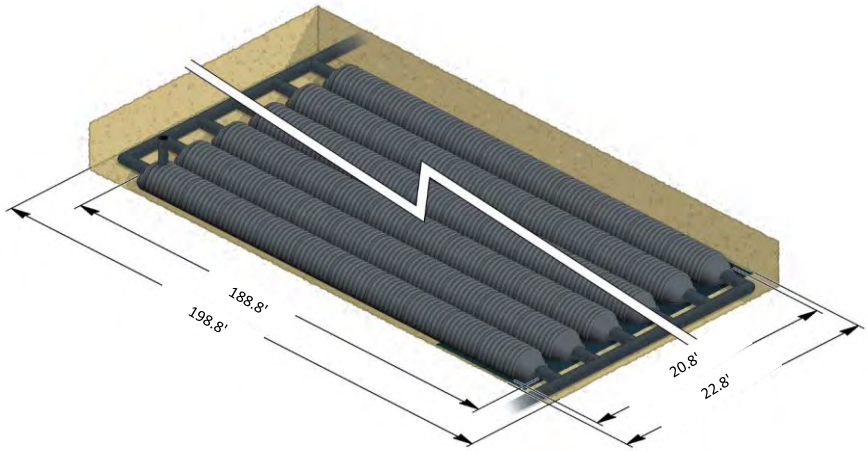
Chamber Size: HS180 Constraint on System Dimensions: Width Number of Manifolds: 2 Manifold Diameter: 24 (in) Include Manifold Volume?: Yes *Units: Standard

Target Storage Volume	15210 (cf)	Constraint Limit	25 (ft)	Stone Porosity	40 %	Bottom of Stone Elevation	0.00 (ft)	Max. Pavement Elevation	10.00 (ft)
Min. Pavement Elevation	10.00 (ft)								
Additional Stone Above Chamber*	0 (in)	Additional Stone Below Chamber*	0 (in)	Additional Stone Side of Chamber*	0 (in)	Additional Stone Between Chambers*	0 (in)		

* Minimum recommended values are already included in calculations

SYSTEM LAYOUT





NOTES ON COVER ABOVE CHAMBER:

Min. Burial Depth: 23.5"

Max. Burial Depth: 8'

SYSTEM STORAGE & QUANTITIES

System Layout: 2 rows of 26 chambers & 1 rows of 25 chambers

System Footprint	Stone Storage	Manifold Storage	Chamber Storage	Total System Storage
4478 (sf)	6360 (cf)	112 (cf)	8837 (cf)	15309 (cf)

Number of Chambers	Number of End Caps	Required Stone (For Embedment Backfill)	Non-Woven Geotextile (Includes 20% Overlap)	Woven Geotextile - Scour	Woven Geotextile - Sediment Row
77	6	589 (cy)	1534 (sy)	54 (sy)	318 (sy)

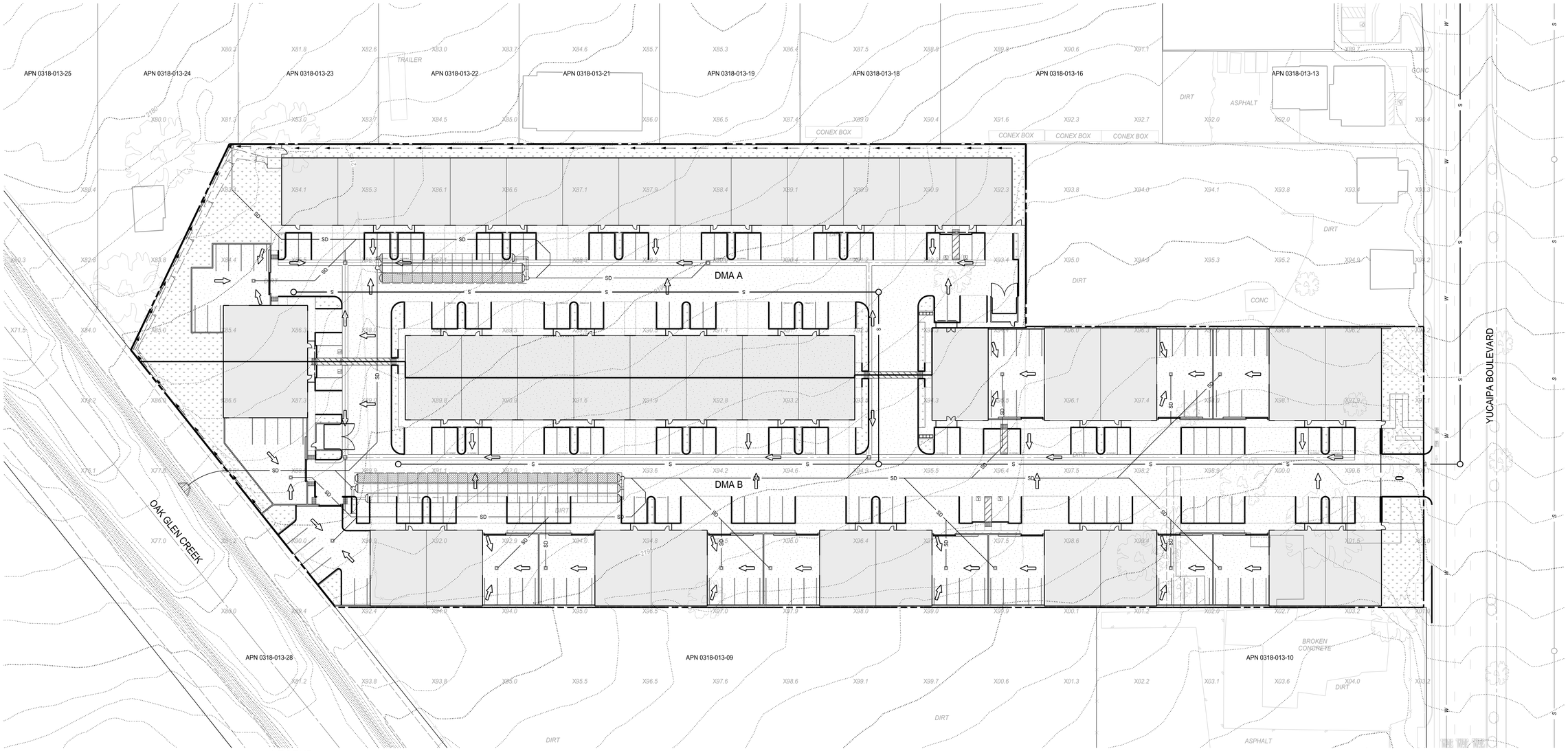
ASSISTANCE: For assistance with design, drawings or pricing please have your completed system design aid ready, and contact your Prinsco sales representative

This tool is intended to assist in sizing stormwater management systems using Prinsco products. It should be used for estimating purposes only and is not intended to be a final design tool. The design engineer needs to verify all the values and ensure they meet all project design criteria.

IN THE CITY OF YUCAIPA

PRELIMINARY WQMP SITE PLAN

TECK PROPERTIES, LLC



LEGEND

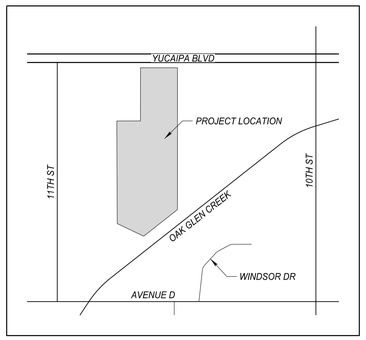
EXISTING BOUNDARY	
EXISTING CENTERLINE	
EXISTING PROPERTY LINE	
EXISTING RIGHT-OF-WAY LINE	
EXISTING BUILDING	
EXISTING CONTOUR MAJOR	100
EXISTING CONTOUR MINOR	99
EXISTING CURB	
EXISTING EDGE OF CONCRETE	
EXISTING FENCE - CHAINLINK	
EXISTING FENCE - TUBE STEEL	
EXISTING FENCE - WOOD	
EXISTING WALL - CONCRETE OR MASONRY	
EXISTING SPOT ELEVATION	24.50
EXISTING POWER POLE	
EXISTING SEWER MANHOLE	SMH
EXISTING SIGN	
EXISTING STREET LIGHT	
EXISTING TELEPHONE RISER	TR
EXISTING WATER METER	WM
EXISTING WATER VALVE	WV
EXISTING ELECTRIC - OVERHEAD	OHE
EXISTING SEWER	S
PROPOSED ADA PATH OF TRAVEL	
PROPOSED BUILDING	
PROPOSED CURB	
PROPOSED EDGE OF PCC PAVING	
PROPOSED GRADEBREAK LINE	
PROPOSED WALL - CONCRETE OR MASONRY	
PROPOSED ELEVATION	24.50
PROPOSED DMA BOUNDARY	
INDICATES EXISTING STORM DRAIN	SD
INDICATES PROPOSED STORM DRAIN	SD
INDICATES FLOW DIRECTION	
INDICATES DRAIN INLET WITH STENCILING	
INDICATES PC CONCRETE PAVEMENT	
INDICATES BUILDING ROOF	
INDICATES LANDSCAPE	

SCALE: 1" = 30'

30 0 30 60

MTH2 engineering, inc

639 Lakewood Drive
Riverside, CA 92506
(951) 850-2190
www.mth2engineering.com
civil • water resources • storm water
urban design and planning



VICINITY MAP
NOT TO SCALE

OWNER

TECK PROPERTIES, LLC
PO BOX 674
FOREST FALLS, CA 92339
CONTACT: GLENN SCHMIDT
(909) 240-9132

ENGINEER/CONTACT PERSON

THIS PLAN WAS PREPARED UNDER THE DIRECTION OF MARTEN L. ANDERSON, A REGISTERED CIVIL ENGINEER IN THE STATE OF CALIFORNIA.

11-JAN-2024

MARTEN L. ANDERSON — DATE
RCE 51313
MTH2 ENGINEERING, INC.
639 LAKEWOOD DRIVE
RIVERSIDE, CA 92506
(951) 850-2190

REGISTERED PROFESSIONAL ENGINEER
MARTEN L. ANDERSON
No. 51313
Exp. 6-30-24
CIVIL
STATE OF CALIFORNIA

LEGAL DESCRIPTION

BLOCK 3, ACCORDING TO MAP OF SUBDIVISION NO. 2 OF PART OF DUNLAP RANCH, AS PER PLAT RECORDED IN BOOK 20 OF MAPS, PAGE 47, RECORDS OF SAID COUNTY EXCEPTING THAT PORTION DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT IN THE NORTHWEST CORNER OF SAID BLOCK, SAID POINT BEING IN THE CENTER LINE OF YUCAIPA BLVD., (FORMERLY REDLANDS BOULEVARD); THENCE SOUTH ALONG THE WEST BOUNDARY OF SAID BLOCK, 335 FEET; THENCE EAST AT RIGHT ANGLES 130 FEET; THENCE NORTH AT RIGHT ANGLES 335 FEET TO THE POINT IN THE CENTER LINE OF YUCAIPA BOULEVARD; THENCE WEST ALONG SAID CENTER LINE 130 FEET TO THE POINT OF BEGINNING. ALSO THAT PORTION OF BLOCK "G" LYING SOUTHERLY FROM AND ADJOINING SAID BLOCK 3, ACCORDING TO MAP OF SUBDIVISION, NO. 2, OF PART OF DUNLAP RANCH, AS PER PLAT RECORDED IN BOOK 20 OF MAPS, PAGE 47, RECORDS OF SAID COUNTY. EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT BY DEED RECORDED SEPTEMBER 8, 1964, IN BOOK 6227, PAGE 250, OFFICIAL RECORDS.
NOTE: THE MAP OF THE ABOVE DESCRIBED SUBDIVISION SHOWS THAT AREAS AND DISTANCES OF SAID LOTS ARE COMPUTED TO STREET CENTERS.

ASSESSOR'S PARCEL NUMBER

0318-013-11

BASIS OF BEARINGS

THE BEARING OF EAST FOR THE CENTERLINE OF YUCAIPA BOULEVARD AS SHOWN ON PARECL MAP NO 3621, FILED IN BOOK 2 PAGE 12 OF PACEL MAPS ON FILE IN THE OFFICE OF THE COUNTY RECORDED OF SAN BERNARDINO COUNTY WAS USED AS THE BASIS OF BEARINGS SHOWN.

BENCHMARK

FD CONC NAIL IN TOP OF SOUTH CURB RETURN AT THE SW CORNER OF THE INTERSECTION OF 10TH STREET AND AVENUE D PER SAN BERNARDINO COUNTY FIELD BOOK 4011 PAGE 1567.
DATED FEB 3, 1987
ELEV = 2209.90 FEET

FEMA FLOODZONE

ZONE X PER FIRM MAP NO. 06071C8740H, EFFECTIVE DATE AUG 28, 2008

DMA AREA SUMMARY

DMA A			
Concrete or Asphalt	45670.90	SF	
Roofs	36960.00	SF	
Landscape	13600.78	SF	
	96231.68	SF	Total
DMA B			
Concrete or Asphalt	94357.34	SF	
Roofs	46800.00	SF	
Landscape	11090.34	SF	
	152247.68	SF	Total

9.94% Landscape Coverage
90.06% Impervious Area

Yucaipa Business Park Development Traffic Impact Analysis

City of Yucaipa, California

December 4, 2024

Prepared by:

TJW ENGINEERING, INC.
9841 Irvine Center Drive, Suite 200
Irvine, CA 92618
949.878.3509 | www.tjwengineering.com

TJW ENGINEERING, INC.
TRAFFIC ENGINEERING &
TRANSPORTATION PLANNING
CONSULTANTS

December 4, 2024

Patricia Carbajal
TECK PROPERTIES
P.O. Box 674
Forest Falls, CA 92339

Subject: Traffic Impact Analysis – Yucaipa Business Park Development, City of Yucaipa, CA

Dear Ms. Carbajal:

TJW ENGINEERING, INC. (TJW) is pleased to present you with this traffic impact analysis for the proposed project, Yucaipa Business Park Development, comprised of 96,060 square feet of commercial business land use and six (6) apartment units, located at 33193 Yucaipa Boulevard in the City of Yucaipa.

This traffic study has been prepared to meet the traffic study requirements for the City of Yucaipa and assesses the forecast traffic operations associated with the proposed project and its impact on the local street network. This report is being submitted to you for review and forwarding to the City of Yucaipa.

Please contact us at (949) 878-3509 if you have any questions regarding this analysis.

Sincerely,

Thomas Wheat, PE, TE
President
Registered Civil Engineer *#69467*
Registered Traffic Engineer *#2565*

David Chew, PTP
Transportation Planner

Travis Yokota
Assistant Transportation Planner

Yucaipa Business Park Development
Traffic Impact Analysis

City of Yucaipa, California

December 4, 2024

Prepared for:
Patricia Carbajal
TECK PROPERTIES
P.O. Box 674
Forest Falls, CA 92339

Prepared by:
Thomas Wheat, PE, TE
David Chew, PTP
Travis Yokota

TJW ENGINEERING, INC.
9841 Irvine Center Drive, Suite 200
Irvine, CA 92618
949.878.3509 | www.tjwengineering.com

Table of Contents

1.0 EXECUTIVE SUMMARY 5

1.1 SUMMARY OF LEVEL OF SERVICE ANALYSIS RESULTS 6
1.2 ON-SITE ROADWAY AND SITE ACCESS IMPROVEMENTS 7

2.0 INTRODUCTION 8

2.1 PROJECT DESCRIPTION 8
2.2 STUDY AREA 8
2.3 ANALYSIS METHODOLOGY 9

2.3.1 Intersection Analysis Methodology 9
2.3.2 Roadway Segment Analysis Methodology 11

2.4 PERFORMANCE CRITERIA 12

3.0 EXISTING CONDITIONS 16

3.1 EXISTING CIRCULATION NETWORK/STUDY AREA CONDITIONS 16
3.2 PEDESTRIAN AND BICYCLE FACILITIES 16
3.3 EXISTING PUBLIC TRANSIT SERVICES 16
3.4 EXISTING TRAFFIC VOLUMES 17
3.5 EXISTING CONDITIONS INTERSECTION LEVEL OF SERVICE ANALYSIS 17
3.6 EXISTING CONDITIONS ROADWAY SEGMENT ANALYSIS 17

4.0 PROPOSED PROJECT 22

4.1 PROJECT DESCRIPTION 22
4.2 PROJECT TRIP GENERATION 22
4.3 PROJECT TRIP DISTRIBUTION 23

5.0 OPENING YEAR (OY) TRAFFIC CONDITIONS 25

5.1 ROADWAY IMPROVEMENTS 25
5.2 CUMULATIVE PROJECTS 25
5.3 OY TRAFFIC VOLUMES 26
5.4 OY INTERSECTION LOS ANALYSIS 26
5.5 OY ROADWAY SEGMENT ANALYSIS 26

6.0 OPENING YEAR WITH PROJECT (OYP) TRAFFIC CONDITIONS 31

6.1 ROADWAY IMPROVEMENTS 31
6.2 OYP TRAFFIC VOLUMES 31
6.3 OYP INTERSECTION LEVEL OF SERVICE ANALYSIS 31
6.4 OYP ROADWAY SEGEMENT LEVEL OF SERVICE ANALYSIS 32

List of Tables

Table 1: HCM – LOS & Delay Ranges – Signalized Intersections 10
Table 2: HCM – LOS & Delay Ranges – Unsignalized Intersections 11
Table 3: LOS & Capacity Thresholds – Roadway Segments 12
Table 4: Roadway Characteristics within Study Area 16
Table 5: Intersection Analysis – Existing Conditions 17
Table 6: Roadway Segments – Existing Conditions 18
Table 7: Proposed Project Trip Generation 22
Table 8: Cumulative Project Trip Generation 25
Table 9: Intersection Analysis – OY Conditions 26
Table 10: Roadway Segments – OY Conditions 27
Table 11: Intersection Analysis – OYP Conditions 31
Table 12: Roadway Segment – OYP Conditions 32

List of Exhibits

Exhibit 1: Project Location 13
Exhibit 2: Proposed Project Site Plan 14
Exhibit 3: Project Study Area 15
Exhibit 4: Lane Geometry and Intersection Controls 19
Exhibit 5: Existing AM Peak Hour Volumes 20
Exhibit 6: Existing PM Peak Hour Volumes 21
Exhibit 7: Proposed Trip Distribution 24
Exhibit 8: Cumulative Project Locations 28
Exhibit 9: OY AM Peak Hour Volumes 29
Exhibit 10: OY PM Peak Hour Volumes 30
Exhibit 11: OYP AM Peak Hour Volumes 33
Exhibit 12: OYP PM Peak Hour Volumes 34

Appendices

Appendix A: Glossary of Terminology
Appendix B: Scoping Agreement and City Documents
Appendix C: Existing Traffic Counts
Appendix D: HCM Analysis Sheets

1.0 EXECUTIVE SUMMARY

This traffic impact analysis (TIA) analyzes the projected traffic operations associated with the proposed project, Yucaipa Business Park Development, located at 33193 Yucaipa Boulevard in the City of Yucaipa. The purpose of this TIA is to evaluate potential circulation system deficiencies that may result from the development of the proposed project, and to recommend improvements to achieve acceptable operations, if applicable. This analysis has been prepared in coordination with the City of Yucaipa via a scoping agreement (See **Appendix B**) and follows the *City of Yucaipa General Plan* (City General Plan) (April 2016) and the *City of Yucaipa Traffic Impact Analysis Guidelines* (City Guidelines) (August 2020).

The proposed project is comprised of 96,060 square feet of commercial use and six (6) apartment units. Site access is planned via one right-in/right-out driveway on Yucaipa Boulevard. In the City General Plan, the site is currently zoned as General Commercial (CG) and is also designated for CG land use. The project site is currently vacant.

The proposed project is anticipated to be completed and generating trips by 2026. An annual growth rate of 1.5% was used to account for the 2026 volumes. When completed, the proposed project is expected to generate 1,235 daily trips which includes 132 AM peak hour trips, and 120 PM peak hour trips.

The following four (4) intersections and ten (10) roadway segments in the vicinity of the project site have been included in the level of service (LOS) analysis:

Intersections:

1. Sand Canyon Road-14th Street/Yucaipa Boulevard
2. 13th Street/Yucaipa Boulevard
3. 10th Street/Yucaipa Boulevard
4. Oak Glen Road/Yucaipa Boulevard
5. Project Access/Yucaipa Boulevard.

Roadway Segments:

1. Yucaipa Boulevard east of Sand Canyon Road-14th Street
2. Yucaipa Boulevard east of 11th Street
3. Yucaipa Boulevard west of 10th Street
4. Yucaipa Boulevard east of 10th Street
5. Sand Canyon Road north of Yucaipa Boulevard
6. 14th Street south of Yucaipa Boulevard
7. 12th Street south of Yucaipa Boulevard

8. 10th Street south of Yucaipa Boulevard
9. Oak Glen Road north of Yucaipa Boulevard
10. Oak Glen Road south of Yucaipa Boulevard.

The study intersections are analyzed for the following study scenarios:

- Existing Traffic Conditions (Existing);
- Opening Year Traffic Conditions (OY);
- Opening Year With Project Traffic Conditions (OYP).

1.1 SUMMARY OF LEVEL OF SERVICE ANALYSIS RESULTS

Table ES-1 summarizes the results of the intersection level of service analysis based on the City of Yucaipa thresholds of significance for analyzing transportation deficiencies.

Table ES-1

Summary of Transportation Deficiencies at Study Intersections

Intersection			Existing Conditions	OY Conditions	OYP Conditions
1	Sand Canyon Road-14th Street	Yucaipa Boulevard	-	-	-
2	13th Street	Yucaipa Boulevard	-	-	-
3	10th Street	Yucaipa Boulevard	-	-	-
4	Oak Glen Road	Yucaipa Boulevard	-	-	-

Existing Traffic Conditions

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *Existing* traffic conditions.

Opening Year (OY) Traffic Conditions

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *Opening Year* traffic conditions

Opening Year With Project (OYP) Traffic Conditions

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *Opening Year With Project* traffic conditions.

1.2 ON-SITE ROADWAY AND SITE ACCESS IMPROVEMENTS

Wherever necessary, roadways adjacent to the proposed project site and site access points will be constructed in compliance with recommended roadway classifications and respective cross-sections in the City General Plan or as directed by the City Engineer.

Sight distance at each project access point should be reviewed with respect to standard Caltrans and City sight distance standards at the time of final grading, landscaping and street improvement plans.

Signing/striping should be implemented in conjunction with detailed construction plans for the project site.

2.0 INTRODUCTION

This traffic impact analysis (TIA) analyzes the projected traffic operations associated with the proposed project, Yucaipa Business Park Development, located at 33193 Yucaipa Boulevard in the City of Yucaipa. The purpose of this TIA is to evaluate potential circulation system deficiencies that may result from the development of the proposed project, and to recommend improvements to achieve acceptable operations, if applicable. This analysis has been prepared in coordination with the City of Yucaipa via a scoping agreement (See **Appendix B**) and follows the *City of Yucaipa General Plan* (City General Plan) (April 2016) and the *City of Yucaipa Traffic Impact Analysis Guidelines* (City Guidelines) (August 2020).

2.1 PROJECT DESCRIPTION

The proposed project is comprised of 96,060 square feet of commercial use and six (6) apartment units. Site access is planned via one right-in/right-out driveway on Yucaipa Boulevard. In the City General Plan, the site is currently zoned as General Commercial (CG) and is also designated for CG land use. The project site is currently vacant.

The proposed project is anticipated to be completed and generating trips by 2026. An annual growth rate of 1.5% was used to account for the 2026 volumes. **Exhibit 1** shows the project site location. **Exhibit 2** shows the proposed project site plan.

2.2 STUDY AREA

The following four (4) intersections and ten (10) roadway segments in the vicinity of the project site have been included in the level of service (LOS) analysis:

Intersections:

1. Sand Canyon Road-14th Street/Yucaipa Boulevard
2. 13th Street/Yucaipa Boulevard
3. 10th Street/Yucaipa Boulevard
4. Oak Glen Road/Yucaipa Boulevard
5. Project Access/Yucaipa Boulevard.

Roadway Segments:

1. Yucaipa Boulevard east of Sand Canyon Road-14th Street
2. Yucaipa Boulevard east of 11th Street
3. Yucaipa Boulevard west of 10th Street
4. Yucaipa Boulevard east of 10th Street

5. Sand Canyon Road north of Yucaipa Boulevard
6. 14th Street south of Yucaipa Boulevard
7. 12th Street south of Yucaipa Boulevard
8. 10th Street south of Yucaipa Boulevard
9. Oak Glen Road north of Yucaipa Boulevard
10. Oak Glen Road south of Yucaipa Boulevard.

Exhibit 3 shows the locations of the study intersections and roadway segments.

The study intersections are analyzed for the following study scenarios:

- Existing Traffic Conditions (Existing);
- Opening Year Traffic Conditions (OY);
- Opening Year With Project Traffic Conditions (OYP).

Traffic operations are evaluated for the following time periods:

- Weekday AM Peak Hour occurring between 7:00 AM to 9:00 AM; and
- Weekday PM Peak Hour occurring between 4:00 PM to 6:00 PM.

2.3 ANALYSIS METHODOLOGY

2.3.1 Intersection Analysis Methodology

Level of Service (LOS) is commonly used to describe the quality of flow on roadways and at intersections using a range of LOS from LOS A (free flow with little congestion) to LOS F (severely congested conditions). The definitions for LOS for interruption of traffic flow differ depending on the type of traffic control (traffic signal, unsignalized intersection with side street stops, unsignalized intersection with all-way stops). The *Highway Capacity Manual (HCM) 7th Edition* (Transportation Research Board, 2022) methodology expresses the LOS of an intersection in terms of delay time for the intersection approaches. The HCM methodology utilizes different procedures for different types of intersection control.

The City Guidelines recommends signalized intersection operations to be analyzed utilizing the HCM 7th Edition methodology. Intersection LOS for signalized intersections is based on the intersections average control delay for all movements at the intersection during the peak hour. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The procedure for stop-control analysis determines the average total delay, expressed in seconds of delay per vehicle, for left turns from the major street and from the stop-controlled minor street traffic stream. Delay values are calculated based on the relationship between traffic on the major street and the availability of acceptable "gaps" in this stream through which conflicting traffic movements can be made.

Table 1 describes the general characteristics of traffic flow and accompanying delay ranges at signalized intersections.

Table 1:
HCM – LOS & Delay Ranges – Signalized Intersections

Level of Service	Description	Delay (in seconds)
A	Very favorable progression; most vehicles arrive during green signal and do not stop. Short cycle lengths.	0 – 10.00
B	Good progression, short cycle lengths. More vehicles stop than for LOS A.	10.01 – 20.00
C	Fair progression; longer cycle lengths. Individual cycle failures may begin to appear. The number of vehicles stopping is significant, though many vehicles still pass through without stopping.	20.01 – 35.00
D	Progression less favorable, longer cycle length and high flow/capacity ratio. The proportion of vehicles that pass through without stopping diminishes. Individual cycle failures are obvious.	35.01 – 55.00
E	Severe congestion with some long-standing queues on critical approaches. Poor progression, long cycle lengths and high flow/capacity ratio. Individual cycle failures are frequent.	55.01 – 80.00
F	Very poor progression, long cycle lengths and many individual cycle failures. Arrival flow rates exceed capacity of intersection.	> 80.01

Source: *Transportation Research Board Highway Capacity Manual, 7th Edition* (Washington D.C., 2022).

Collected peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. It is a common practice in LOS analysis to conservatively use a peak 15-minute flow rate applied to the entire hour to derive flow rates in vehicles per hour that are used in the LOS analysis. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume. PHF = [Hourly Volume]/ [4 * Peak 15-Minute Volume]. The use of a 15-minute PHF produces a more detailed and conservative analysis compared to analyzing vehicles per hour. Existing PHFs, obtained from the *Existing* traffic counts have been used for all analysis scenarios in this study.

The City Guidelines also recommends unsignalized intersection operations to be analyzed utilizing the HCM 7th Edition methodology. Intersection operation for unsignalized intersections is based on the weighted average control delay expressed in seconds per vehicle.

At a two-way or side-street stop-controlled intersection, LOS is calculated for each stop-controlled minor street movement, for the left-turn movement(s) from the major street, and for the intersection as a whole. For approaches consisting of a single lane, the delay is calculated as the average of all movements in that lane. For all-way stop-controlled intersection, LOS is computed for the intersection as a whole. **Table 2** describes the general characteristics of traffic flow and accompanying delay ranges at unsignalized intersections.

Table 2:
HCM – LOS & Delay Ranges – Unsignalized Intersections

Level of Service	Description	Delay (in seconds)
A	Very favorable progression; most vehicles arrive during green signal and do not stop. Short cycle lengths.	0 – 10.00
B	Good progression, short cycle lengths. More vehicles stop than for LOS A.	10.01 – 20.00
C	Fair progression; longer cycle lengths. Individual cycle failures may begin to appear. The number of vehicles stopping is significant, though many vehicles still pass through without stopping.	20.01 – 35.00
D	Progression less favorable, longer cycle length and high flow/capacity ratio. The proportion of vehicles that pass through without stopping diminishes. Individual cycle failures are obvious.	35.01 – 55.00
E	Severe congestion with some long-standing queues on critical approaches. Poor progression, long cycle lengths and high flow/capacity ratio. Individual cycle failures are frequent.	55.01 – 80.00
F	Very poor progression, long cycle lengths and many individual cycle failures. Arrival flow rates exceed capacity of intersection.	> 80.01

Source: *Transportation Research Board Highway Capacity Manual, 7th Edition* (Washington D.C., 2022).

This analysis utilizes *PTV Vistro*, Version 2022 analysis software for all signalized and unsignalized intersections. Vistro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis specified in Chapter 16 of the HCM. The level of service and capacity analysis performed within Vistro takes the optimization and coordination of signalized intersections within a network into consideration.

2.3.2 Roadway Segment Analysis Methodology

Roadway segment analysis level of service is estimated by comparing the two-way 24-hour traffic volumes on the roadway segment to the daily roadway capacity, based on its functional classification. Because neither the City General Plan nor the County of San Bernardino General Plan provide roadway capacities, capacities from the neighboring County of Riverside's *Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled* (Riverside County Guidelines) (December 2020) have been used. **Table 3** presents the daily roadway capacities for each roadway classification.

Table 3:
LOS & Capacity Thresholds – Roadway Segments

Street Classification	Number of Lanes	LOS C ADT[1]	LOS D ADT[1]	LOS E ADT[1]
Collector	2	10,400	11,700	13,000
Secondary	4	20,700	23,300	25,900
Major	4	27,300	30,700	34,100
Arterial	2	14,400	16,200	18,000
Arterial	4	28,700	32,300	35,900
Mountain Arterial	2	12,900	14,500	16,100
Mountain Arterial	3	16,700	18,800	20,900
Mountain Arterial	4	29,800	33,500	37,200
Urban Arterial	4	28,700	32,300	35,900
Urban Arterial	6	43,100	48,500	53,900
Urban Arterial	8	57,400	64,600	71,800
Expressway	4	32,700	36,800	40,900
Expressway	6	49,000	55,200	61,300
Expressway	8	65,400	73,500	81,700
Freeway	4	61,200	68,900	76,500
Freeway	6	94,000	105,800	117,500
Freeway	8	128,400	144,500	160,500
Freeway	10	160,500	180,500	200,600

Source: County of Riverside Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled (December 2020).
1: ADT = Average Daily Traffic

2.4 PERFORMANCE CRITERIA

In order to best promote the safe and efficient movement of vehicular traffic, the City General Plan aims to maintain a minimum of LOS “C” on all intersections, signalized and unsignalized, and roadway segments.

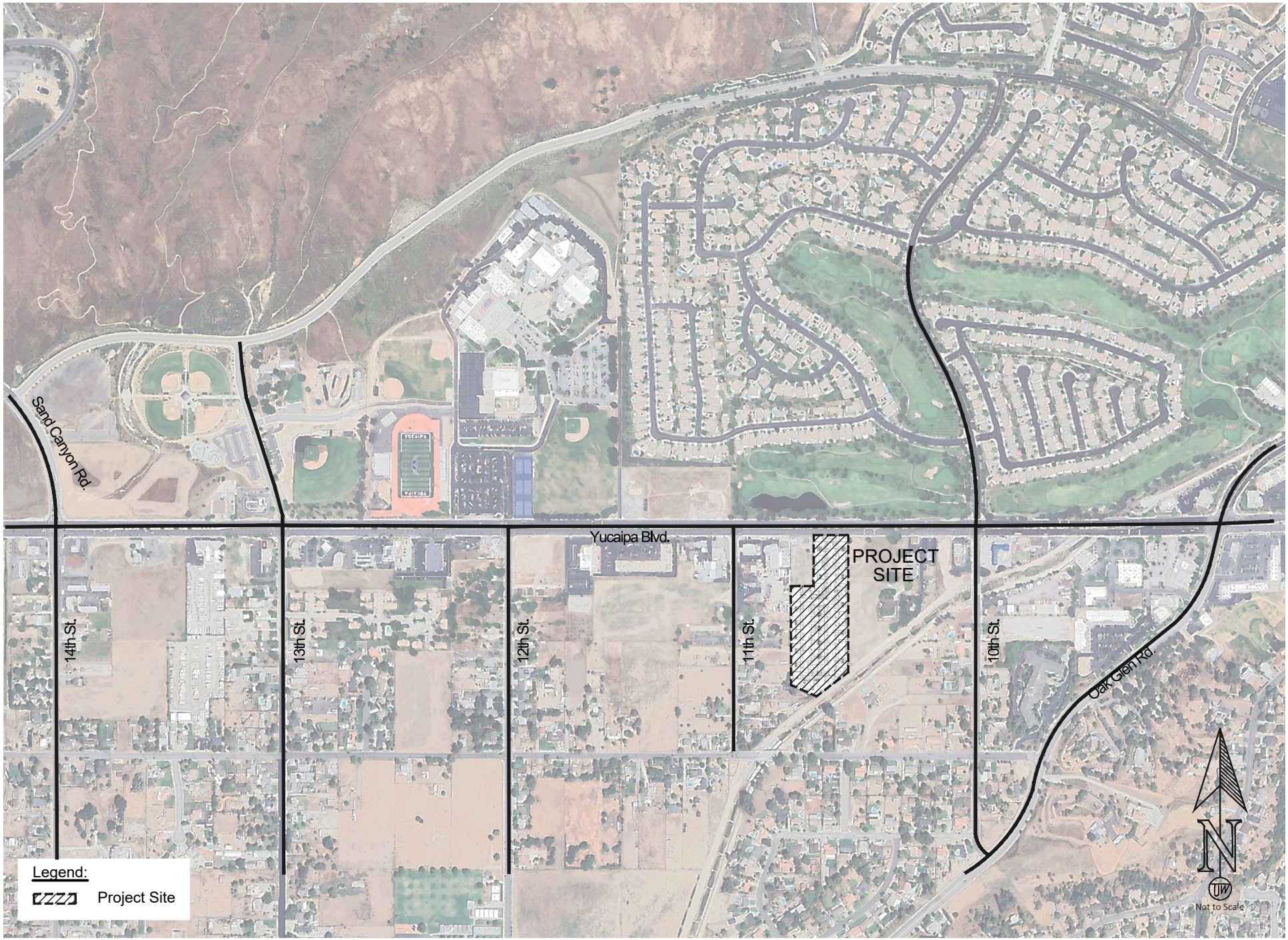


Exhibit 1: Project Location

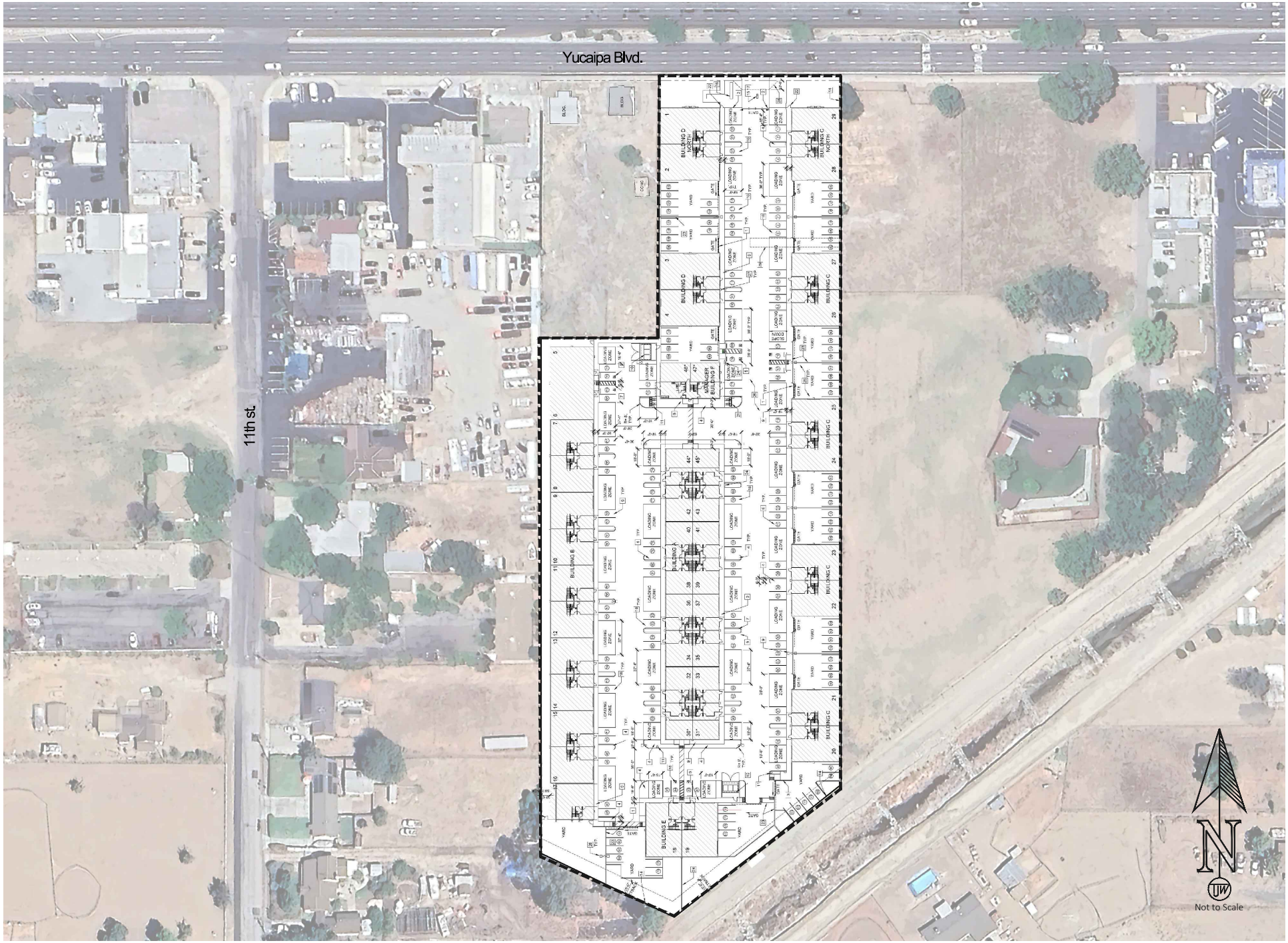


Exhibit 2: Proposed Project Site Plan

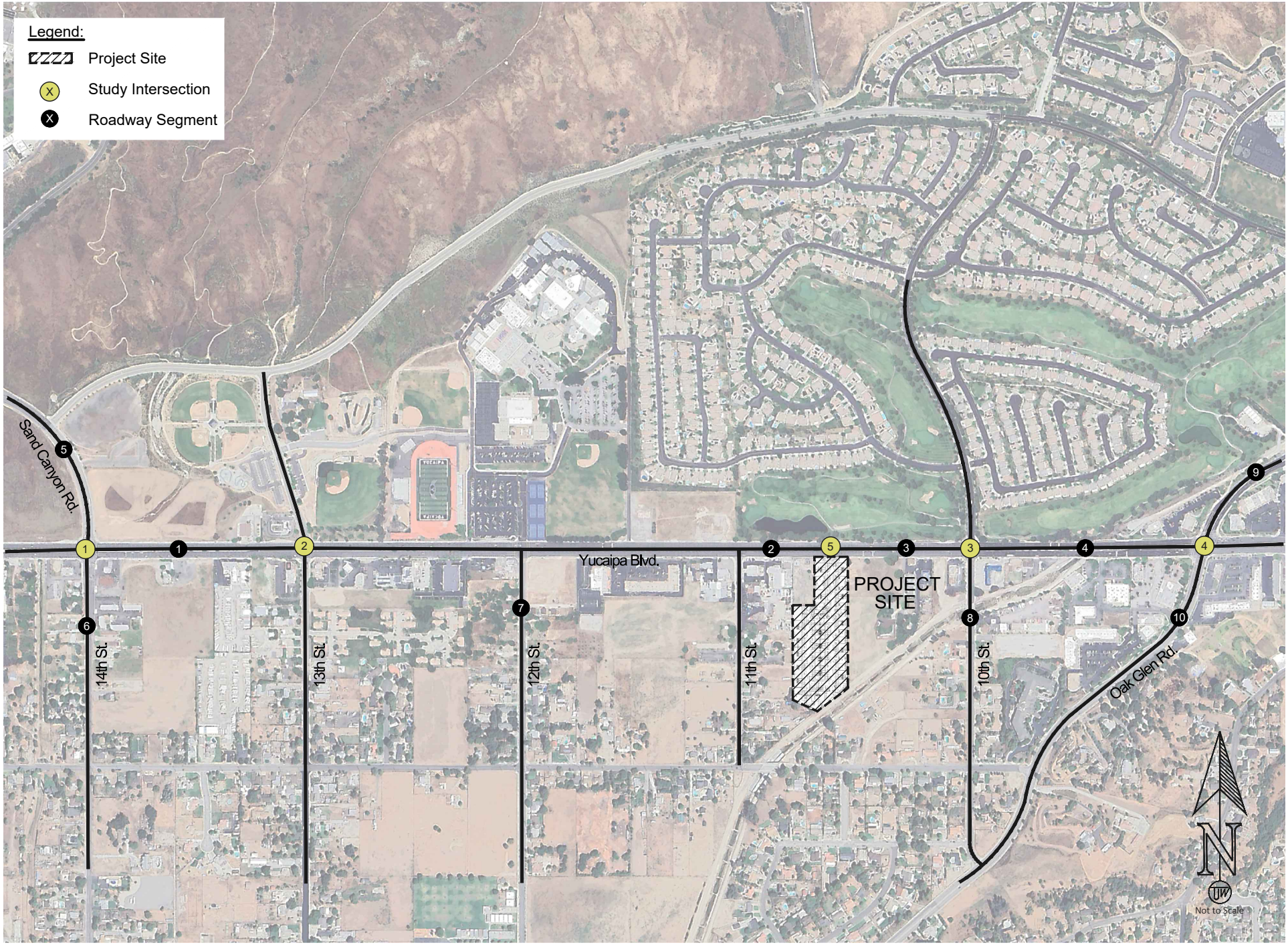


Exhibit 3: Project Study Area

3.0 EXISTING CONDITIONS

3.1 EXISTING CIRCULATION NETWORK/STUDY AREA CONDITIONS

The City General Plan classifies its streets and highways by their function. The City General Plan description of the roadway classifications can be found in **Appendix B**. The characteristics of the roadways in the vicinity of the proposed project site are described in **Table 4.**

Table 4:
Roadway Characteristics within Study Area

Roadway	Classification[1]	Direction	Existing Travel Lanes	Median Type[2]	Speed Limit[3]	On-Street Parking
Yucaipa Boulevard	Urban Arterial Highway	East-West	6	RM	40	No
Sand Canyon Road	Major Highway	North-South	4	TWLTL	50	No
14th Street	Secondary Highway (Arterial)	North-South	2	NM	35	Yes
12th Street	Controlled/Limited Access Collector	North-South	2	NM	25	Yes
10th Street	Residential Collector	North-South	2	NM	35	No
Oak Glen Road	Secondary Highway (Arterial)	Northeast-Southwest	4	NM-RM	40-45	No

1: Sources: County of Riverside Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled (December 2020).
2: TWLTL = Two-Way Left-Turn Lane, RM= Raised Median, NM = No Median.
3: Unit: Miles Per Hour.

Exhibit 4 shows the *Existing* intersection controls and roadway geometry of the study area.

3.2 PEDESTRIAN AND BICYCLE FACILITIES

The City General Plan identifies the bicycle facilities, by classification, throughout the City. Within the project study area, the City General Plan identifies Class II bicycle lanes on Yucaipa Boulevard, Sand Canyon Road-14th Street, and Oak Glen Road. A Class III bicycle facility is identified on 12th Street. See **Appendix B** for the City General Plan map of the bikeway network.

For pedestrians, paved sidewalks are located along all roadways within the study area with the exception of Sand Canyon Road and 14th Street.

3.3 EXISTING PUBLIC TRANSIT SERVICES

The City of Yucaipa is served by Omnitrans, which provides bus service throughout the County of San Bernardino. The proposed project is located within one-half mile of four (4) stops along Omnitrans Route 19 which travels between the Yucaipa Transit Center and the Fontana Transit Center. The stops include the

Yucaipa Boulevard intersections with 12th Street, 11th Street, 10th Street, and Oak Glen Road. See **Appendix B** for the Route 19 map and schedule.

3.4 EXISTING TRAFFIC VOLUMES

To determine the *Existing* operation of the study intersections and roadway segments, AM and PM peak period traffic volumes were collected on Tuesday, October 8, 2024. Detailed traffic count data is provided in **Appendix C**. The *Existing* AM peak hour volumes at each study intersection are shown in **Exhibit 5Error! Reference source not found.**, while the *Existing* PM peak hour volumes at each study intersection are shown in **Exhibit 6**.

3.5 EXISTING CONDITIONS INTERSECTION LEVEL OF SERVICE ANALYSIS

The AM and PM peak hour intersection analysis of the *Existing* traffic conditions are shown in **Table 5.** Calculations are based on the current geometrics at each study area intersection as shown in **Exhibit 4.** HCM analysis reports are provided in **Appendix D**.

Table 5:
Intersection Analysis – Existing Conditions

Intersection			Control Type	Target LOS	Peak Hour	Existing Conditions	
						Delay[1]	LOS
1	Sand Canyon Road - 14th Street	Yucaipa Boulevard	Signal	C	AM	28.3	C
					PM	26.5	C
2	13th Street	Yucaipa Boulevard	Signal	C	AM	14.6	B
					PM	8.2	A
3	10th Street	Yucaipa Boulevard	Signal	C	AM	11.2	B
					PM	9.5	A
4	Oak Glen Road	Yucaipa Boulevard	Signal	C	AM	30.3	C
					PM	28.2	C

1: Delay shown in seconds per vehicle. Per the Highway Capacity Manual 7th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections.

As shown in **Table 5**, the study intersections under *Existing* traffic conditions are currently operating at an acceptable LOS during the AM and PM peak hours.

3.6 EXISTING CONDITIONS ROADWAY SEGMENT ANALYSIS

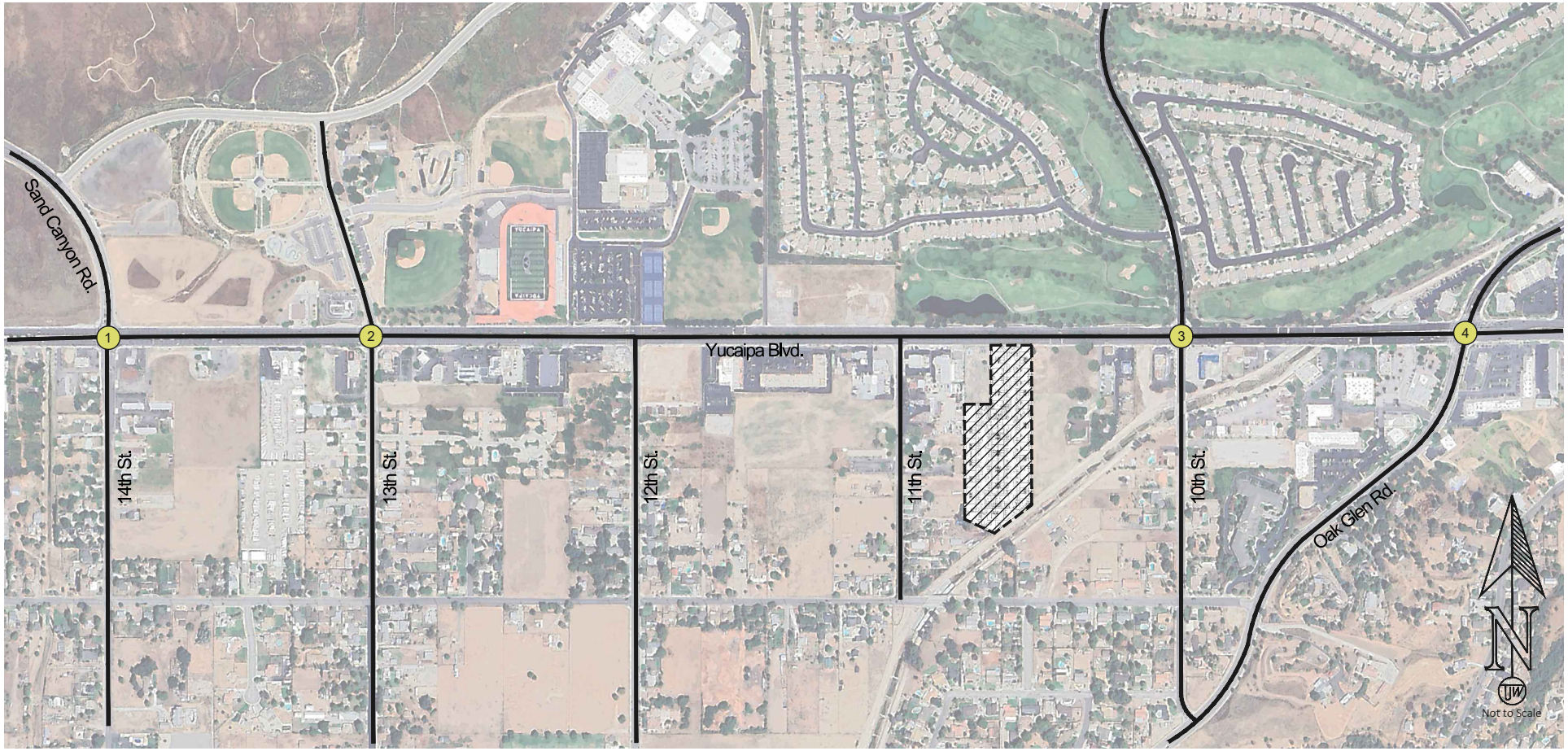
The roadway level of service analysis was conducted based on the roadway capacities presented previously in this report. The results of the roadway analysis for *Existing* traffic conditions are shown in **Table 6**.

Table 6:
Roadway Segments – Existing Conditions

Roadway		Segment	Classification	Lanes	LOS C Capacity[1]	Existing Conditions	
						ADT[2]	LOS
1	Yucaipa Boulevard	East of Sand Canyon Road-14th Street	Urban Arterial Highway	6	43,100	26,713	≤C
2	Yucaipa Boulevard	East of 11th Street	Urban Arterial Highway	6	43,100	28,941	≤C
3	Yucaipa Boulevard	West of 10th Street	Urban Arterial Highway	6	43,100	28,900	≤C
4	Yucaipa Boulevard	East of 10th Street	Urban Arterial Highway	6	43,100	28,441	≤C
5	Sand Canyon Road	North of Yucaipa Boulevard	Major Highway	4	27,300	10,843	≤C
6	14th Street	South of Yucaipa Boulevard	Secondary Highway	2	10,350	6,896	≤C
7	12th Street	South of Yucaipa Boulevard	Collector	2	10,400	1,748	≤C
8	10th Street	South of Yucaipa Boulevard	Collector	2	10,400	1,733	≤C
9	Oak Glen Road	North of Yucaipa Boulevard	Major Highway	4	27,300	16,930	≤C
10	Oak Glen Road	South of Yucaipa Boulevard	Major Highway	4	27,300	15,553	≤C

1: Source: County of Riverside Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled (December 2020).
2: ADT = Average Daily Traffic.

Review of **Table 6** shows that the study roadway segments are currently operating at acceptable levels of service on a daily basis.



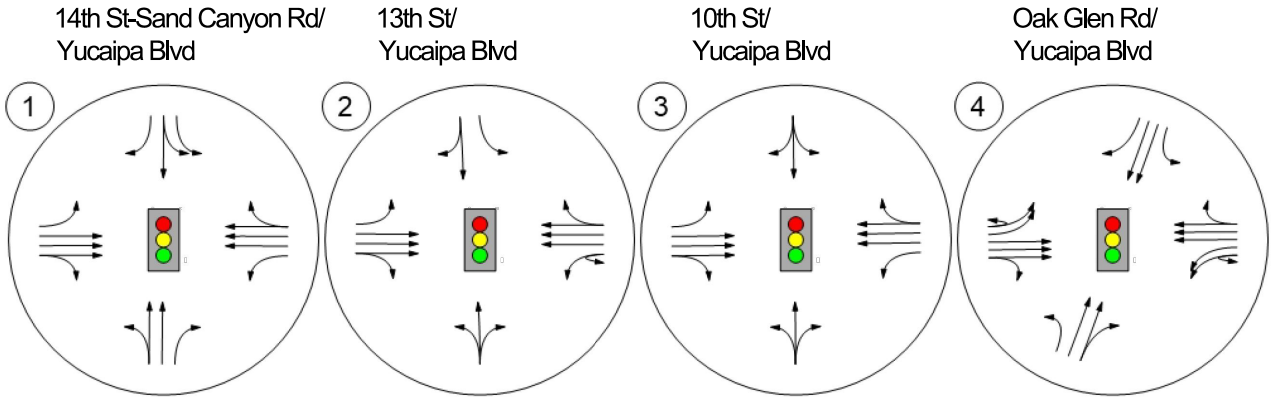


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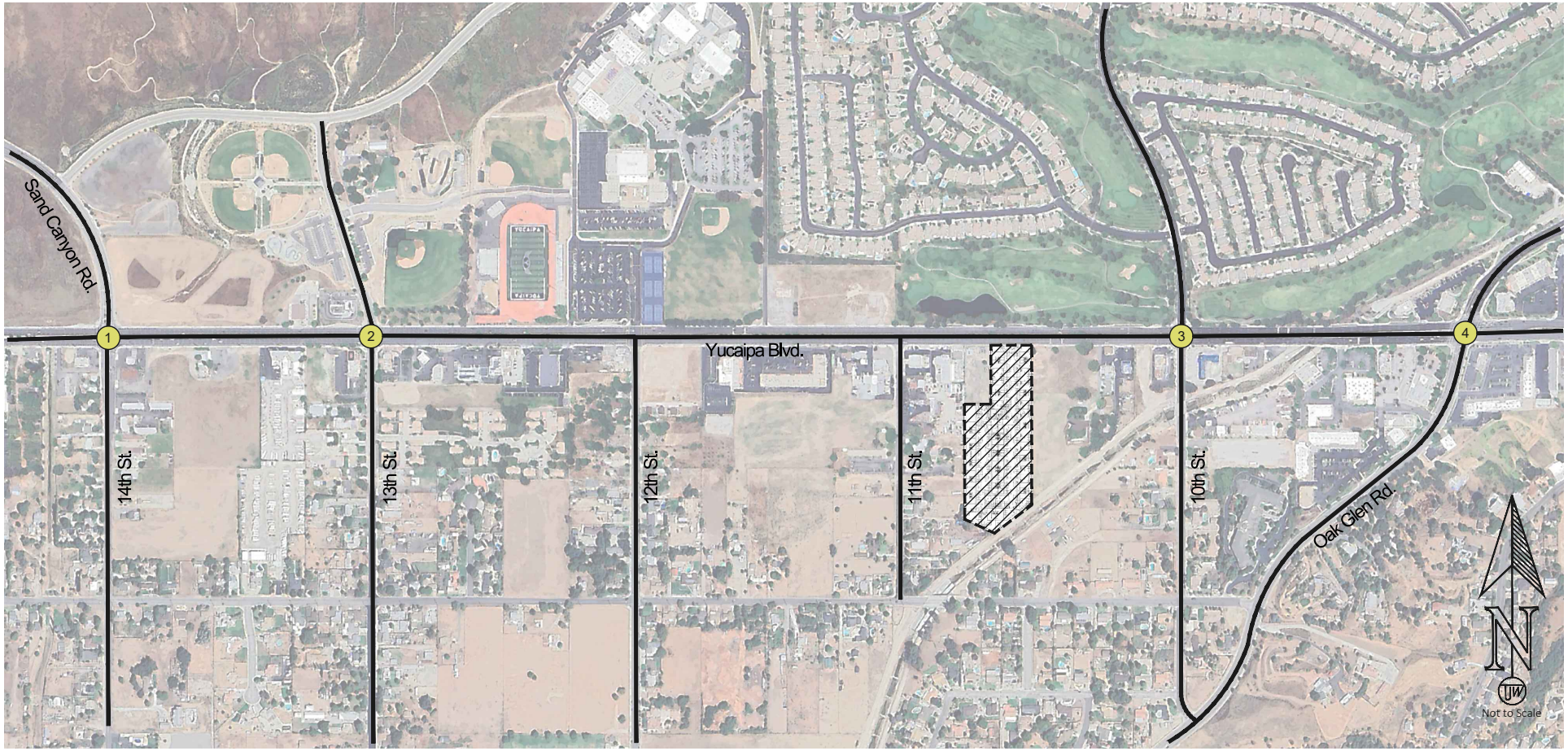
Exhibit 4: Lane Geometry and Intersection Controls



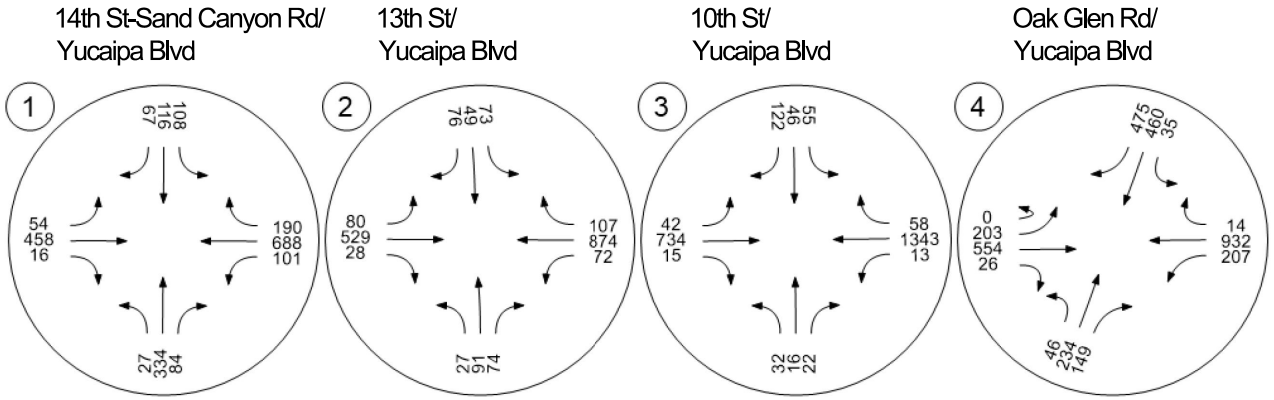


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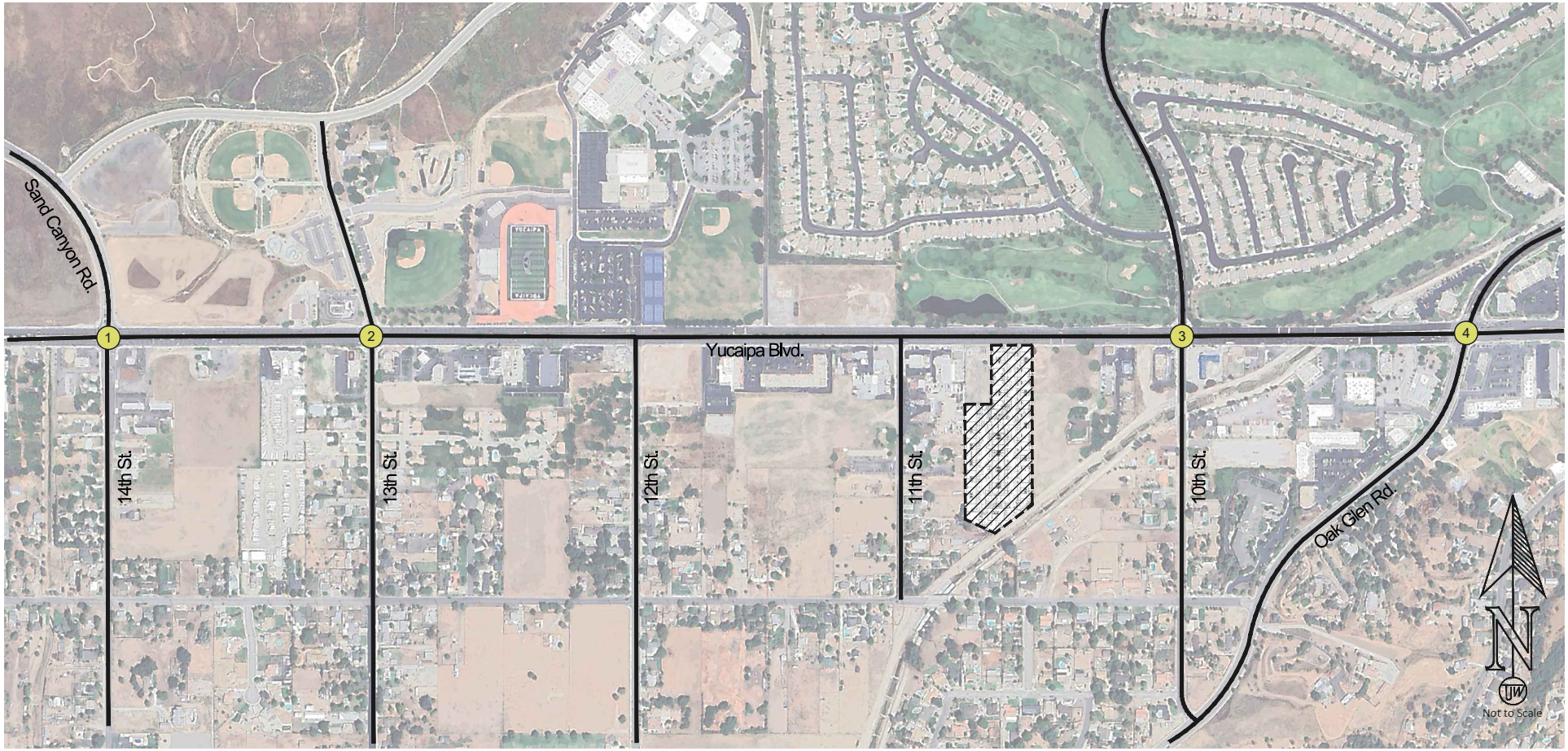
Exhibit 5: Existing AM Peak Hour Volumes



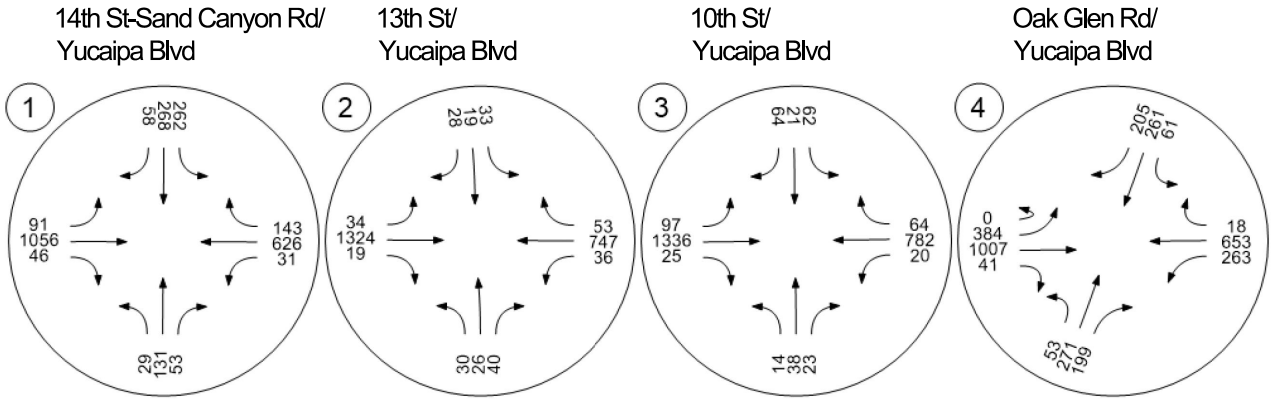


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Exhibit 6: Existing PM Peak Hour Volumes

4.0 PROPOSED PROJECT

4.1 PROJECT DESCRIPTION

The proposed project is comprised of 96,060 square feet of commercial use and six (6) apartment units. Site access is planned via one right-in/right-out driveway on Yucaipa Boulevard. The proposed project is anticipated to be completed and generating trips by 2026. A growth rate of 1.5% was used to account for the 2026 volumes.

Exhibit 2 previously showed the proposed project site plan.

4.2 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic, both inbound and outbound, produced by a development. Determining trip generation for a proposed project is based on projecting the amount of traffic that the specific land uses being proposed will produce. Industry standard *Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021)* trip generation rates were used to determine trip generation of for the proposed project land uses.

Table 7 summarizes the projected AM peak hour, PM peak hour and daily trip generation of the proposed project. The proposed project is projected to generate 1,235 daily trips which includes 132 AM peak hour trips and 120 PM peak hour trips.

Table 7:
Proposed Project Trip Generation

Proposed Land Use[1]	ITE Code	Qty	Unit[2]	Daily		AM Peak Hour					PM Peak Hour				
				Rate	Volume	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
								In	Out	Total			In	Out	Total
Business Park	770	96.0	TSF	12.44	1,235	1.35	85:15	111	19	130	1.22	26:74	30	87	117
Multifamily Housing (Low-Rise)	220	6	DU	6.74	6	0.4	24:76	0	2	2	0.51	63:37	2	1	3

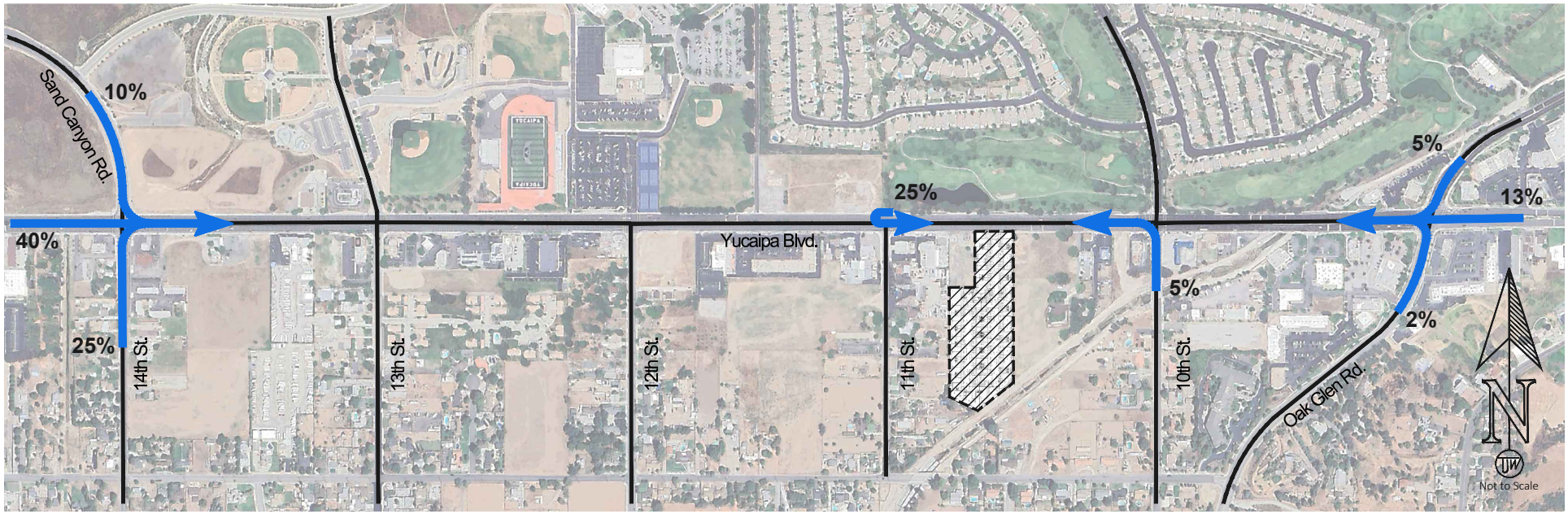
Results	Daily Volume	AM Peak Hour	In	Out	Total	PM Peak Hour	In	Out	Total
Net Total	**1,235**		**111**	**21**	**132**		**32**	**88**	**120**

1: Trip generation rates are from the ITE Trip Generation Manual (11th Edition, 2021).
2: TSF = Thousand Square Feet; DU = Dwelling Unit.

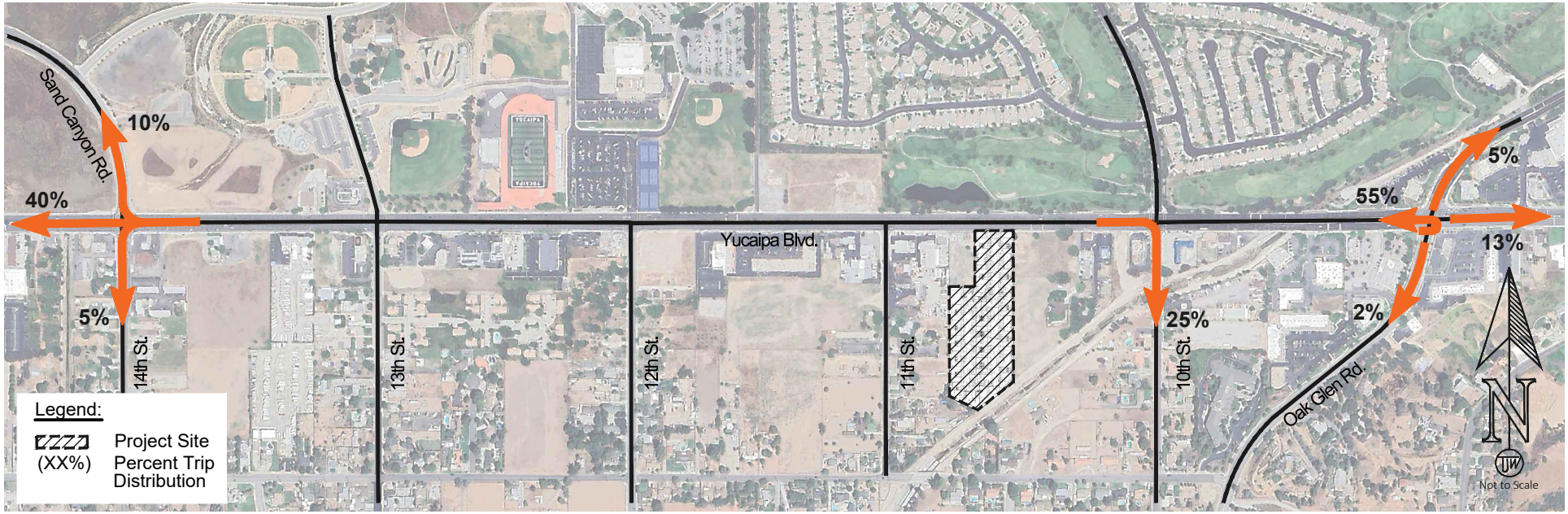
4.3 PROJECT TRIP DISTRIBUTION

Projecting trip distribution involves the process of identifying probable destinations and traffic routes that will be utilized by the proposed project's traffic. The potential interaction between the proposed land use and surrounding regional access routes are considered to identify the probable routes onto which project traffic would distribute. The projected trip distribution for the proposed project is based on anticipated travel patterns to and from the project site. **Exhibit 7** shows the project proposed trip distribution.

Trip Distribution - In



Trip Distribution - Out



5.0 OPENING YEAR (OY) TRAFFIC CONDITIONS

The *Opening Year (OY)* traffic conditions analysis is intended to identify traffic conditions in the project's anticipated opening year, 2026, plus traffic generated from cumulative projects.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for the *OY* traffic conditions scenario are consistent with those previously shown in **Exhibit 4**.

5.2 CUMULATIVE PROJECTS

Other reasonably foreseeable development projects which are either approved or are currently being processed in the study area are also included as part of an *OY* analysis scenario. A list of cumulative projects was developed for this analysis through consultation with City of Yucaipa staff. **Exhibit 8** displays a map of the cumulative project locations. A summary of the cumulative projects land uses is shown in **Table 8**.

Table 8:
Cumulative Project Trip Generation

Project		Land Use[1]	ITE Code	Qty	Unit[2]	Daily		AM Peak Hour					PM Peak Hour				
						Rate	Volume	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
										In	Out	Total			In	Out	Total
1	U-Stor-It	Mini-Warehouse	151	146.7	TSF	1.45	213	0.09	59:41	8	5	13	0.15	47:53	10	12	22
2	Raising Cane's	Fast Food Without Drive-Through	933	2.9	TSF	450.49	1,306	43.18	58:42	73	52	125	33.21	50:50	48	48	96
3	Cottages at 14th	Multifamily Housing (Low-Rise)	220	144	DU	6.74	971	0.4	24:76	14	44	58	0.51	63:37	46	27	73
4	Starling Heights	Multifamily Housing (Low-Rise)	220	127	DU	6.74	856	0.4	24:76	12	39	51	0.51	63:37	41	24	65

Results	Daily Volume	AM Peak Hour	In	Out	Total	PM Peak Hour	In	Out	Total
Net Total	**3,346**		**107**	**140**	**247**		**145**	**111**	**256**

1: Trip generation rates are from the ITE Trip Generation Manual (11th Edition, 2021).
2: TSF = Thousand Square Feet; DU = Dwelling Units.

5.3 OY TRAFFIC VOLUMES

OY traffic volumes are *Existing* volumes projected to the project's anticipated opening year, 2026. An annual growth rate of 1.5% is applied to the *Existing* volumes for a two (2) year period. Project volumes are not added for this scenario. **Exhibit 9** shows *OY* AM peak hour volumes at the study intersections. **Exhibit 10** shows *OY* PM peak hour volumes at the study intersections.

OY Volumes = (Existing (2024) Counts * 1.015^2) + Cumulative Projects

5.4 OY INTERSECTION LOS ANALYSIS

The AM and PM peak hour intersection analysis of the *OY* traffic conditions are shown in **Table 9**. Calculations are based on the current geometrics at the study area intersections.

Table 9:
Intersection Analysis – OY Conditions

Intersection			Control Type	Target LOS	Peak Hour	OY Conditions	
						Delay[1]	LOS
1	Sand Canyon Road - 14th Street	Yucaipa Boulevard	Signal	C	AM	28.6	C
					PM	27.0	C
2	13th Street	Yucaipa Boulevard	Signal	C	AM	14.8	B
					PM	8.4	A
3	10th Street	Yucaipa Boulevard	Signal	C	AM	11.5	B
					PM	9.7	A
4	Oak Glen Road	Yucaipa Boulevard	Signal	C	AM	30.8	C
					PM	28.8	C

1: Delay shown in seconds per vehicle. Per the Highway Capacity Manual 7th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections.

As shown in **Table 9**, the study intersections under *OY* traffic conditions are projected to continue to operate at an acceptable LOS during the AM and PM peak hours.

5.5 OY ROADWAY SEGMENT ANALYSIS

The roadway level of service analysis was conducted based on the roadway capacities presented previously in this report. The results of the roadway analysis for *OY* traffic conditions are shown in **Table 10**.

Table 10:
Roadway Segments – OY Conditions

	Roadway	Segment	Classification[1]	Lanes	LOS C Capacity[2]	OY Conditions	
						ADT[3]	LOS
1	Yucaipa Boulevard	East of Sand Canyon Road-14th Street	Urban Arterial Highway	6	43,100	27,648	≤C
2	Yucaipa Boulevard	East of 11th Street	Urban Arterial Highway	6	43,100	30,441	≤C
3	Yucaipa Boulevard	West of 10th Street	Urban Arterial Highway	6	43,100	30,427	≤C
4	Yucaipa Boulevard	East of 10th Street	Urban Arterial Highway	6	43,100	29,878	≤C
5	Sand Canyon Road	North of Yucaipa Boulevard	Major Highway	4	27,300	11,170	≤C
6	14th Street	South of Yucaipa Boulevard	Secondary Highway	2	10,350	7,232	≤C
7	12th Street	South of Yucaipa Boulevard	Collector	2	10,400	2,275	≤C
8	10th Street	South of Yucaipa Boulevard	Collector	2	10,400	1,861	≤C
9	Oak Glen Road	North of Yucaipa Boulevard	Major Highway	4	27,300	17,607	≤C
10	Oak Glen Road	South of Yucaipa Boulevard	Major Highway	4	27,300	16,053	≤C

1: Source: County of Riverside Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled (December 2020).
2: ADT = Average Daily Traffic.

Review of **Table 10** shows that the study roadway segments will continue operating at acceptable levels of service under *OY* traffic conditions.

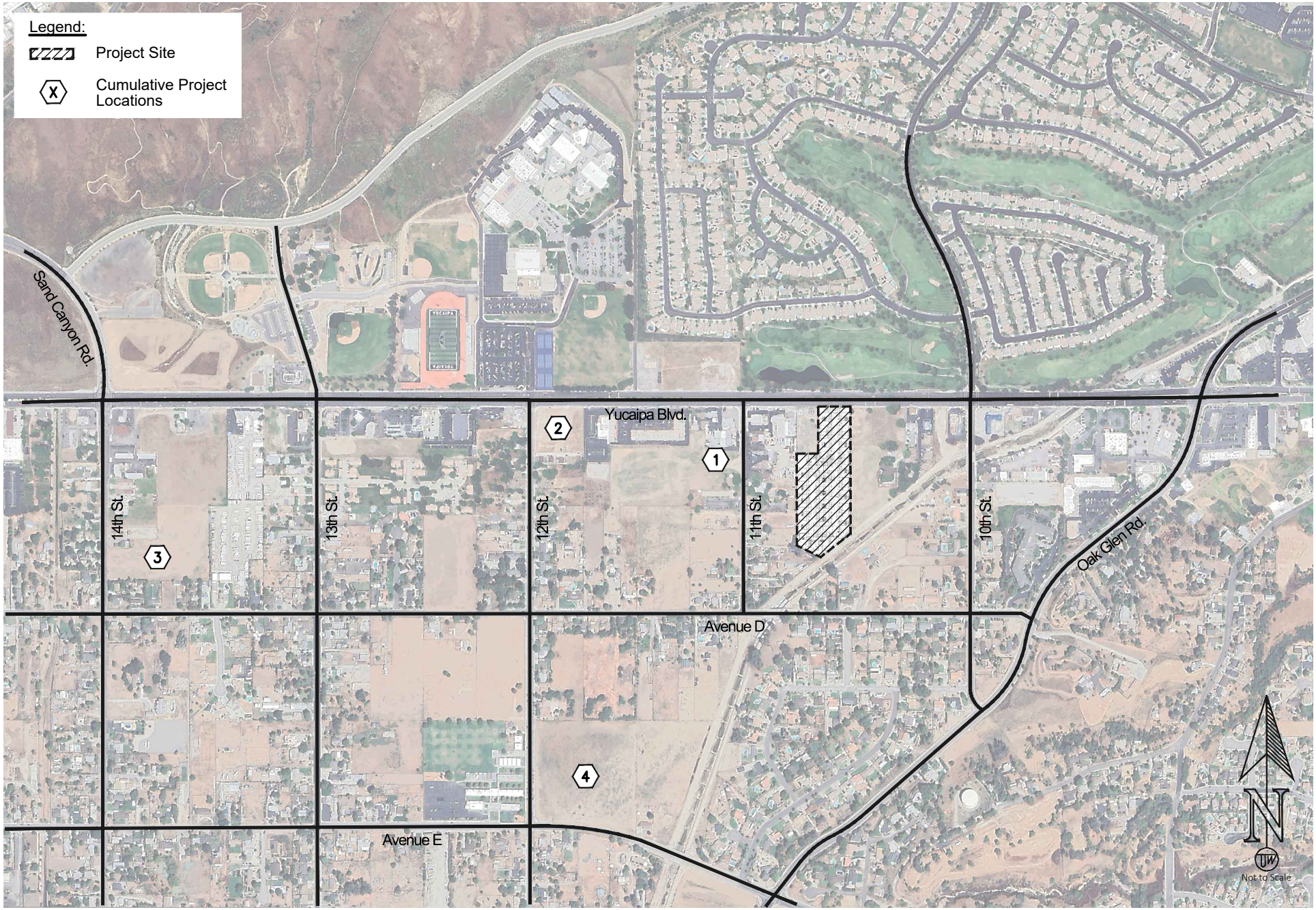
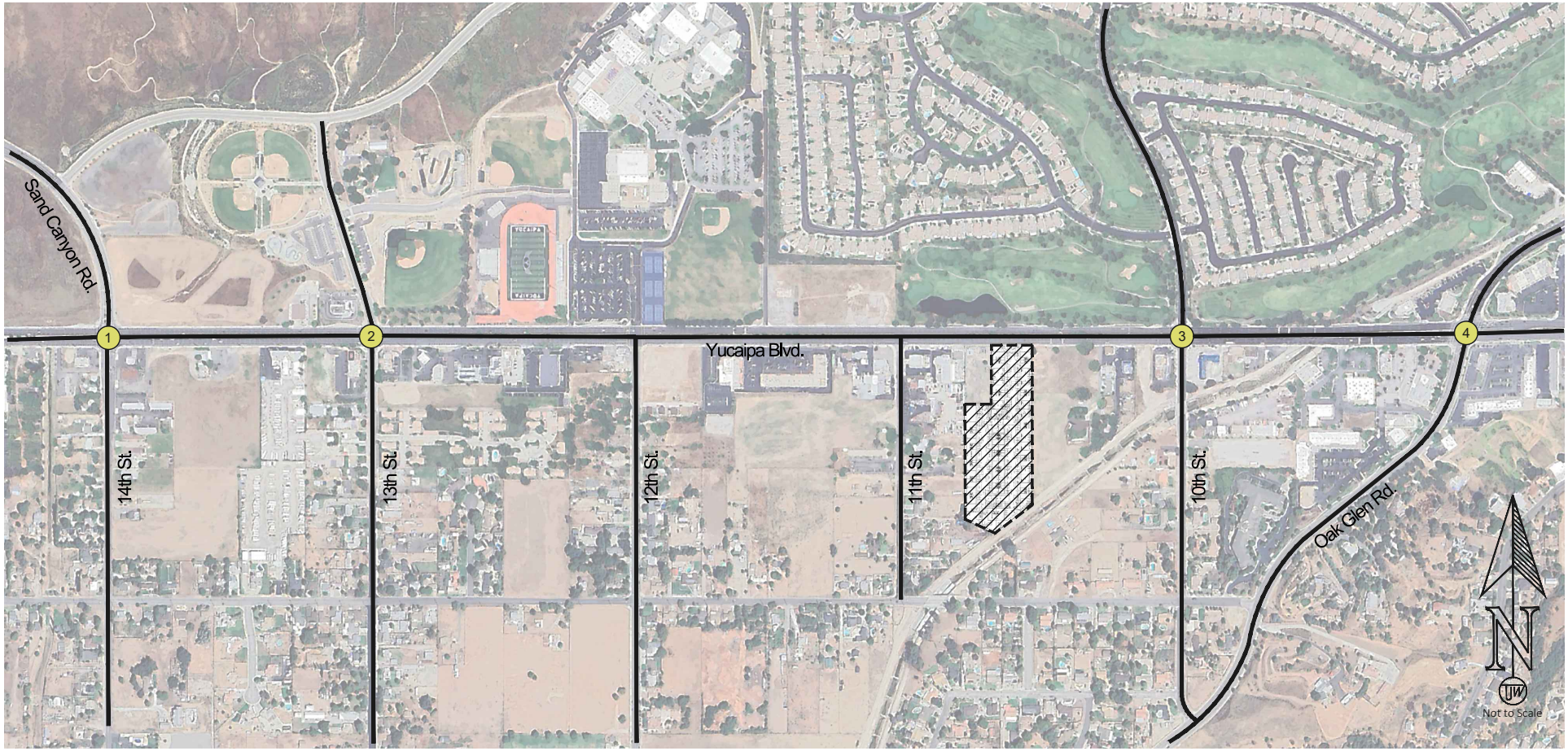
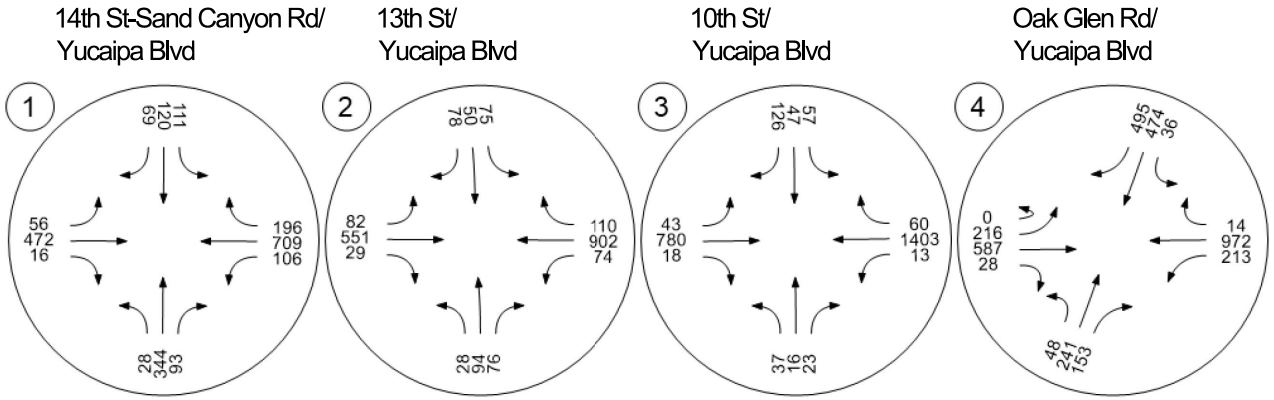
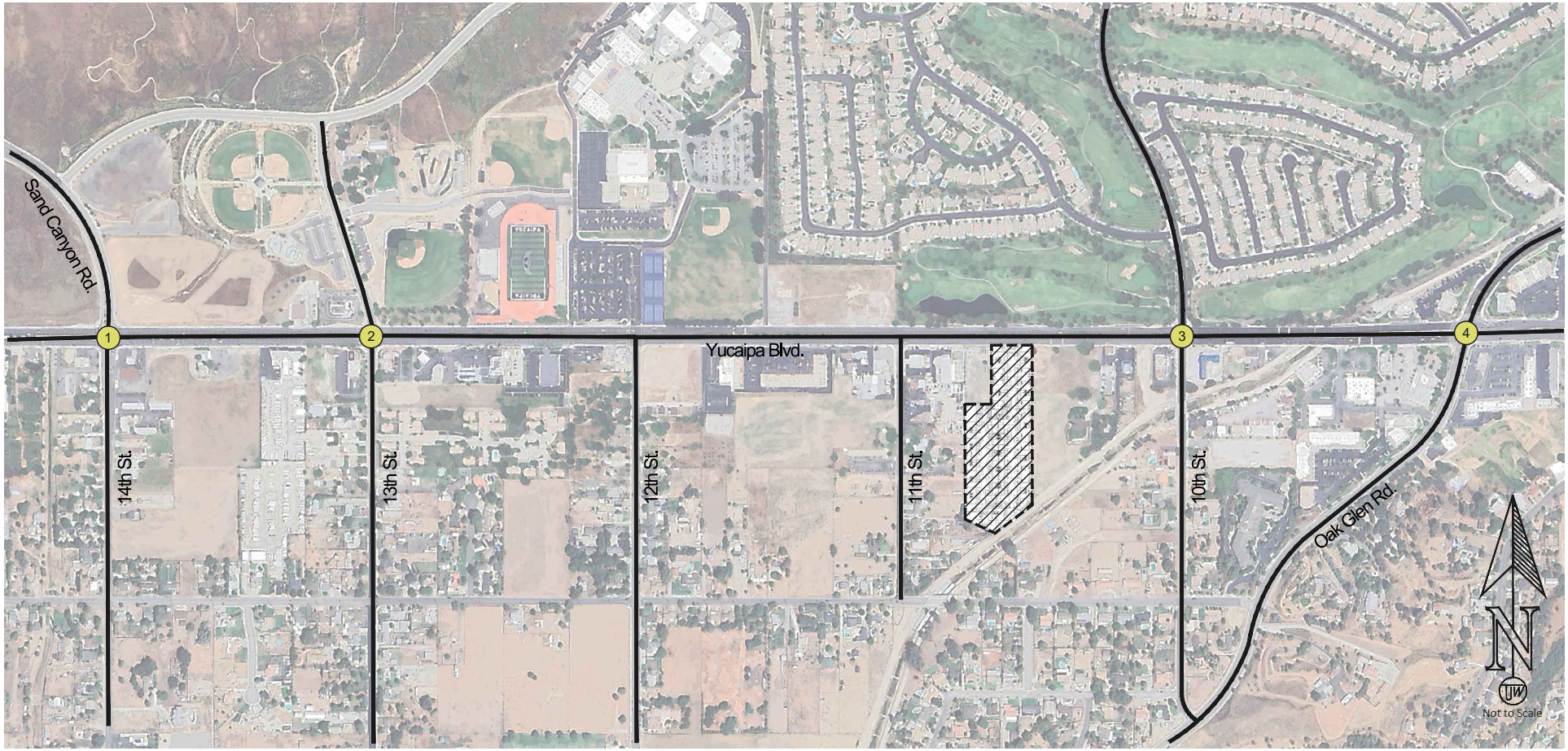


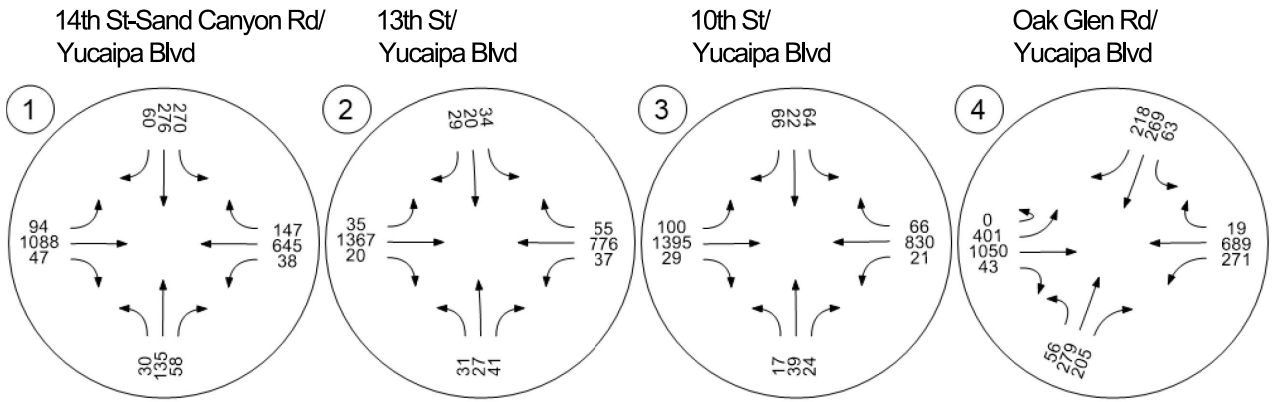
Exhibit 8: Cumulative Project Locations


Sand Canyon Rd.
Yucaipa Blvd.
14th St.
13th St.
12th St.
11th St.
10th St.
Oak Glen Rd.
1
2
3
4
Not to Scale


14th St-Sand Canyon Rd/
Yucaipa Blvd
1
111
120
69
56
472
16
196
709
106
28
344
93
13th St/
Yucaipa Blvd
2
78
75
50
82
551
29
110
902
74
28
94
76
10th St/
Yucaipa Blvd
3
126
47
57
43
780
18
60
1403
13
37
16
23
Oak Glen Rd/
Yucaipa Blvd
4
495
474
36
0
216
587
28
14
972
213
48
241
153

Not to Scale


Sand Canyon Rd.
Yucaipa Blvd.
14th St.
13th St.
12th St.
11th St.
10th St.
Oak Glen Rd.
1
2
3
4
N
Not to Scale


14th St-Sand Canyon Rd/
Yucaipa Blvd
1
94
1088
47
147
645
38
30
135
58
13th St/
Yucaipa Blvd
2
35
1367
20
55
776
37
31
27
41
10th St/
Yucaipa Blvd
3
100
1395
29
66
830
21
17
39
24
Oak Glen Rd/
Yucaipa Blvd
4
0
401
1050
43
19
689
271
56
279
205

Not to Scale

6.0 OPENING YEAR WITH PROJECT (OYP) TRAFFIC CONDITIONS

The *Opening Year With Project (OYP)* traffic conditions analysis is intended identify the impact of both the project and cumulative projects on traffic conditions in the project's anticipated opening year, 2026.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for the *OYP* traffic conditions scenario are consistent with those previously shown in **Exhibit 4**.

6.2 OYP TRAFFIC VOLUMES

OYP traffic volumes are *Existing* volumes projected to the project's anticipated opening year, 2026, plus both project and cumulative conditions. An annual growth rate of 1.5% is applied to the *Existing* volumes for a two (2) year period. Project and cumulative project volumes are then added. **Exhibit 11** shows *OYP* AM peak hour volumes at each study intersection. **Exhibit 12** shows *OYP* PM peak hour volumes at each study intersection.

OY Volumes = (Existing (2024) Counts * 1.015^2) + Proposed Project + Cumulative Projects

6.3 OYP INTERSECTION LEVEL OF SERVICE ANALYSIS

The AM and PM peak hour intersection analysis of the *OYP* traffic conditions is shown in **Table 11**. Calculations are based on the current geometrics at the study area intersections. HCM analysis reports are provided in **Appendix D.**

Table 11:
Intersection Analysis – OYP Conditions

Intersection			Control Type[1]	Target LOS	Peak Hour	OY Conditions		OYP Conditions	
						Delay[2]	LOS	Delay[2]	LOS
1	Sand Canyon Road - 14th Street	Yucaipa Boulevard	Signal	C	AM	28.6	C	28.8	C
					PM	27.0	C	26.9	C
2	13th Street	Yucaipa Boulevard	Signal	C	AM	14.8	B	14.6	B
					PM	8.4	A	8.3	A
3	10th Street	Yucaipa Boulevard	Signal	C	AM	11.5	B	11.6	B
					PM	9.7	A	9.7	A
4	Oak Glen Road	Yucaipa Boulevard	Signal	C	AM	30.8	C	32.0	C
					PM	28.8	C	30.7	C
5	Project Access	Yucaipa Boulevard	TWSC	C	AM	-	-	9.4	A
					PM	-	-	9.5	A

1: TWSC = Two-Way Stop-Control.

2: Delay shown in seconds per vehicle. Per the Highway Capacity Manual 7th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one or two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 11**, the study intersections under *OYP* traffic conditions are projected to continue to operate at an acceptable LOS during the AM and PM peak hours.

6.4 OYP ROADWAY SEGEMENT LEVEL OF SERVICE ANALYSIS

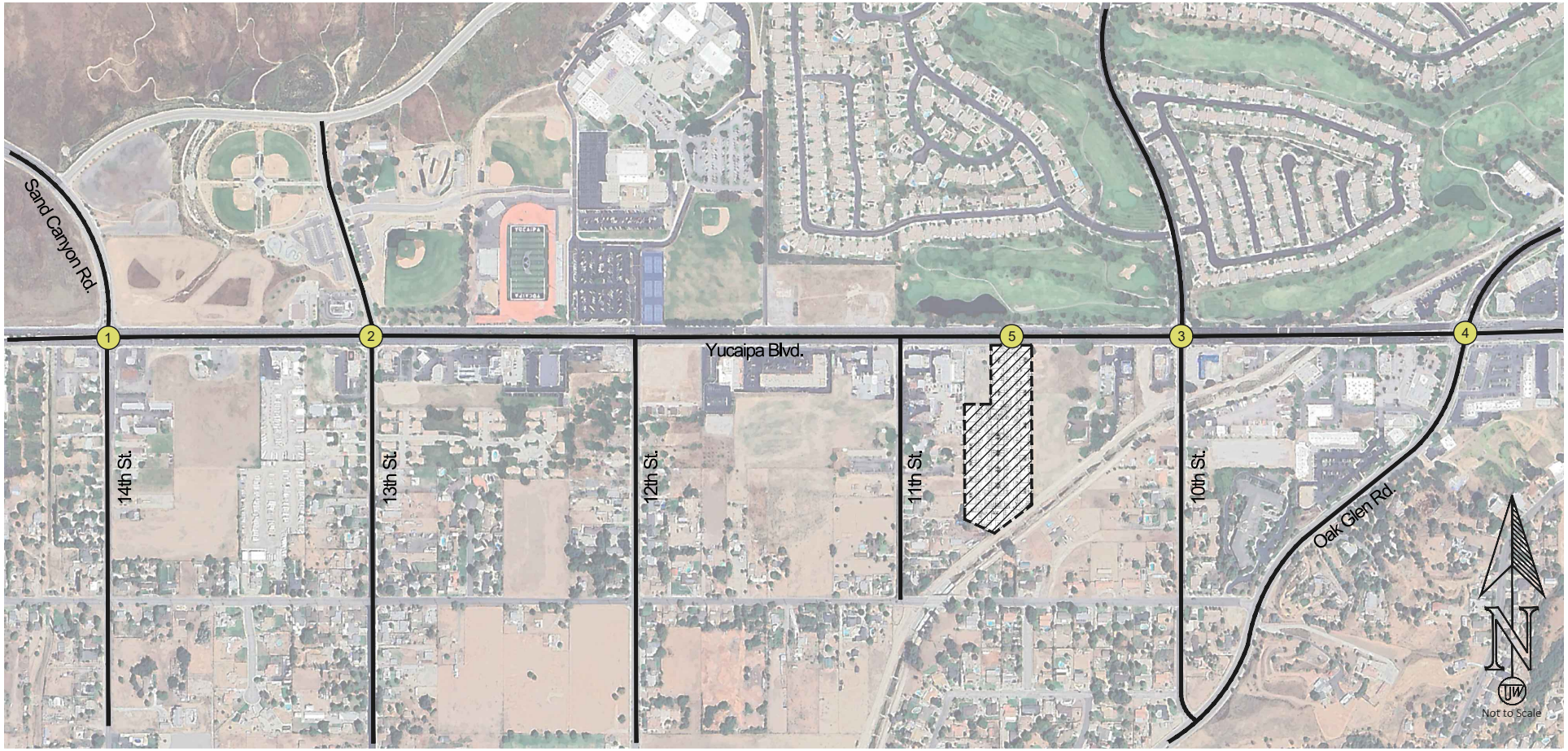
The roadway level of service analysis was conducted based on the roadway capacities presented previously in this report. The results of the roadway analysis for *OYP* traffic conditions are shown on **Table 12**.

Table 12:
Roadway Segment – OYP Conditions

Roadway		Segment	Classification[1]	Lanes	LOS C Capacity[2]	OY Conditions		OYP Conditions	
						ADT[3]	LOS	ADT[3]	LOS
1	Yucaipa Boulevard	East of Sand Canyon Road-14th Street	Urban Arterial Highway	6	43,100	27,648	≥C	28,696	≤C
2	Yucaipa Boulevard	East of 11th Street	Urban Arterial Highway	6	43,100	30,441	≥C	31,909	≤C
3	Yucaipa Boulevard	West of 10th Street	Urban Arterial Highway	6	43,100	30,427	≥C	31,894	≤C
4	Yucaipa Boulevard	East of 10th Street	Urban Arterial Highway	6	43,100	29,878	≥C	31,140	≤C
5	Sand Canyon Road	North of Yucaipa Boulevard	Major Highway	4	27,300	11,170	≥C	11,334	≤C
6	14th Street	South of Yucaipa Boulevard	Secondary Highway	2	10,350	7,232	≥C	7,477	≤C
7	12th Street	South of Yucaipa Boulevard	Collector	2	10,400	2,275	≥C	2,275	≤C
8	10th Street	South of Yucaipa Boulevard	Collector	2	10,400	1,861	≥C	2,106	≤C
9	Oak Glen Road	North of Yucaipa Boulevard	Major Highway	4	27,300	17,607	≥C	17,689	≤C
10	Oak Glen Road	South of Yucaipa Boulevard	Major Highway	4	27,300	16,053	≥C	16,085	≤C

1: Source: County of Riverside Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled (December 2020).
2: ADT = Average Daily Traffic.

Review of **Table 12** shows that the study roadway segments will continue operating at acceptable levels of service under daily *OYP* traffic conditions.



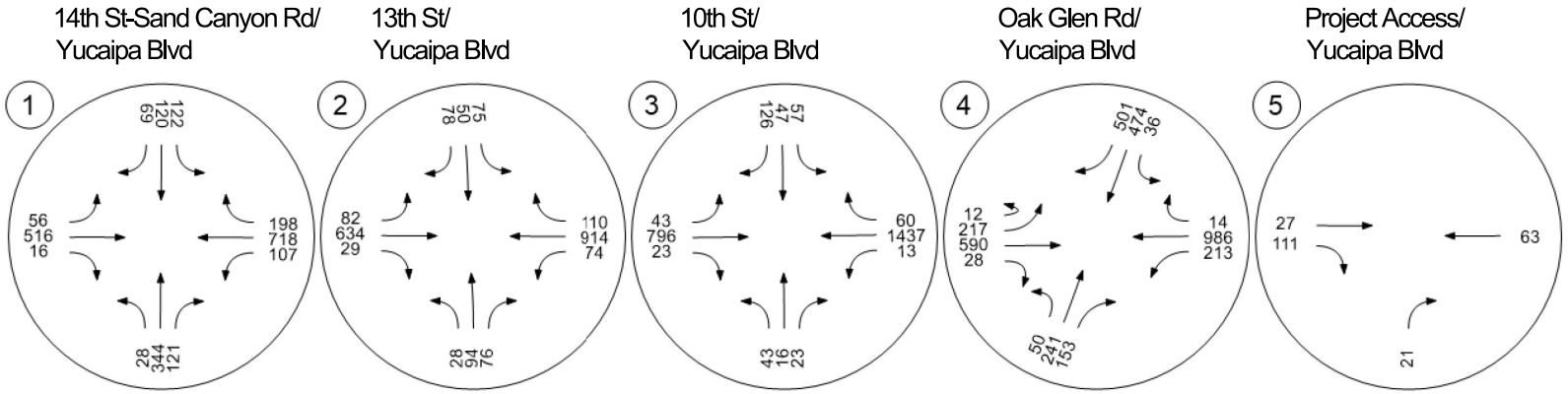


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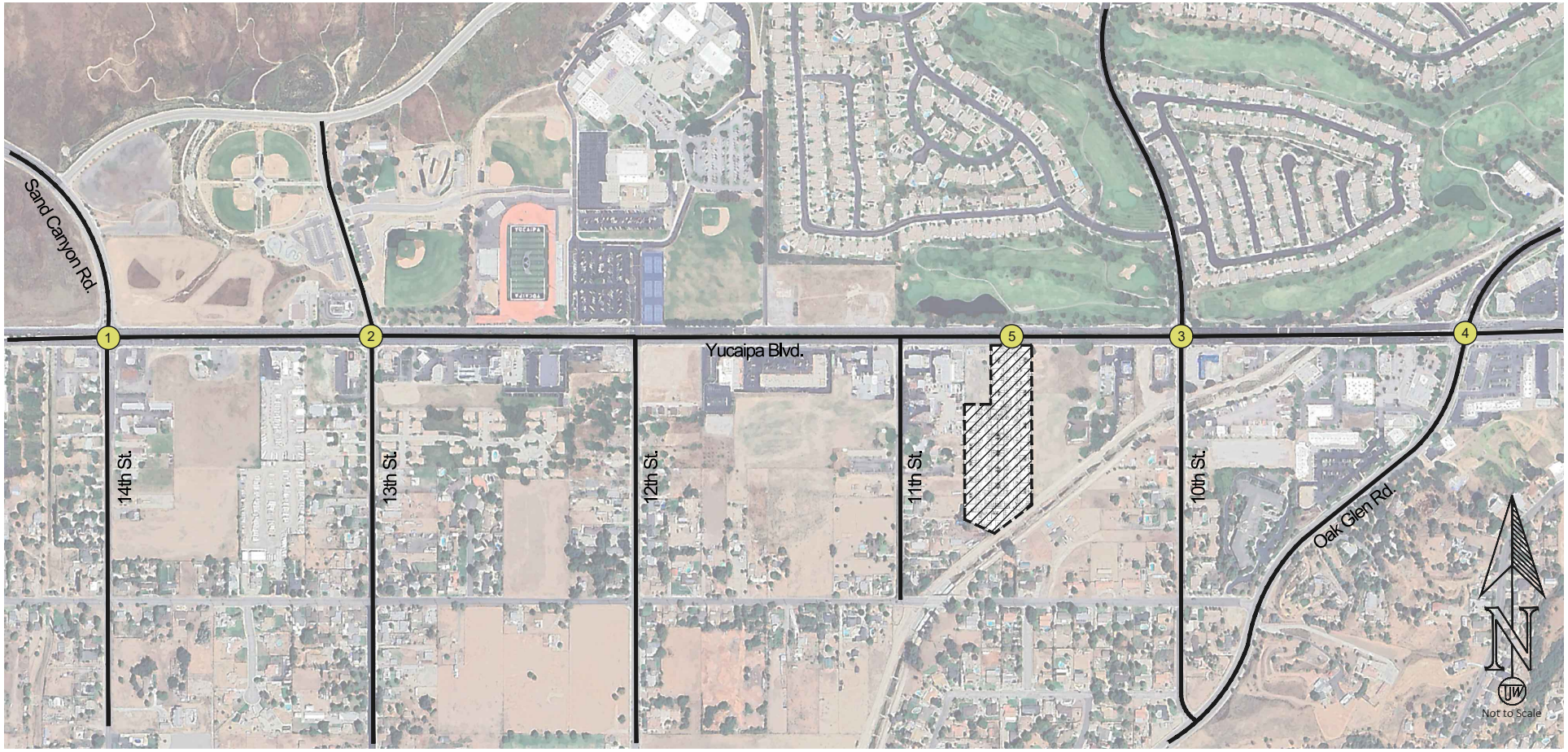
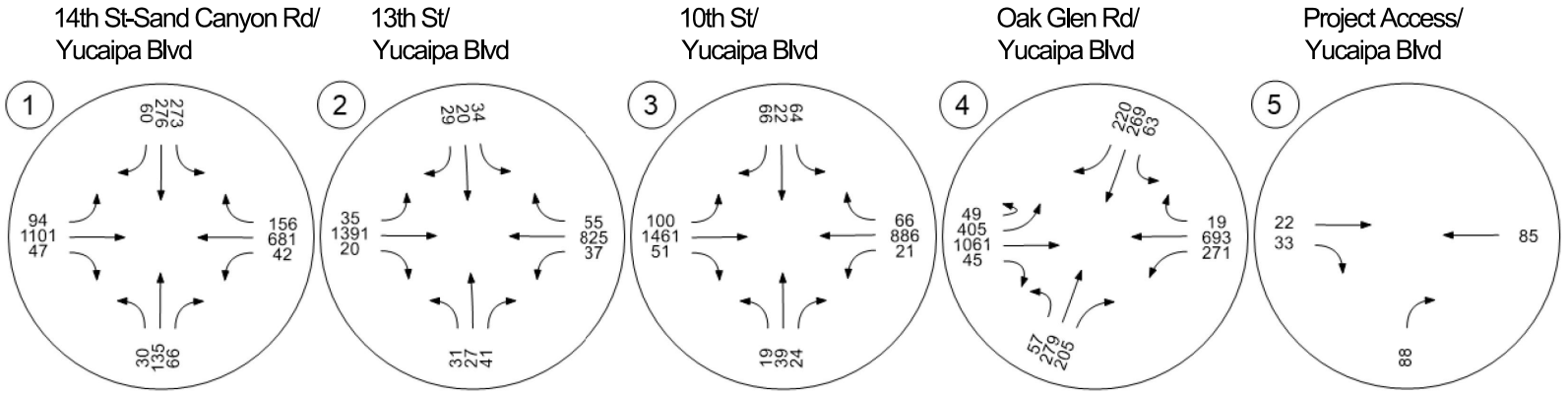
Exhibit 11: OYP AM Peak Hour Volumes

Traffic Impact Analysis

EVD-24-001

TJW Engineering, Inc.





Not to Scale

Exhibit 12: OYP PM Peak Hour Volumes

TJW Engineering, Inc.

APPENDIX

Appendix A: Glossary of Terminology
Appendix B: Scoping Agreement and City Documents
Appendix C: Existing Traffic Counts
Appendix D: HCM Analysis Sheets

APPENDIX A

GLOSSARY OF TERMINOLOGY

Glossary of Terminology

ACRONYMS:

ADT	Average Daily Traffic
Caltrans	California Department of Transportation
DU	Dwelling Unit
LOS	Level of Service
TSF	Thousand Square Feet
TWSC	Two-Way Stop Control

TERMS

AVERAGE DAILY TRAFFIC – *The average 24-hour volume for a stated period divided by the number of days in that period. For example, Annual Average Daily Traffic is the total volume during a year divided by 365 days.*

CAPACITY – T*he maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.*

CYCLE LENGTH – *The time period in seconds required for a traffic signal to complete one full cycle of indications.*

DAILY CAPACITY – *A theoretical value representing the daily traffic volume that will typically result in a peak hour volume equal to the capacity of the roadway.*

DELAY – *The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.*

FREE FLOW – *Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.*

LEVEL OF SERVICE – *A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.*

PEAK HOUR – *The 60 consecutive minutes with the highest number of vehicles.*

QUEUE LENGTH – *The length of vehicle queue, typically expressed in feet, waiting at a service area such as a Traffic signal, stop sign, or access gate.*

SIGHT DISTANCE – *The continuous length of roadway visible to a driver or roadway user.*

SIGNAL CYCLE – *The time period in seconds required for one complete sequence of signal indications.*

SIGNAL PHASE – *The part of the signal cycle allocated to one or more traffic movements.*

STARTING DELAY – *The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through an intersection.*

TRAFFIC-ACTUATED SIGNAL – *A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.*

TRIP – *The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.*

TRIP GENERATION RATE – *The quantity of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.*

APPENDIX B

SCOPING AGREEMENT AND CITY DOCUMENTS

Traffic Scoping Agreement for Level-of-Service Traffic Impact Analysis

This Traffic Scoping Agreement acknowledges the Transportation Impact Study for the following Project will be prepared in accordance with the City of Yucaipa's Transportation Study Guidelines for Level of Service Assessment:

A. Project Information

Project Name: Yucaipa Business Park Development

Project Location: 33193 Yucaipa Boulevard, Yucaipa, CA 92399 (on south side of Yucaipa Boulevard)

Project Description: The proposed project consists of 96,060 square feet of commercial business park and a total of six (6) apartment units designated for live-work and managerial use on an approximate 5.7-acre lot.

Building	Description	Size	Quantity	Total Size	
A1	Business Park	1500	12	18,000	Sq. Ft.
A2	Business Park	1200	4	4,800	Sq. Ft.
B	Business Park	2220	13	28,860	Sq. Ft.
C	Business Park	2460	10	24,600	Sq. Ft.
D	Business Park	2940	4	11,760	Sq. Ft.
E	Business Park	2700	2	5,400	Sq. Ft.
F	Business Park	2640	1	2,640	Sq. Ft.
Total				**96,060**	**Sq. Ft.**

Building	Description			Size	
A2	Live/Work Apartment			4	Unit
F	Manager Apartment			2	Unit
Total				**6**	**Unit**

The business park will have vehicular access via one (1) driveway with right-turn ingress and right-turn egress only on Yucaipa Boulevard. The internal roadways will provide two-way access.

The subject property is currently not occupied.

Project Site Plan Attached? *(required)* ☒ Yes ☐ No **[See ATTACHMENT 1]**

B. Trip Generation

The project trip generation has been derived based on trip rates from ITE Trip Generation Manual, 11th Edition.

The project trip generation is provided in **ATTACHMENT 2** and summarized below.

	In	Out	Total
AM Trips	111	21	132
PM Trips	32	88	120
Daily Trips	-	-	1,235

Internal Trips ☐ Yes ☒ No Trip Discount % _____

Pass-by Trips ☐ Yes ☒ No Trip Discount % _____

Trip Geographic Distribution N 10 % S 30 % E 20 % W 40 %

See **ATTACHMENT 3** for Project Trip Distribution Percentages

See **ATTACHMENT 4** for Project Traffic Volumes

C. Study Area and Assumptions

Project Completion Year: 2026

Annual Growth Rate: 1.5% / year

Related Projects List attached? See **ATTACHMENT 5** for Related Projects list

Study Intersections **[See ATTACHMENT 3]**

1. Yucaipa Blvd and Sand Canyon Rd / 14th St
2. Yucaipa Blvd and 13th St
3. Yucaipa Blvd and 10th St
4. Yucaipa Blvd and Oak Glen Rd

Study Roadway Segments **[See ATTACHMENT 3]**

1. Yucaipa Blvd (East of Sand Canyon Rd / 14th St)
2. Yucaipa Blvd (East of 11th Street)
3. Yucaipa Blvd (West of 10th Street)
4. Yucaipa Blvd (East of 10th Street)
5. 14th Street (North of Yucaipa Blvd)
6. 14th Street (South of Yucaipa Blvd)
7. 11th Street (South of Yucaipa Blvd)
8. 10th Street (South of Yucaipa Blvd)
9. Oak Glen Rd (North of Yucaipa Blvd)
10. Oak Glen Rd (South of Yucaipa Blvd)

Traffic Counts:
Intersection traffic counts will be collected from 7:00 to 9:00 AM and from 4:00 to 6:00 PM on one weekday (Tuesday, Wednesday, or Thursday) when schools are in session and not during a week with a holiday.

Analysis Methodology:

- The traffic analysis for the study intersections will follow the traffic impact analysis guidelines established by the City of Yucaipa and San Bernardino Associated Governments (SANBAG) Congestion Management Program (CMP). Both agencies require analysis to be conducted following the Highway Capacity Manual methodology.

- The traffic analysis for the study roadway segments will be based on the daily traffic compared against the roadway capacities according to the City of Yucaipa General Plan. The level-of-service will be derived based on the Volume-to-Capacity (V/C) ratio at the study roadway segments.

Analysis Scenarios:

- Existing 2024 Conditions
- Opening Year 2026 Without Project Conditions (Existing + Ambient Growth + Other Related Projects)
- Opening Year 2026 With Project Conditions

D. Other Jurisdictional Impacts

Is the project within any other Agency's sphere of influence? ☐ Yes ☒ No

E. Vehicle Miles Traveled (VMT) Analysis

Per the VMT Screening Assessment prepared for the project, based on the location of the project and the proposed land uses, the project cannot be screened from further VMT analysis. Thus, a full VMT analysis will be prepared for the project.

Per the City's Guidelines, the San Bernardino Transportation Analysis Model (SBTAM) will be used to calculate and estimate VMT. The SBTAM will be used to determine the following two types of VMT for the project:

- Project-generated VMT (VMT per service population)
- Project-effect on VMT (total VMT)

As outlined in the City's guidelines, the project-generated VMT will be calculated using the Origin-Destination (OD) method and the project-effect on VMT will be calculated using the City limits as the subregional boundary. The socioeconomic data for the project Transportation Analysis Zone (TAZ) will be edited to incorporate changes due to the addition of project, based on resident/employment estimates prepared for the project, shown below.

	Households	Residents	Square Feet	Employment				
				Total	Manufaturing	Wholesale	Retail	Other Service
Live/Work Units[1]	6	9	-	-	-	-	-	-
Business Park[2]	-	-	96,060	296	89	89	30	59
TOTAL	6	9	96,060	296	89	89	30	59

[1] Number of residents on project site based conservatively on an assumption of 1.5 residents per household for the live/work units.

[2] Number of employees on project site based conservatively on an rate of 3.08 employees per 1,000 square feet, determined using rates from the Instutue of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021) for Land Use Code 770 Business Park. Employment sector splits based on typical employment conversion factors for the OCTAM.

VMT metrics will be calculated for the model base year (2016) to determine Project impacts and the model future year (2040) to determine cumulative impacts (i.e. two model runs). To determine impacts for the project completion year, interpolation between the results for the model base (2016) and future (2040) year will be conducted.

E. Contact Information

	Consultant	Developer
Name:	MR. JONATHAN LOUIE	C/O GLENN SCHMIDT - East Valley Design and Construction
Company:	KOA CORPORATION	Teck Properties, Inc.
Address:	333 S. ANITA DRIVE, SUITE 800 ORANGE, CALIFORNIA 92868	P.O. Box 674
Telephone:	GEN: (714) 573-0317 / DIR: (714) 923-6269	(909) 240-9132
Email:	JLOUIE@HWLochner.COM	Evd1877@hotmail.com

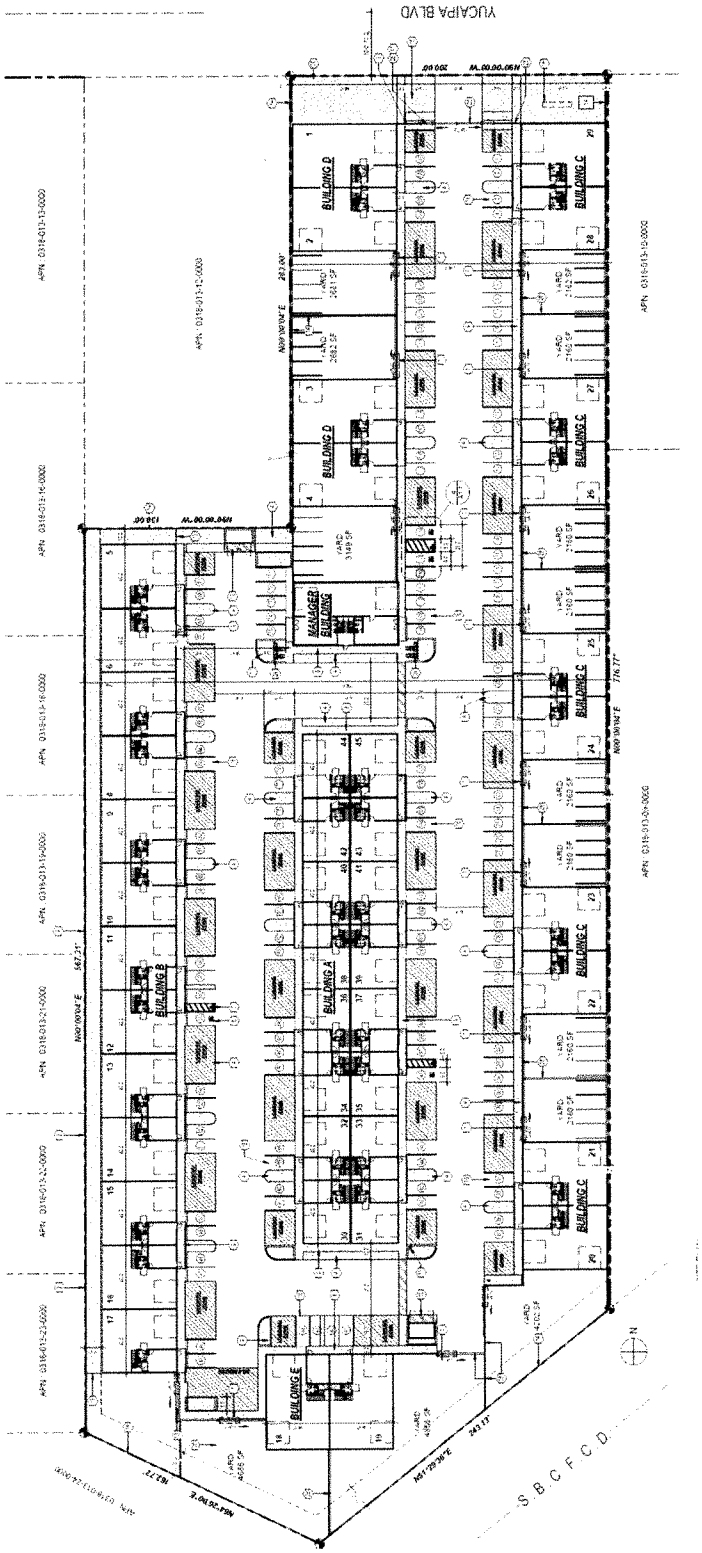
Approved by: J. Louie — 08/22/2024

Consultant's Representative — Date

John Fermin Preciado, P.E. — 8/26/24

City of Yucaipa Representative — Date

ATTACHMENT 1: PROJECT SITE PLAN



ATTACHMENT 2: PROJECT TRIP GENERATION

ITE Code	ITE Trip Rate *		Daily (2-Way)	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
770	Business Park	Trips per 1,000 Sq. Ft. GFA	12.44	85%	15%	1.35	26%	74%	1.22
220	Multifamily Housing (Low-Rise)	Trips per Dwelling Unit	6.74	24%	76%	0.40	63%	37%	0.51

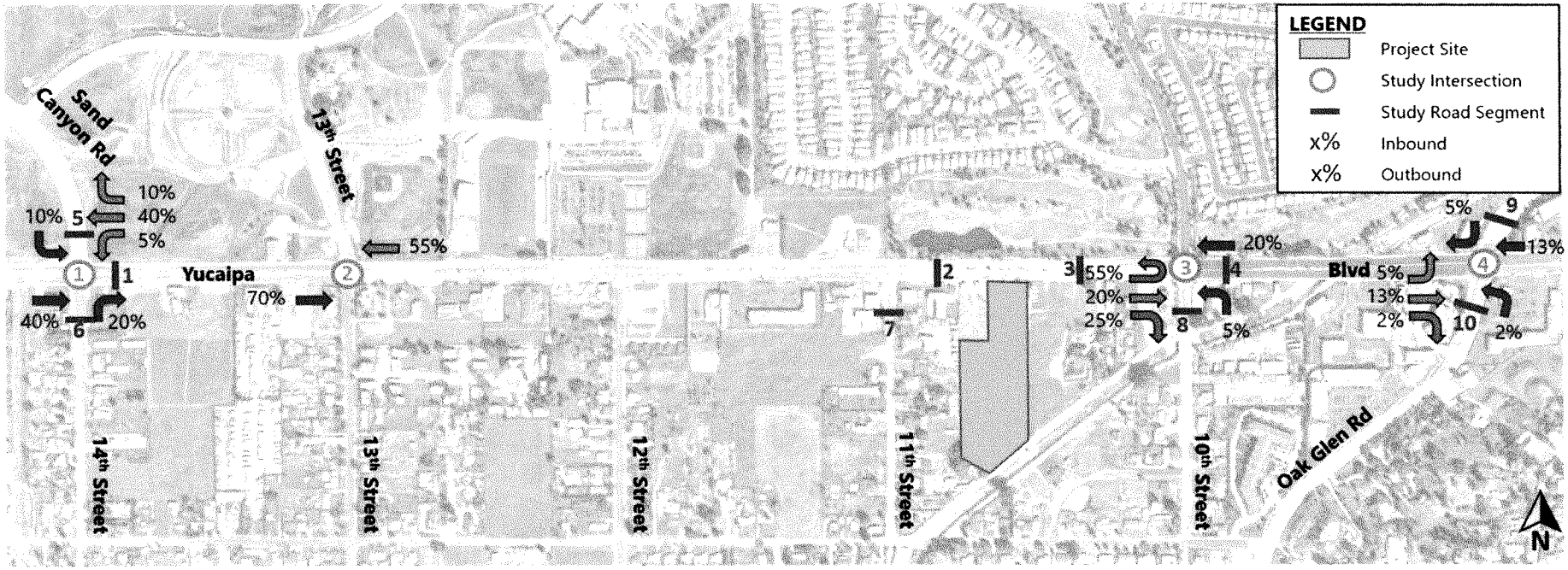
Project Trip Generation

Land Use	Size		Daily (2-Way)	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Business Park	96,060	Sq. Ft.	1,195	111	19	130	30	87	117
Live-Work & Manager Apartments **	6	Dwelling Units	40	-	2	2	2	1	3
Total			**1,235**	**111**	**21**	**132**	**32**	**88**	**120**

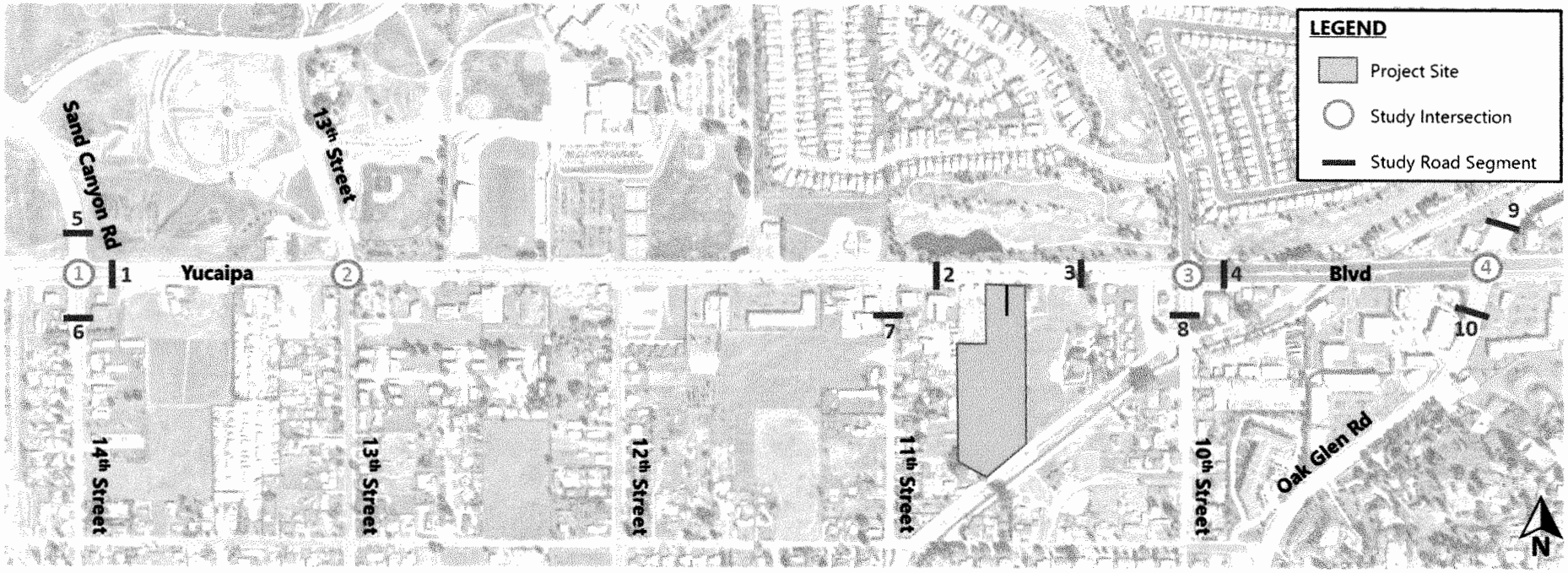
* Source: *Institute of Transportation Engineers Trip Generation, 11th Edition*

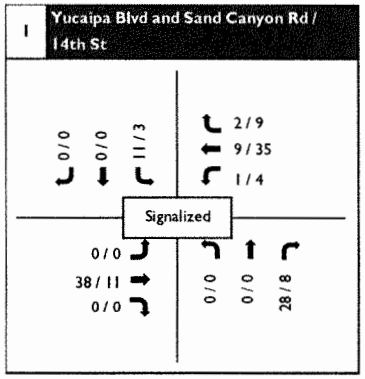
** Includes 4 live-work apartments and 2 manager apartments

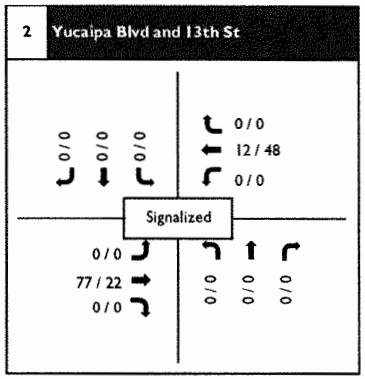
ATTACHMENT 3: PROJECT TRIP DISTRIBUTION

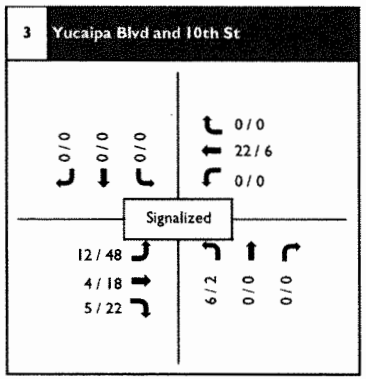


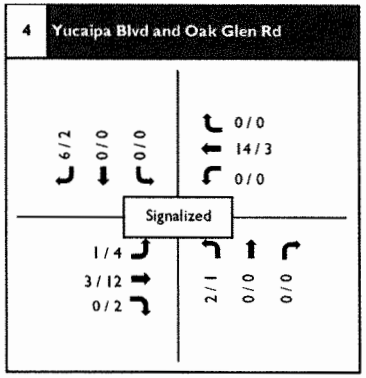
ATTACHMENT 4: PROJECT TRAFFIC VOLUMES











ATTACHMENT 5: CUMULATIVE PROJECTS

No.	APN	Name	Location	Status	Size		Land Use
1	-	U-Stor-It	33067 Yucaipa Blvd	Under Construction	968	SF	Rental Office Building
					146,700	SF	5 storage buildings (containing 1,208 climate controlled self-storage units and an open RV storage)
2	0318-011-50	Raising Canes	Southeast corner of 12th St and Yucaipa Blvd	Submitted Grading Permit	2,899	SF	Fast-food restaurant (with 1,360 square feet of outdoor patio area)
3	-	Apartment Project	12241 14th St	Approved, Not Yet Under Construction	144	Unit	Apartment (with 72 1-bedroom units, 58 2-bedroom units and 14 3-bedroom units)
4	0318-021-18,127 19, -44 & -58	Starling Heights Specific Plan Tentative Tract Map (TTM) 20372	Northeast corner of 12th St and Avenue E	Appeal going to City Council next month	127	Unit	Residential subdivision (with associated community features including a recreation center, active park, dog park, entry monuments, and detention basins based on the Specific Plan)

Source

Description of cumulative projects provided by City of Yucaipa, July 25, 2024

TRANSPORTATION PLAN

Adjacent land use often influences the functionality and character of the street environment. A well-integrated transportation network acknowledges the complementary relationship between travel needs and land use. Because of Yucaipa's natural topography and distance from some major employment centers, Yucaipans must rely on automobile travel. As a result, the City recognizes the need to invest in appropriate strategies that improve roadway efficiency while maintaining the community's identity.

Yucaipa's transportation network is designed to accommodate travel demand and minimize excessive delays and traffic congestion during peak hours. Street design standards specify the width and other roadway features to ensure safety and provide sufficient roadway capacity to accommodate travel demand. As streets are further improved, the City is establishing a network of streets that is optimally managed, provides appropriate linkages between communities, and improves mobility for its residents.

Yucaipa's roundabouts help to calm traffic and create a pedestrian environment in the historic Uptown District.

Street Classifications

Yucaipa's street network has been developed based upon a hierarchy of roadway classifications, each with different design standards. This layered approach allows the City to vary the design of streets to allow for different travel speeds, modal options (e.g., pedestrian and bicycling), and priorities. These standard street classifications, along with context-sensitive design parameters described later, provide the backbone of the street network.

Each roadway classification, right-of-way, and its corresponding functionality are described below.

Freeway/Interstate

Freeways are multi-lane, limited access, high speed roadways dedicated to serve regional and interregional vehicular travel. Access to freeways is restricted to interchange ramps. Freeways are under the jurisdiction of the California Department of Transportation (Caltrans), with specific right-of-way requirements. Interstate 10 runs along the southern edge of Yucaipa.

Major Arterial Highways

Major arterials serve regional traffic and the right-of-way dimensions are consistent with the County Master Plan of Highways. This street classification is not a common street type in Yucaipa but it is included to be consistent with San Bernardino County standards. It covers Mill Creek Road (Highway 38) near the northern city limits of Yucaipa. Typical right-of-way is 120 feet.

Major Highway

Major highways are intended to serve through-traffic movement across urban areas or to major traffic generators and attractors. They are subject to controlled access from properties fronting the right-of-way. Major highways are designed to accommodate between four to six lanes of traffic, bicycle lanes, with a right-of-way width of 104 feet and a curb-to-curb width of 80 to 92 feet.

Secondary Highway (Arterial)

Secondary highways serve traffic from collector streets and major highways. They are subject to controlled access from the properties fronting on the right of way. Secondary highways are designed to accommodate four lanes of traffic, bicycle lanes, right-of-way of 80 to 88 feet, curb-to-curb width of 64 feet, and sidewalks.

Collector Street

Collector streets circulate localized traffic and move vehicles from local residential roads to secondary highways and arterials. Collector streets are designed to accommodate two to four lanes of traffic with a typical right-of-way width of 66 feet, curb-to curb width of 44 feet, and sidewalks on both sides of the street.

Controlled/Limited Access Collector

A controlled/limited access collector has the same dimensions as a collector street. This roadway differs in the number and frequency of permitted access points and driveways from private property. Reducing or regulating private property access helps to reduce traffic conflicts and optimize traffic flow.

Residential Collector

A residential collector is a modified collector street. While serving to circulate local traffic, the typical segment has only one lane in each direction, a right-of-way width of 60 to 66 feet, and sidewalks on both sides. This classification is used for residential streets requiring a narrow curb-to-curb width for traffic calming.

Local Streets

Local streets provide direct access to properties, distribute traffic to and from arterials and collector streets, and discourage through-traffic. Local streets are designed to accommodate two lanes of traffic, with a right-of-way width of 60 feet, curb-to-curb width of 36 to 40 feet, and sidewalks on both sides of the streets.

Figure 6.1 illustrates Yucaipa's circulation network at buildout that will support the land use plan and other community objectives.

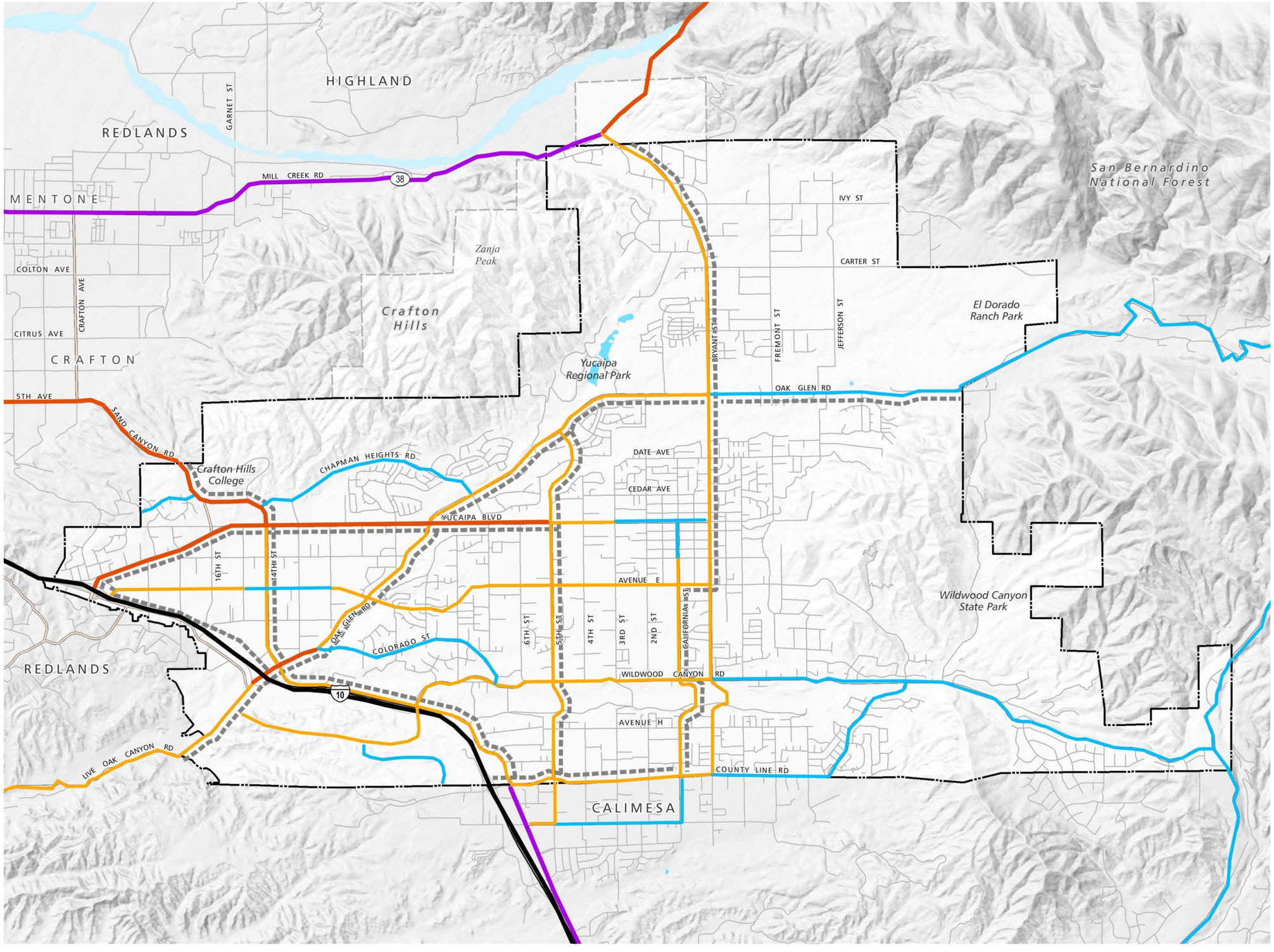


Figure T-1
TRANSPORTATION NETWORK

City Limits

Yucaipa Sphere of influence

Road Classification

- Freeway/Interstate
- Major Arterial Highway
- Major Highway
- Secondary Highway (Arterial)
- Controlled/Limited Access Collector
- Truck Route

YUCAIPA GENERAL PLAN

0 1,000 2,000 3,000 4,000 Feet

PLACEWORKS

Source: IBI Group Inc., 2015

11/19/2015

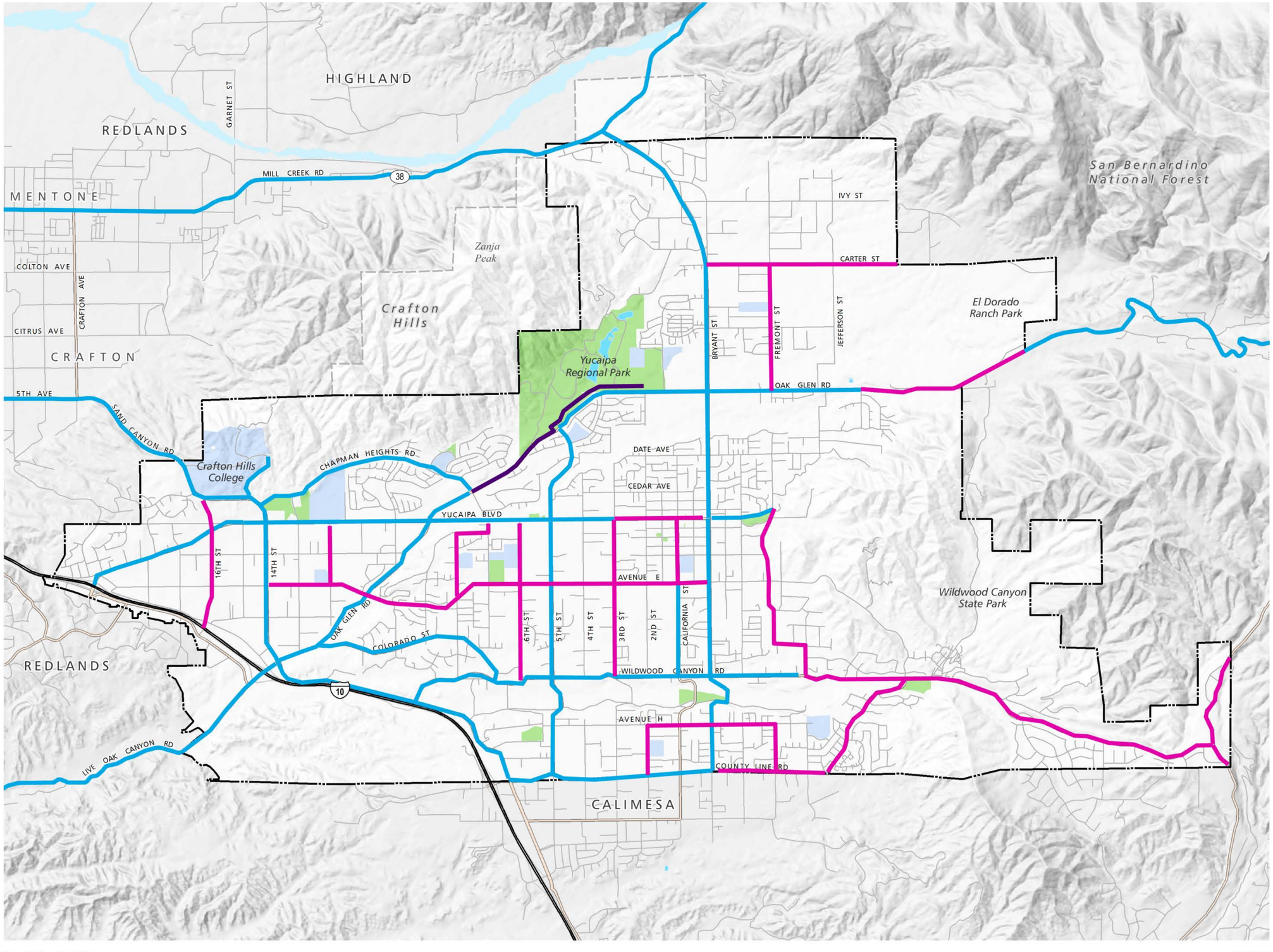


Figure T-2
BIKEWAY NETWORK

- City Limits
- Yucaipa Sphere of influence
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route
- Schools
- Park and Recreation

YUCAIPA GENERAL PLAN

0 1,000 2,000 3,000 4,000 Feet

PLACEWORKS

Source: IBI Group Inc., 2015

9/17/2015

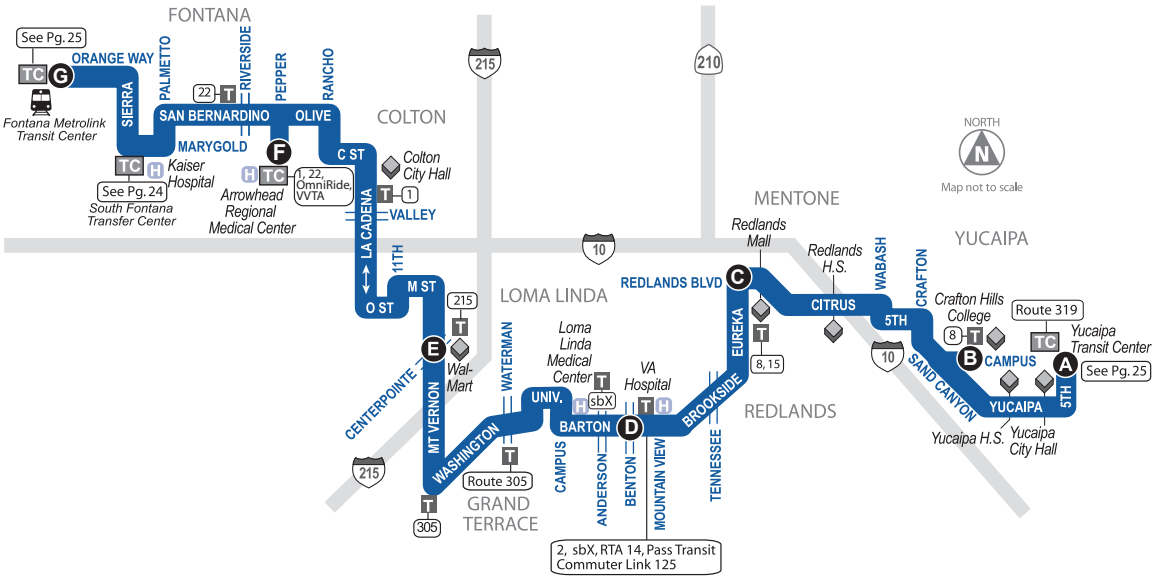
19 FONTANA - COLTON - REDLANDS - YUCAIPA

Bus Route | Tripper Service | Timepoint - Look for the matching symbol in the timetable section. | Metrolink Station | Park-and-Ride | Point of Interest | Medical Center | Transfer Point | Connection Route(s) | Transit/Transfer Center

FREQUENCY

M-F	SAT	SUN
30/60	60	60

This Route connects with Metrolink and sbX!



RULES OF THE ROAD

Be Ready to go Before you Board

Help keep us on time! Using mobile fares? Have your phone out and your pass activated. Cash: Plese have exact change. Paper pass, have your pass out. If you are paying with discounted fare, please be prepared to show the required ID to the driver. Omnitrans does not issue courtesy rides.

STUDENTS: Please show your school ID to the driver.

ROUTE 19: MONDAY - FRIDAY

Fontana Metrolink	ARMC+	Mt. Vernon & Centre Pl.	Benton & Barton	Redlands Mall	Crafton Hills	Yucaipa Transit Center	Crafton Hills	Redlands Mall	Benton & Barton	Mt. Vernon & Centre Pl.	ARMC+	Fontana Metrolink
G	F	E	D	C	B	A	B	C	D	E	F	G
EASTBOUND							WESTBOUND					
								4:49	5:00	5:12	5:29	5:53
							4:52	5:00	5:14	5:24	5:37	5:54	6:19
							5:50	5:58	6:12	6:22	6:35	6:52	7:17
							6:50	7:01	7:15	7:29	7:45	8:03	8:34
							7:17	7:28	7:45	7:59	8:15	8:33	9:04
5:37	6:02	6:18	6:34	6:49	7:06	7:20	7:47	7:58	8:15	8:29	8:45	9:03	**9:34**
6:00	6:25	6:42	6:58	7:13	7:30	7:44	8:09	8:20	8:37	**8:52**	**9:08**	**9:26**	**9:57**
6:33	6:58	7:15	7:33	7:49	8:06	8:20	**8:50**	**9:01**	**9:18**	**9:33**	**9:49**	**10:07**	**10:38**
6:50	7:21	7:41	7:59	**8:15**	**8:32**	**8:46**	**9:20**	**9:31**	**9:48**	**10:03**	**10:20**	**10:40**	**11:11**
8:07	**8:38**	**8:58**	**9:16**	**9:32**	**9:49**	**10:03**	**10:20**	**10:31**	**10:48**	**11:03**	**11:20**	**11:40**	**12:11**
9:07	**9:38**	**9:58**	**10:16**	**10:32**	**10:49**	**11:03**	**11:20**	**11:31**	**11:49**	**12:04**	**12:22**	**12:42**	**1:13**
9:37	**10:08**	**10:28**	**10:48**	**11:04**	**11:21**	**11:35**							
10:07	**10:38**	**10:58**	**11:18**	**11:34**	**11:51**	**12:05**	**12:20**	**12:31**	**12:49**	**1:04**	**1:22**	**1:42**	**2:13**
11:06	**11:37**	**11:57**	**12:17**	**12:33**	**12:50**	**1:04**	**1:20**	**1:31**	**1:49**	**2:04**	**2:22**	**2:42**	**3:13**
11:36	**12:07**	**12:27**	**12:47**	**1:03**	**1:20**	**1:34**	**1:50**	**2:01**	**2:18**	**2:33**	**2:51**	**3:11**	**3:42**
12:06	**12:37**	**12:57**	**1:17**	**1:33**	**1:50**	**2:04**	**2:20**	**2:31**	**2:48**	**3:03**	**3:21**	**3:41**	**4:12**
12:36	**1:07**	**1:28**	**1:51**	**2:10**	**2:27**	**2:41**	**2:50**	**3:01**	**3:18**	**3:34**	**3:55**	**4:15**	**4:46**
									3:39	**3:54**	**4:15**		
1:06	**1:37**	**1:58**	**2:21**	**2:40**	**2:57**	**3:11**	**3:30**	**3:41**	**3:57**	**4:11**	**4:32**	**4:51**	**5:19**
1:41	**2:12**	**2:33**	**2:56**	**3:15**	**3:32**	**3:47**	**3:55**	**4:06**	**4:22**	**4:38**	**5:01**	**5:20**	**5:48**
2:06	**2:37**	**2:58**	**3:21**	**3:40**	**3:57**	**4:12**	**4:20**	**4:31**	**4:47**	**5:03**	**5:26**	**5:45**	**6:13**
2:36	**3:07**	**3:28**	**3:51**	**4:08**	**4:25**	**4:38**	**4:50**	**5:01**	**5:17**	**5:33**	**5:56**	**6:15**	**6:43**
3:31	**4:02**	**4:23**	**4:46**	**5:03**	**5:20**	**5:33**	**5:50**	**6:01**	**6:17**	**6:31**	**6:46**	**7:05**	**7:33**
4:06	**4:37**	**4:58**	**5:21**	**5:38**	**5:55**	**6:08**	**6:25**	**6:36**	**6:52**	**7:06**	**7:21**	**7:40**	**8:07**
5:06	**5:37**	**5:58**	**6:21**	**6:38**	**6:55**	**7:08**	**7:20**	**7:31**	**7:47**	**8:01**	**8:16**	**8:35**	**9:02**
5:33	**6:04**	**6:23**	**6:40**	**6:54**	**7:11**	**7:24**							
6:09	**6:40**	**6:59**	**7:16**	**7:30**	**7:46**	**7:58**	**8:30**	**8:41**	**8:57**	**9:09**	**9:21**	**9:40**	**10:04**
7:09	**7:38**	**7:57**	**8:12**	**8:26**	**8:42**	**8:54**							
8:09	**8:38**	**8:57**	**9:12**	**9:26**	**9:42**	**9:54**							
9:14	**9:43**	**10:02**	**10:17**	**10:28**									

ROUTE 19: SATURDAY

Fontana Metrolink	ARMC+	Mt. Vernon & Centre Pl.	Benton & Barton	Redlands Mall	Crafton Hills	Yucaipa Transit Center	Crafton Hills	Redlands Mall	Benton & Barton	Mt. Vernon & Centre Pl.	ARMC+	Fontana Metrolink
G	F	E	D	C	B	A	B	C	D	E	F	G
EASTBOUND							WESTBOUND					
							5:10	5:18	5:31	5:41	5:53	6:09	6:33
							6:10	6:18	6:31	6:43	6:55	7:11	7:35
							7:10	7:18	7:31	7:43	7:55	8:11	8:40
6:00	6:21	6:38	6:51	7:05	7:20	7:30	8:05	8:13	8:30	8:42	8:54	9:10	9:39
7:00	7:24	7:41	7:54	8:08	8:23	8:33	9:00	9:08	9:25	9:37	9:49	10:05	10:34
8:00	8:25	8:42	8:55	9:09	9:24	9:34	10:00	10:12	10:29	10:41	10:56	11:13	**11:43**
9:00	9:27	9:44	10:01	10:15	10:31	10:43	11:00	11:12	11:29	**11:43**	**11:58**	**12:17**	**12:47**
10:00	10:27	10:44	11:01	11:15	11:31	11:43	**12:00**	**12:12**	**12:29**	**12:43**	**12:58**	**1:17**	**1:47**
11:00	11:30	11:49	12:06	**12:20**	**12:36**	**12:48**	**1:00**	**1:12**	**1:29**	**1:43**	**1:58**	**2:17**	**2:47**
12:00	**12:30**	**12:49**	**1:06**	**1:20**	**1:36**	**1:48**	**2:00**	**2:12**	**2:29**	**2:43**	**2:58**	**3:17**	**3:47**
1:00	**1:33**	**1:52**	**2:09**	**2:23**	**2:39**	**2:51**	**3:00**	**3:12**	**3:28**	**3:42**	**3:57**	**4:16**	**4:46**
2:00	**2:30**	**2:50**	**3:08**	**3:23**	**3:39**	**3:52**	**4:00**	**4:12**	**4:28**	**4:42**	**4:57**	**5:16**	**5:46**
3:00	**3:30**	**3:50**	**4:08**	**4:23**	**4:39**	**4:52**	**5:00**	**5:12**	**5:28**	**5:42**	**5:57**	**6:16**	**6:46**
4:00	**4:30**	**4:48**	**5:06**	**5:21**	**5:37**	**5:50**	**6:00**	**6:12**	**6:28**	**6:42**	**6:57**	**7:16**	**7:46**
5:00	**5:30**	**5:48**	**6:05**	**6:19**	**6:35**	**6:46**	**7:00**	**7:09**	**7:25**	**7:39**	**7:54**	**8:11**	**8:37**
6:00	**6:30**	**6:48**	**7:05**	**7:19**	**7:35**	**7:46**	**8:10**	**8:19**	**8:35**	**8:46**	**8:58**	**9:15**	**9:38**
7:00	**7:30**	**7:48**	**8:05**	**8:19**	**8:35**	**8:46**							
8:00	**8:30**	**8:48**	**9:02**	**9:16**	**9:32**	**9:42**							

ARMC+ is the Arrowhead Regional Medical Center

ROUTE 19: SUNDAY

EASTBOUND

Fontana Metrolink (G)	ARMC+ (F)	Mt. Vernon & Centre Pl. (E)	Benton & Barton (D)	Redlands Mall (C)	Crafton Hills (B)	Yucaipa Transit Center (A)
7:00	7:24	7:42	7:55	8:08	8:24	8:36
8:00	8:24	8:42	8:55	9:09	9:25	9:37
9:00	9:26	9:44	9:59	10:13	10:29	10:41
9:57	10:27	10:45	11:00	11:14	11:30	11:42
10:57	11:27	11:45	12:01	**12:15**	**12:31**	**12:43**
11:57	**12:27**	**12:45**	**1:01**	**1:15**	**1:31**	**1:43**
12:57	**1:27**	**1:45**	**2:02**	**2:16**	**2:32**	**2:44**
1:57	**2:27**	**2:45**	**3:02**	**3:16**	**3:32**	**3:44**
2:57	**3:27**	**3:45**	**4:02**	**4:16**	**4:32**	**4:44**
3:57	**4:27**	**4:45**	**5:00**	**5:14**	**5:30**	**5:42**
4:57	**5:27**	**5:45**	**6:00**	**6:14**	**6:30**	**6:42**
5:57	**6:27**	**6:45**	**6:59**	**7:13**		

WESTBOUND

Crafton Hills (B)	Redlands Mall (C)	Benton & Barton (D)	Mt. Vernon & Centre Pl. (E)	ARMC+ (F)	Fontana Metrolink (G)
				6:30	6:55
	6:40	6:51	7:02	7:18	7:47
7:00	7:23	7:34	7:47	8:03	8:32
8:00	8:28	8:41	8:54	9:10	9:39
9:13	9:28	9:41	9:54	10:14	10:43
10:13	10:28	10:41	10:54	11:14	**11:43**
11:13	11:28	**11:41**	**11:54**	**12:14**	**12:43**
12:13	**12:29**	**12:42**	**12:55**	**1:15**	**1:44**
1:13	**1:29**	**1:42**	**1:57**	**2:16**	**2:45**
2:13	**2:29**	**2:42**	**2:57**	**3:16**	**3:45**
3:13	**3:29**	**3:42**	**3:57**	**4:16**	**4:45**
4:13	**4:29**	**4:42**	**4:55**	**5:14**	**5:43**
5:11	**5:27**	**5:40**	**5:53**	**6:12**	**6:37**

APPENDIX C

EXISTING TRAFFIC COUNTS

INTERSECTION TURNING MOVEMENT COUNTS

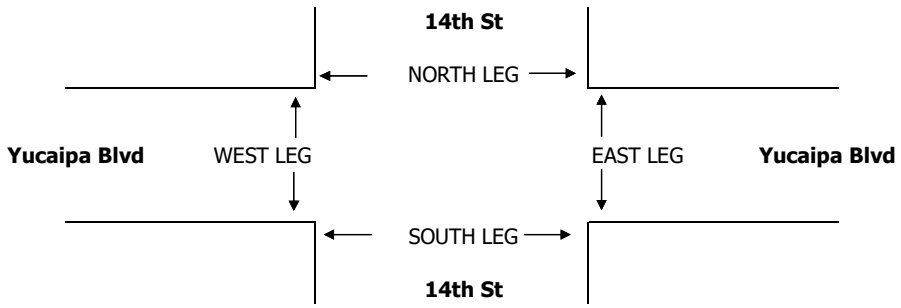
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Yucaipa	PROJECT #:	SC4947
Tue, Oct 8, 24	NORTH & SOUTH:	14th St	LOCATION #:	1
	EAST & WEST:	Yucaipa Blvd	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND 14th St			SOUTHBOUND Sand Canyon Rd			EASTBOUND Yucaipa Blvd			WESTBOUND Yucaipa Blvd			
LANES:	NL 0.5	NT 1.5	NR 1	SL 1.5	ST 0.5	SR 1	EL 1	ET 3	ER 0	WL 1	WT 3	WR 0	TOTAL
AM 7:00 AM	8	53	7	10	30	24	10	63	2	5	174	40	426
7:15 AM	3	53	16	19	28	22	12	85	4	8	167	59	476
7:30 AM	6	92	10	25	24	24	10	111	2	15	171	58	548
7:45 AM	3	82	18	20	31	14	12	113	2	17	185	51	548
8:00 AM	7	76	34	34	26	19	20	129	5	33	164	46	593
8:15 AM	11	84	22	29	35	10	12	105	7	36	168	35	554
8:30 AM	9	66	11	31	27	11	19	84	3	16	171	27	475
8:45 AM	8	41	9	24	28	14	19	104	3	4	152	34	440
VOLUMES	55	547	127	192	229	138	114	794	28	134	1,352	350	4,068
APPROACH %	8%	75%	17%	34%	41%	25%	12%	84%	3%	7%	73%	19%	
APP/DEPART	729	/	1,011	559	/	391	940	/	1,117	1,840	/	1,549	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	27	334	84	108	116	67	54	458	16	101	688	190	2,247
APPROACH %	6%	75%	19%	37%	40%	23%	10%	86%	3%	10%	70%	19%	
PEAK HR FACTOR		0.951			0.921			0.855			0.969		0.943
APP/DEPART	445	/	578	291	/	233	530	/	652	981	/	784	0
PM 4:00 PM	10	38	13	41	46	13	20	217	12	8	129	26	573
4:15 PM	8	56	15	54	59	18	24	237	14	5	144	30	664
4:30 PM	5	27	17	66	69	17	26	262	16	9	117	32	663
4:45 PM	6	40	13	63	71	17	25	253	9	8	173	29	707
5:00 PM	11	32	12	73	64	10	18	271	8	5	176	30	710
5:15 PM	7	32	11	60	64	14	22	270	13	9	160	52	714
5:30 PM	6	41	11	75	72	15	21	234	12	7	123	37	654
5:45 PM	7	46	10	67	81	25	20	262	6	11	141	38	714
VOLUMES	60	312	102	499	526	129	176	2,006	90	62	1,163	274	5,418
APPROACH %	13%	66%	22%	43%	46%	11%	8%	88%	4%	4%	77%	18%	
APP/DEPART	474	/	762	1,154	/	678	2,280	/	2,618	1,510	/	1,360	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	29	131	53	262	268	58	91	1,056	46	31	626	143	2,801
APPROACH %	14%	62%	25%	45%	46%	10%	8%	88%	4%	4%	78%	18%	
PEAK HR FACTOR		0.903			0.967			0.979			0.908		0.979
APP/DEPART	213	/	365	588	/	345	1,194	/	1,377	806	/	714	0



INTERSECTION TURNING MOVEMENT COUNTS

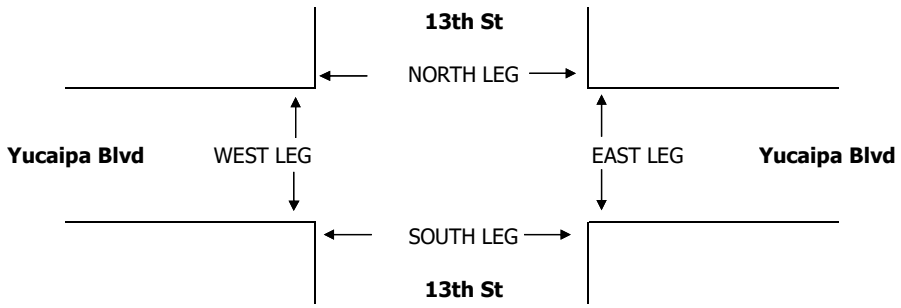
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Yucaipa	PROJECT #:	SC4947
Tue, Oct 8, 24	NORTH & SOUTH:	13th St	LOCATION #:	2
	EAST & WEST:	Yucaipa Blvd	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND 13th St			SOUTHBOUND 13th St			EASTBOUND Yucaipa Blvd			WESTBOUND Yucaipa Blvd			
	LANES:	NL 0	NT 1	NR 0	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 0	WL 1	WT 3	WR 0	TOTAL
AM	7:00 AM	4	8	5	1	1	6	5	74	0	1	215	5	325
	7:15 AM	7	11	7	7	5	7	13	106	0	4	219	13	399
	7:30 AM	6	8	10	5	3	8	6	129	1	2	250	19	447
	7:45 AM	2	16	12	14	10	11	19	136	2	14	220	15	471
	8:00 AM	8	41	30	28	17	30	31	137	7	25	199	40	593
	8:15 AM	11	26	22	26	19	27	24	127	18	31	205	33	569
	8:30 AM	11	4	8	6	1	7	5	121	5	10	185	11	374
	8:45 AM	4	0	9	6	2	6	6	122	6	6	182	16	365
	VOLUMES	53	114	103	93	58	102	109	952	39	93	1,675	152	3,666
	APPROACH %	20%	42%	38%	37%	23%	40%	10%	86%	4%	5%	82%	7%	
	APP/DEPART	270	/	375	253	/	190	1,104	/	1,267	2,039	/	1,834	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	27	91	74	73	49	76	80	529	28	72	874	107	2,168
	APPROACH %	14%	47%	39%	37%	25%	38%	13%	83%	4%	6%	77%	9%	
	PEAK HR FACTOR		0.608			0.660			0.904			0.936		0.866
	APP/DEPART	192	/	278	198	/	149	640	/	761	1,138	/	980	0
PM	4:00 PM	4	4	12	9	7	8	8	260	11	7	152	13	495
	4:15 PM	5	4	12	9	4	6	8	265	6	9	170	6	504
	4:30 PM	3	6	12	5	3	8	12	344	7	9	177	17	603
	4:45 PM	11	5	11	10	6	8	6	312	4	7	185	17	582
	5:00 PM	9	5	10	7	4	6	5	361	7	7	199	10	630
	5:15 PM	7	10	7	11	6	6	11	307	1	13	186	9	574
	5:30 PM	5	11	7	9	1	9	8	316	8	3	168	12	557
	5:45 PM	6	5	6	13	2	3	13	334	8	12	172	10	584
	VOLUMES	50	50	77	73	33	54	71	2,499	52	67	1,409	94	4,582
	APPROACH %	28%	28%	44%	46%	21%	34%	3%	95%	2%	4%	87%	6%	
	APP/DEPART	177	/	215	160	/	152	2,627	/	2,697	1,618	/	1,518	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	30	26	40	33	19	28	34	1,324	19	36	747	53	2,415
	APPROACH %	31%	27%	42%	41%	24%	35%	2%	96%	1%	4%	87%	6%	
	PEAK HR FACTOR		0.889			0.833			0.924			0.970		0.949
	APP/DEPART	96	/	113	80	/	74	1,378	/	1,422	861	/	806	0



INTERSECTION TURNING MOVEMENT COUNTS

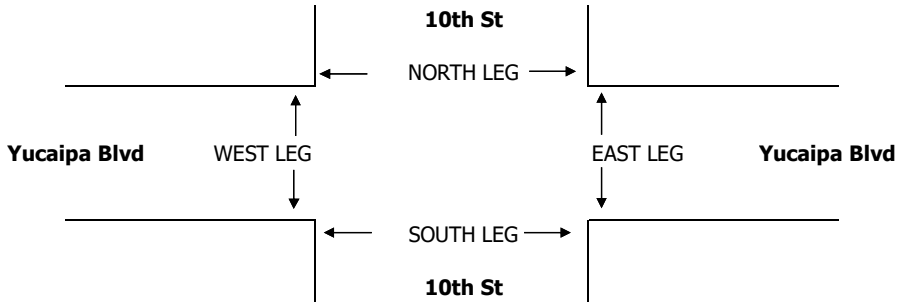
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Tue, Oct 8, 24	LOCATION:	Yucaipa	PROJECT #:	SC4947	
	NORTH & SOUTH:	10th St	LOCATION #:	5	
	EAST & WEST:	Yucaipa Blvd	CONTROL:	SIGNAL	

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND 10th St			SOUTHBOUND 10th St			EASTBOUND Yucaipa Blvd			WESTBOUND Yucaipa Blvd			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 3	ER 0	WL 1	WT 3	WR 0	TOTAL
AM	7:00 AM	4	4	4	9	19	35	3	76	4	0	257	9	424
	7:15 AM	7	4	7	15	14	27	8	138	3	2	260	7	492
	7:30 AM	7	1	1	25	10	24	10	161	2	2	304	15	562
	7:45 AM	8	3	5	8	12	39	7	161	4	4	377	20	648
	8:00 AM	8	6	4	13	14	35	7	198	5	6	439	17	752
	8:15 AM	9	6	12	9	10	24	18	214	4	1	223	6	536
	8:30 AM	5	5	9	4	7	22	13	188	2	6	171	3	435
	8:45 AM	4	4	7	13	6	12	5	131	0	2	203	2	389
	VOLUMES	52	33	49	96	92	218	71	1,267	24	23	2,234	79	4,250
	APPROACH %	39%	25%	37%	24%	23%	54%	5%	93%	2%	1%	95%	3%	
	APP/DEPART	134	/	183	406	/	139	1,366	/	1,420	2,344	/	2,508	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	32	16	22	55	46	122	42	734	15	13	1,343	58	2,505
	APPROACH %	46%	23%	31%	25%	21%	55%	5%	92%	2%	1%	95%	4%	
	PEAK HR FACTOR		0.648			0.899			0.841			0.766		0.831
	APP/DEPART	70	/	116	223	/	74	794	/	815	1,418	/	1,500	0
PM	4:00 PM	2	12	4	21	4	9	25	273	5	6	185	13	559
	4:15 PM	2	10	9	10	5	14	23	292	3	5	189	19	581
	4:30 PM	4	8	4	7	3	17	25	351	6	3	199	15	642
	4:45 PM	2	7	5	20	7	18	26	330	7	7	203	12	644
	5:00 PM	4	14	9	13	6	12	28	357	3	7	175	22	650
	5:15 PM	4	9	5	22	5	17	18	298	9	3	205	15	610
	5:30 PM	2	7	2	21	4	17	31	309	3	3	185	17	601
	5:45 PM	4	6	2	18	11	10	26	294	3	6	213	22	615
	VOLUMES	24	73	40	132	45	114	202	2,504	39	40	1,554	135	4,919
	APPROACH %	18%	53%	29%	45%	15%	39%	7%	91%	1%	2%	89%	8%	
	APP/DEPART	137	/	410	291	/	124	2,749	/	2,689	1,742	/	1,696	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	14	38	23	62	21	64	97	1,336	25	20	782	64	2,555
	APPROACH %	19%	51%	31%	42%	14%	44%	7%	92%	2%	2%	89%	7%	
	PEAK HR FACTOR		0.694			0.817			0.940			0.971		0.980
	APP/DEPART	75	/	199	147	/	66	1,459	/	1,429	874	/	861	0



INTERSECTION TURNING MOVEMENT COUNTS

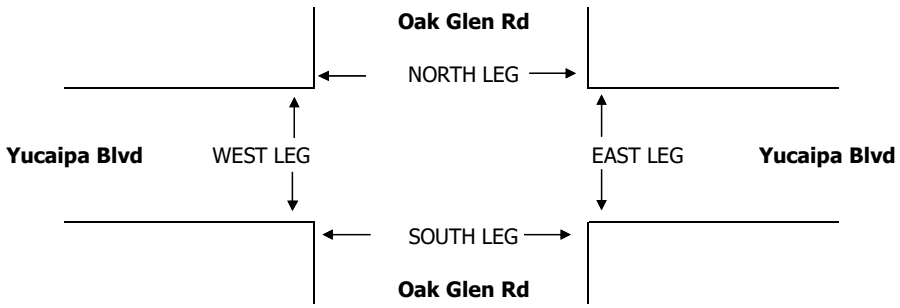
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Yucaipa	PROJECT #:	SC4947
Tue, Oct 8, 24	NORTH & SOUTH:	Oak Glen Rd	LOCATION #:	6
	EAST & WEST:	Yucaipa Blvd	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Oak Glen Rd			SOUTHBOUND Oak Glen Rd			EASTBOUND Yucaipa Blvd			WESTBOUND Yucaipa Blvd			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 1	EL 2	ET 3	ER 0	WL 2	WT 3	WR 0	TOTAL
AM	7:00 AM	6	61	28	2	115	106	33	59	1	42	155	2	610
	7:15 AM	4	66	18	6	100	88	42	104	5	53	170	8	664
	7:30 AM	5	59	34	9	136	124	61	108	4	41	201	4	786
	7:45 AM	12	71	33	6	120	142	62	122	1	53	258	4	884
	8:00 AM	15	49	40	8	133	149	37	146	10	68	292	4	951
	8:15 AM	14	55	42	12	71	60	43	178	11	45	181	2	714
	8:30 AM	8	49	63	6	72	62	44	141	6	46	110	2	609
	8:45 AM	8	57	61	10	46	56	26	119	2	33	144	3	565
	VOLUMES	72	467	319	59	793	787	348	977	40	381	1,511	29	5,840
	APPROACH %	8%	54%	37%	4%	48%	48%	25%	71%	3%	20%	77%	1%	
	APP/DEPART	858	/	852	1,647	/	1,214	1,383	/	1,386	1,952	/	2,388	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	46	234	149	35	460	475	203	554	26	207	932	14	3,363
	APPROACH %	11%	55%	35%	4%	47%	49%	26%	70%	3%	18%	80%	1%	
	PEAK HR FACTOR		0.925			0.831			0.842			0.801		0.879
	APP/DEPART	429	/	455	974	/	693	788	/	757	1,172	/	1,458	0
PM	4:00 PM	13	74	52	22	55	53	88	249	10	64	150	4	834
	4:15 PM	16	78	60	13	61	49	77	230	7	63	144	3	801
	4:30 PM	12	64	45	8	65	51	99	242	8	47	165	1	807
	4:45 PM	13	54	48	15	59	48	103	265	12	68	173	5	863
	5:00 PM	10	85	60	15	72	55	94	246	12	77	147	4	877
	5:15 PM	11	67	45	14	72	57	81	257	8	64	166	3	845
	5:30 PM	19	65	46	17	58	45	106	239	9	54	167	6	831
	5:45 PM	16	68	58	15	52	57	85	231	6	50	163	3	804
	VOLUMES	110	555	414	119	494	415	733	1,959	72	487	1,275	29	6,818
	APPROACH %	10%	51%	38%	11%	47%	39%	26%	70%	3%	26%	68%	2%	
	APP/DEPART	1,079	/	1,347	1,058	/	1,053	2,814	/	2,568	1,867	/	1,850	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	53	271	199	61	261	205	384	1,007	41	263	653	18	3,476
	APPROACH %	10%	52%	38%	11%	48%	38%	26%	69%	3%	27%	68%	2%	
	PEAK HR FACTOR		0.844			0.917			0.942			0.951		0.982
	APP/DEPART	523	/	685	539	/	565	1,455	/	1,292	959	/	934	0



Tuesday, October 08, 2024 | CITY: Yucaipa | PROJECT: SC4947

ADT1 Yucaipa Blvd east of 14th St. | **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	EB		WB			PM Period	EB		WB		
0:00	19		14			12:00	223		176		
0:15	24		12			12:15	206		212		
0:30	22		10			12:30	221		207		
0:45	14	79	6	42	121	12:45	205	855	221	816	1671
1:00	17		8			13:00	218		189		
1:15	10		11			13:15	241		182		
1:30	7		13			13:30	189		217		
1:45	9	43	6	38	81	13:45	211	859	190	778	1637
2:00	10		5			14:00	221		190		
2:15	5		13			14:15	237		182		
2:30	11		13			14:30	273		211		
2:45	6	32	13	44	76	14:45	259	990	220	803	1793
3:00	14		23			15:00	260		215		
3:15	8		43			15:15	269		171		
3:30	5		37			15:30	328		241		
3:45	9	36	40	143	179	15:45	289	1146	323	950	2096
4:00	13		44			16:00	270		163		
4:15	7		53			16:15	291		182		
4:30	20		96			16:30	358		159		
4:45	14	54	98	291	345	16:45	332	1251	213	717	1968
5:00	12		85			17:00	357		212		
5:15	17		129			17:15	342		222		
5:30	31		108			17:30	322		169		
5:45	43	103	137	459	562	17:45	346	1367	190	793	2160
6:00	45		123			18:00	349		224		
6:15	58		159			18:15	311		189		
6:30	72		206			18:30	343		173		
6:45	103	278	232	720	998	18:45	269	1272	170	756	2028
7:00	80		229			19:00	251		163		
7:15	120		239			19:15	213		189		
7:30	146		239			19:30	199		127		
7:45	151	497	248	955	1452	19:45	176	839	123	602	1441
8:00	199		240			20:00	163		127		
8:15	156		234			20:15	172		91		
8:30	127		220			20:30	150		112		
8:45	138	620	191	885	1505	20:45	147	632	98	428	1060
9:00	148		172			21:00	132		97		
9:15	141		160			21:15	91		70		
9:30	149		206			21:30	122		58		
9:45	173	611	200	738	1349	21:45	81	426	53	278	704
10:00	160		178			22:00	68		45		
10:15	138		211			22:15	55		32		
10:30	173		183			22:30	60		31		
10:45	178	649	182	754	1403	22:45	33	216	37	145	361
11:00	170		227			23:00	45		24		
11:15	47		198			23:15	39		34		
11:30	202		189			23:30	41		18		
11:45	217	636	220	834	1470	23:45	25	150	27	103	253
Total Vol.		3638		5903	**9541**			10003		7169	**17172**

Daily Totals	EB	WB	**Combined**
	13641	13072	**26713**

	AM			**PM**		
Split %	38.1%	61.9%	**35.7%**	58.3%	41.7%	**64.3%**
Peak Hour	11:45	7:15	**11:45**	16:30	15:00	**16:30**
Volume	867	966	**1682**	1389	950	**2195**
P.H.F.	0.97	0.97	**0.96**	0.97	0.74	**0.96**

cs@aimtd.com Tell. 714 253 7888

Tuesday, October 08, 2024 | CITY: Yucaipa | PROJECT: SC4947

ADT2 Yucaipa Blvd east of 11th St.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB			PM Period	EB		WB		
0:00	16		13			12:00	222		182		
0:15	22		13			12:15	206		212		
0:30	23		8			12:30	239		220		
0:45	13	74	8	42	116	12:45	205	872	236	850	1722
1:00	18		5			13:00	204		190		
1:15	11		15			13:15	228		190		
1:30	7		7			13:30	211		224		
1:45	10	46	5	32	78	13:45	246	889	163	767	1656
2:00	8		4			14:00	209		212		
2:15	3		13			14:15	279		199		
2:30	9		11			14:30	344		191		
2:45	7	27	15	43	70	14:45	234	1066	247	849	1915
3:00	14		30			15:00	248		273		
3:15	6		36			15:15	226		300		
3:30	5		37			15:30	369		283		
3:45	6	31	37	140	171	15:45	533	1376	202	1058	2434
4:00	13		48			16:00	312		192		
4:15	6		50			16:15	311		208		
4:30	14		85			16:30	391		216		
4:45	15	48	97	280	328	16:45	367	1381	212	828	2209
5:00	11		87			17:00	375		206		
5:15	16		111			17:15	335		226		
5:30	29		112			17:30	364		201		
5:45	32	88	132	442	530	17:45	330	1404	233	866	2270
6:00	39		141			18:00	391		230		
6:15	52		165			18:15	305		184		
6:30	59		199			18:30	338		213		
6:45	90	240	233	738	978	18:45	334	1368	166	793	2161
7:00	84		303			19:00	277		161		
7:15	147		271			19:15	270		148		
7:30	174		351			19:30	227		141		
7:45	169	574	412	1337	1911	19:45	184	958	109	559	1517
8:00	201		448			20:00	206		124		
8:15	235		317			20:15	174		96		
8:30	198		191			20:30	161		92		
8:45	142	776	216	1172	1948	20:45	167	708	85	397	1105
9:00	137		178			21:00	133		80		
9:15	128		220			21:15	101		66		
9:30	152		216			21:30	120		61		
9:45	164	581	187	801	1382	21:45	98	452	51	258	710
10:00	169		172			22:00	59		38		
10:15	142		207			22:15	63		34		
10:30	162		185			22:30	60		26		
10:45	191	664	207	771	1435	22:45	31	213	34	132	345
11:00	176		249			23:00	51		26		
11:15	198		204			23:15	42		32		
11:30	203		212			23:30	37		22		
11:45	197	774	228	893	1667	23:45	27	157	19	99	256
Total Vol.		3923		6691	**10614**			10844		7456	**18300**

	Daily Totals EB	WB	**Combined**
	14767	14147	**28914**

	AM			**PM**		
Split %	37.0%	63.0%	**36.7%**	59.3%	40.7%	**63.3%**
Peak Hour	11:45	7:30	**7:30**	15:45	14:45	**15:00**
Volume	864	1528	**2307**	1547	1103	**2434**
P.H.F.	0.90	0.85	**0.89**	0.73	0.92	**0.83**

cs@aimtd.com Tell. 714 253 7888

Tuesday, October 08, 2024 | CITY: Yucaipa | PROJECT: SC4947

ADT3 Yucaipa Blvd west of 10th St.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB			PM Period	EB		WB		
0:00	17		12			12:00	228		176		
0:15	24		13			12:15	201		206		
0:30	22		8			12:30	236		214		
0:45	13	76	9	42	118	12:45	207	872	232	828	1700
1:00	18		6			13:00	199		198		
1:15	10		16			13:15	232		196		
1:30	8		7			13:30	205		231		
1:45	10	46	5	34	80	13:45	242	878	172	797	1675
2:00	7		4			14:00	217		217		
2:15	3		12			14:15	271		206		
2:30	10		11			14:30	348		189		
2:45	7	27	17	44	71	14:45	240	1076	256	868	1944
3:00	14		27			15:00	252		266		
3:15	6		34			15:15	220		302		
3:30	4		34			15:30	367		291		
3:45	6	30	36	131	161	15:45	539	1378	207	1066	2444
4:00	12		45			16:00	306		199		
4:15	7		45			16:15	318		205		
4:30	14		90			16:30	382		220		
4:45	12	45	93	273	318	16:45	364	1370	224	848	2218
5:00	13		91			17:00	388		191		
5:15	16		111			17:15	325		226		
5:30	27		114			17:30	343		204		
5:45	32	88	139	455	543	17:45	323	1379	227	848	2227
6:00	40		127			18:00	385		226		
6:15	52		161			18:15	314		190		
6:30	59		206			18:30	336		210		
6:45	96	247	244	738	985	18:45	327	1362	172	798	2160
7:00	83		296			19:00	287		157		
7:15	150		295			19:15	262		139		
7:30	175		337			19:30	234		132		
7:45	172	580	424	1352	1932	19:45	186	969	111	539	1508
8:00	211		483			20:00	197		122		
8:15	236		256			20:15	177		101		
8:30	203		198			20:30	158		96		
8:45	136	786	219	1156	1942	20:45	171	703	85	404	1107
9:00	140		177			21:00	135		84		
9:15	122		216			21:15	96		68		
9:30	161		211			21:30	126		60		
9:45	172	595	182	786	1381	21:45	93	450	46	258	708
10:00	160		173			22:00	61		42		
10:15	147		210			22:15	63		34		
10:30	160		179			22:30	62		27		
10:45	189	656	213	775	1431	22:45	34	220	36	139	359
11:00	177		239			23:00	46		21		
11:15	180		194			23:15	39		34		
11:30	215		218			23:30	41		21		
11:45	195	767	218	869	1636	23:45	26	152	24	100	252
Total Vol.		3943		6655	**10598**			10809		7493	**18302**

Daily Totals	EB	WB	**Combined**
	14752	14148	**28900**

	AM			**PM**		
Split %	37.2%	62.8%	**36.7%**	59.1%	40.9%	**63.3%**
Peak Hour	11:45	7:15	**7:30**	15:45	14:45	**15:00**
Volume	860	1539	**2294**	1545	1115	**2444**
P.H.F.	0.91	0.80	**0.83**	0.72	0.92	**0.82**

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Tuesday, October 08, 2024 CITY: Yucaipa PROJECT: SC4947

ADT4 Yucaipa Blvd east of 10th St. **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	EB		WB			PM Period	EB		WB		
0:00	16		11			12:00	231		174		
0:15	21		13			12:15	197		216		
0:30	19		7			12:30	234		224		
0:45	10	66	8	39	105	12:45	194	856	244	858	1714
1:00	18		5			13:00	197		201		
1:15	9		16			13:15	231		177		
1:30	9		6			13:30	217		230		
1:45	9	45	5	32	77	13:45	247	892	172	780	1672
2:00	6		3			14:00	231		222		
2:15	2		12			14:15	271		219		
2:30	8		9			14:30	338		193		
2:45	6	22	16	40	62	14:45	255	1095	267	901	1996
3:00	15		24			15:00	252		275		
3:15	5		33			15:15	216		303		
3:30	5		35			15:30	373		287		
3:45	4	29	35	127	156	15:45	514	1355	203	1068	2423
4:00	12		43			16:00	302		208		
4:15	10		41			16:15	311		213		
4:30	13		82			16:30	364		219		
4:45	15	50	86	252	302	16:45	357	1334	224	864	2198
5:00	15		82			17:00	381		206		
5:15	14		102			17:15	327		225		
5:30	30		98			17:30	332		205		
5:45	34	93	119	401	494	17:45	315	1355	242	878	2233
6:00	41		110			18:00	359		212		
6:15	62		138			18:15	300		198		
6:30	60		175			18:30	320		214		
6:45	92	255	218	641	896	18:45	306	1285	168	792	2077
7:00	89		266			19:00	258		171		
7:15	160		269			19:15	248		142		
7:30	187		321			19:30	223		138		
7:45	176	612	403	1259	1871	19:45	171	900	113	564	1464
8:00	216		463			20:00	186		128		
8:15	236		231			20:15	167		108		
8:30	204		183			20:30	143		100		
8:45	152	808	208	1085	1893	20:45	159	655	91	427	1082
9:00	141		175			21:00	125		99		
9:15	124		202			21:15	86		67		
9:30	163		207			21:30	106		63		
9:45	178	606	183	767	1373	21:45	88	405	50	279	684
10:00	161		174			22:00	56		44		
10:15	147		211			22:15	60		33		
10:30	170		179			22:30	57		22		
10:45	191	669	210	774	1443	22:45	32	205	39	138	343
11:00	185		234			23:00	37		24		
11:15	186		199			23:15	35		34		
11:30	208		218			23:30	33		20		
11:45	197	776	228	879	1655	23:45	22	127	23	101	228
Total Vol.		4031		6296	**10327**			10464		7650	**18114**

	Daily Totals EB	WB	**Combined**
	14495	13946	**28441**

	AM			**PM**		
Split %	39.0%	61.0%	**36.3%**	57.8%	42.2%	**63.7%**
Peak Hour	11:45	7:15	**7:30**	15:30	14:45	**15:00**
Volume	859	1456	**2233**	1500	1132	**2423**
P.H.F.	0.92	0.79	**0.82**	0.73	0.93	**0.84**

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Tuesday, October 08, 2024 CITY: Yucaipa PROJECT: SC4947

ADT5 Sand Canyon Rd north of Yucaipa Blvd. **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB			PM Period	NB		SB		
0:00	4		3			12:00	69		108		
0:15	3		2			12:15	87		76		
0:30	4		9			12:30	103		93		
0:45	5	16	2	16	32	12:45	101	360	101	378	738
1:00	3		4			13:00	69		89		
1:15	4		7			13:15	54		98		
1:30	3		3			13:30	80		73		
1:45	2	12	0	14	26	13:45	98	301	69	329	630
2:00	2		1			14:00	71		94		
2:15	3		3			14:15	72		149		
2:30	3		2			14:30	63		123		
2:45	2	10	3	9	19	14:45	94	300	109	475	775
3:00	1		3			15:00	81		128		
3:15	5		3			15:15	75		114		
3:30	3		6			15:30	83		151		
3:45	5	14	4	16	30	15:45	121	360	116	509	869
4:00	3		5			16:00	84		100		
4:15	3		8			16:15	110		131		
4:30	8		10			16:30	85		152		
4:45	17	31	9	32	63	16:45	94	373	151	534	907
5:00	9		11			17:00	80		147		
5:15	26		11			17:15	106		138		
5:30	30		10			17:30	99		162		
5:45	24	89	23	55	144	17:45	104	389	173	620	1009
6:00	19		22			18:00	90		123		
6:15	28		27			18:15	64		144		
6:30	36		32			18:30	61		105		
6:45	67	150	56	137	287	18:45	53	268	102	474	742
7:00	103		64			19:00	65		100		
7:15	124		69			19:15	52		84		
7:30	160		73			19:30	37		65		
7:45	145	532	65	271	803	19:45	55	209	43	292	501
8:00	142		79			20:00	58		70		
8:15	131		74			20:15	34		64		
8:30	112		69			20:30	38		45		
8:45	94	479	66	288	767	20:45	24	154	40	219	373
9:00	65		47			21:00	23		30		
9:15	89		51			21:15	27		29		
9:30	100		61			21:30	14		18		
9:45	157	411	80	239	650	21:45	12	76	19	96	172
10:00	82		90			22:00	13		15		
10:15	70		76			22:15	6		7		
10:30	74		47			22:30	8		10		
10:45	73	299	65	278	577	22:45	9	36	10	42	78
11:00	69		61			23:00	3		12		
11:15	73		37			23:15	12		7		
11:30	62		98			23:30	6		7		
11:45	85	289	108	304	593	23:45	6	27	5	31	58
Total Vol.		2332		1659	**3991**			2853		3999	**6852**

	Daily Totals		
	NB	SB	**Combined**
	5185	5658	**10843**

	AM			**PM**		
Split %	58.4%	41.6%	**36.8%**	41.6%	58.4%	**63.2%**
Peak Hour	7:30	11:30	**7:30**	15:45	17:00	**17:00**
Volume	578	390	**869**	400	620	**1009**
P.H.F.	0.90	0.90	**0.93**	0.83	0.90	**0.91**

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Tuesday, October 08, 2024 CITY: Yucaipa PROJECT: SC4947

ADT6 14th St south of Yucaipa Blvd. **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB			PM Period	NB		SB		
0:00	5		5			12:00	36		46		
0:15	4		4			12:15	54		51		
0:30	3		6			12:30	41		52		
0:45	3	15	5	20	35	12:45	63	194	64	213	407
1:00	1		2			13:00	45		54		
1:15	1		2			13:15	35		56		
1:30	2		4			13:30	44		48		
1:45	3	7	1	9	16	13:45	60	184	48	206	390
2:00	1		3			14:00	38		58		
2:15	3		5			14:15	45		86		
2:30	3		1			14:30	31		80		
2:45	3	10	3	12	22	14:45	57	171	79	303	474
3:00	4		1			15:00	77		82		
3:15	2		3			15:15	62		65		
3:30	3		2			15:30	55		100		
3:45	4	13	3	9	22	15:45	68	262	97	344	606
4:00	3		2			16:00	61		66		
4:15	4		5			16:15	79		78		
4:30	6		8			16:30	49		94		
4:45	11	24	8	23	47	16:45	59	248	88	326	574
5:00	8		7			17:00	55		77		
5:15	19		10			17:15	50		86		
5:30	24		8			17:30	58		91		
5:45	17	68	21	46	114	17:45	63	226	98	352	578
6:00	22		16			18:00	41		75		
6:15	29		16			18:15	33		99		
6:30	29		12			18:30	30		62		
6:45	45	125	20	64	189	18:45	28	132	67	303	435
7:00	68		37			19:00	29		68		
7:15	72		40			19:15	25		60		
7:30	108		41			19:30	22		43		
7:45	103	351	50	168	519	19:45	24	100	33	204	304
8:00	117		64			20:00	17		40		
8:15	117		78			20:15	17		34		
8:30	86		46			20:30	14		36		
8:45	58	378	35	223	601	20:45	7	55	23	133	188
9:00	50		28			21:00	15		17		
9:15	66		29			21:15	19		27		
9:30	66		25			21:30	11		20		
9:45	98	280	45	127	407	21:45	10	55	11	75	130
10:00	62		57			22:00	11		15		
10:15	41		42			22:15	5		7		
10:30	59		33			22:30	7		13		
10:45	43	205	45	177	382	22:45	12	35	19	54	89
11:00	42		38			23:00	6		8		
11:15	42		0			23:15	3		8		
11:30	42		45			23:30	5		6		
11:45	57	183	56	139	322	23:45	2	16	7	29	45
Total Vol.		1659		1017	**2676**			1678		2542	**4220**

Daily Totals

NB	SB	Combined
3337	3559	**6896**

	AM			PM		
Split %	62.0%	38.0%	**38.8%**	39.8%	60.2%	**61.2%**
Peak Hour	7:30	7:45	**7:30**	15:30	17:30	**15:00**
Volume	445	238	**678**	263	363	**606**
P.H.F.	0.95	0.76	**0.87**	0.83	0.92	**0.92**

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Tuesday, October 08, 2024 | CITY: Yucaipa | PROJECT: SC4947

ADT7 12th St south of Yucaipa Blvd.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB		SB			PM Period	NB		SB		
0:00	1		0			12:00	10		7		
0:15	0		0			12:15	11		2		
0:30	0		0			12:30	9		4		
0:45	0	1	1	1	2	12:45	6	36	2	15	51
1:00	1		0			13:00	10		10		
1:15	0		0			13:15	19		15		
1:30	0		0			13:30	11		14		
1:45	0	1	0	0	1	13:45	11	51	5	44	95
2:00	1		0			14:00	7		8		
2:15	1		0			14:15	17		16		
2:30	0		2			14:30	21		20		
2:45	0	2	0	2	4	14:45	7	52	13	57	109
3:00	0		0			15:00	33		14		
3:15	1		0			15:15	34		17		
3:30	0		1			15:30	25		37		
3:45	2	3	0	1	4	15:45	35	127	37	105	232
4:00	0		2			16:00	17		10		
4:15	2		0			16:15	21		11		
4:30	0		0			16:30	16		18		
4:45	5	7	0	2	9	16:45	17	71	7	46	117
5:00	0		0			17:00	17		15		
5:15	2		0			17:15	17		9		
5:30	2		0			17:30	17		13		
5:45	2	6	0	0	6	17:45	20	71	25	62	133
6:00	3		2			18:00	14		29		
6:15	4		3			18:15	14		17		
6:30	5		6			18:30	14		10		
6:45	9	21	6	17	38	18:45	11	53	11	67	120
7:00	21		10			19:00	3		12		
7:15	35		11			19:15	5		13		
7:30	24		13			19:30	11		7		
7:45	60	140	31	65	205	19:45	6	25	7	39	64
8:00	67		43			20:00	0		5		
8:15	77		38			20:15	2		8		
8:30	16		19			20:30	3		7		
8:45	10	170	4	104	274	20:45	5	10	4	24	34
9:00	14		10			21:00	4		6		
9:15	16		4			21:15	1		3		
9:30	8		9			21:30	0		1		
9:45	11	49	7	30	79	21:45	0	5	1	11	16
10:00	7		4			22:00	1		2		
10:15	12		8			22:15	1		1		
10:30	11		9			22:30	0		0		
10:45	9	39	19	40	79	22:45	0	2	1	4	6
11:00	9		6			23:00	0		0		
11:15	9		5			23:15	1		2		
11:30	6		8			23:30	2		3		
11:45	8	32	10	29	61	23:45	0	3	1	6	9
Total Vol.		471		291	**762**			506		480	**986**

Daily Totals

NB	SB	Combined
977	771	**1748**

	AM			PM		
Split %	61.8%	38.2%	**43.6%**	51.3%	48.7%	**56.4%**
Peak Hour	7:30	7:45	**7:30**	15:00	15:00	**15:00**
Volume	228	131	**353**	127	105	**232**
P.H.F.	0.74	0.76	**0.77**	0.91	0.71	**0.81**

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Tuesday, October 08, 2024 CITY: Yucaipa PROJECT: SC4947

ADT8 10th St south of Yucaipa Blvd. **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB			PM Period	NB		SB		
0:00	0		1			12:00	10		16		
0:15	1		1			12:15	15		12		
0:30	1		0			12:30	16		18		
0:45	0	2	0	2	4	12:45	9	50	19	65	115
1:00	0		1			13:00	13		14		
1:15	0		0			13:15	14		22		
1:30	0		0			13:30	19		13		
1:45	2	2	0	1	3	13:45	18	64	10	59	123
2:00	1		0			14:00	16		21		
2:15	0		1			14:15	15		18		
2:30	0		0			14:30	13		12		
2:45	0	1	0	1	2	14:45	14	58	17	68	126
3:00	0		1			15:00	22		11		
3:15	0		0			15:15	15		16		
3:30	0		0			15:30	26		14		
3:45	0	0	0	1	1	15:45	23	86	38	79	165
4:00	0		1			16:00	18		15		
4:15	0		0			16:15	21		13		
4:30	0		0			16:30	16		12		
4:45	1	1	7	8	9	16:45	14	69	21	61	130
5:00	0		4			17:00	27		16		
5:15	1		5			17:15	18		17		
5:30	0		6			17:30	11		10		
5:45	4	5	2	17	22	17:45	12	68	20	63	131
6:00	1		3			18:00	18		13		
6:15	3		9			18:15	14		19		
6:30	2		12			18:30	27		13		
6:45	10	16	13	37	53	18:45	19	78	15	60	138
7:00	12		23			19:00	10		14		
7:15	18		19			19:15	6		11		
7:30	9		14			19:30	10		6		
7:45	16	55	20	76	131	19:45	10	36	11	42	78
8:00	18		25			20:00	7		3		
8:15	27		15			20:15	10		9		
8:30	19		15			20:30	5		8		
8:45	15	79	8	63	142	20:45	5	27	5	25	52
9:00	7		6			21:00	6		8		
9:15	7		9			21:15	4		4		
9:30	4		6			21:30	4		6		
9:45	8	26	10	31	57	21:45	3	17	3	21	38
10:00	8		9			22:00	7		1		
10:15	8		16			22:15	8		4		
10:30	8		9			22:30	4		1		
10:45	10	34	5	39	73	22:45	1	20	6	12	32
11:00	16		10			23:00	2		1		
11:15	10		23			23:15	2		0		
11:30	8		14			23:30	0		0		
11:45	5	39	14	61	100	23:45	2	6	1	2	8
Total Vol.		260		337	**597**			579		557	**1136**

	Daily Totals		
	NB	SB	**Combined**
	839	894	**1733**

	AM			**PM**		
Split %	43.6%	56.4%	**34.4%**	51.0%	49.0%	**65.6%**
Peak Hour	7:45	7:15	**7:45**	15:30	15:15	**15:30**
Volume	80	78	**155**	88	83	**168**
P.H.F.	0.74	0.78	**0.90**	0.85	0.55	**0.69**

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Tuesday, October 08, 2024 CITY: Yucaipa PROJECT: SC4947

ADT9 Oak Glen Rd north of Yucaipa Blvd. **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB			PM Period	NB		SB		
0:00	9		9			12:00	139		108		
0:15	14		11			12:15	134		125		
0:30	8		7			12:30	117		119		
0:45	14	45	3	30	75	12:45	133	523	110	462	985
1:00	3		2			13:00	118		112		
1:15	4		4			13:15	150		121		
1:30	5		6			13:30	141		113		
1:45	3	15	3	15	30	13:45	162	571	122	468	1039
2:00	3		2			14:00	161		135		
2:15	1		9			14:15	188		147		
2:30	4		6			14:30	187		150		
2:45	1	9	17	34	43	14:45	178	714	244	676	1390
3:00	2		16			15:00	175		154		
3:15	2		19			15:15	164		140		
3:30	4		17			15:30	170		154		
3:45	4	12	17	69	81	15:45	216	725	147	595	1320
4:00	13		27			16:00	169		133		
4:15	8		37			16:15	164		129		
4:30	11		52			16:30	167		127		
4:45	7	39	60	176	215	16:45	165	665	125	514	1179
5:00	12		60			17:00	185		144		
5:15	13		73			17:15	155		147		
5:30	26		83			17:30	180		123		
5:45	46	97	78	294	391	17:45	162	682	130	544	1226
6:00	46		87			18:00	143		109		
6:15	50		135			18:15	146		103		
6:30	52		160			18:30	140		94		
6:45	88	236	201	583	819	18:45	154	583	109	415	998
7:00	96		223			19:00	122		94		
7:15	117		195			19:15	144		66		
7:30	124		269			19:30	128		54		
7:45	138	475	269	956	1431	19:45	109	503	56	270	773
8:00	93		293			20:00	102		53		
8:15	100		143			20:15	112		54		
8:30	96		141			20:30	111		38		
8:45	88	377	114	691	1068	20:45	115	440	45	190	630
9:00	93		110			21:00	85		42		
9:15	72		135			21:15	71		23		
9:30	93		127			21:30	65		23		
9:45	99	357	97	469	826	21:45	42	263	17	105	368
10:00	72		99			22:00	54		12		
10:15	90		107			22:15	38		15		
10:30	101		103			22:30	36		7		
10:45	96	359	128	437	796	22:45	26	154	24	58	212
11:00	97		107			23:00	35		11		
11:15	128		133			23:15	27		12		
11:30	93		121			23:30	20		10		
11:45	103	421	115	476	897	23:45	18	100	5	38	138
Total Vol.		2442		4230	**6672**			5923		4335	**10258**

	Daily Totals		
	NB	SB	**Combined**
	8365	8565	**16930**

	AM			**PM**		
Split %	36.6%	63.4%	**39.4%**	57.7%	42.3%	**60.6%**
Peak Hour	11:45	7:15	**7:15**	14:15	14:15	**14:15**
Volume	493	1026	**1498**	728	695	**1423**
P.H.F.	0.89	0.88	**0.92**	0.97	0.71	**0.84**

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Tuesday, October 08, 2024 CITY: Yucaipa PROJECT: SC4947

ADT10 Oak Glen Rd south of Yucaipa Blvd. **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB			PM Period	NB		SB		
0:00	13		5			12:00	145		131		
0:15	11		6			12:15	121		138		
0:30	7		4			12:30	129		117		
0:45	13	44	1	16	60	12:45	148	543	118	504	1047
1:00	2		3			13:00	128		132		
1:15	2		1			13:15	135		130		
1:30	5		4			13:30	153		107		
1:45	4	13	2	10	23	13:45	142	558	146	515	1073
2:00	5		4			14:00	147		114		
2:15	6		9			14:15	154		140		
2:30	3		6			14:30	178		152		
2:45	4	18	8	27	45	14:45	164	643	205	611	1254
3:00	1		8			15:00	166		164		
3:15	6		11			15:15	159		142		
3:30	8		12			15:30	181		159		
3:45	3	18	10	41	59	15:45	175	681	133	598	1279
4:00	14		18			16:00	139		129		
4:15	12		29			16:15	154		131		
4:30	11		37			16:30	121		120		
4:45	11	48	37	121	169	16:45	115	529	139	519	1048
5:00	18		43			17:00	155		161		
5:15	20		50			17:15	123		144		
5:30	24		68			17:30	130		121		
5:45	48	110	55	216	326	17:45	142	550	108	534	1084
6:00	45		75			18:00	117		130		
6:15	47		113			18:15	89		111		
6:30	52		132			18:30	105		83		
6:45	73	217	142	462	679	18:45	92	403	105	429	832
7:00	95		158			19:00	77		103		
7:15	88		158			19:15	102		82		
7:30	98		181			19:30	77		63		
7:45	116	397	174	671	1068	19:45	87	343	56	304	647
8:00	104		211			20:00	85		59		
8:15	111		127			20:15	79		47		
8:30	120		124			20:30	81		46		
8:45	126	461	81	543	1004	20:45	76	321	44	196	517
9:00	110		99			21:00	51		43		
9:15	74		110			21:15	71		28		
9:30	117		107			21:30	57		27		
9:45	128	429	100	416	845	21:45	41	220	11	109	329
10:00	104		113			22:00	43		10		
10:15	116		99			22:15	30		12		
10:30	126		113			22:30	36		6		
10:45	111	457	108	433	890	22:45	24	133	11	39	172
11:00	118		106			23:00	24		14		
11:15	153		141			23:15	28		7		
11:30	112		116			23:30	18		9		
11:45	122	505	107	470	975	23:45	22	92	6	36	128
Total Vol.		2717		3426	**6143**			5016		4394	**9410**

Daily Totals

NB	SB	Combined
7733	7820	**15553**

	AM			PM		
Split %	44.2%	55.8%	**39.5%**	53.3%	46.7%	**60.5%**
Peak Hour	11:15	7:15	**7:15**	15:00	14:45	**14:45**
Volume	532	724	**1130**	681	670	**1340**
P.H.F.	0.87	0.86	**0.90**	0.94	0.82	**0.91**

cs@aimtd.com Tell. 714 253 7888

APPENDIX D

HCM ANALYSIS WORKSHEETS

EXISTING TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: 14th St-Sand Canyon Rd/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	28.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.419

Intersection Setup

Name	14th Street			Sand Canyon Road			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	120.00	100.00	120.00	165.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			50.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	14th Street			Sand Canyon Road			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	27	334	84	108	116	67	54	458	16	101	688	190
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	334	84	108	116	67	54	458	16	101	688	190
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	89	22	29	31	18	14	121	4	27	182	50
Total Analysis Volume [veh/h]	29	354	89	115	123	71	57	486	17	107	730	201
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	35	0	0	29	0	8	19	0	11	22	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	18	23	0	21	26	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	14	14	10	10	10	5	62	62	8	66	66
g / C, Green / Cycle	0.13	0.13	0.13	0.09	0.09	0.09	0.04	0.56	0.56	0.07	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.10	0.10	0.06	0.06	0.06	0.04	0.03	0.09	0.09	0.06	0.17	0.18
s, saturation flow rate [veh/h]	1886	1900	1615	1810	1900	1615	1810	3618	1867	1810	3618	1699
c, Capacity [veh/h]	239	240	204	166	174	148	75	2033	1049	135	2153	1011
d1, Uniform Delay [s]	46.70	46.69	44.41	48.47	48.53	47.47	52.19	11.62	11.63	50.06	10.92	10.94
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.13	6.03	1.46	5.13	5.19	2.40	14.68	0.17	0.34	9.94	0.35	0.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.80	0.44	0.69	0.71	0.48	0.76	0.16	0.16	0.79	0.29	0.30
d, Delay for Lane Group [s/veh]	52.83	52.72	45.88	53.60	53.72	49.88	66.87	11.79	11.97	60.00	11.27	11.69
Lane Group LOS	D	D	D	D	D	D	E	B	B	E	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.42	5.44	2.30	3.18	3.40	1.88	1.83	1.88	2.00	3.21	3.55	3.48
50th-Percentile Queue Length [ft/ln]	135.43	136.02	57.61	79.51	85.09	46.98	45.82	46.91	49.96	80.23	88.83	87.11
95th-Percentile Queue Length [veh/ln]	9.23	9.27	4.15	5.72	6.13	3.38	3.30	3.38	3.60	5.78	6.40	6.27
95th-Percentile Queue Length [ft/ln]	230.86	231.65	103.69	143.12	153.17	84.57	82.47	84.44	89.93	144.41	159.90	156.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.83	52.77	45.88	53.60	53.72	49.88	66.87	11.85	11.97	60.00	11.32	11.69
Movement LOS	D	D	D	D	D	D	E	B	B	E	B	B
d_A, Approach Delay [s/veh]	51.47			52.79			17.45			16.41		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	28.34											
Intersection LOS	C											
Intersection V/C	0.419											

Emissions

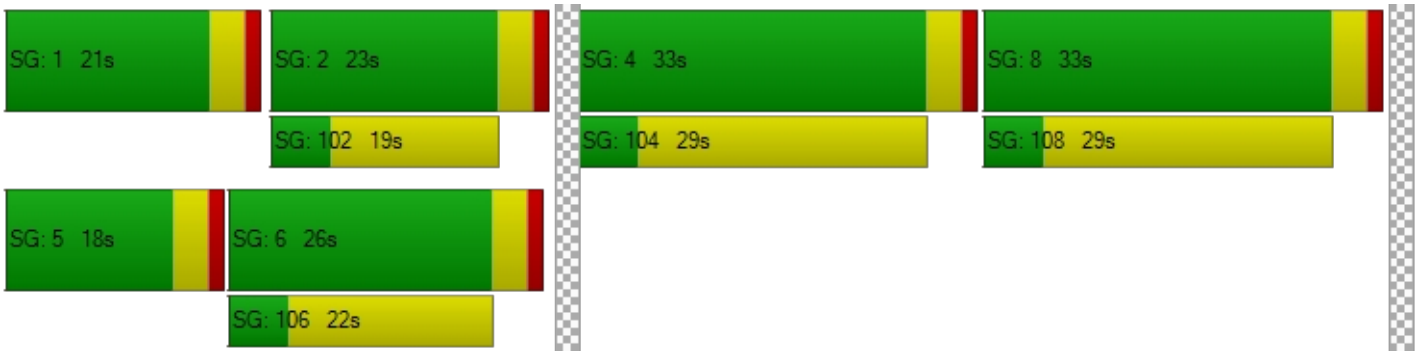
Vehicle Miles Traveled [mph]	13.79	13.87	6.43	6.73	7.19	4.15	4.42	25.68	13.34	26.67	157.48	74.61
Stops [stops/h]	177.30	178.06	75.41	104.09	111.39	61.50	59.98	122.82	65.41	105.03	232.58	114.03
Fuel consumption [US gal/h]	3.91	3.93	1.64	3.08	3.30	1.80	1.52	2.92	1.54	3.29	9.37	4.50
CO [g/h]	273.44	274.55	114.85	215.10	230.34	126.08	106.47	204.17	107.60	230.21	655.27	314.87
NOx [g/h]	53.20	53.42	22.34	41.85	44.82	24.53	20.72	39.72	20.93	44.79	127.49	61.26
VOC [g/h]	63.37	63.63	26.62	49.85	53.38	29.22	24.68	47.32	24.94	53.35	151.87	72.97

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
I_p,int, Pedestrian LOS Score for Intersectio	2.347	2.610	2.863	2.926
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	527	527	345	400
d_b, Bicycle Delay [s]	29.82	29.82	37.64	35.20
I_b,int, Bicycle LOS Score for Intersection	1.949	2.069	1.868	2.131
Bicycle LOS	A	B	A	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: 13th St/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	14.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.488

Intersection Setup

Name	13th Street			13th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	13th Street			13th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	27	91	74	73	49	76	80	529	28	72	874	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	91	74	73	49	76	80	529	28	72	874	107
Peak Hour Factor	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	26	21	21	14	22	23	153	8	21	252	31
Total Analysis Volume [veh/h]	31	105	85	84	57	88	92	611	32	83	1009	124
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	29	0	0	29	0	14	12	0	17	15	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	10	0	0	7	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	18	16	0	21	19	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	14	14	5	40	40	4	40	40
g / C, Green / Cycle	0.20	0.20	0.20	0.07	0.57	0.57	0.06	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.14	0.07	0.08	0.05	0.12	0.12	0.05	0.21	0.21
s, saturation flow rate [veh/h]	1538	1212	1716	1810	3618	1852	1810	3618	1796
c, Capacity [veh/h]	361	152	337	120	2069	1060	109	2047	1016
d1, Uniform Delay [s]	26.29	27.58	24.69	32.13	7.26	7.27	32.40	8.35	8.35
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.69	3.14	0.87	9.62	0.22	0.44	10.43	0.52	1.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.55	0.43	0.76	0.21	0.21	0.76	0.37	0.37
d, Delay for Lane Group [s/veh]	27.98	30.72	25.56	41.75	7.49	7.71	42.83	8.86	9.39
Lane Group LOS	C	C	C	D	A	A	D	A	A
Critical Lane Group	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.55	1.46	2.13	1.76	1.26	1.37	1.61	2.59	2.73
50th-Percentile Queue Length [ft/ln]	88.68	36.58	53.35	43.93	31.60	34.18	40.37	64.84	68.17
95th-Percentile Queue Length [veh/ln]	6.39	2.63	3.84	3.16	2.28	2.46	2.91	4.67	4.91
95th-Percentile Queue Length [ft/ln]	159.63	65.84	96.04	79.08	56.89	61.52	72.67	116.70	122.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.98	27.98	27.98	30.72	25.56	25.56	41.75	7.55	7.71	42.83	8.99	9.39
Movement LOS	C	C	C	C	C	C	D	A	A	D	A	A
d_A, Approach Delay [s/veh]	27.98			27.45			11.84			11.34		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	14.56											
Intersection LOS	B											
Intersection V/C	0.488											

Emissions

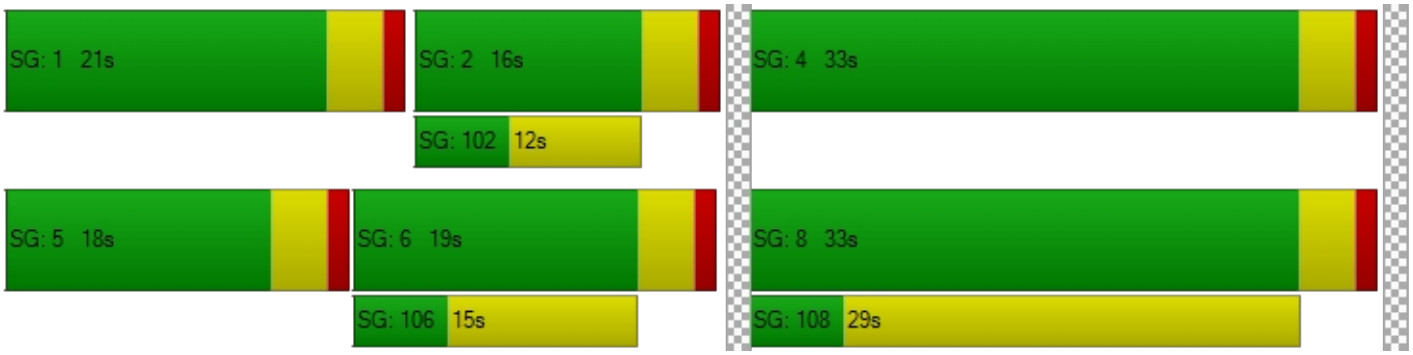
Vehicle Miles Traveled [mph]	14.70	5.89	10.17	22.93	105.79	54.50	20.71	188.86	93.88
Stops [stops/h]	182.44	75.25	109.76	90.38	130.03	70.30	83.05	266.75	140.24
Fuel consumption [US gal/h]	2.62	1.08	1.63	2.49	5.71	2.99	2.28	10.75	5.46
CO [g/h]	183.09	75.41	114.12	174.12	399.37	208.72	159.46	751.46	381.61
NOx [g/h]	35.62	14.67	22.20	33.88	77.70	40.61	31.03	146.21	74.25
VOC [g/h]	42.43	17.48	26.45	40.35	92.56	48.37	36.96	174.16	88.44

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	0.00	26.58
l_p,int, Pedestrian LOS Score for Intersectio	1.863	2.078	0.000	3.073
Crosswalk LOS	A	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	829	829	343	429
d_b, Bicycle Delay [s]	12.01	12.01	24.03	21.61
l_b,int, Bicycle LOS Score for Intersection	1.924	1.937	1.964	2.228
Bicycle LOS	A	A	A	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: 10th St/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.622

Intersection Setup

Name	10th Street			10th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	10th Street			10th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	32	16	22	55	46	122	42	734	15	13	1343	58
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	16	22	55	46	122	42	734	15	13	1343	58
Peak Hour Factor	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	5	7	17	14	37	13	221	5	4	404	17
Total Analysis Volume [veh/h]	39	19	26	66	55	147	51	883	18	16	1616	70
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	31	0	0	31	0	5	12	0	5	12	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	9	16	0	11	18	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	3	35	35	1	33	33
g / C, Green / Cycle	0.19	0.19	0.05	0.59	0.59	0.02	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.06	0.16	0.03	0.16	0.16	0.01	0.31	0.31
s, saturation flow rate [veh/h]	1411	1660	1810	3618	1881	1810	3618	1860
c, Capacity [veh/h]	364	400	87	2113	1098	37	2012	1035
d1, Uniform Delay [s]	20.35	22.99	27.98	6.21	6.21	29.05	8.53	8.54
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	1.95	6.17	0.33	0.64	7.96	1.10	2.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.67	0.59	0.28	0.28	0.44	0.55	0.55
d, Delay for Lane Group [s/veh]	20.67	24.94	34.14	6.54	6.85	37.01	9.64	10.67
Lane Group LOS	C	C	C	A	A	D	A	B
Critical Lane Group	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.94	3.50	0.81	1.36	1.51	0.29	3.55	3.95
50th-Percentile Queue Length [ft/ln]	23.53	87.42	20.16	34.05	37.79	7.27	88.82	98.82
95th-Percentile Queue Length [veh/ln]	1.69	6.29	1.45	2.45	2.72	0.52	6.40	7.12
95th-Percentile Queue Length [ft/ln]	42.35	157.36	36.29	61.29	68.03	13.09	159.88	177.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.67	20.67	20.67	24.94	24.94	24.94	34.14	6.64	6.85	37.01	9.96	10.67
Movement LOS	C	C	C	C	C	C	C	A	A	D	A	B
d_A, Approach Delay [s/veh]	20.67			24.94			8.12			10.24		
Approach LOS	C			C			A			B		
d_I, Intersection Delay [s/veh]	11.17											
Intersection LOS	B											
Intersection V/C	0.622											

Emissions

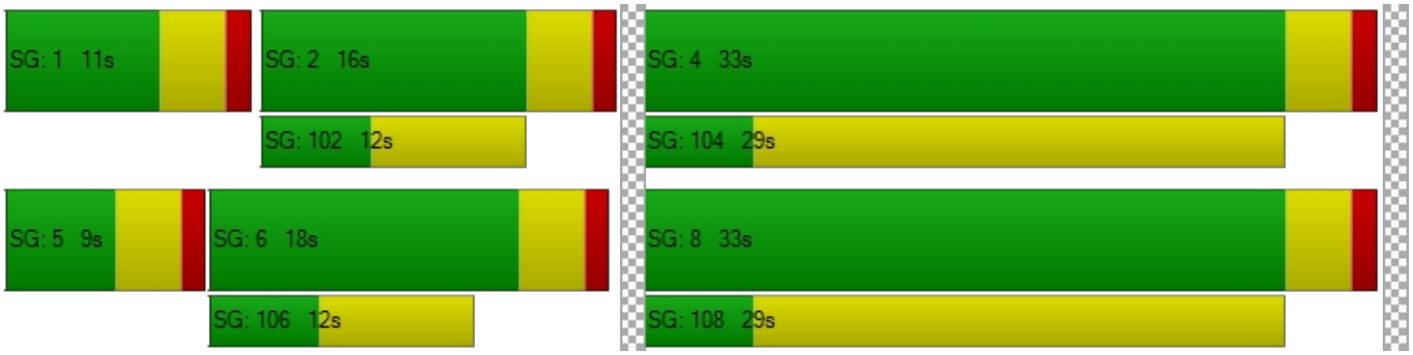
Vehicle Miles Traveled [mph]	5.96	19.62	7.90	91.84	47.80	4.39	305.74	157.28
Stops [stops/h]	56.46	209.81	48.38	163.45	90.70	17.45	426.35	237.17
Fuel consumption [US gal/h]	1.01	3.69	1.11	5.68	3.03	0.45	17.32	9.21
CO [g/h]	70.27	257.67	77.79	397.34	212.03	31.41	1210.90	643.60
NOx [g/h]	13.67	50.13	15.13	77.31	41.25	6.11	235.60	125.22
VOC [g/h]	16.29	59.72	18.03	92.09	49.14	7.28	280.64	149.16

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	1.794	1.928	3.142	3.166
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	967	967	400	467
d_b, Bicycle Delay [s]	8.01	8.01	19.20	17.63
l_b,int, Bicycle LOS Score for Intersection	1.698	2.002	2.083	2.496
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Oak Glen Rd/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	30.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.759

Intersection Setup

Name	Oak Glen Road			Oak Glen Road			Yucaipa Boulevard				Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound				Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	2	0	0	0	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	250.00	100.00	150.00	325.0	100.0	100.0	100.0	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			45.00			40.00				40.00		
Grade [%]	0.00			0.00			0.00				0.00		
Curb Present	No			No			No				No		
Crosswalk	Yes			Yes			Yes				Yes		

Volumes

Name	Oak Glen Road			Oak Glen Road			Yucaipa Boulevard				Yucaipa Boulevard		
Base Volume Input [veh/h]	46	234	149	35	460	475	0	203	554	26	207	932	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00												
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	234	149	35	460	475	0	203	554	26	207	932	14
Peak Hour Factor	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.879	0.879	0.879	0.879	0.8790	0.8790	0.8790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	67	42	10	131	135	0	58	158	7	59	265	4
Total Analysis Volume [veh/h]	52	266	170	40	523	540	0	231	630	30	235	1060	16
Presence of On-Street Parking	No		No	No		No	No			No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0				0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0				0		
v_co, Outbound Pedestrian Volume crossing	0			0			0				0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0				0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0				0		
Bicycle Volume [bicycles/h]	0			0			0				0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	5	2	0	1	6	0
Auxiliary Signal Groups													
Maximum Green [s]	5	32	0	9	36	0	0	7	22	0	11	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	27	0	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	13	36	0	13	36	0	0	11	26	0	15	30	0
Lead / Lag	Lead	-	-	Lead	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No			No	No		No	No	
Maximum Recall	No	No		No	No			No	No		No	No	
Pedestrian Recall	No	No		No	No			No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	33	33	3	33	33	7	30	30	8	31	31
g / C, Green / Cycle	0.04	0.37	0.37	0.04	0.36	0.36	0.08	0.33	0.33	0.09	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.03	0.12	0.12	0.02	0.14	0.33	0.07	0.12	0.12	0.07	0.20	0.20
s, saturation flow rate [veh/h]	1810	1900	1659	1810	3618	1615	3514	3618	1856	3514	3618	1886
c, Capacity [veh/h]	77	698	609	67	1310	585	273	1186	608	317	1230	641
d1, Uniform Delay [s]	42.50	20.49	20.58	42.66	21.40	27.51	40.97	23.12	23.13	39.93	24.36	24.36
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.32	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.08	0.27	0.33	8.14	0.20	16.18	7.05	0.88	1.72	3.44	1.96	3.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.33	0.34	0.60	0.40	0.92	0.85	0.37	0.37	0.74	0.57	0.58
d, Delay for Lane Group [s/veh]	52.58	20.76	20.91	50.80	21.60	43.69	48.02	24.00	24.85	43.36	26.32	28.09
Lane Group LOS	D	C	C	D	C	D	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.32	3.30	3.00	0.99	3.82	12.67	2.71	3.47	3.72	2.60	6.11	6.69
50th-Percentile Queue Length [ft/ln]	32.97	82.60	75.00	24.80	95.45	316.63	67.63	86.87	93.03	64.91	152.87	167.23
95th-Percentile Queue Length [veh/ln]	2.37	5.95	5.40	1.79	6.87	18.50	4.87	6.25	6.70	4.67	10.17	10.93
95th-Percentile Queue Length [ft/ln]	59.34	148.68	135.00	44.63	171.81	462.54	121.74	156.37	167.46	116.84	254.25	273.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.58	20.78	20.91	50.80	21.60	43.69	48.02	48.02	24.26	24.85	43.36	26.91	28.09
Movement LOS	D	C	C	D	C	D	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	24.21			33.47			30.44				29.87		
Approach LOS	C			C			C				C		
d_I, Intersection Delay [s/veh]	30.33												
Intersection LOS	C												
Intersection V/C	0.759												

Emissions

Vehicle Miles Traveled [mph]	3.92	17.29	15.59	3.91	51.09	52.75	63.44	119.65	61.61	35.32	106.32	55.42
Stops [stops/h]	52.75	132.16	120.00	39.67	305.43	506.60	216.43	277.99	148.85	207.72	489.17	267.57
Fuel consumption [US gal/h]	1.21	2.89	2.62	1.04	7.85	12.91	6.66	9.14	4.80	5.38	12.40	6.72
CO [g/h]	84.93	201.74	182.91	72.75	548.56	902.23	465.23	639.21	335.77	376.03	866.93	469.81
NOx [g/h]	16.52	39.25	35.59	14.15	106.73	175.54	90.52	124.37	65.33	73.16	168.67	91.41
VOC [g/h]	19.68	46.76	42.39	16.86	127.13	209.10	107.82	148.14	77.82	87.15	200.92	108.88

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.633	2.848	3.140	3.076
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	711	711	489	578
d_b, Bicycle Delay [s]	18.69	18.69	25.69	22.76
l_b,int, Bicycle LOS Score for Intersection	1.962	2.470	1.923	2.281
Bicycle LOS	A	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 1: 14th St-Sand Canyon Rd/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	26.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.464

Intersection Setup

Name	14th Street			Sand Canyon Road			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	120.00	100.00	120.00	165.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			50.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	14th Street			Sand Canyon Road			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	29	131	53	262	268	58	91	1056	46	31	626	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	131	53	262	268	58	91	1056	46	31	626	143
Peak Hour Factor	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	33	14	67	68	15	23	270	12	8	160	37
Total Analysis Volume [veh/h]	30	134	54	268	274	59	93	1079	47	32	639	146
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	29	0	0	33	0	9	27	0	5	23	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	18	23	0	21	26	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10	19	19	19	7	62	62	3	58	58
g / C, Green / Cycle	0.09	0.09	0.09	0.17	0.17	0.17	0.07	0.56	0.56	0.03	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.04	0.04	0.03	0.15	0.15	0.04	0.05	0.21	0.21	0.02	0.15	0.15
s, saturation flow rate [veh/h]	1866	1900	1615	1810	1899	1615	1810	3618	1860	1810	3618	1727
c, Capacity [veh/h]	171	174	148	309	324	276	119	2038	1048	52	1905	909
d1, Uniform Delay [s]	47.48	47.45	46.97	44.29	44.27	39.25	50.62	13.20	13.20	52.81	14.43	14.48
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.07	2.00	1.51	6.80	6.41	0.38	10.69	0.51	0.98	11.09	0.36	0.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.47	0.37	0.86	0.85	0.21	0.78	0.36	0.37	0.61	0.28	0.28
d, Delay for Lane Group [s/veh]	49.55	49.45	48.48	51.09	50.68	39.63	61.32	13.70	14.18	63.90	14.79	15.25
Lane Group LOS	D	D	D	D	D	D	E	B	B	E	B	B
Critical Lane Group	Yes	No	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.21	2.22	1.44	7.27	7.57	1.35	2.82	4.82	5.09	1.02	3.53	3.55
50th-Percentile Queue Length [ft/ln]	55.14	55.44	35.99	181.68	189.24	33.72	70.62	120.39	127.34	25.48	88.32	88.67
95th-Percentile Queue Length [veh/ln]	3.97	3.99	2.59	11.69	12.08	2.43	5.08	8.41	8.79	1.83	6.36	6.38
95th-Percentile Queue Length [ft/ln]	99.24	99.80	64.78	292.21	302.04	60.69	127.11	210.36	219.87	45.86	158.98	159.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.55	49.49	48.48	51.09	50.68	39.63	61.32	13.85	14.18	63.90	14.87	15.25
Movement LOS	D	D	D	D	D	D	E	B	B	E	B	B
d_A, Approach Delay [s/veh]	49.25			49.78			17.49			16.86		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	26.53											
Intersection LOS	C											
Intersection V/C	0.464											

Emissions

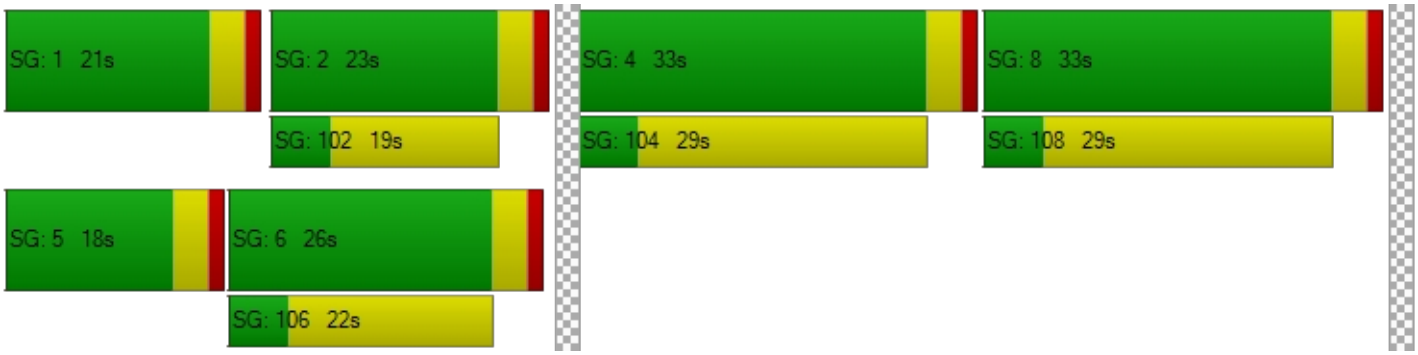
Vehicle Miles Traveled [mph]	5.90	5.94	3.90	15.49	16.21	3.45	7.22	57.69	29.67	7.98	131.70	63.99
Stops [stops/h]	72.18	72.58	47.12	237.83	247.73	44.14	92.44	315.20	166.70	33.35	231.25	116.07
Fuel consumption [US gal/h]	1.59	1.60	1.04	6.92	7.20	1.27	2.33	7.24	3.80	1.03	8.58	4.23
CO [g/h]	111.25	111.88	72.39	483.90	503.56	88.69	162.65	505.83	265.93	71.96	599.72	295.62
NOx [g/h]	21.65	21.77	14.09	94.15	97.97	17.26	31.65	98.42	51.74	14.00	116.68	57.52
VOC [g/h]	25.78	25.93	16.78	112.15	116.71	20.56	37.70	117.23	61.63	16.68	138.99	68.51

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	2.305	2.628	2.967	3.017
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	527	527	345	400
d_b, Bicycle Delay [s]	29.82	29.82	37.64	35.20
l_b,int, Bicycle LOS Score for Intersection	1.739	2.551	2.230	2.009
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: 13th St/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	8.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.419

Intersection Setup

Name	13th Street			13th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	13th Street			13th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	30	26	40	33	19	28	34	1324	19	36	747	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	26	40	33	19	28	34	1324	19	36	747	53
Peak Hour Factor	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	7	11	9	5	7	9	349	5	9	197	14
Total Analysis Volume [veh/h]	32	27	42	35	20	30	36	1395	20	38	787	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	29	0	0	29	0	5	22	0	7	24	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	10	0	0	7	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	18	20	0	17	19	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	9	3	47	47	3	47	47
g / C, Green / Cycle	0.12	0.12	0.12	0.04	0.67	0.67	0.04	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.07	0.03	0.03	0.02	0.26	0.26	0.02	0.15	0.16
s, saturation flow rate [veh/h]	1471	1353	1718	1810	3618	1886	1810	3618	1836
c, Capacity [veh/h]	250	157	213	66	2412	1258	69	2417	1227
d1, Uniform Delay [s]	28.78	27.92	27.67	33.14	5.23	5.23	33.09	4.56	4.57
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.05	0.71	0.56	6.77	0.47	0.90	6.82	0.22	0.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.40	0.22	0.23	0.54	0.39	0.39	0.55	0.23	0.23
d, Delay for Lane Group [s/veh]	29.83	28.63	28.23	39.92	5.70	6.13	39.91	4.78	5.01
Lane Group LOS	C	C	C	D	A	A	D	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.64	0.55	0.77	0.69	2.11	2.35	0.73	1.10	1.20
50th-Percentile Queue Length [ft/ln]	41.11	13.86	19.35	17.26	52.83	58.83	18.17	27.45	29.90
95th-Percentile Queue Length [veh/ln]	2.96	1.00	1.39	1.24	3.80	4.24	1.31	1.98	2.15
95th-Percentile Queue Length [ft/ln]	73.99	24.95	34.83	31.06	95.10	105.90	32.70	49.41	53.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.83	29.83	29.83	28.63	28.23	28.23	39.92	5.84	6.13	39.91	4.85	5.01
Movement LOS	C	C	C	C	C	C	D	A	A	D	A	A
d_A, Approach Delay [s/veh]	29.83			28.39			6.69			6.37		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	8.24											
Intersection LOS	A											
Intersection V/C	0.419											

Emissions

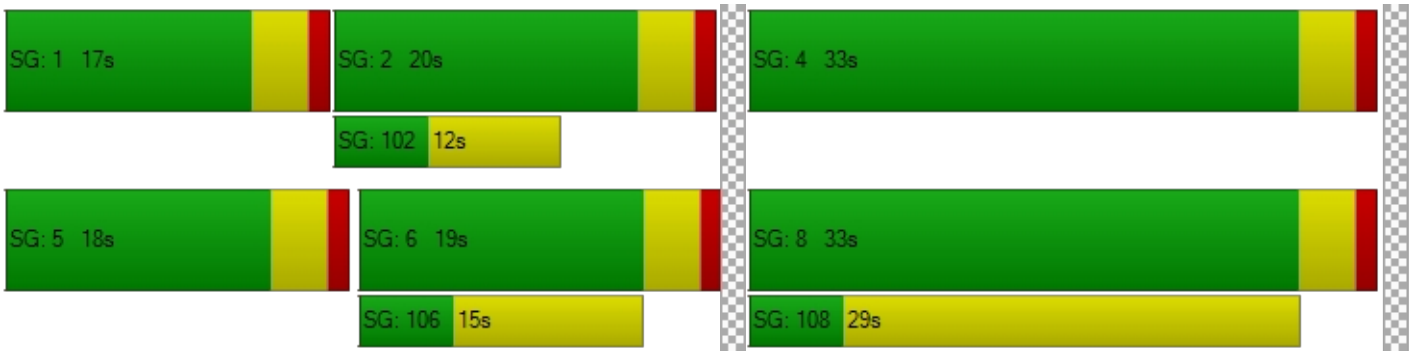
Vehicle Miles Traveled [mph]	6.72	2.46	3.51	8.97	231.85	120.89	9.48	139.29	71.08
Stops [stops/h]	84.56	28.51	39.81	35.50	217.37	121.02	37.37	112.95	61.51
Fuel consumption [US gal/h]	1.24	0.42	0.60	0.96	11.52	6.12	1.02	6.64	3.44
CO [g/h]	86.64	29.62	41.77	67.29	805.21	428.08	70.98	464.32	240.51
NOx [g/h]	16.86	5.76	8.13	13.09	156.66	83.29	13.81	90.34	46.79
VOC [g/h]	20.08	6.86	9.68	15.59	186.61	99.21	16.45	107.61	55.74

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	0.00	26.58
l_p,int, Pedestrian LOS Score for Intersectio	1.776	1.984	0.000	3.070
Crosswalk LOS	A	A	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	829	829	457	429
d_b, Bicycle Delay [s]	12.01	12.01	20.83	21.61
l_b,int, Bicycle LOS Score for Intersection	1.726	1.700	2.358	2.044
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: 10th St/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	9.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.443

Intersection Setup

Name	10th Street			10th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	10th Street			10th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	14	38	23	62	21	64	97	1336	25	20	782	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	38	23	62	21	64	97	1336	25	20	782	64
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	10	6	16	5	16	25	341	6	5	199	16
Total Analysis Volume [veh/h]	14	39	23	63	21	65	99	1363	26	20	798	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	29	0	0	29	0	37	44	0	5	12	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	11	18	0	9	16	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	4	37	37	1	35	35
g / C, Green / Cycle	0.15	0.15	0.07	0.62	0.62	0.02	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.04	0.09	0.05	0.25	0.25	0.01	0.16	0.16
s, saturation flow rate [veh/h]	1778	1640	1810	3618	1882	1810	3618	1828
c, Capacity [veh/h]	347	340	128	2245	1168	44	2075	1049
d1, Uniform Delay [s]	22.35	23.35	27.39	5.78	5.78	28.89	6.48	6.48
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	0.89	9.33	0.55	1.05	7.34	0.33	0.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.44	0.77	0.41	0.41	0.46	0.28	0.28
d, Delay for Lane Group [s/veh]	22.66	24.24	36.72	6.33	6.83	36.23	6.81	7.14
Lane Group LOS	C	C	D	A	A	D	A	A
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.90	1.87	1.61	1.98	2.22	0.35	1.37	1.49
50th-Percentile Queue Length [ft/ln]	22.55	46.70	40.13	49.52	55.61	8.76	34.19	37.16
95th-Percentile Queue Length [veh/ln]	1.62	3.36	2.89	3.57	4.00	0.63	2.46	2.68
95th-Percentile Queue Length [ft/ln]	40.59	84.06	72.23	89.14	100.10	15.77	61.53	66.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.66	22.66	22.66	24.24	24.24	24.24	36.72	6.49	6.83	36.23	6.90	7.14
Movement LOS	C	C	C	C	C	C	D	A	A	D	A	A
d_A, Approach Delay [s/veh]	22.66			24.24			8.51			7.58		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	9.51											
Intersection LOS	A											
Intersection V/C	0.443											

Emissions

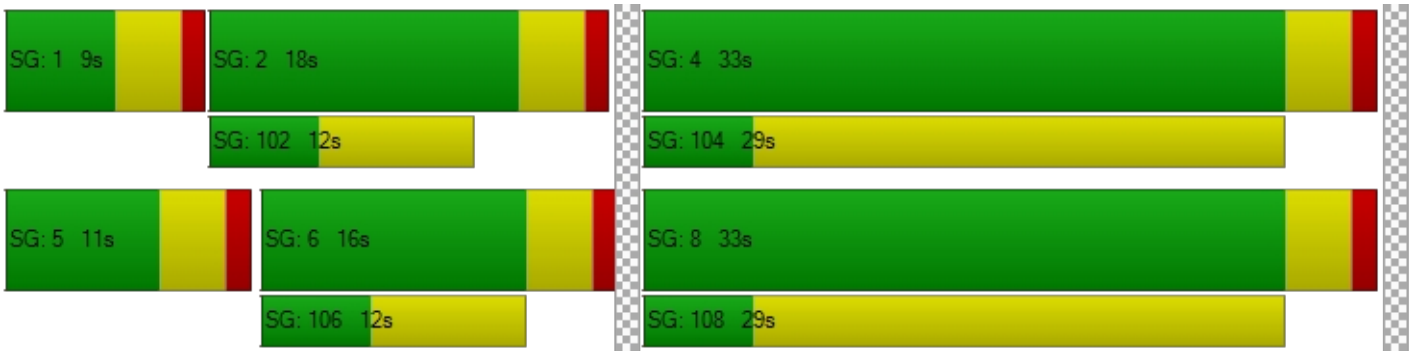
Vehicle Miles Traveled [mph]	5.39	10.91	15.34	141.62	73.67	5.49	157.13	79.87
Stops [stops/h]	54.13	112.08	96.31	237.71	133.47	21.03	164.09	89.18
Fuel consumption [US gal/h]	0.96	1.99	2.24	8.58	4.61	0.55	8.03	4.16
CO [g/h]	67.32	139.37	156.26	600.06	322.30	38.50	561.53	290.77
NOx [g/h]	13.10	27.12	30.40	116.75	62.71	7.49	109.25	56.57
VOC [g/h]	15.60	32.30	36.21	139.07	74.70	8.92	130.14	67.39

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	1.777	1.896	3.034	3.097
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	967	967	467	400
d_b, Bicycle Delay [s]	8.01	8.01	17.63	19.20
l_b,int, Bicycle LOS Score for Intersection	1.685	1.805	2.378	2.045
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Oak Glen Rd/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	28.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.538

Intersection Setup

Name	Oak Glen Road			Oak Glen Road			Yucaipa Boulevard				Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound				Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	2	0	0	0	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	250.00	100.00	150.00	325.0	100.0	100.0	100.0	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			45.00			40.00				40.00		
Grade [%]	0.00			0.00			0.00				0.00		
Curb Present	No			No			No				No		
Crosswalk	Yes			Yes			Yes				Yes		

Volumes

Name	Oak Glen Road			Oak Glen Road			Yucaipa Boulevard				Yucaipa Boulevard		
Base Volume Input [veh/h]	53	271	199	61	261	205	0	384	1007	41	263	653	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00												
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	53	271	199	61	261	205	0	384	1007	41	263	653	18
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.982	0.982	0.982	0.982	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	69	51	16	66	52	0	98	256	10	67	166	5
Total Analysis Volume [veh/h]	54	276	203	62	266	209	0	391	1025	42	268	665	18
Presence of On-Street Parking	No		No	No		No	No			No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0				0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0				0		
v_co, Outbound Pedestrian Volume crossing	0			0			0				0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0				0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0				0		
Bicycle Volume [bicycles/h]	0			0			0				0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	5	2	0	1	6	0
Auxiliary Signal Groups													
Maximum Green [s]	8	34	0	6	32	0	0	18	31	0	13	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	27	0	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9	36	0	9	36	0	0	15	26	0	19	30	0
Lead / Lag	Lead	-	-	Lead	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No			No	No		No	No	
Maximum Recall	No	No		No	No			No	No		No	No	
Pedestrian Recall	No	No		No	No			No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	15	15	4	15	15	11	46	46	9	44	44
g / C, Green / Cycle	0.04	0.17	0.17	0.04	0.17	0.17	0.12	0.51	0.51	0.10	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.03	0.13	0.14	0.03	0.07	0.13	0.11	0.19	0.19	0.08	0.12	0.12
s, saturation flow rate [veh/h]	1810	1900	1639	1810	3618	1615	3514	3618	1862	3514	3618	1874
c, Capacity [veh/h]	75	319	275	80	619	276	430	1839	947	356	1764	914
d1, Uniform Delay [s]	42.63	35.95	36.11	42.55	33.38	35.52	39.01	13.50	13.50	39.34	13.49	13.50
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.24	4.50	5.91	14.40	0.47	4.22	7.72	0.61	1.18	3.23	0.35	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.72	0.79	0.82	0.77	0.43	0.76	0.91	0.38	0.38	0.75	0.25	0.26
d, Delay for Lane Group [s/veh]	54.87	40.45	42.02	56.96	33.85	39.74	46.73	14.11	14.68	42.57	13.84	14.17
Lane Group LOS	D	D	D	E	C	D	D	B	B	D	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.40	5.52	5.02	1.63	2.51	4.45	4.55	4.06	4.33	2.94	2.51	2.69
50th-Percentile Queue Length [ft/ln]	35.07	137.93	125.40	40.66	62.65	111.16	113.84	101.46	108.19	73.39	62.82	67.28
95th-Percentile Queue Length [veh/ln]	2.53	9.37	8.69	2.93	4.51	7.90	8.05	7.31	7.74	5.28	4.52	4.84
95th-Percentile Queue Length [ft/ln]	63.13	234.23	217.22	73.18	112.77	197.61	201.33	182.64	193.48	132.10	113.08	121.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.87	40.57	42.02	56.96	33.85	39.74	46.73	46.73	14.29	14.68	42.57	13.95	14.17
Movement LOS	D	D	D	E	C	D	D	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	42.57			38.81			23.00				22.02		
Approach LOS	D			D			C				C		
d_I, Intersection Delay [s/veh]	28.17												
Intersection LOS	C												
Intersection V/C	0.538												

Emissions

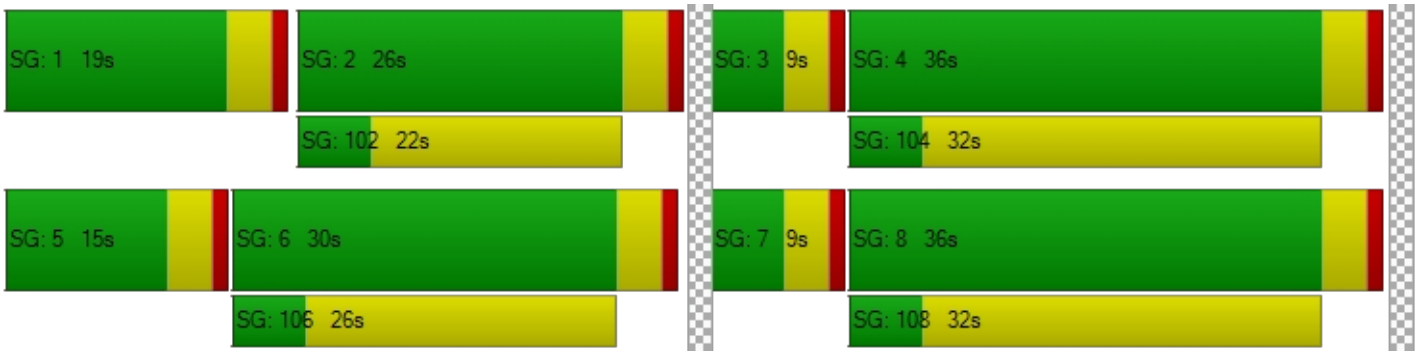
Vehicle Miles Traveled [mph]	4.07	19.13	16.98	6.06	25.98	20.42	107.38	193.46	99.57	40.28	67.59	35.08
Stops [stops/h]	56.12	220.69	200.63	65.05	200.48	177.85	364.28	324.69	173.10	234.85	201.03	107.65
Fuel consumption [US gal/h]	1.30	4.94	4.51	1.73	5.22	4.60	11.14	12.14	6.35	6.07	5.66	2.99
CO [g/h]	90.87	345.43	314.91	121.27	364.58	321.62	778.90	848.71	443.87	424.39	395.80	208.79
NOx [g/h]	17.68	67.21	61.27	23.59	70.93	62.58	151.55	165.13	86.36	82.57	77.01	40.62
VOC [g/h]	21.06	80.06	72.98	28.11	84.49	74.54	180.52	196.70	102.87	98.36	91.73	48.39

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.590	2.752	3.115	3.091
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	711	711	489	578
d_b, Bicycle Delay [s]	18.69	18.69	25.69	22.76
l_b,int, Bicycle LOS Score for Intersection	1.999	2.003	2.146	2.083
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



OPENING YEAR TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: 14th St-Sand Canyon Rd/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	28.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.433

Intersection Setup

Name	14th Street			Sand Canyon Road			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	120.00	100.00	120.00	165.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			50.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	14th Street			Sand Canyon Road			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	27	334	84	108	116	67	54	458	16	101	688	190
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	6	0	0	0	0	0	0	2	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	344	93	111	120	69	56	472	16	106	709	196
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	91	25	29	32	18	15	125	4	28	188	52
Total Analysis Volume [veh/h]	30	365	99	118	127	73	59	501	17	112	752	208
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	33	0	0	29	0	10	19	0	13	22	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	18	23	0	21	26	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	14	14	10	10	10	5	61	61	9	65	65
g / C, Green / Cycle	0.13	0.13	0.13	0.09	0.09	0.09	0.04	0.56	0.56	0.08	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.10	0.10	0.06	0.07	0.07	0.05	0.03	0.09	0.09	0.06	0.18	0.18
s, saturation flow rate [veh/h]	1886	1900	1615	1810	1900	1615	1810	3618	1868	1810	3618	1698
c, Capacity [veh/h]	245	247	210	166	174	148	77	2009	1037	141	2135	1002
d1, Uniform Delay [s]	46.48	46.47	44.35	48.55	48.64	47.54	52.10	12.01	12.02	49.87	11.27	11.28
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.07	5.97	1.64	5.57	5.77	2.53	14.27	0.18	0.36	9.80	0.37	0.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.80	0.47	0.71	0.73	0.49	0.76	0.17	0.17	0.80	0.31	0.31
d, Delay for Lane Group [s/veh]	52.55	52.45	45.99	54.12	54.40	50.07	66.36	12.19	12.37	59.68	11.64	12.08
Lane Group LOS	D	D	D	D	D	D	E	B	B	E	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.58	5.60	2.57	3.28	3.54	1.94	1.89	1.98	2.11	3.35	3.75	3.67
50th-Percentile Queue Length [ft/ln]	139.38	140.02	64.29	82.06	88.54	48.43	47.18	49.42	52.64	83.73	93.83	91.82
95th-Percentile Queue Length [veh/ln]	9.45	9.48	4.63	5.91	6.37	3.49	3.40	3.56	3.79	6.03	6.76	6.61
95th-Percentile Queue Length [ft/ln]	236.19	237.05	115.72	147.71	159.37	87.17	84.92	88.96	94.75	150.71	168.89	165.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.55	52.49	45.99	54.12	54.40	50.07	66.36	12.25	12.37	59.68	11.69	12.08
Movement LOS	D	D	D	D	D	D	E	B	B	E	B	B
d_A, Approach Delay [s/veh]	51.19			53.30			17.79			16.78		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	28.64											
Intersection LOS	C											
Intersection V/C	0.433											

Emissions

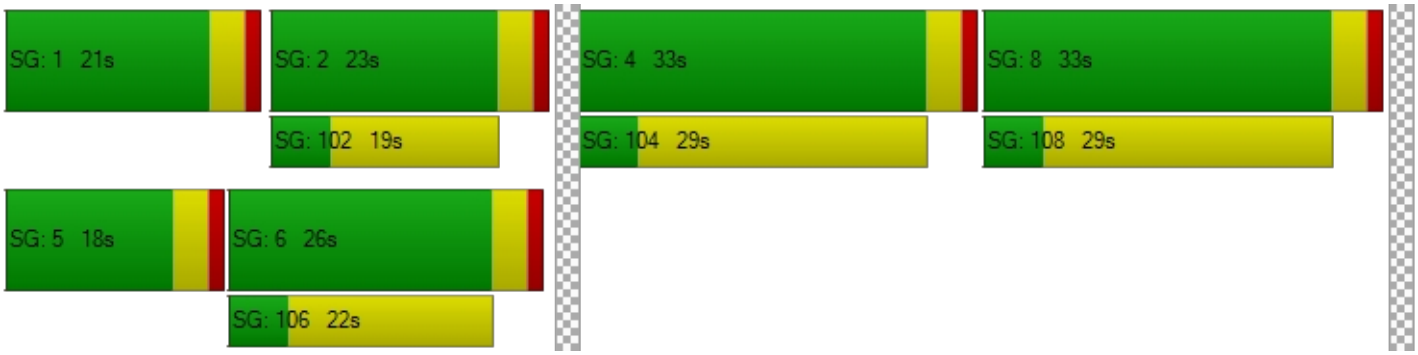
Vehicle Miles Traveled [mph]	14.22	14.31	7.15	6.90	7.43	4.27	4.58	26.45	13.74	27.92	162.48	76.83
Stops [stops/h]	182.46	183.30	84.16	107.43	115.91	63.40	61.76	129.39	68.91	109.61	245.66	120.21
Fuel consumption [US gal/h]	4.02	4.04	1.83	3.18	3.43	1.86	1.57	3.06	1.62	3.44	9.78	4.69
CO [g/h]	281.01	282.23	128.05	222.26	240.03	130.01	109.56	214.19	112.90	240.24	683.41	327.88
NOx [g/h]	54.67	54.91	24.91	43.24	46.70	25.29	21.32	41.67	21.97	46.74	132.97	63.79
VOC [g/h]	65.13	65.41	29.68	51.51	55.63	30.13	25.39	49.64	26.17	55.68	158.39	75.99

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	2.356	2.620	2.871	2.937
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	527	527	345	400
d_b, Bicycle Delay [s]	29.82	29.82	37.64	35.20
l_b,int, Bicycle LOS Score for Intersection	1.967	2.084	1.877	2.149
Bicycle LOS	A	B	A	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: 13th St/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

Intersection Setup

Name	13th Street			13th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	13th Street			13th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	27	91	74	73	49	76	80	529	28	72	874	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	6	0	0	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	94	76	75	50	78	82	551	29	74	902	110
Peak Hour Factor	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	27	22	22	14	23	24	159	8	21	260	32
Total Analysis Volume [veh/h]	32	109	88	87	58	90	95	636	33	85	1042	127
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	29	0	0	29	0	14	12	0	17	15	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	10	0	0	7	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	18	16	0	21	19	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	14	14	5	40	40	4	39	39
g / C, Green / Cycle	0.20	0.20	0.20	0.07	0.56	0.56	0.06	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.15	0.07	0.09	0.05	0.12	0.12	0.05	0.22	0.22
s, saturation flow rate [veh/h]	1544	1204	1716	1810	3618	1853	1810	3618	1796
c, Capacity [veh/h]	370	154	346	124	2046	1048	112	2020	1003
d1, Uniform Delay [s]	26.11	27.55	24.43	32.04	7.53	7.53	32.34	8.70	8.70
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.70	3.25	0.84	9.35	0.24	0.48	10.19	0.56	1.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.57	0.43	0.76	0.22	0.22	0.76	0.39	0.39
d, Delay for Lane Group [s/veh]	27.80	30.81	25.27	41.39	7.77	8.01	42.53	9.26	9.83
Lane Group LOS	C	C	C	D	A	A	D	A	A
Critical Lane Group	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.66	1.52	2.16	1.80	1.36	1.47	1.65	2.78	2.92
50th-Percentile Queue Length [ft/ln]	91.57	38.10	54.05	45.09	33.97	36.71	41.14	69.48	73.04
95th-Percentile Queue Length [veh/ln]	6.59	2.74	3.89	3.25	2.45	2.64	2.96	5.00	5.26
95th-Percentile Queue Length [ft/ln]	164.82	68.57	97.29	81.17	61.15	66.07	74.05	125.06	131.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.80	27.80	27.80	30.81	25.27	25.27	41.39	7.84	8.01	42.53	9.40	9.83
Movement LOS	C	C	C	C	C	C	D	A	A	D	A	A
d_A, Approach Delay [s/veh]	27.80			27.32			12.02			11.69		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	14.76											
Intersection LOS	B											
Intersection V/C	0.503											

Emissions

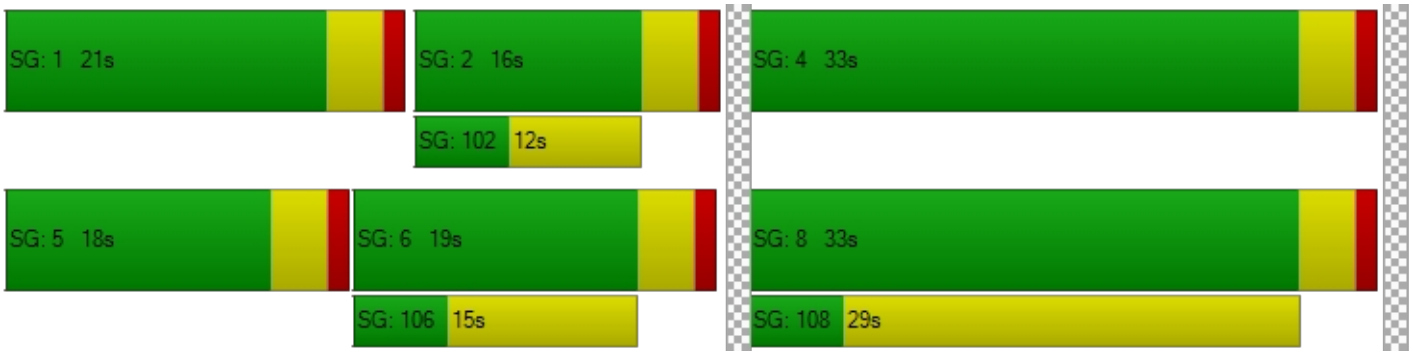
Vehicle Miles Traveled [mph]	15.23	6.10	10.38	23.68	110.08	56.69	21.21	194.86	96.86
Stops [stops/h]	188.36	78.37	111.19	92.76	139.76	75.51	84.62	285.85	150.25
Fuel consumption [US gal/h]	2.70	1.12	1.65	2.56	6.01	3.14	2.33	11.26	5.72
CO [g/h]	188.94	78.32	115.64	178.93	420.41	219.72	162.64	787.08	400.00
NOx [g/h]	36.76	15.24	22.50	34.81	81.80	42.75	31.64	153.14	77.82
VOC [g/h]	43.79	18.15	26.80	41.47	97.43	50.92	37.69	182.41	92.70

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	0.00	26.58
l_p,int, Pedestrian LOS Score for Intersectio	1.868	2.082	0.000	3.090
Crosswalk LOS	A	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	829	829	343	429
d_b, Bicycle Delay [s]	12.01	12.01	24.03	21.61
l_b,int, Bicycle LOS Score for Intersection	1.937	1.947	1.980	2.249
Bicycle LOS	A	A	A	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: 10th St/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.646

Intersection Setup

Name	10th Street			10th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	10th Street			10th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	32	16	22	55	46	122	42	734	15	13	1343	58
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	0	0	0	0	0	24	3	0	19	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	16	23	57	47	126	43	780	18	13	1403	60
Peak Hour Factor	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	5	7	17	14	38	13	235	5	4	422	18
Total Analysis Volume [veh/h]	45	19	28	69	57	152	52	939	22	16	1688	72
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	30	0	0	30	0	5	13	0	5	13	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	9	16	0	11	18	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	3	35	35	1	33	33
g / C, Green / Cycle	0.20	0.20	0.05	0.58	0.58	0.02	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.07	0.17	0.03	0.17	0.17	0.01	0.32	0.32
s, saturation flow rate [veh/h]	1349	1671	1810	3618	1878	1810	3618	1860
c, Capacity [veh/h]	359	409	88	2098	1089	36	1995	1026
d1, Uniform Delay [s]	20.24	22.86	27.97	6.42	6.42	29.08	8.90	8.90
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.37	1.98	6.26	0.37	0.71	8.37	1.25	2.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.26	0.68	0.59	0.30	0.30	0.44	0.58	0.58
d, Delay for Lane Group [s/veh]	20.62	24.84	34.22	6.79	7.13	37.45	10.15	11.32
Lane Group LOS	C	C	C	A	A	D	B	B
Critical Lane Group	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.03	3.62	0.82	1.50	1.67	0.29	3.88	4.33
50th-Percentile Queue Length [ft/ln]	25.73	90.45	20.57	37.62	41.70	7.34	96.89	108.14
95th-Percentile Queue Length [veh/ln]	1.85	6.51	1.48	2.71	3.00	0.53	6.98	7.74
95th-Percentile Queue Length [ft/ln]	46.32	162.82	37.03	67.71	75.05	13.21	174.41	193.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.62	20.62	20.62	24.84	24.84	24.84	34.22	6.90	7.13	37.45	10.51	11.32
Movement LOS	C	C	C	C	C	C	C	A	A	D	B	B
d_A, Approach Delay [s/veh]	20.62			24.84			8.31			10.79		
Approach LOS	C			C			A			B		
d_I, Intersection Delay [s/veh]	11.51											
Intersection LOS	B											
Intersection V/C	0.646											

Emissions

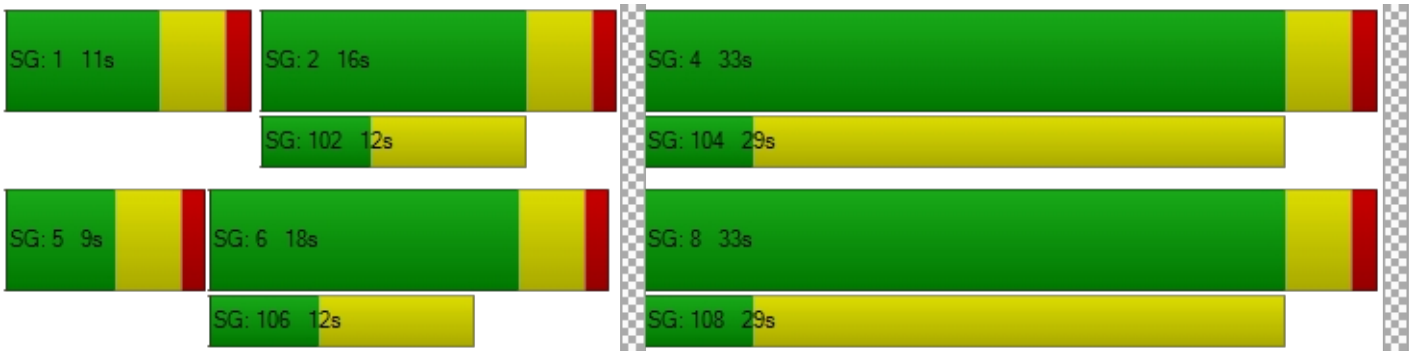
Vehicle Miles Traveled [mph]	6.53	20.35	8.06	98.01	50.93	4.39	319.08	164.26
Stops [stops/h]	61.76	217.09	49.37	180.57	100.07	17.61	465.08	259.54
Fuel consumption [US gal/h]	1.10	3.81	1.14	6.16	3.28	0.45	18.40	9.81
CO [g/h]	76.84	266.59	79.39	430.45	229.58	31.62	1286.00	685.84
NOx [g/h]	14.95	51.87	15.45	83.75	44.67	6.15	250.21	133.44
VOC [g/h]	17.81	61.78	18.40	99.76	53.21	7.33	298.04	158.95

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	1.802	1.935	3.177	3.195
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	967	967	400	467
d_b, Bicycle Delay [s]	8.01	8.01	19.20	17.63
l_b,int, Bicycle LOS Score for Intersection	1.711	2.018	2.117	2.536
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Oak Glen Rd/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	31.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.794

Intersection Setup

Name	Oak Glen Road			Oak Glen Road			Yucaipa Boulevard				Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound				Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	2	0	0	0	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	250.00	100.00	150.00	325.0	100.0	100.0	100.0	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			45.00			40.00				40.00		
Grade [%]	0.00			0.00			0.00				0.00		
Curb Present	No			No			No				No		
Crosswalk	Yes			Yes			Yes				Yes		

Volumes

Name	Oak Glen Road			Oak Glen Road			Yucaipa Boulevard				Yucaipa Boulevard		
Base Volume Input [veh/h]	46	234	149	35	460	475	0	203	554	26	207	932	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00												
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.030	1.030	1.030	1.030	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	6	0	7	16	1	0	12	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	241	153	36	474	495	0	216	587	28	213	972	14
Peak Hour Factor	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.879	0.879	0.879	0.879	0.8790	0.8790	0.8790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	69	44	10	135	141	0	61	167	8	61	276	4
Total Analysis Volume [veh/h]	55	274	174	41	539	563	0	246	668	32	242	1106	16
Presence of On-Street Parking	No		No	No		No	No			No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0				0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0				0		
v_co, Outbound Pedestrian Volume crossing	0			0			0				0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0				0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0				0		
Bicycle Volume [bicycles/h]	0			0			0				0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	5	2	0	1	6	0
Auxiliary Signal Groups													
Maximum Green [s]	5	32	0	9	36	0	0	7	22	0	11	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	27	0	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	13	36	0	13	36	0	0	11	26	0	15	30	0
Lead / Lag	Lead	-	-	Lead	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No			No	No		No	No	
Maximum Recall	No	No		No	No			No	No		No	No	
Pedestrian Recall	No	No		No	No			No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	34	34	3	34	34	7	28	28	8	29	29
g / C, Green / Cycle	0.04	0.38	0.38	0.04	0.37	0.37	0.08	0.31	0.31	0.09	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.03	0.12	0.13	0.02	0.15	0.35	0.07	0.13	0.13	0.07	0.20	0.20
s, saturation flow rate [veh/h]	1810	1900	1660	1810	3618	1615	3514	3618	1856	3514	3618	1886
c, Capacity [veh/h]	78	722	630	68	1354	604	273	1131	580	323	1183	617
d1, Uniform Delay [s]	42.48	19.76	19.84	42.64	20.71	27.06	41.15	24.37	24.38	39.84	25.60	25.60
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.35	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.78	0.26	0.31	8.26	0.19	17.88	10.41	1.09	2.14	3.47	2.48	4.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.33	0.34	0.60	0.40	0.93	0.90	0.41	0.41	0.75	0.62	0.62
d, Delay for Lane Group [s/veh]	53.26	20.02	20.16	50.90	20.90	44.93	51.56	25.46	26.51	43.32	28.09	30.31
Lane Group LOS	D	C	C	D	C	D	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.40	3.32	3.01	1.02	3.86	13.43	3.00	3.84	4.12	2.67	6.65	7.32
50th-Percentile Queue Length [ft/ln]	35.09	83.07	75.28	25.43	96.43	335.76	75.07	95.88	102.88	66.83	166.28	182.90
95th-Percentile Queue Length [veh/ln]	2.53	5.98	5.42	1.83	6.94	19.44	5.41	6.90	7.41	4.81	10.88	11.75
95th-Percentile Queue Length [ft/ln]	63.16	149.52	135.51	45.77	173.58	486.01	135.13	172.58	185.19	120.30	272.02	293.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.26	20.04	20.16	50.90	20.90	44.93	51.56	51.56	25.79	26.51	43.32	28.83	30.31
Movement LOS	D	C	C	D	C	D	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	23.71			33.82			32.51				31.42		
Approach LOS	C			C			C				C		
d_I, Intersection Delay [s/veh]	31.39												
Intersection LOS	C												
Intersection V/C	0.794												

Emissions

Vehicle Miles Traveled [mph]	4.15	17.78	16.00	4.00	52.65	54.99	67.56	126.93	65.31	36.38	110.85	57.80
Stops [stops/h]	56.14	132.91	120.45	40.68	308.58	537.21	240.23	306.81	164.61	213.86	532.09	292.64
Fuel consumption [US gal/h]	1.30	2.90	2.63	1.07	7.93	13.71	7.36	9.96	5.24	5.54	13.41	7.32
CO [g/h]	90.59	202.92	183.63	74.64	554.60	958.50	514.52	695.90	366.24	387.04	937.58	511.44
NOx [g/h]	17.63	39.48	35.73	14.52	107.90	186.49	100.11	135.40	71.26	75.30	182.42	99.51
VOC [g/h]	21.00	47.03	42.56	17.30	128.53	222.14	119.24	161.28	84.88	89.70	217.29	118.53

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.644	2.864	3.161	3.092
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	711	711	489	578
d_b, Bicycle Delay [s]	18.69	18.69	25.69	22.76
l_b,int, Bicycle LOS Score for Intersection	1.975	2.503	1.945	2.310
Bicycle LOS	A	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 1: 14th St-Sand Canyon Rd/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	27.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.482

Intersection Setup

Name	14th Street			Sand Canyon Road			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	120.00	100.00	120.00	165.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			50.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	14th Street			Sand Canyon Road			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	29	131	53	262	268	58	91	1056	46	31	626	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	0	0	0	0	0	0	6	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	135	58	270	276	60	94	1088	47	38	645	147
Peak Hour Factor	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	34	15	69	70	15	24	278	12	10	165	38
Total Analysis Volume [veh/h]	31	138	59	276	282	61	96	1111	48	39	659	150
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	29	0	0	35	0	8	25	0	5	22	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	18	23	0	21	26	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10	19	19	19	7	61	61	4	57	57
g / C, Green / Cycle	0.09	0.09	0.09	0.18	0.18	0.18	0.07	0.56	0.56	0.03	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.05	0.04	0.04	0.15	0.15	0.04	0.05	0.21	0.21	0.02	0.15	0.15
s, saturation flow rate [veh/h]	1866	1900	1615	1810	1899	1615	1810	3618	1860	1810	3618	1727
c, Capacity [veh/h]	171	174	148	317	333	283	122	2010	1033	58	1882	899
d1, Uniform Delay [s]	47.54	47.52	47.12	44.05	44.02	38.88	50.51	13.77	13.78	52.66	14.90	14.94
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.20	2.11	1.74	6.80	6.37	0.38	10.55	0.55	1.07	12.57	0.39	0.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.49	0.40	0.86	0.86	0.22	0.79	0.38	0.38	0.67	0.29	0.29
d, Delay for Lane Group [s/veh]	49.74	49.63	48.85	50.85	50.39	39.25	61.06	14.32	14.84	65.22	15.29	15.78
Lane Group LOS	D	D	D	D	D	D	E	B	B	E	B	B
Critical Lane Group	Yes	No	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.28	2.29	1.58	7.47	7.77	1.39	2.91	5.11	5.41	1.25	3.73	3.74
50th-Percentile Queue Length [ft/ln]	56.95	57.28	39.54	186.87	194.37	34.67	72.71	127.86	135.26	31.22	93.17	93.39
95th-Percentile Queue Length [veh/ln]	4.10	4.12	2.85	11.96	12.35	2.50	5.24	8.82	9.22	2.25	6.71	6.72
95th-Percentile Queue Length [ft/ln]	102.51	103.11	71.16	298.96	308.69	62.41	130.88	220.58	230.62	56.20	167.71	168.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.74	49.67	48.85	50.85	50.39	39.25	61.06	14.49	14.84	65.22	15.37	15.78
Movement LOS	D	D	D	D	D	D	E	B	B	E	B	B
d_A, Approach Delay [s/veh]	49.47			49.49			18.06			17.74		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	26.99											
Intersection LOS	C											
Intersection V/C	0.482											

Emissions

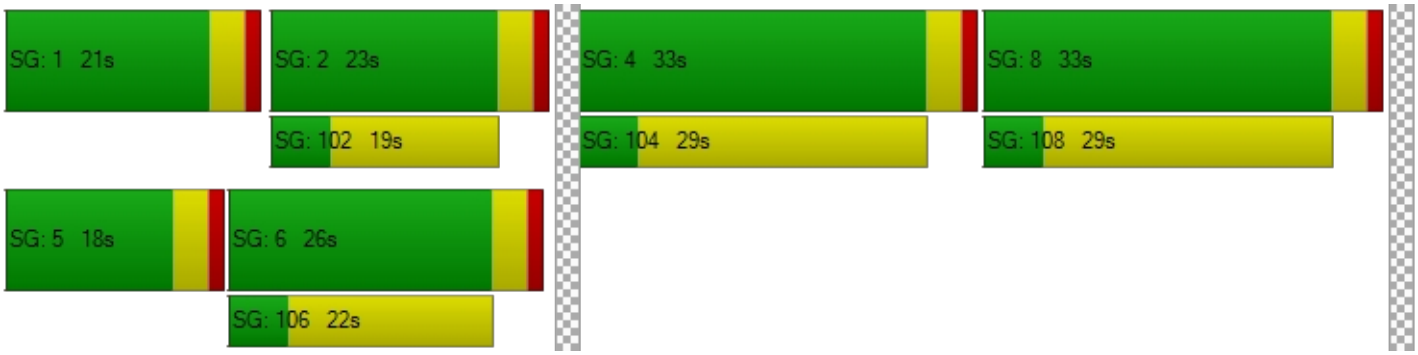
Vehicle Miles Traveled [mph]	6.08	6.13	4.26	15.95	16.68	3.57	7.45	59.38	30.54	9.72	135.79	65.88
Stops [stops/h]	74.55	74.99	51.76	244.62	254.45	45.39	95.18	334.75	177.06	40.88	243.95	122.25
Fuel consumption [US gal/h]	1.64	1.65	1.14	7.11	7.39	1.30	2.39	7.65	4.02	1.27	8.96	4.41
CO [g/h]	114.94	115.62	79.56	497.08	516.51	91.11	167.38	534.48	281.18	88.59	626.00	308.21
NOx [g/h]	22.36	22.50	15.48	96.71	100.49	17.73	32.57	103.99	54.71	17.24	121.80	59.97
VOC [g/h]	26.64	26.80	18.44	115.20	119.71	21.12	38.79	123.87	65.17	20.53	145.08	71.43

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	2.312	2.637	2.978	3.031
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	527	527	345	400
d_b, Bicycle Delay [s]	29.82	29.82	37.64	35.20
l_b,int, Bicycle LOS Score for Intersection	1.748	2.581	2.250	2.026
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: 13th St/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	8.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.433

Intersection Setup

Name	13th Street			13th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	13th Street			13th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	30	26	40	33	19	28	34	1324	19	36	747	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	3	0	0	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	27	41	34	20	29	35	1367	20	37	776	55
Peak Hour Factor	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	7	11	9	5	8	9	360	5	10	204	14
Total Analysis Volume [veh/h]	33	28	43	36	21	31	37	1440	21	39	818	58
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	29	0	0	29	0	8	31	0	8	31	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	10	0	0	7	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	18	19	0	18	19	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	9	3	47	47	3	47	47
g / C, Green / Cycle	0.12	0.12	0.12	0.04	0.67	0.67	0.04	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.07	0.03	0.03	0.02	0.27	0.27	0.02	0.16	0.16
s, saturation flow rate [veh/h]	1456	1350	1719	1810	3618	1886	1810	3618	1836
c, Capacity [veh/h]	250	154	215	67	2405	1254	70	2410	1223
d1, Uniform Delay [s]	28.81	27.91	27.63	33.12	5.35	5.35	33.06	4.64	4.65
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.11	0.76	0.58	6.78	0.50	0.95	6.81	0.24	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.23	0.24	0.55	0.40	0.40	0.56	0.24	0.24
d, Delay for Lane Group [s/veh]	29.92	28.67	28.20	39.89	5.85	6.30	39.87	4.88	5.12
Lane Group LOS	C	C	C	D	A	A	D	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.70	0.57	0.80	0.71	2.23	2.49	0.74	1.16	1.27
50th-Percentile Queue Length [ft/ln]	42.45	14.29	20.12	17.71	55.81	62.15	18.61	29.06	31.63
95th-Percentile Queue Length [veh/ln]	3.06	1.03	1.45	1.27	4.02	4.47	1.34	2.09	2.28
95th-Percentile Queue Length [ft/ln]	76.42	25.72	36.21	31.87	100.45	111.86	33.50	52.31	56.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.92	29.92	29.92	28.67	28.20	28.20	39.89	6.00	6.30	39.87	4.95	5.12
Movement LOS	C	C	C	C	C	C	D	A	A	D	A	A
d_A, Approach Delay [s/veh]	29.92			28.40			6.84			6.45		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	8.35											
Intersection LOS	A											
Intersection V/C	0.433											

Emissions

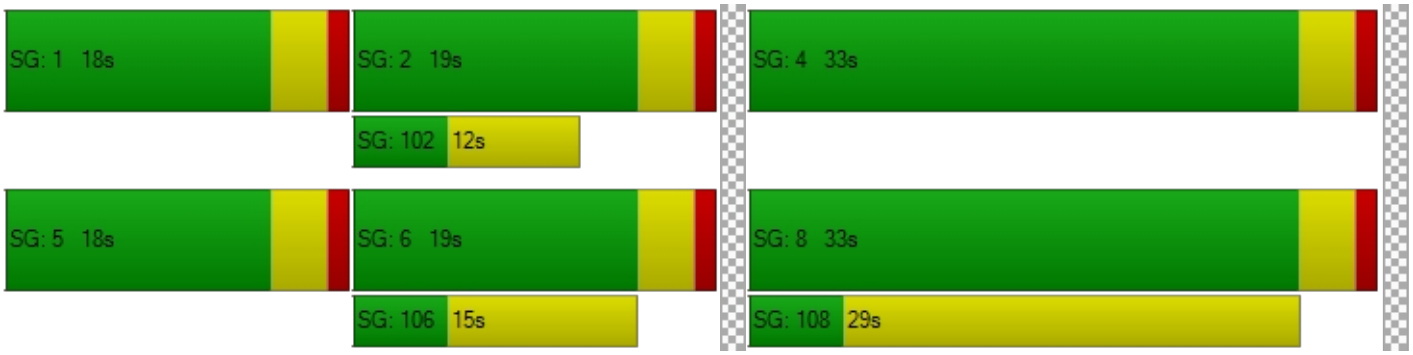
Vehicle Miles Traveled [mph]	6.92	2.53	3.65	9.22	239.40	124.81	9.73	144.77	73.84
Stops [stops/h]	87.33	29.39	41.38	36.42	229.61	127.84	38.28	119.56	65.06
Fuel consumption [US gal/h]	1.28	0.44	0.62	0.99	11.97	6.37	1.04	6.94	3.59
CO [g/h]	89.41	30.50	43.42	69.10	836.97	445.18	72.77	484.87	251.09
NOx [g/h]	17.40	5.93	8.45	13.44	162.84	86.62	14.16	94.34	48.85
VOC [g/h]	20.72	7.07	10.06	16.02	193.98	103.18	16.87	112.37	58.19

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0	
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00	
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00	
d_p, Pedestrian Delay [s]	26.58	26.58	0.00	26.58	
l_p,int, Pedestrian LOS Score for Intersectio	1.779	1.986	0.000	3.086	
Crosswalk LOS	A	A	F	C	
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000	
c_b, Capacity of the bicycle lane [bicycles/h]	829	829	429	429	
d_b, Bicycle Delay [s]	12.01	12.01	21.61	21.61	
l_b,int, Bicycle LOS Score for Intersection	1.731	1.705	2.384	2.063	
Bicycle LOS	A	A	B	B	

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: 10th St/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.462

Intersection Setup

Name	10th Street			10th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	10th Street			10th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	14	38	23	62	21	64	97	1336	25	20	782	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	0	0	0	0	0	0	19	3	0	24	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	39	24	64	22	66	100	1395	29	21	830	66
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	10	6	16	6	17	26	356	7	5	212	17
Total Analysis Volume [veh/h]	17	40	24	65	22	67	102	1423	30	21	847	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	29	0	0	29	0	14	34	0	5	25	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	11	18	0	9	16	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	4	37	37	1	34	34
g / C, Green / Cycle	0.16	0.16	0.07	0.62	0.62	0.02	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.05	0.09	0.06	0.26	0.26	0.01	0.17	0.17
s, saturation flow rate [veh/h]	1778	1644	1810	3618	1880	1810	3618	1830
c, Capacity [veh/h]	351	343	132	2237	1163	45	2064	1044
d1, Uniform Delay [s]	22.35	23.36	27.31	5.94	5.94	28.85	6.65	6.66
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.33	0.92	9.10	0.60	1.15	7.18	0.36	0.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.45	0.77	0.43	0.43	0.46	0.29	0.30
d, Delay for Lane Group [s/veh]	22.68	24.28	36.41	6.53	7.09	36.03	7.01	7.38
Lane Group LOS	C	C	D	A	A	D	A	A
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.96	1.93	1.64	2.13	2.39	0.36	1.49	1.62
50th-Percentile Queue Length [ft/ln]	24.07	48.35	41.09	53.31	59.87	9.12	37.15	40.38
95th-Percentile Queue Length [veh/ln]	1.73	3.48	2.96	3.84	4.31	0.66	2.68	2.91
95th-Percentile Queue Length [ft/ln]	43.32	87.03	73.96	95.97	107.76	16.42	66.88	72.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.68	22.68	22.68	24.28	24.28	24.28	36.41	6.71	7.09	36.03	7.12	7.38
Movement LOS	C	C	C	C	C	C	D	A	A	D	A	A
d_A, Approach Delay [s/veh]	22.68			24.28			8.67			7.78		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	9.66											
Intersection LOS	A											
Intersection V/C	0.462											

Emissions

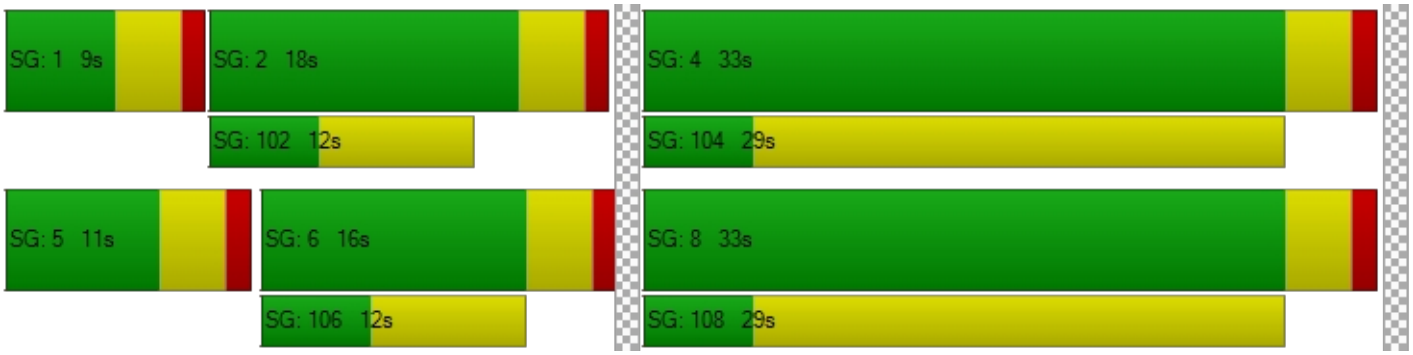
Vehicle Miles Traveled [mph]	5.75	11.28	15.81	148.19	77.01	5.77	166.43	84.58
Stops [stops/h]	57.76	116.04	98.62	255.91	143.68	21.89	178.34	96.91
Fuel consumption [US gal/h]	1.03	2.06	2.29	9.09	4.89	0.58	8.58	4.44
CO [g/h]	71.82	144.24	160.13	635.65	341.58	40.23	599.62	310.65
NOx [g/h]	13.97	28.06	31.16	123.67	66.46	7.83	116.66	60.44
VOC [g/h]	16.64	33.43	37.11	147.32	79.16	9.32	138.97	72.00

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	1.783	1.902	3.060	3.121
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	967	967	467	400
d_b, Bicycle Delay [s]	8.01	8.01	17.63	19.20
l_b,int, Bicycle LOS Score for Intersection	1.693	1.814	2.415	2.074
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Oak Glen Rd/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	28.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.557

Intersection Setup

Name	Oak Glen Road			Oak Glen Road			Yucaipa Boulevard				Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound				Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	2	0	0	0	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	250.00	100.00	150.00	325.0	100.0	100.0	100.0	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			45.00			40.00				40.00		
Grade [%]	0.00			0.00			0.00				0.00		
Curb Present	No			No			No				No		
Crosswalk	Yes			Yes			Yes				Yes		

Volumes

Name	Oak Glen Road			Oak Glen Road			Yucaipa Boulevard				Yucaipa Boulevard		
Base Volume Input [veh/h]	53	271	199	61	261	205	0	384	1007	41	263	653	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00												
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.030	1.030	1.030	1.030	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	7	0	5	13	1	0	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	56	279	205	63	269	218	0	401	1050	43	271	689	19
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.982	0.982	0.982	0.982	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	71	52	16	68	55	0	102	267	11	69	175	5
Total Analysis Volume [veh/h]	57	284	209	64	274	222	0	408	1069	44	276	702	19
Presence of On-Street Parking	No		No	No		No	No			No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0				0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0				0		
v_co, Outbound Pedestrian Volume crossing	0			0			0				0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0				0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0				0		
Bicycle Volume [bicycles/h]	0			0			0				0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	5	2	0	1	6	0
Auxiliary Signal Groups													
Maximum Green [s]	5	32	0	5	32	0	0	11	23	0	14	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	27	0	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9	36	0	9	36	0	0	15	27	0	18	30	0
Lead / Lag	Lead	-	-	Lead	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No			No	No		No	No	
Maximum Recall	No	No		No	No			No	No		No	No	
Pedestrian Recall	No	No		No	No			No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	15	15	4	16	16	11	45	45	9	43	43
g / C, Green / Cycle	0.04	0.17	0.17	0.05	0.17	0.17	0.12	0.50	0.50	0.10	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.14	0.04	0.08	0.14	0.12	0.20	0.20	0.08	0.13	0.13
s, saturation flow rate [veh/h]	1810	1900	1639	1810	3618	1615	3514	3618	1862	3514	3618	1874
c, Capacity [veh/h]	77	327	282	83	635	283	430	1814	933	362	1744	904
d1, Uniform Delay [s]	42.61	35.77	35.93	42.48	33.11	35.47	39.23	14.04	14.04	39.29	13.89	13.89
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.15	4.53	5.91	14.01	0.46	4.74	11.41	0.67	1.31	3.34	0.39	0.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.80	0.82	0.77	0.43	0.78	0.95	0.41	0.41	0.76	0.27	0.27
d, Delay for Lane Group [s/veh]	55.76	40.30	41.83	56.49	33.57	40.22	50.63	14.71	15.35	42.63	14.27	14.63
Lane Group LOS	E	D	D	E	C	D	D	B	B	D	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.49	5.68	5.15	1.67	2.57	4.76	4.97	4.37	4.66	3.03	2.71	2.91
50th-Percentile Queue Length [ft/ln]	37.32	141.99	128.70	41.72	64.26	119.12	124.37	109.20	116.50	75.68	67.84	72.66
95th-Percentile Queue Length [veh/ln]	2.69	9.59	8.87	3.00	4.63	8.34	8.63	7.80	8.20	5.45	4.88	5.23
95th-Percentile Queue Length [ft/ln]	67.18	239.70	221.72	75.09	115.66	208.62	215.82	194.89	205.01	136.23	122.12	130.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.76	40.43	41.83	56.49	33.57	40.22	50.63	50.63	14.91	15.35	42.63	14.39	14.63
Movement LOS	E	D	D	E	C	D	D	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	42.55			38.82			24.51				22.21		
Approach LOS	D			D			C				C		
d_I, Intersection Delay [s/veh]	28.82												
Intersection LOS	C												
Intersection V/C	0.557												

Emissions

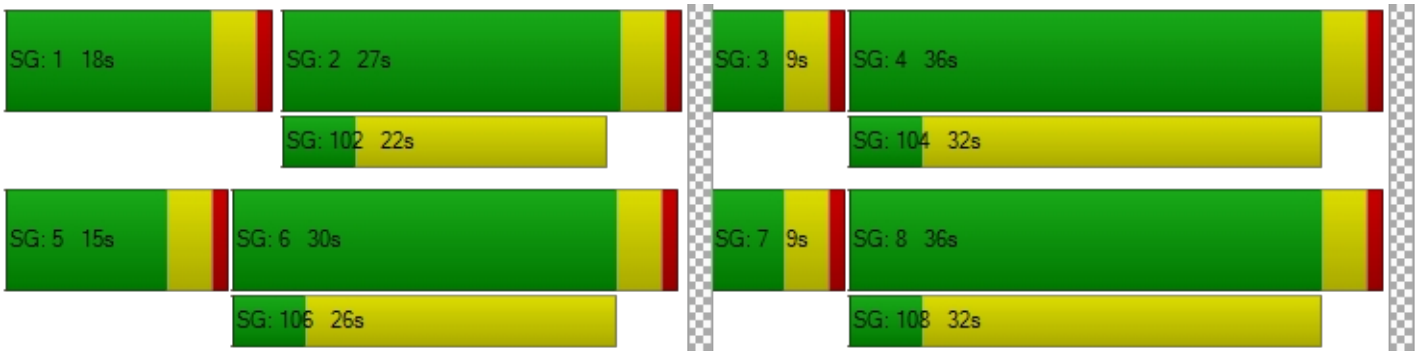
Vehicle Miles Traveled [mph]	4.30	19.71	17.46	6.25	26.76	21.69	112.05	201.80	103.86	41.49	71.35	37.02
Stops [stops/h]	59.72	227.18	205.91	66.75	205.62	190.60	397.98	349.43	186.40	242.18	217.10	116.26
Fuel consumption [US gal/h]	1.39	5.08	4.62	1.78	5.35	4.93	12.13	12.86	6.73	6.26	6.07	3.20
CO [g/h]	96.97	355.24	322.88	124.41	373.67	344.60	847.67	899.03	470.61	437.52	424.12	223.81
NOx [g/h]	18.87	69.12	62.82	24.21	72.70	67.05	164.93	174.92	91.56	85.13	82.52	43.55
VOC [g/h]	22.47	82.33	74.83	28.83	86.60	79.86	196.46	208.36	109.07	101.40	98.29	51.87

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.599	2.764	3.134	3.107
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	711	711	511	578
d_b, Bicycle Delay [s]	18.69	18.69	24.94	22.76
l_b,int, Bicycle LOS Score for Intersection	2.013	2.022	2.172	2.108
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



OPENING YEAR WITH PROJECT TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: 14th St-Sand Canyon Rd/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	28.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.438

Intersection Setup

Name	14th Street			Sand Canyon Road			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	120.00	100.00	120.00	165.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			50.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	14th Street			Sand Canyon Road			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	27	334	84	108	116	67	54	458	16	101	688	190
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	34	11	0	0	0	44	0	3	9	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	344	121	122	120	69	56	516	16	107	718	198
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	91	32	32	32	18	15	137	4	28	190	52
Total Analysis Volume [veh/h]	30	365	128	129	127	73	59	547	17	113	761	210
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	29	0	0	29	0	9	22	0	14	27	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	18	23	0	21	26	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	14	14	10	10	10	5	61	61	9	65	65
g / C, Green / Cycle	0.13	0.13	0.13	0.09	0.09	0.09	0.04	0.55	0.55	0.08	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.10	0.10	0.08	0.07	0.07	0.05	0.03	0.10	0.10	0.06	0.18	0.18
s, saturation flow rate [veh/h]	1886	1900	1615	1810	1897	1615	1810	3618	1871	1810	3618	1698
c, Capacity [veh/h]	246	248	211	167	175	149	77	2002	1035	142	2130	1000
d1, Uniform Delay [s]	46.41	46.41	45.14	48.68	48.67	47.46	52.10	12.23	12.24	49.84	11.37	11.39
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.90	5.82	2.80	6.59	6.19	2.48	14.27	0.20	0.40	9.78	0.38	0.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.80	0.61	0.75	0.75	0.49	0.76	0.19	0.19	0.80	0.31	0.31
d, Delay for Lane Group [s/veh]	52.31	52.22	47.94	55.28	54.86	49.93	66.36	12.43	12.63	59.62	11.75	12.20
Lane Group LOS	D	D	D	E	D	D	E	B	B	E	B	B
Critical Lane Group	Yes	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.56	5.59	3.42	3.53	3.66	1.93	1.89	2.19	2.33	3.38	3.83	3.74
50th-Percentile Queue Length [ft/ln]	139.03	139.70	85.62	88.24	91.59	48.34	47.18	54.66	58.23	84.43	95.63	93.55
95th-Percentile Queue Length [veh/ln]	9.43	9.47	6.16	6.35	6.59	3.48	3.40	3.94	4.19	6.08	6.89	6.74
95th-Percentile Queue Length [ft/ln]	235.71	236.63	154.12	158.83	164.87	87.01	84.92	98.38	104.82	151.98	172.14	168.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.31	52.26	47.94	55.27	54.86	49.93	66.36	12.50	12.63	59.62	11.81	12.20
Movement LOS	D	D	D	E	D	D	E	B	B	E	B	B
d_A, Approach Delay [s/veh]	51.21			53.93			17.60			16.87		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	28.83											
Intersection LOS	C											
Intersection V/C	0.438											

Emissions

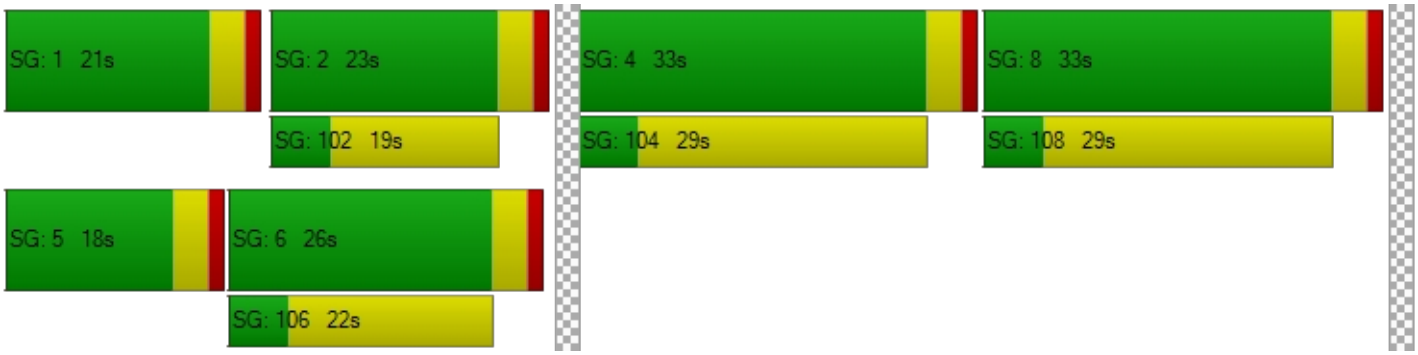
Vehicle Miles Traveled [mph]	14.22	14.31	9.25	7.33	7.65	4.27	4.58	28.79	14.97	28.17	164.36	77.70
Stops [stops/h]	182.00	182.89	112.08	115.51	119.90	63.28	61.76	143.10	76.23	110.53	250.38	122.47
Fuel consumption [US gal/h]	4.01	4.03	2.44	3.43	3.56	1.86	1.57	3.38	1.78	3.47	9.92	4.76
CO [g/h]	280.08	281.40	170.84	239.59	248.55	129.74	109.56	236.00	124.49	242.24	693.67	332.74
NOx [g/h]	54.49	54.75	33.24	46.62	48.36	25.24	21.32	45.92	24.22	47.13	134.96	64.74
VOC [g/h]	64.91	65.22	39.59	55.53	57.60	30.07	25.39	54.69	28.85	56.14	160.76	77.12

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	2.364	2.624	2.881	2.956
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	527	527	345	400
d_b, Bicycle Delay [s]	29.82	29.82	37.64	35.20
l_b,int, Bicycle LOS Score for Intersection	1.991	2.102	1.902	2.156
Bicycle LOS	A	B	A	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: 13th St/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	14.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.506

Intersection Setup

Name	13th Street			13th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	13th Street			13th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	27	91	74	73	49	76	80	529	28	72	874	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	89	0	0	14	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	94	76	75	50	78	82	634	29	74	914	110
Peak Hour Factor	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660	0.8660
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	27	22	22	14	23	24	183	8	21	264	32
Total Analysis Volume [veh/h]	32	109	88	87	58	90	95	732	33	85	1055	127
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	29	0	0	29	0	14	12	0	17	15	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	10	0	0	7	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	18	16	0	21	19	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	14	14	5	40	40	4	39	39
g / C, Green / Cycle	0.20	0.20	0.20	0.07	0.56	0.56	0.06	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.15	0.07	0.09	0.05	0.14	0.14	0.05	0.22	0.22
s, saturation flow rate [veh/h]	1544	1204	1716	1810	3618	1858	1810	3618	1797
c, Capacity [veh/h]	370	154	346	124	2046	1051	112	2020	1004
d1, Uniform Delay [s]	26.11	27.55	24.43	32.04	7.68	7.68	32.34	8.73	8.73
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.70	3.25	0.84	9.35	0.29	0.56	10.19	0.57	1.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.57	0.43	0.76	0.25	0.25	0.76	0.39	0.39
d, Delay for Lane Group [s/veh]	27.80	30.81	25.27	41.39	7.97	8.25	42.53	9.30	9.88
Lane Group LOS	C	C	C	D	A	A	D	A	A
Critical Lane Group	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.66	1.52	2.16	1.80	1.59	1.72	1.65	2.82	2.96
50th-Percentile Queue Length [ft/ln]	91.57	38.10	54.05	45.09	39.66	42.92	41.14	70.47	74.12
95th-Percentile Queue Length [veh/ln]	6.59	2.74	3.89	3.25	2.86	3.09	2.96	5.07	5.34
95th-Percentile Queue Length [ft/ln]	164.82	68.57	97.29	81.17	71.38	77.25	74.05	126.84	133.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.80	27.80	27.80	30.81	25.27	25.27	41.39	8.05	8.25	42.53	9.44	9.88
Movement LOS	C	C	C	C	C	C	D	A	A	D	A	A
d_A, Approach Delay [s/veh]	27.80			27.32			11.74			11.71		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	14.56											
Intersection LOS	B											
Intersection V/C	0.506											

Emissions

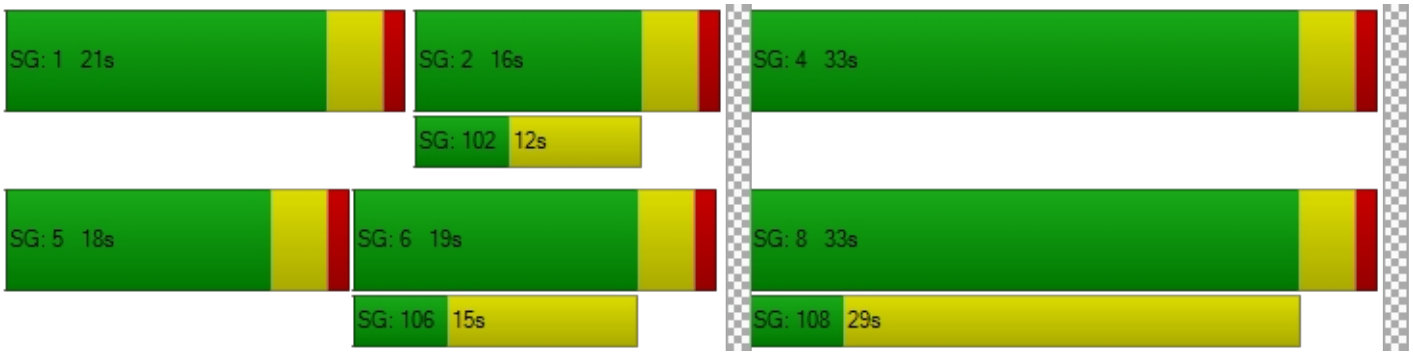
Vehicle Miles Traveled [mph]	15.23	6.10	10.38	23.68	125.83	64.88	21.21	197.00	97.97
Stops [stops/h]	188.36	78.37	111.19	92.76	163.16	88.29	84.62	289.92	152.48
Fuel consumption [US gal/h]	2.70	1.12	1.65	2.56	6.93	3.63	2.33	11.40	5.80
CO [g/h]	188.94	78.32	115.64	178.93	484.31	253.61	162.64	796.76	405.17
NOx [g/h]	36.76	15.24	22.50	34.81	94.23	49.34	31.64	155.02	78.83
VOC [g/h]	43.79	18.15	26.80	41.47	112.24	58.78	37.69	184.66	93.90

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	0.00	26.58
l_p,int, Pedestrian LOS Score for Intersectio	1.868	2.082	0.000	3.110
Crosswalk LOS	A	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	829	829	343	429
d_b, Bicycle Delay [s]	12.01	12.01	24.03	21.61
l_b,int, Bicycle LOS Score for Intersection	1.937	1.947	2.033	2.256
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: 10th St/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.654

Intersection Setup

Name	10th Street			10th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	10th Street			10th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	32	16	22	55	46	122	42	734	15	13	1343	58
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	0	0	0	0	0	0	40	8	0	53	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	16	23	57	47	126	43	796	23	13	1437	60
Peak Hour Factor	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	5	7	17	14	38	13	239	7	4	432	18
Total Analysis Volume [veh/h]	52	19	28	69	57	152	52	958	28	16	1729	72
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	29	0	0	29	0	6	38	0	11	43	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	9	16	0	11	18	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	3	35	35	1	33	33
g / C, Green / Cycle	0.20	0.20	0.05	0.58	0.58	0.02	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.08	0.17	0.03	0.18	0.18	0.01	0.33	0.33
s, saturation flow rate [veh/h]	1304	1682	1810	3618	1873	1810	3618	1861
c, Capacity [veh/h]	351	410	88	2102	1088	36	1998	1028
d1, Uniform Delay [s]	20.43	22.88	27.97	6.42	6.42	29.08	8.95	8.96
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.43	1.97	6.26	0.38	0.74	8.37	1.31	2.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.28	0.68	0.59	0.31	0.31	0.44	0.59	0.60
d, Delay for Lane Group [s/veh]	20.87	24.86	34.22	6.80	7.16	37.45	10.26	11.50
Lane Group LOS	C	C	C	A	A	D	B	B
Critical Lane Group	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.12	3.62	0.82	1.55	1.71	0.29	4.00	4.47
50th-Percentile Queue Length [ft/ln]	28.04	90.42	20.57	38.67	42.78	7.34	99.92	111.77
95th-Percentile Queue Length [veh/ln]	2.02	6.51	1.48	2.78	3.08	0.53	7.19	7.94
95th-Percentile Queue Length [ft/ln]	50.47	162.76	37.03	69.60	77.00	13.21	179.86	198.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.87	20.87	20.87	24.86	24.86	24.86	34.22	6.92	7.16	37.45	10.65	11.50
Movement LOS	C	C	C	C	C	C	C	A	A	D	B	B
d_A, Approach Delay [s/veh]	20.87			24.86			8.29			10.92		
Approach LOS	C			C			A			B		
d_I, Intersection Delay [s/veh]	11.58											
Intersection LOS	B											
Intersection V/C	0.654											

Emissions

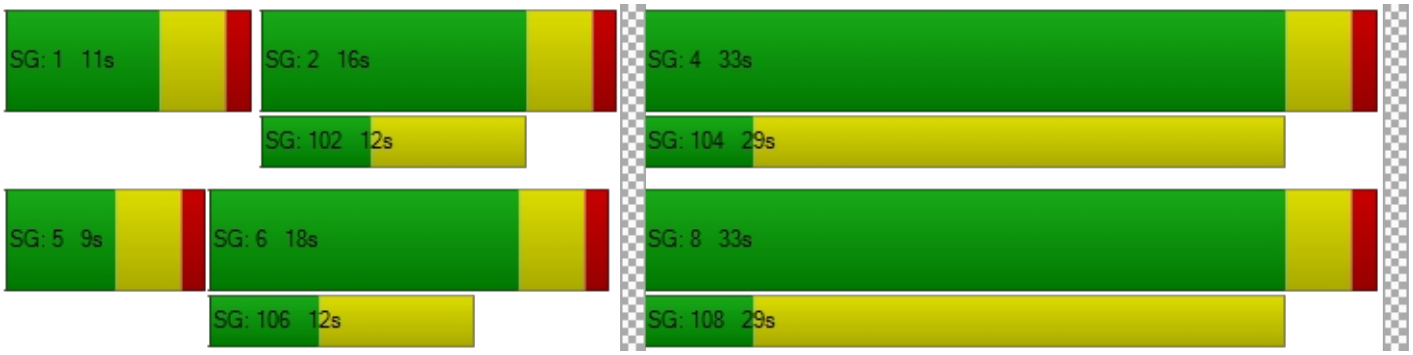
Vehicle Miles Traveled [mph]	7.03	20.35	8.06	100.66	52.16	4.39	326.44	168.17
Stops [stops/h]	67.30	217.01	49.37	185.59	102.67	17.61	479.62	268.25
Fuel consumption [US gal/h]	1.19	3.81	1.14	6.33	3.37	0.45	18.89	10.09
CO [g/h]	83.48	266.61	79.39	442.33	235.40	31.62	1320.25	705.44
NOx [g/h]	16.24	51.87	15.45	86.06	45.80	6.15	256.87	137.25
VOC [g/h]	19.35	61.79	18.40	102.51	54.56	7.33	305.98	163.49

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	1.809	1.935	3.200	3.206
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	967	967	400	467
d_b, Bicycle Delay [s]	8.01	8.01	19.20	17.63
l_b,int, Bicycle LOS Score for Intersection	1.723	2.018	2.131	2.559
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Oak Glen Rd/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	31.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.809

Intersection Setup

Name	Oak Glen Road			Oak Glen Road			Yucaipa Boulevard				Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound				Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	2	0	0	0	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	250.00	100.00	150.00	325.0	100.0	100.0	100.0	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			45.00			40.00				40.00		
Grade [%]	0.00			0.00			0.00				0.00		
Curb Present	No			No			No				No		
Crosswalk	Yes			Yes			Yes				Yes		

Volumes

Name	Oak Glen Road			Oak Glen Road			Yucaipa Boulevard				Yucaipa Boulevard		
Base Volume Input [veh/h]	46	234	149	35	460	475	0	203	554	26	207	932	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00												
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.030	1.030	1.030	1.030	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	0	0	0	0	12	12	8	19	1	0	26	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	241	153	36	474	501	12	217	590	28	213	986	14
Peak Hour Factor	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.879	0.879	0.879	0.879	0.8790	0.8790	0.8790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	69	44	10	135	142	3	62	168	8	61	280	4
Total Analysis Volume [veh/h]	57	274	174	41	539	570	14	247	671	32	242	1122	16
Presence of On-Street Parking	No		No	No		No	No			No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0				0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0				0		
v_co, Outbound Pedestrian Volume crossing	0			0			0				0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0				0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0				0		
Bicycle Volume [bicycles/h]	0			0			0				0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	5	2	0	1	6	0
Auxiliary Signal Groups													
Maximum Green [s]	5	32	0	8	35	0	0	8	22	0	12	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	27	0	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12	36	0	12	36	0	0	12	26	0	16	30	0
Lead / Lag	Lead	-	-	Lead	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No			No	No		No	No	
Maximum Recall	No	No		No	No			No	No		No	No	
Pedestrian Recall	No	No		No	No			No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	34	34	3	34	34	8	28	28	8	28	28
g / C, Green / Cycle	0.04	0.38	0.38	0.04	0.38	0.38	0.09	0.31	0.31	0.09	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.03	0.12	0.13	0.02	0.15	0.35	0.07	0.13	0.13	0.07	0.21	0.21
s, saturation flow rate [veh/h]	1810	1900	1660	1810	3618	1615	3514	3618	1856	3514	3618	1886
c, Capacity [veh/h]	79	726	634	67	1359	607	312	1122	576	326	1136	592
d1, Uniform Delay [s]	42.50	19.62	19.71	42.67	20.62	27.12	40.35	24.56	24.57	39.78	26.69	26.69
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.37	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.67	0.26	0.31	8.52	0.19	19.88	5.86	1.13	2.20	3.34	2.99	5.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.72	0.32	0.33	0.61	0.40	0.94	0.84	0.41	0.41	0.74	0.66	0.66
d, Delay for Lane Group [s/veh]	54.17	19.88	20.02	51.19	20.81	47.00	46.21	25.69	26.77	43.12	29.68	32.33
Lane Group LOS	D	B	C	D	C	D	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.47	3.31	3.00	1.02	3.85	13.95	2.99	3.87	4.16	2.67	6.98	7.72
50th-Percentile Queue Length [ft/ln]	36.70	82.71	74.93	25.51	96.13	348.68	74.87	96.86	103.96	66.66	174.54	192.94
95th-Percentile Queue Length [veh/ln]	2.64	5.95	5.40	1.84	6.92	20.07	5.39	6.97	7.49	4.80	11.32	12.27
95th-Percentile Queue Length [ft/ln]	66.06	148.87	134.88	45.93	173.04	501.80	134.77	174.35	187.14	119.99	282.88	306.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.17	19.90	20.02	51.19	20.81	47.00	46.21	46.21	26.02	26.77	43.12	30.57	32.33
Movement LOS	D	B	C	D	C	D	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	23.81			34.87			31.51				32.79		
Approach LOS	C			C			C				C		
d_I, Intersection Delay [s/veh]	31.95												
Intersection LOS	C												
Intersection V/C	0.809												

Emissions

Vehicle Miles Traveled [mph]	4.30	17.78	16.00	4.00	52.65	55.68	71.68	127.48	65.58	36.38	112.43	58.63
Stops [stops/h]	58.72	132.33	119.89	40.82	307.62	557.90	239.58	309.95	166.34	213.32	558.54	308.71
Fuel consumption [US gal/h]	1.36	2.89	2.62	1.07	7.91	14.30	7.38	10.04	5.28	5.52	14.03	7.70
CO [g/h]	95.00	202.08	182.81	74.93	553.02	999.30	515.55	701.65	369.36	385.98	980.85	538.16
NOx [g/h]	18.48	39.32	35.57	14.58	107.60	194.43	100.31	136.52	71.86	75.10	190.84	104.71
VOC [g/h]	22.02	46.83	42.37	17.37	128.17	231.60	119.48	162.62	85.60	89.45	227.32	124.72

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.644	2.866	3.168	3.095
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	711	711	489	578
d_b, Bicycle Delay [s]	18.69	18.69	25.69	22.76
l_b,int, Bicycle LOS Score for Intersection	1.976	2.508	1.954	2.319
Bicycle LOS	A	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 5: Project Access/Yucaipa Blvd

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.025

Intersection Setup

Name	Project Access		Yucaipa Boulevard		Yucaipa Boulevard	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	15.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Access		Yucaipa Boulevard		Yucaipa Boulevard	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	21	27	111	0	63
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	21	27	111	0	63
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	5	7	28	0	16
Total Analysis Volume [veh/h]	0	21	27	111	0	63
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.03	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	9.42	0.00	0.00	0.00	0.00
Movement LOS		A	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.08	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.93	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.42		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.89					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: 14th St-Sand Canyon Rd/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	26.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.487

Intersection Setup

Name	14th Street			Sand Canyon Road			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	120.00	100.00	120.00	165.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			50.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	14th Street			Sand Canyon Road			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	29	131	53	262	268	58	91	1056	46	31	626	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	11	3	0	0	0	13	0	10	36	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	135	66	273	276	60	94	1101	47	42	681	156
Peak Hour Factor	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	34	17	70	70	15	24	281	12	11	174	40
Total Analysis Volume [veh/h]	31	138	67	279	282	61	96	1125	48	43	696	159
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	29	0	0	35	0	8	25	0	5	22	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	16	35	0	9	28	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	L	C	C
C, Calculated Cycle Length [s]	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	19	19	19	7	61	4	57	57
g / C, Green / Cycle	0.09	0.09	0.18	0.18	0.18	0.07	0.55	0.03	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.04	0.04	0.15	0.15	0.04	0.05	0.22	0.02	0.16	0.16
s, saturation flow rate [veh/h]	3618	1615	1810	1898	1615	1810	5176	1810	3618	1726
c, Capacity [veh/h]	333	149	319	335	285	122	2862	60	1877	896
d1, Uniform Delay [s]	47.13	47.30	43.99	43.96	38.79	50.52	14.05	52.65	15.15	15.19
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.82	2.13	6.77	6.34	0.37	10.62	0.41	14.40	0.42	0.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.45	0.86	0.86	0.21	0.79	0.39	0.71	0.31	0.31
d, Delay for Lane Group [s/veh]	47.96	49.42	50.76	50.30	39.16	61.14	14.46	67.05	15.57	16.09
Lane Group LOS	D	D	D	D	D	E	B	E	B	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.81	1.81	7.51	7.81	1.38	2.91	5.04	1.40	4.00	3.99
50th-Percentile Queue Length [ft/ln]	45.16	45.27	187.80	195.26	34.62	72.77	126.06	34.89	99.90	99.85
95th-Percentile Queue Length [veh/ln]	3.25	3.26	12.01	12.39	2.49	5.24	8.72	2.51	7.19	7.19
95th-Percentile Queue Length [ft/ln]	81.29	81.49	300.17	309.84	62.32	130.98	218.12	62.79	179.82	179.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	47.96	49.42	50.76	50.30	39.16	61.14	14.46	0.00	67.05	15.66	16.09
Movement LOS		D	D	D	D	D	E	B		E	B	B
d_A, Approach Delay [s/veh]	48.44			49.41			18.13			18.20		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	26.86											
Intersection LOS	C											
Intersection V/C	0.487											

Emissions

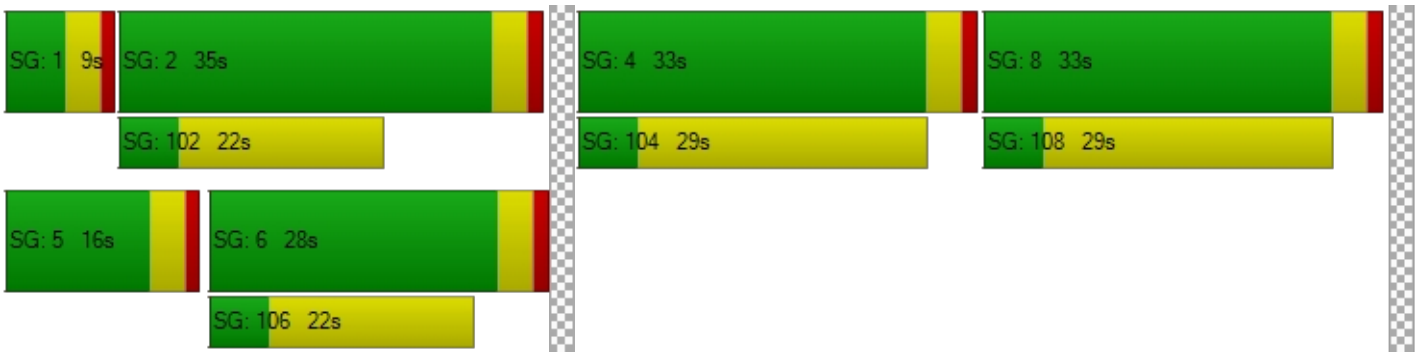
Vehicle Miles Traveled [mph]	9.97	4.84	16.04	16.77	3.57	7.47	87.52	10.72	143.65	69.49
Stops [stops/h]	118.24	59.27	245.85	255.61	45.32	95.26	495.06	45.67	261.55	130.71
Fuel consumption [US gal/h]	2.62	1.30	7.14	7.42	1.30	2.40	11.31	1.42	9.54	4.69
CO [g/h]	182.85	91.15	499.38	518.66	90.96	167.60	790.42	99.21	666.92	327.55
NOx [g/h]	35.58	17.73	97.16	100.91	17.70	32.61	153.79	19.30	129.76	63.73
VOC [g/h]	42.38	21.13	115.74	120.20	21.08	38.84	183.19	22.99	154.56	75.91

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	2.432	2.641	2.972	3.045
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	527	527	564	436
d_b, Bicycle Delay [s]	29.82	29.82	28.37	33.62
l_b,int, Bicycle LOS Score for Intersection	1.729	2.586	2.231	2.054
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: 13th St/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	8.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.438

Intersection Setup

Name	13th Street			13th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	13th Street			13th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	30	26	40	33	19	28	34	1324	19	36	747	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	27	0	0	55	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	27	41	34	20	29	35	1391	20	37	825	55
Peak Hour Factor	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	7	11	9	5	8	9	366	5	10	217	14
Total Analysis Volume [veh/h]	33	28	43	36	21	31	37	1466	21	39	869	58
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	29	0	0	29	0	8	31	0	8	31	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	10	0	0	7	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	18	19	0	18	19	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	9	3	47	47	3	47	47
g / C, Green / Cycle	0.12	0.12	0.12	0.04	0.67	0.67	0.04	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.07	0.03	0.03	0.02	0.27	0.27	0.02	0.17	0.17
s, saturation flow rate [veh/h]	1456	1350	1719	1810	3618	1886	1810	3618	1840
c, Capacity [veh/h]	250	154	215	67	2405	1254	70	2410	1226
d1, Uniform Delay [s]	28.81	27.91	27.63	33.12	5.39	5.39	33.06	4.70	4.70
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.11	0.76	0.58	6.78	0.51	0.98	6.81	0.25	0.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.23	0.24	0.55	0.41	0.41	0.56	0.25	0.26
d, Delay for Lane Group [s/veh]	29.92	28.67	28.20	39.89	5.90	6.36	39.87	4.95	5.20
Lane Group LOS	C	C	C	D	A	A	D	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.70	0.57	0.80	0.71	2.29	2.55	0.74	1.24	1.36
50th-Percentile Queue Length [ft/ln]	42.45	14.29	20.12	17.71	57.19	63.71	18.61	31.10	33.88
95th-Percentile Queue Length [veh/ln]	3.06	1.03	1.45	1.27	4.12	4.59	1.34	2.24	2.44
95th-Percentile Queue Length [ft/ln]	76.42	25.72	36.21	31.87	102.94	114.68	33.50	55.98	60.98

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.92	29.92	29.92	28.67	28.20	28.20	39.89	6.05	6.36	39.87	5.03	5.20
Movement LOS	C	C	C	C	C	C	D	A	A	D	A	A
d_A, Approach Delay [s/veh]	29.92			28.40			6.88			6.44		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	8.32											
Intersection LOS	A											
Intersection V/C	0.438											

Emissions

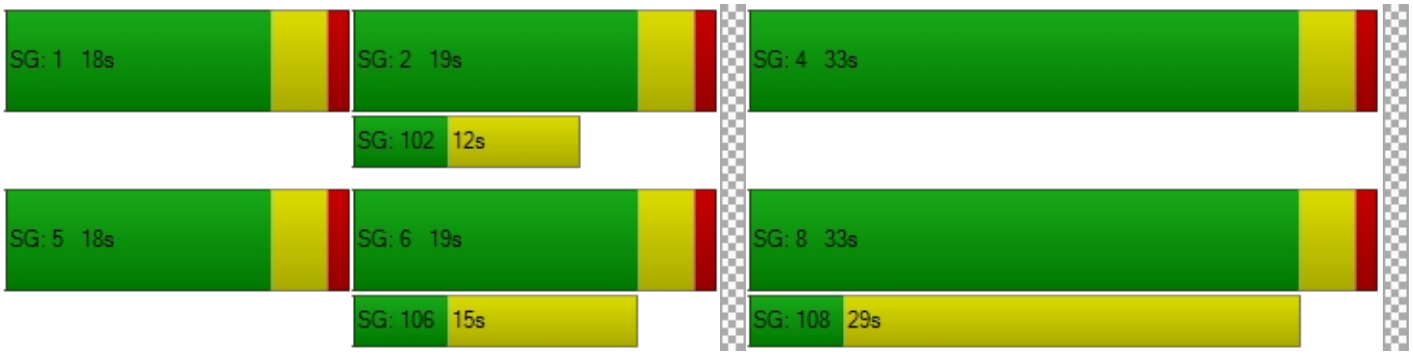
Vehicle Miles Traveled [mph]	6.92	2.53	3.65	9.22	243.65	127.04	9.73	153.16	78.18
Stops [stops/h]	87.33	29.39	41.38	36.42	235.28	131.06	38.28	127.96	69.70
Fuel consumption [US gal/h]	1.28	0.44	0.62	0.99	12.21	6.50	1.04	7.36	3.82
CO [g/h]	89.41	30.50	43.42	69.10	853.61	454.24	72.77	514.58	266.79
NOx [g/h]	17.40	5.93	8.45	13.44	166.08	88.38	14.16	100.12	51.91
VOC [g/h]	20.72	7.07	10.06	16.02	197.83	105.27	16.87	119.26	61.83

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	0.00	26.58
l_p,int, Pedestrian LOS Score for Intersectio	1.779	1.986	0.000	3.100
Crosswalk LOS	A	A	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	829	829	429	429
d_b, Bicycle Delay [s]	12.01	12.01	21.61	21.61
l_b,int, Bicycle LOS Score for Intersection	1.731	1.705	2.398	2.091
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: 10th St/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.465

Intersection Setup

Name	10th Street			10th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	250.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	10th Street			10th Street			Yucaipa Boulevard			Yucaipa Boulevard		
Base Volume Input [veh/h]	14	38	23	62	21	64	97	1336	25	20	782	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	0	0	0	0	0	0	85	25	0	80	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	39	24	64	22	66	100	1461	51	21	886	66
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	10	6	16	6	17	26	373	13	5	226	17
Total Analysis Volume [veh/h]	19	40	24	65	22	67	102	1491	52	21	904	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	29	0	0	29	0	14	34	0	5	25	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	33	0	0	33	0	21	16	0	21	16	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	5	47	47	2	43	43
g / C, Green / Cycle	0.14	0.14	0.07	0.67	0.67	0.02	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.05	0.09	0.06	0.28	0.28	0.01	0.18	0.18
s, saturation flow rate [veh/h]	1802	1671	1810	3618	1867	1810	3618	1834
c, Capacity [veh/h]	310	302	134	2413	1246	45	2234	1132
d1, Uniform Delay [s]	27.33	28.51	31.78	5.40	5.40	33.68	6.23	6.24
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.46	1.34	8.43	0.54	1.05	7.39	0.33	0.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.27	0.51	0.76	0.42	0.42	0.47	0.29	0.29
d, Delay for Lane Group [s/veh]	27.79	29.85	40.21	5.94	6.45	41.07	6.56	6.88
Lane Group LOS	C	C	D	A	A	D	A	A
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.23	2.41	1.90	2.39	2.64	0.42	1.70	1.83
50th-Percentile Queue Length [ft/ln]	30.75	60.33	47.50	59.75	66.09	10.61	42.51	45.78
95th-Percentile Queue Length [veh/ln]	2.21	4.34	3.42	4.30	4.76	0.76	3.06	3.30
95th-Percentile Queue Length [ft/ln]	55.35	108.59	85.50	107.54	118.96	19.09	76.51	82.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.79	27.79	27.79	29.85	29.85	29.85	40.21	6.11	6.45	41.07	6.65	6.88
Movement LOS	C	C	C	C	C	C	D	A	A	D	A	A
d_A, Approach Delay [s/veh]	27.79			29.85			8.23			7.39		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	9.67											
Intersection LOS	A											
Intersection V/C	0.465											

Emissions

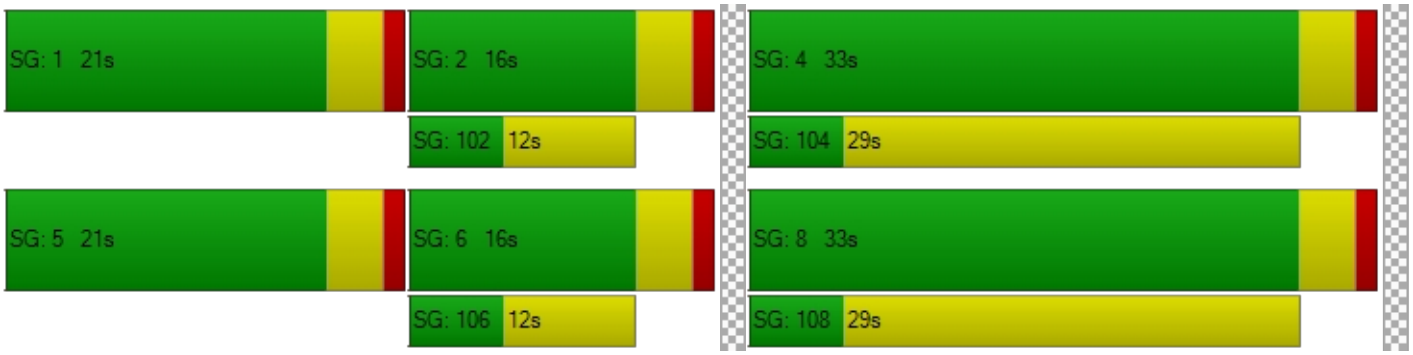
Vehicle Miles Traveled [mph]	5.89	11.28	15.81	157.72	81.43	5.77	176.75	89.92
Stops [stops/h]	63.26	124.11	97.72	245.81	135.96	21.82	174.89	94.19
Fuel consumption [US gal/h]	1.17	2.30	2.36	9.30	4.94	0.60	8.91	4.60
CO [g/h]	81.76	160.68	165.02	649.74	345.49	41.69	622.67	321.86
NOx [g/h]	15.91	31.26	32.11	126.42	67.22	8.11	121.15	62.62
VOC [g/h]	18.95	37.24	38.25	150.58	80.07	9.66	144.31	74.59

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	1.805	1.910	3.099	3.153
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	829	829	343	343
d_b, Bicycle Delay [s]	12.01	12.01	24.03	24.03
l_b,int, Bicycle LOS Score for Intersection	1.697	1.814	2.464	2.105
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Oak Glen Rd/Yucaipa Blvd

Control Type:	Signalized	Delay (sec / veh):	30.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.549

Intersection Setup

Name	Oak Glen Road			Oak Glen Road			Yucaipa Boulevard				Yucaipa Boulevard		
Approach	Northbound			Southbound			Eastbound				Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	2	0	0	0	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	250.00	100.00	150.00	325.0	100.0	100.0	100.0	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			45.00			40.00				40.00		
Grade [%]	0.00			0.00			0.00				0.00		
Curb Present	No			No			No				No		
Crosswalk	Yes			Yes			Yes				Yes		

Volumes

Name	Oak Glen Road			Oak Glen Road			Yucaipa Boulevard				Yucaipa Boulevard		
Base Volume Input [veh/h]	53	271	199	61	261	205	0	384	1007	41	263	653	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00												
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.030	1.030	1.030	1.030	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	0	0	0	0	9	49	9	24	3	0	20	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	279	205	63	269	220	49	405	1061	45	271	693	19
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.982	0.982	0.982	0.982	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	71	52	16	68	56	12	103	270	11	69	176	5
Total Analysis Volume [veh/h]	58	284	209	64	274	224	50	412	1080	46	276	706	19
Presence of On-Street Parking	No		No	No		No	No			No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0				0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0				0		
v_co, Outbound Pedestrian Volume crossing	0			0			0				0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0				0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0				0		
Bicycle Volume [bicycles/h]	0			0			0				0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	5	2	0	1	6	0
Auxiliary Signal Groups													
Maximum Green [s]	5	32	0	5	32	0	0	21	27	0	20	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	27	0	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	13	38	0	11	36	0	0	21	31	0	20	30	0
Lead / Lag	Lead	-	-	Lead	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No			No	No		No	No	
Maximum Recall	No	No		No	No			No	No		No	No	
Pedestrian Recall	No	No		No	No			No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	17	17	5	17	17	15	52	52	10	47	47
g / C, Green / Cycle	0.04	0.17	0.17	0.05	0.17	0.17	0.15	0.52	0.52	0.10	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.14	0.04	0.08	0.14	0.13	0.21	0.21	0.08	0.13	0.13
s, saturation flow rate [veh/h]	1810	1900	1639	1810	3618	1615	3514	3618	1861	3514	3618	1875
c, Capacity [veh/h]	76	321	277	83	626	279	534	1894	974	356	1710	886
d1, Uniform Delay [s]	47.39	40.03	40.20	47.16	37.00	39.70	41.40	14.29	14.29	43.83	16.01	16.02
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.18	4.99	6.54	13.60	0.48	5.31	4.35	0.61	1.19	3.64	0.41	0.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.81	0.84	0.77	0.44	0.80	0.86	0.39	0.39	0.78	0.28	0.28
d, Delay for Lane Group [s/veh]	61.56	45.02	46.74	60.77	37.48	45.02	45.74	14.90	15.48	47.47	16.42	16.80
Lane Group LOS	E	D	D	E	D	D	D	B	B	D	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.70	6.44	5.83	1.84	2.92	5.46	5.70	4.78	5.07	3.42	3.20	3.41
50th-Percentile Queue Length [ft/ln]	42.39	160.89	145.76	45.92	73.00	136.56	142.50	119.50	126.85	85.51	80.00	85.36
95th-Percentile Queue Length [veh/ln]	3.05	10.60	9.79	3.31	5.26	9.30	9.62	8.37	8.77	6.16	5.76	6.15
95th-Percentile Queue Length [ft/ln]	76.30	264.90	244.76	82.66	131.41	232.38	240.39	209.14	219.20	153.91	143.99	153.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.56	45.15	46.74	60.77	37.48	45.02	45.74	45.74	15.08	15.48	47.47	16.54	16.80
Movement LOS	E	D	D	E	D	D	D	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	47.48			43.14			24.01				25.08		
Approach LOS	D			D			C				C		
d_I, Intersection Delay [s/veh]	30.70												
Intersection LOS	C												
Intersection V/C	0.549												

Emissions

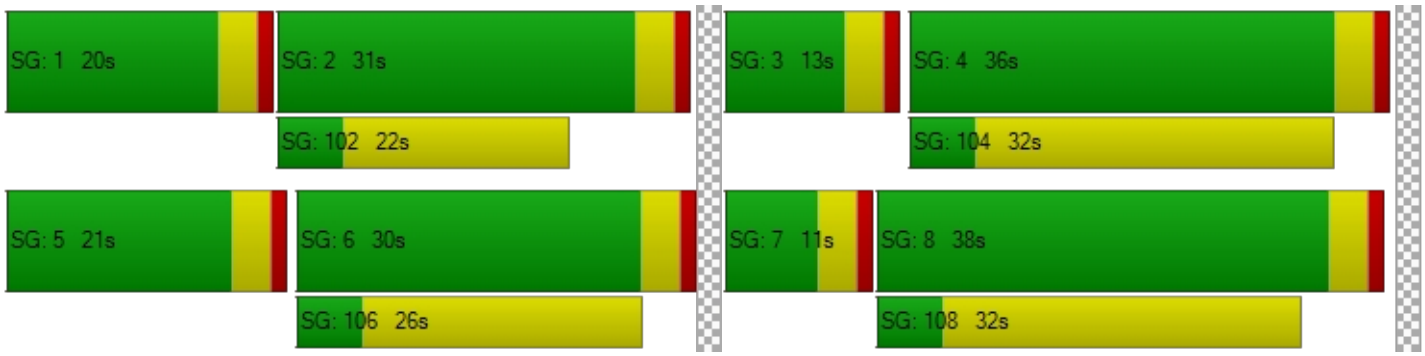
Vehicle Miles Traveled [mph]	4.37	19.71	17.46	6.25	26.76	21.88	126.88	204.20	105.03	41.49	71.75	37.23
Stops [stops/h]	61.04	231.68	209.89	66.13	210.25	196.64	410.40	344.17	182.66	246.26	230.39	122.92
Fuel consumption [US gal/h]	1.48	5.38	4.89	1.83	5.62	5.25	12.88	12.95	6.76	6.57	6.43	3.39
CO [g/h]	103.65	375.87	341.74	127.77	392.94	366.76	900.07	905.23	472.63	459.34	449.33	236.81
NOx [g/h]	20.17	73.13	66.49	24.86	76.45	71.36	175.12	176.12	91.96	89.37	87.42	46.08
VOC [g/h]	24.02	87.11	79.20	29.61	91.07	85.00	208.60	209.80	109.54	106.46	104.14	54.88

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.605	2.771	3.151	3.115
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	640	540	520
d_b, Bicycle Delay [s]	21.78	23.12	26.65	27.38
l_b,int, Bicycle LOS Score for Intersection	2.014	2.023	2.206	2.110
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Project Access/Yucaipa Blvd

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.099

Intersection Setup

Name	Project Access		Yucaipa Boulevard		Yucaipa Boulevard	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	15.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Access		Yucaipa Boulevard		Yucaipa Boulevard	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	88	22	33	0	85
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	88	22	33	0	85
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	22	6	8	0	21
Total Analysis Volume [veh/h]	0	88	22	33	0	85
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.10	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	9.50	0.00	0.00	0.00	0.00
Movement LOS		A	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.33	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	8.23	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.50		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.67					
Intersection LOS	A					

December 4, 2024

TJW ENGINEERING, INC.
TRAFFIC ENGINEERING &
TRANSPORTATION PLANNING
CONSULTANTS

Patricia Carbajal
TECK PROPERTIES
P.O. Box 674
Forest Falls, CA 92339

SUBJECT: Yucaipa Business Park Development Vehicle Miles Traveled (VMT) Analysis

Patricia Carbajal,

*TJW Engineering, Inc. (*TJW*)* is pleased to submit this Vehicle Miles Traveled (VMT) Analysis for the proposed project located at 33193 Yucaipa Boulevard in the City of Yucaipa. The purpose of this memorandum is to satisfy the requirements for disclosure of potential impacts and mitigation measures per the California Environmental Quality Act (CEQA). This analysis has been conducted using guidance from the City of Yucaipa *Traffic Impact Analysis Guidelines* (August 2020).

PROJECT DESCRIPTION

The proposed project consists of 96,060 square feet of commercial business land use and a total of six (6) apartment units. Project access is planned via one right-in/right-out only access driveway on Yucaipa Boulevard. The project site plan is attached for reference.

BACKGROUND

Senate Bill 743 (SB-743), which was codified in Public Resources Code section 21099, was signed by the Governor in 2013 and directed the Governor's OPR to identify alternative metrics for evaluating transportation impacts under CEQA. Based on this, delay-based analysis (level of service) has been replaced by VMT. Pursuant to Section 21099, the criteria for determining the significance of transportation impacts must "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." Recently adopted changes to the CEQA Guidelines in response to Section 21099 include a new section (15064.3) that specifies that VMT is the most appropriate measure of transportation impacts. A separate Technical Advisory issued by OPR provides additional technical details on calculating VMT and assessing transportation impacts for various types of projects.

METHODOLOGY

A VMT analysis was prepared using the City's guidelines for VMT analysis. The analysis was prepared using the San Bernardino Transportation Analysis Model (SBTAM).

The SBTAM model was modified to include the project socioeconomic data. In this case, the project is located within Traffic Analysis Zone (TAZ) 53847102. The project socioeconomic data for the project was presented in the traffic scoping agreement (attached for reference) and assumes 1.5 residents per household for the live/work units and a rate of 3.08 employees per 1,000 square feet[1]; employment sector splits were based on typical employment conversion factors for the Orange County Traffic Analysis Model (OCTAM). The following table is an overview of the socioeconomic data assumed for the project.

Table 1: Project Socioeconomic Data

	Households	Residents	Square Feet	Employment				
				Total	Manufacturing	Wholesale	Retail	Other Service
Live/Work Units	6	9	-	-	-	-	-	-
Business Park	-	-	96,060	296	89	89	30	88
Total	**6**	**9**	**96,060**	**296**	**89**	**89**	**30**	**88**

The model was run for base year 2016 and future year 2040 with project conditions (total two model runs). VMT was then evaluated using the Origin-Destination (OD) matrices as required by the City guidelines.

THRESHOLDS

As outlined in the City's guidelines for VMT analysis, a project would result in a significant project-generated VMT impact if:

1. The baseline project-generated VMT per service population exceeds the County of San Bernardino baseline VMT per service population, or
2. The cumulative project-generated VMT per service population exceeds County of San Bernardino baseline VMT per service population.

The project's effect on VMT would be considered significant if it resulted in either of the following conditions:

1. The cumulative link-level boundary VMT per service population within the City of Yucaipa increases under the plus project condition compared to the no project condition.

[1] ITE Trip Generation Manual 11th Edition (2021) Land Use Code 770 Business Park outlines a rate of 3.08 employees per 1,00 square feet.

VMT ANALYSIS

The VMT analysis results are shown below in Tables 1 and 2. The project-generated baseline (2016) VMT per service population was determined to be 30.9, below the county-wide baseline (2016) threshold of 32.7. The cumulative (2040) project-generated county-wide VMT per service population was determined to be 33.7, below the county-wide baseline (2040) threshold of 35.3. The cumulative city-wide link-level VMT per service population was determined to be 14.14 without the project and 14.06 with the project, resulting in a decrease under the project conditions.

Table 1: VMT Analysis of Project Impact

	2016	2040	2024
Project TAZ VMT	54,002	51,867	53,291
Project TAZ Population	827	782	812
Project TAZ Employment	921	758	867
Project VMT/SP	30.9	33.7	31.7
Baseline Threshold[1]	**Baseline Project VMT/SP**	**% Above/Below Threshold**	**Baseline VMT Impact**
32.7	30.9	-5.50%	No
Cumulative Threshold[1]	**Cumulative Project VMT/SP**	**% Above/Below Threshold**	**Cumulative VMT Impact**
35.3	33.7	-4.53%	No

1: SBCTA VMT Screening Tool

Table 2: Cumulative Project Effect on VMT

	No Project	With Project	VMT Impact?
City Link-Level VMT	1,182,364	1,179,260	--
City Population	69,100	69,109	--
City Employment	14,496	14,792	--
City Link-Level VMT/SP	14.14	14.06	No

CONCLUSION

In summary, because the VMT per service population is below the County threshold for baseline (2016) and cumulative (2040) scenarios, the project would have a less than significant VMT impact. In addition, the with project cumulative link-level boundary VMT per service population is lower than the no project conditions.

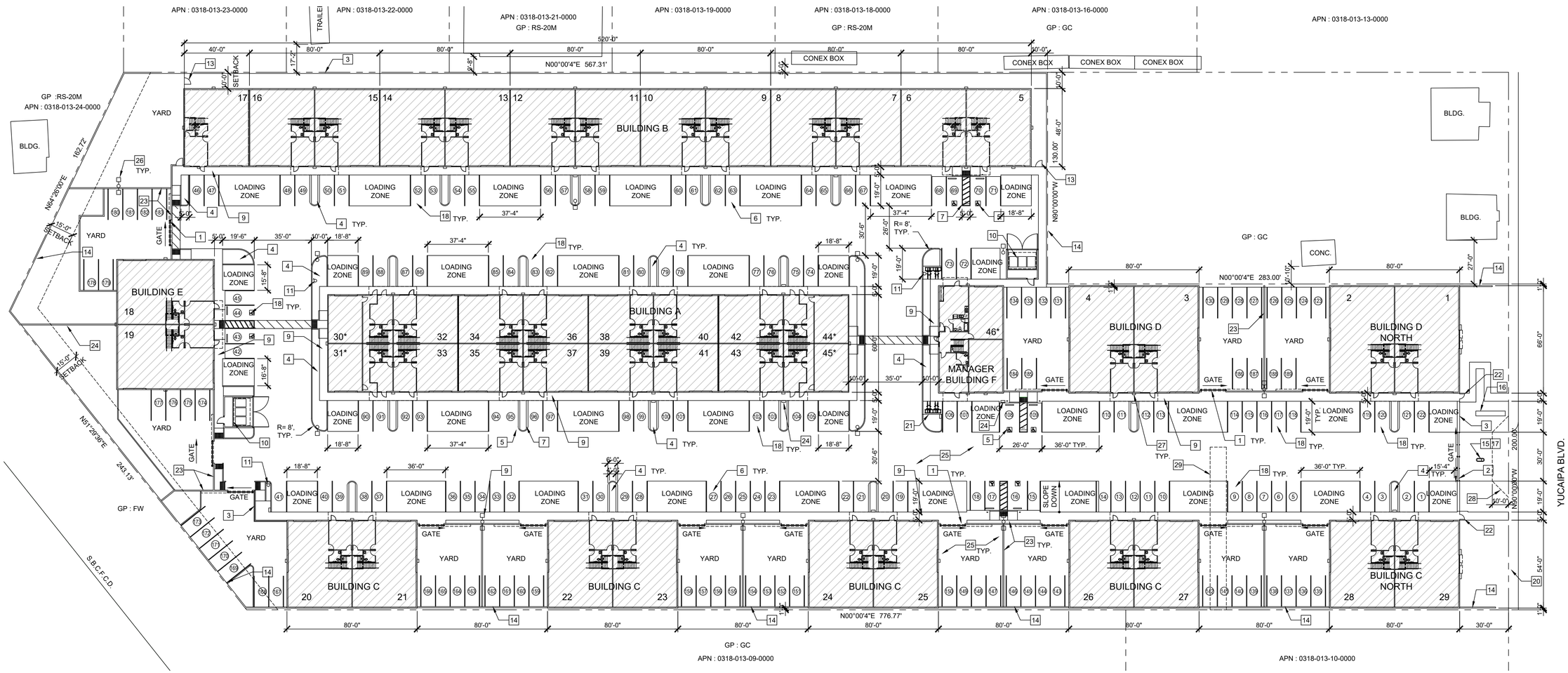
Please contact us at (949) 878-3509 if you have any questions regarding this analysis.

Sincerely,

Thomas Wheat, PE, TE
President

David Chew, PTP
Transportation Planner

Registered Civil Engineer *#69467*
Registered Traffic Engineer *#2565*



SITE PLAN

1"=30'-0"

SITE COVERAGE

LOT COVERAGE CALCULATIONS

SITE AREA =	248,292 S.F.	(100%)
BUILDING AREA =	83,310 S.F.	(33.4%)
PAVING AREA =	97,750 S.F.	(39.6%)
HARDSCAPE AREA =	42,381 S.F.	(17.0%)
LANDSCAPE AREA =	24,851 S.F.	(10.0%)

PARKING

TOTAL BUILDING A (WAREHOUSE - 16 UNITS) :		
WAREHOUSE / STORAGE : 14,060 S.F. /1000	=	**15 SPACES**
OFFICE : 3,420 S.F./250	=	**14 SPACES**
2ND FLOOR LIVING : 1,640 S.F.(2 PER UNIT) x2	=	**4 SPACES**
1 SPACE PER VEHICLE OPERATED	=	**16 SPACES**
TOTAL PARKING SPACES REQUIRED	=	**49 SPACES**
TOTAL BUILDING B :		
WAREHOUSE / STORAGE : 24,284 S.F. /1000	=	**25 SPACES**
OFFICE : 3,250 S.F./250	=	**13 SPACES**
1 SPACE PER VEHICLE OPERATED	=	**13 SPACES**
TOTAL PARKING SPACES REQUIRED	=	**51 SPACES**
TOTAL BUILDING C :		
WAREHOUSE / STORAGE : 21,080 S.F. /1000	=	**22 SPACES**
OFFICE : 2,500 S.F./250	=	**10 SPACES**
1 SPACE PER VEHICLE OPERATED	=	**10 SPACES**
TOTAL PARKING SPACES REQUIRED	=	**42 SPACES**

PARKING

TOTAL BUILDING D :		
WAREHOUSE / STORAGE : 10,368 S.F. /1000	=	**11 SPACES**
OFFICE : 1,000 S.F./250	=	**4 SPACES**
1 SPACE PER VEHICLE OPERATED	=	**4 SPACES**
TOTAL PARKING SPACES REQUIRED	=	**19 SPACES**
TOTAL BUILDING E :		
WAREHOUSE / STORAGE : 4,080 S.F. /1000	=	**5 SPACES**
OFFICE : 500 S.F./250	=	**2 SPACES**
1 SPACE PER VEHICLE OPERATED	=	**2 SPACES**
TOTAL PARKING SPACES REQUIRED	=	**9 SPACES**
TOTAL BUILDING F :		
WAREHOUSE / STORAGE : 1,402 S.F. /1000	=	**2 SPACES**
1ST FLOOR OFFICE : 788 S.F./250	=	**4 SPACES**
2ND FLOOR LIVING : 1,064 S.F.(2 PER UNIT) x2	=	**4 SPACES**
1 SPACE PER VEHICLE OPERATED	=	**2 SPACES**
TOTAL PARKING SPACES REQUIRED	=	**12 SPACES**
TOTAL PARKING SPACES REQUIRED	=	**182 SPACES**
TOTAL SPACES PROVIDED	=	**189 SPACES**

SITE PLAN KEYNOTES :

1. YARD GATE, ROLLING GATE WITH LOCK, 15' WIDE
2. ENTRY GATE, DOUBLE ROLLING GATE (2), 15' WIDE DOUBLE KEYPAD CONROLLED
3. 6' HIGH WROUGHT IRON FENCE
4. LANDSCAPE AREA - REFER TO LANDSCAPE DWGS.
5. ACCESSIBLE PARKING STALL, SLOPE SHALL NOT EXCEED 1/4" PER FOOT IN ANY DIRECTION
6. PARKING STALL, 9' x 19'
7. ACCESSIBLE AISLE, PAINT 12" HIGH "NO PARKING" SIGN PER CITY REQUIREMENTS
8. CONCRETE PARKING PER CIVIL DWGS.
9. CONCRETE WALKWAY
10. TRASH ENCLOSURE PER CITY OF YUCAIPA STANDARDS
11. FIRE HYDRANT PER CITY OF YUCAIPA REQUIREMENTS
12. PROPOSED TRANSFORMER
13. ACCESS GATE, 4' WIDE
14. 6' HIGH C.M.U. WALL
15. ENTRY KEY PAD
16. MONUMENT SIGN
17. KNOX BOX
18. STANDARD PARKING AREA
19. ACCESSIBLE RAMP
20. SIDEWALK AT PUBLIC R.O.W.
21. BICYCLE PARKING AREA
22. ACCESSIBLE PEDESTRIAN ENTRANCE GATE
23. 8' HIGH C.M.U. WALL
24. EV CHARGING STATION (TYP. OF 10)
25. CONCRETE PAVING
26. LIGHT POLE & FOOTING
27. EXTERIOR BUILDING LIGHTING
28. CLEAR SITE TRIANGLE @ INTERSECTION OF DRIVE ENTRANCE AND PUBLID R.O.W. PER YUCAIPA DEVELOPMENT CODE 87.0815
29. EXIST. SCE EASMENT TO BE ABANDONED

NOTES :
- * DENOTES LIVE / WORK UNIT
- NO EXISTING HILLY TERRAIN OR DRAINAGE CHANNELS ON SITE
- REFER TO BIOLOGY REPORT FOR PROTECTED PLANTS EXISTING ON SITE

LEGEND :

LIGHT POLE & FOOTING

FIRE HYDRANT

broeske architects & associates, inc.
4344 latham street, suite 100
riverside, ca 92501-1773
ph. (951) 300 1866
fx. (951) 300 1868

LICENSED ARCHITECT JAMES L. BROESKE No. C009174 Ren 11-30-2025 STATE OF CALIFORNIA

CONSULTANTS

YUCAIPA BUSINESS PARK

33193 YUCAIPA BLVD., YUCAIPA, CA., 92399

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JOB NO.	•	23-009
DATE	•	09/15/23
DRAWN BY	•	GMH
CHECKED BY	•	--
SCALE	•	

REVISIONS △

SHEET TITLE

SITE PLAN

SHEET NO.

A1.1

MITIGATION MONITORING AND REPORTING PROGRAM

This Mitigation Monitoring and Reporting Program (MMRP) has been prepared pursuant to the California Environmental Quality Act (CEQA) and the State CEQA Guidelines to provide for monitoring of the mitigation measures required by adoption of a Mitigated Negative Declaration prepared for a Conditional Use Permit (CUP) and Variance (VAR) for the development of a business park in the General Commercial (CG) land use district. The Proposed Project consists of 47 individual two-story business/office units, with 6 interior floor plans ranging from 1,542 square feet up to 2,990 square feet, and a live-in, work onsite component that allows six (6) tenants to live onsite on the second floor of their assigned unit.

Section 21081.6 of the Public Resources Code and Section 15091(d) of the CEQA Guidelines require public agencies to "adopt a reporting or monitoring program for changes to the Project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." The lead agency must define specific reporting and/or monitoring requirements to be enforced during Project implementation prior to final approval of the proposed Project.

The City of Yucaipa (City) is the lead agency for the proposed Project and is responsible for administering and implementing the MMRP. The MMRP stipulates how all required mitigation measures are to be implemented and completed during the appropriate Project phase. It also facilitates documentation necessary to verify that mitigation measures were in fact properly implemented.

3.7.1 Mitigation Monitoring and Reporting Program Procedures

This MMRP gives the City the primary responsibility for taking all actions necessary to implement the mitigation measures according to the specifications provided for each measure and for demonstrating that the action has been successfully completed. The City, at its discretion, may delegate responsibility for measure implementation and monitoring, or portions thereof, to other responsible individuals, such as a licensed contractor. Specific responsibilities for the City include:

- Coordination of all mitigation monitoring activities
- Management of the preparation, approval, and filing of monitoring or permit compliance reports
- Maintenance of records concerning the status of all approved mitigation measures
- Quality control assurance of field monitoring personnel
- Coordination with other agencies regarding compliance with mitigation or permit requirements
- Reviewing and recommending acceptance and certification of implementation documentation

- Acting as a contact for interested parties or surrounding property owners who wish to register complaints, observations of unsafe conditions, or environmental violations; verifying any such circumstances; and developing any necessary corrective actions

3.7.2 Mitigation Monitoring and Reporting Program Matrix

The MMRP is organized in a matrix format. The first column identifies the mitigation measure. The second column titled "Responsible for Monitoring," refers to the agency responsible for ensuring that the mitigation measure is implemented. The third column "Monitoring Frequency" and the fourth column "Timing of Verification" refer to when monitoring will occur. The fifth column "Method of Verification" will be used by the lead agency to ensure what implementation of the mitigation will look like. The sixth column "Verified Date/Initials" will document the person who verified that the mitigation measure was satisfactorily implemented and will include the date on which this verification occurred. The last column titled "Sanctions for Non-Compliance" will be used to assist the lead agency in determining consequences for failing to comply with the mitigation measure. The mitigation measures are presented by environmental issue area.

Mitigation Measure	Responsible for Monitoring	Responsible for Implementation	Monitoring Frequency	Timing of Verification	Method of Verification	Verified Date/Initials	Sanctions for Non-Compliance
BIOLOGY							
BIO-1: Any ground disturbing activities and vegetation clearing activities should occur outside of the active nesting bird season (i.e., February 1st–August 31), when feasible, to ensure compliance with the California Fish and Game Code (CFGC). If any ground disturbing activities were to take place during the active breeding bird season, a qualified biologist shall conduct a nesting bird survey prior to ground disturbing activities. If nesting birds are discovered during pre-construction surveys, the qualified biologist will identify appropriate Mitigation Measures such as providing a work area buffer, prescribe a monitor for work, or postponing construction until after anticipated fledge date, to prevent impacts to nesting birds. Mitigation Measures will be dependent on the nesting bird characteristics in relation to the Project observed during the pre-construction survey.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to grading and or during construction	During grading and construction	Applicant to provide preconstruction survey to the City		Withhold Grading Permits
BIO-2: A pre-construction survey for Burrowing Owls shall be conducted by a qualified biologist within 30 days prior to the start of any ground-disturbing activities. If active burrows are found, a buffer zone shall be established, and no construction activities shall occur within this zone until the owls have vacated the burrows. Passive relocation may be employed under the guidance of a qualified biologist and in accordance with California Department of Fish Wildlife (CDFW) guidelines if necessary.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to grading and or during construction	During grading and construction	Applicant to provide preconstruction survey to the City		Withhold Grading Permits
BIO-3: A qualified biologist shall conduct a pre-construction survey for the southern California legless lizard in areas of suitable habitat. If this species is found, the biologist shall relocate individuals to nearby suitable habitat outside the impact area. Construction personnel shall be trained to recognize the species and instructed to halt work and contact the biologist if a legless lizard is encountered during construction.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to grading and or during construction	During grading and construction	Applicant to provide preconstruction survey to the City		Withhold Grading Permits
BIO-4: A pre-construction survey for roosting bats shall be conducted by a qualified biologist within 14 days prior to the start of any ground-disturbing activities at the abandoned buildings. If suitable evidence of bat occupation is present, e.g., guano or live bats are heard, a follow-up nighttime emergence survey shall be conducted to determine the species present and evaluate the size and significance of any colony. If roosting bats are determined to be present, a Bat Management Plan that outlines project-specific protective measures to avoid and minimize impacts to roosting bats during project construction shall be required and implemented.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to grading and or during construction	During grading and construction	Applicant to provide preconstruction survey to the City		Withhold Grading Permits

Mitigation Measure	Responsible for Monitoring	Responsible for Implementation	Monitoring Frequency	Timing of Verification	Method of Verification	Verified Date/Initials	Sanctions for Non-Compliance
BIO-5: Prior to the commencement of any ground-disturbing activities, a qualified biologist shall conduct a pre-construction survey for the Crotch bumble bee. If any nests are found, a buffer zone shall be established to avoid disturbance, and construction activities shall not occur within this zone until the bees have naturally relocated or the nesting season has ended.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to grading and or during construction	During grading and construction	Applicant to provide preconstruction survey to the City		Withhold Grading Permits
BIO-6: A qualified biologist shall conduct a pre-construction survey for the coastal whiptail snake in areas of suitable habitat. If this species is found, the biologist shall relocate individuals to nearby suitable habitat outside the impact area. Construction personnel shall be trained to recognize the species and instructed to halt work and contact the biologist if a whiptail lizard is encountered during construction.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to grading and or during construction	During grading and construction	Applicant to provide preconstruction survey to the City		Withhold Grading Permits
BIO-7: To ensure the protection of the coast live oak tree located adjacent to the northeast border of the Project site, a buffer zone will be established around the tree, and no construction activities will be allowed within its root zone. Additionally, the construction contractor shall avoid any damage to the tree during construction activities. Should there be any encroachment into the rootzone, a permit shall be required pursuant to Section 89.0515 of the Yucaipa Development Code and measures shall be taken consistent with Resolution 96-03.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to Removal of, or Encroachment Into, the Protected Zone of Oak Trees	During grading and construction	Applicant to provide grading plans to City		Withhold Grading Permits
BIO-8: To prevent direct and indirect impacts to the Wilson Creek flood control channel, the following Best Management Practices (BMPs) shall be implemented: • To ensure no direct impacts, Wilson Creek flood control channel located within 50 feet (15 meters) of the Project footprint shall be clearly demarcated with orange construction fencing or other visible markers and no Project-related activities shall be permitted within the delineated area. • To minimize potential indirect impacts, the applicant shall prepare and implement an Erosion and Sediment Control Plan to avoid and minimize erosion and runoff to the Wilson Creek flood control channel adjacent to the Project site.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to grading and or during construction, prior to occupancy	Ongoing	Applicant to provide WQMP and erosion control plans to City		Withhold Grading Permits/withhold occupancy

Mitigation Measure	Responsible for Monitoring	Responsible for Implementation	Monitoring Frequency	Timing of Verification	Method of Verification	Verified Date/Initials	Sanctions for Non-Compliance
• As the Project will disturb at least 1 acre of land, the project applicant is required to obtain coverage under the General Construction Storm Water Permit from the State Water Resources Control Board and prepare a Stormwater Pollution Prevention Plan (SWPPP), implementing BMPs to minimize soil erosion during construction and avoid stormwater runoff into potentially jurisdictional features located off-site. • All staging of construction equipment and materials shall be located within the Project site and outside of the demarcated Wilson Creek flood control channel.							
BIO-9: All construction personnel shall be trained by a qualified biologist on the identification of special-status species that may be encountered on the Project site. Training shall include a review of Mitigation Measures and protocols to follow if a special-status species is encountered.	Planning Division/Engineering Division	Project Developer / Inspector	Prior to grading	Prior to grading	City Staff to verify prior to permit issuance		Withhold Grading Permits
CULTURAL							
CUL-1 A Monitoring and Treatment Plan that is reflective of the project mitigation ("Cultural Resources" and "Tribal Cultural Resources") shall be completed by the archaeologist and submitted to the Lead Agency for dissemination to the Yuhaaviatam of San Manuel Nation Cultural Resources Management Department (YSMN, also known as San Manuel Band of Mission Indians). Once all parties review and approve the plan, it shall be adopted by the Lead Agency – the plan must be adopted prior to permitting for the project. All findings will be subject to the protocol detailed within the Monitoring and Treatment Plan.	Planning Division	Project Developer	Prior to Permit issuance	Prior to Permit Issuance	Notification to the City and tribes from the Applicant's archaeological team.		Withhold Grading Permits
CUL-2 An archaeological monitor with at least 3 years of regional experience in archaeology shall be present for all initial ground-disturbing activities that occur within the proposed project area (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage and irrigation removal and installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], and archaeological work). A sufficient number of archaeological monitors	Planning Division	Project Developer	Ongoing	Ongoing	Notification to the City and tribes from the Applicant's archaeological team.		Withhold Grading Permits

Mitigation Measure	Responsible for Monitoring	Responsible for Implementation	Monitoring Frequency	Timing of Verification	Method of Verification	Verified Date/Initials	Sanctions for Non-Compliance
shall be present each workday to ensure that simultaneously occurring ground disturbing activities receive thorough levels of monitoring coverage.							
NOISE							
NOI-1 During all Project site excavation and grading on-site, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer standards.	Planning Division	Project Developer	Ongoing	Ongoing	Noise Ordinance/Code Enforcement		Code Enforcement Citation
NOI-2 The contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.	Planning Division	Project Developer	Ongoing	Ongoing	Noise Ordinance/Code Enforcement		Code Enforcement Citation
NOI-3 Equipment shall be shut off and not left to idle when not in use.	Planning Division	Project Developer	Ongoing	Ongoing	Noise Ordinance/Code Enforcement		Code Enforcement Citation
NOI-4 The contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the Project site during all Project construction.	Planning Division	Project Developer	Ongoing	Ongoing	Noise Ordinance/Code Enforcement		Code Enforcement Citation
NOI-5 Jackhammers, pneumatic equipment and all other portable stationary noise sources shall be shielded and noise shall be directed away from sensitive receptors.	Planning Division	Project Developer	Ongoing	Ongoing	Noise Ordinance/Code Enforcement		Code Enforcement Citation
NOI-6 The Project proponent shall mandate that the construction contractor prohibit the use of music or sound amplification on the Project site during construction.	Planning Division	Project Developer	Ongoing	Ongoing	Noise Ordinance/Code Enforcement		Code Enforcement Citation
NOI-7 The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment.	Planning Division	Project Developer	Ongoing	Ongoing	Noise Ordinance/Code Enforcement		Code Enforcement Citation
Tribal Resources							

Mitigation Measure	Responsible for Monitoring	Responsible for Implementation	Monitoring Frequency	Timing of Verification	Method of Verification	Verified Date/Initials	Sanctions for Non-Compliance
TCR-1 Tribal Monitoring: At the discretion of the consulting tribe(s), Tribal monitor(s) authorized to represent YSMN shall be present for all initial ground-disturbing activities that occur within the proposed project area (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage and irrigation removal and installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], and archaeological work). If further excavation below the initial ground disturbing activity is required later, monitors again shall be present at the discretion of the Tribe(s). At the discretion of the consulting tribes, a sufficient number of Tribal monitors shall be present each workday to ensure that simultaneously occurring ground disturbing activities receive thorough levels of monitoring coverage. A Monitoring and Treatment Plan that is reflective of the project mitigation ("Cultural Resources" and "Tribal Cultural Resources") shall be completed by the archaeologist, as detailed within CUL-1, and submitted to the Lead Agency for dissemination to the Yuhaaviatam of San Manuel Nation Cultural Resources Management Department (YSMN). Once all parties review and agree to the plan, it shall be adopted by the Lead Agency – the plan must be adopted prior to permitting for the project. Any and all findings will be subject to the protocol detailed within the Monitoring and Treatment Plan.	Planning Division	Project Developer	Ongoing	Ongoing	Notification to the City and tribe by the archaeological and/or paleontological monitor and on-site inspection		Code Enforcement Citation
TCR-2 Treatment of Cultural Resources During Project Implementation: If a pre-contact cultural resource is discovered during project implementation, ground-disturbing activities shall be suspended 60 feet around the resource(s), and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. The Project Archaeologist shall develop a research design that shall include a plan to evaluate the resource for significance under CEQA criteria. Representatives from YSMN, the Archaeologist, and the Lead Agency shall confer regarding the research design, as well as any testing efforts needed to delineate the resource boundary. Following the completion of evaluation efforts, all parties shall confer regarding the resource's archaeological significance, its potential as a Tribal Cultural Resource (TCR), and avoidance (or other appropriate treatment) of the discovered resource. Removal of any cultural resource(s) shall be conducted with the presence of a Tribal monitor representing the Tribe,	Planning Division	Project Developer	Ongoing	Ongoing	Notification to the City, County Coroner, and NAHC by the archaeological and/or paleontological monitor and on-site inspection		Issuance of a Stop Work Order

Mitigation Measure	Responsible for Monitoring	Responsible for Implementation	Monitoring Frequency	Timing of Verification	Method of Verification	Verified Date/Initials	Sanctions for Non-Compliance
unless otherwise decided by YSMN. All plans for analysis shall be reviewed and approved by the applicant and YSMN prior to implementation, and all removed material shall be temporarily curated on-site. It is the preference of YSMN that removed cultural material be reburied as close to the original find location as possible. However, should reburial within/near the original find location during project implementation not be feasible, then a reburial location for future reburial shall be decided upon by YSMN, the landowner, and the Lead Agency, and all finds shall be reburied within this location. Additionally, in this case, reburial shall not occur until all ground-disturbing activities associated with the project have been completed, all monitoring has ceased, all cataloguing and basic recordation of cultural resources have been completed, and a final monitoring report has been issued to Lead Agency, CHRIS, and YSMN. All reburials are subject to a reburial agreement that shall be developed between the landowner and YSMN outlining the determined reburial process/location and shall include measures and provisions to protect the reburial area from any future impacts. Should it occur that avoidance, preservation in place, and on-site reburial are not an option for treatment, the landowner shall relinquish all ownership and rights to this material and confer with YSMN to identify an American Association of Museums (AAM)-accredited facility within the County that can accession the materials into their permanent collections and provide for the proper care of these objects in accordance with the 1993 CA Curation Guidelines. A curation agreement with an appropriate qualified repository shall be developed between the landowner and museum that legally and physically transfers the collections and associated records to the facility. This agreement shall stipulate the payment of fees necessary for permanent curation of the collections and associated records and the obligation of the Project developer/applicant to pay for those fees. All draft records/reports containing the significance and treatment findings and data recovery results shall be prepared by the archaeologist and submitted to the Lead Agency and YSMN for their review and comment. After approval from all parties, the final reports and site/isolate records are							

Mitigation Measure	Responsible for Monitoring	Responsible for Implementation	Monitoring Frequency	Timing of Verification	Method of Verification	Verified Date/Initials	Sanctions for Non-Compliance
to be submitted to the local CHRIS Information Center, the Lead Agency, and YSMN.							
TCR-3 Inadvertent Discoveries of Human Remains: If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project. Initial ground-disturbing activities shall be monitored by a qualified archaeologist, as outlined in Mitigation Measure CUL-1, and interested Native American Tribe(s), as outlined in Mitigation Measures CUL-2. With implementation of Mitigation Measure MM CUL-1 and MM CUL-2, potential impacts to tribal cultural resources would be reduced to less than significant levels.	Planning Division	Project Developer	Throughout construction	Throughout construction	Notification to the City, County Coroner, and NAHC by the archaeological and/or paleontological monitor and on-site inspection		Issuance of a Stop Work Order

April 28, 2025

City of Yucaipa Planning Department
34272 Yucaipa Boulevard
Yucaipa, CA 92399

Re: Conditional Use Permit No. 23-088 CUP / ARC / MJV
Draft Conditions of Approval 04-02-2025
Project Address: 33193 Yucaipa Boulevard

Attn: Christian Farmer, Associate Planner
City of Yucaipa Planning Department

Christian,

After reviewing the CUP package and preliminary drawings we note the following concerns and requests for amendment to the Conditional Use Permit (On-Going Conditions / General Requirements).

Preliminary Grading Plan (Dated: 02/28/2024):

1. Amend Conditions of Approval to require all roof drains and / or gutters to be connected to the underground storm drain system.
2. Amend Conditions of Approval to require overflow storm drain approval into Oak Glen Creek from the San Bernardino County Flood Control District prior to commencing project site grading.
   a. If not approved this will require extensive revisions to the preliminary grading plan and potentially not meeting the requirements of the California Regional Water Quality Control Board, Santa Ana Region.
3. Omit openings in lower portion of property line masonry walls to drain landscape irrigation into Oak Glen Creek.
   a. This will create nuisance drainage into Oak Glen Creek.

Site Plan Sheet No. A1.1:

1. As noted on color board provide decorative split face masonry property line wall to face all adjacent properties.

Roof Plan Sheet No. A2.4:

1. Amend Conditions of Approval to require all roof drains and / or gutters to drain to underground storm drain system.

Thank you for your consideration.

Tom & Kathy Walker
12243 Eleventh Street
Yucaipa, CA 92399

Tom Walker Kathy Walker

CONDITIONAL USE PERMIT

ON-GOING CONDITIONS/GENERAL REQUIREMENTS:

PLANNING DIVISION (909) 797-2489 EXT. 224

1. This Conditional Use Permit with Architectural Review is for the development of a business park consisting of 47 individual two-story business/office units, with six (6) interior floor plans ranging from 1,542 square feet up to 2,990 square feet, and a live-in, work onsite component that allows six (6) tenants to live onsite on the second floor of their assigned unit., and a Major Variance for a 90 percent reduction of the side yard setback at 33193 Yucaipa Boulevard APN: 0318-031-11. Any alteration or expansion of these facilities or increase in the developed area of the site from that shown on the approved site plan, may require the submission of a new application or an additional application for Revisions for review and approval.

2. The applicant shall defend, indemnify, and hold harmless the City, its agents, officers, and employees from any claim, action or proceeding attacking or seeking to set aside, void or annul the approval of all or part of the matters applied for, or any other claim, action or proceeding relating to or arising out of such approval. This obligation includes the obligation to reimburse the City, its agents, officers and employees for any court costs or attorney fees which the City, its agents, officers, or employees are required by a court to pay as a result of such claim, action or proceeding. The City agrees to notify the applicant of any such claim, action or proceeding promptly after the City becomes aware of it. The City may participate in the defense of the claim, action or proceeding, but such participation will not relieve the applicant of applicant's defense and indemnification obligations, including City expenses.

3. This Conditional Use Permit shall become null and void if all conditions have not been complied with and the occupancy or use of the land has not taken place within three (3) years of the date of approval. One extension of time, not to exceed three (3) years, may be granted upon written request and submittal of the appropriate fee not less than 30 days prior to the date of expiration. **PLEASE NOTE:** this will be the only notice given for the above specified expiration date. **The applicant is responsible for the initiation of an extension request.**

4. The applicant/owner shall pay a fee of $2,916.75, pursuant to Senate Bill 1535. This fee shall be submitted to the Planning Division ***within three (3) days*** after the effective date of conditional approval along with a $50.00 administrative handling fee required by the Clerk. **Payments shall be made with a Check, Money Order or Cashier's Check for $2,966.75 made payable to the "Clerk of the Board".** The Planning Division shall then file the Notice of Determination within three (3) days after the effective date of conditional approval. The

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applicant should be aware that Section 21089(b) of the Public Resources Code provides that any project approved under CEQA is not operative, vested or final until the required fee is paid. Proof of fee payment will be required prior to issuance of building permits.

5. All conditions of this Conditional Use Permit are continuing conditions. Failure of the applicant and/or operator to comply with any or all of said conditions at any time may result in the revocation of the permit granted to use the property.

6. The applicant/owner shall always maintain in good condition all permanent plantings as identified on the approved landscape plan, as well as all exterior finishes, and architectural and site design elements.

7. All new utility lines shall be placed underground. Existing overhead distribution lines shall be placed underground when four (4) or more utility poles on the same street are located on or adjacent to the project site.

8. Mail delivery shall be by neighborhood boxes or other delivery as approved by the U.S. Postal Service.

9. All signs proposed by this project may only be lit by steady, stationary, shielded light directed at the sign, by light inside the sign, by direct stationary neon lighting or by an alternating lighting system that changes no more than once per hour. The glare from the luminous source shall not exceed one-half (0.5) foot candle.

10. Parking and on-site circulation requirements shall be maintained at all times.

    A. Any occupancies which require additional parking that has not been provided for through this Conditional Use Permit, such as restaurants or places where food or refreshments are dispensed which have seating, shall not be approved until an application for revision is submitted for review and approval showing the additional parking.

    B. All markings to include parking spaces, directional designations, “No Parking” designations, and “Fire Lane” designations shall be clearly defined and said markings shall be maintained in good condition at all times.

    C. Parking and site circulation surfaces (City Road Specification #39) shall be maintained in good condition at all times.

11. Noise levels shall not exceed City Standards as required by Development Code Section 87.0905(b).

12. All refuse generated at the premises shall at all times be stored in approved containers and shall be placed in a manner so that visual and public health nuisances are minimized.

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13. All refuse containing garbage shall be removed from the premises at least two times per week in conformance with Municipal Code Section 8.24.030(B).

14. The applicant shall implement the approved "Solid Waste Recycling Plan" for any new commercial, industrial, or institutional uses located on the property. The developer and all occupants of the property shall make a good faith effort to fully comply with each component of the approved Plan. Any proposed revision to this Plan shall be subject to the review and approval of Yucaipa Disposal, Inc. (909) 797-9125.

15. Developers of commercial/industrial/institutional projects shall attempt to ensure that at least 20% of the total cost of the project shall be spent with Yucaipa businesses and/or the hiring of Yucaipa residents.

16. The project site shall remain in full compliance with all City Sign Regulations at all times.

17. New projects with a landscape area of 500 square feet or more shall comply with Sections 492.6(a)(3)(b) (c), (d) and (g) of the MWELO including the use of renewable organic waste products such as compost and mulch where applicable.

18. Projects rehabilitating an existing landscape area of 2,500 square feet or more shall comply with Sections 492.6(a)(3)(b) (c), (d) and (g) of the MWELO including the use of renewable organic waste products such as compost and mulch where applicable

19. Compost and mulch made by the City's franchised hauler, Yucaipa Disposal, Inc. (909) 797-9125, or other designee from recovered organic waste products pursuant to 14 CCR Section 18993.1 shall take precedence over inorganic or virgin forest products when available locally.

20. The applicant/property owner shall be required to apply an anti-graffiti coating, and/or provide a landscape design of a type and nature that is acceptable to the City Planner, to each of the publicly viewable surfaces deemed by the City Planner to be likely to attract graffiti.

21. The applicant/property owner, and any and all successors in interest, shall for ten (10) years after the issuance of a Certificate of Occupancy, provide the City with sufficient matching paint and/or anti-graffiti coating on demand for use in the painting over or removal of graffiti from any designated graffiti attracting surfaces.

22. New projects with a landscape area of 500 square feet or more shall comply with Sections 492.6(a)(3)(b) (c), (d) and (g) of the MWELO including the use of renewable organic waste products such as compost and mulch where applicable.

23. Projects rehabilitating an existing landscape area of 2,500 square feet or more shall comply with Sections 492.6(a)(3)(b) (c), (d) and (g) of the MWELO including

the use of renewable organic waste products such as compost and mulch where applicable.

24. Compost and mulch made by the City's franchised hauler, Yucaipa Disposal, Inc. (909) 797-9125, or other designee from recovered organic waste products pursuant to 14 CCR Section 18993.1 shall take precedence over inorganic or virgin forest products when available locally.

25. The project shall implement the mitigation measures listed in the adopted Mitigation Monitoring and Reporting Program.

FIRE DEPARTMENT (909) 797-2489 EXT. 246

26. This project is protected by the Yucaipa Fire Department / CalFire. Prior to any construction occurring on any parcel, the applicant shall contact the Fire Marshall for verification of current fire protection development requirements. All new construction shall comply with the adopted California Fire Code and all applicable statutes, codes, ordinances, standards and policies of the Yucaipa Fire Department/CalFire.

27. This project is in a Fire Safety Review Area 2. This is a high fire hazard brush area. This project shall comply with the construction and development standards for a FR-2 Area. Contact the City Building & Safety Division for FR-2 Area construction and development standards.

28. Fire Department access roads and/or public/private streets shall meet the Fire Department minimum width standard of twenty-four (24) feet. Access roads shall be paved (asphalt/concrete) and in place prior to placement of combustible material on site. Fire Department minimum paving thickness shall be no less than four (4) inches. This standard shall not lessen other agency requirements.

29. Fire Department access roads and/or public/private streets and residential driveways shall have a minimum vertical clearance of thirteen (13) feet and six (6) inches.

30. Fire Department access roadways and/or public/private streets and driveways shall not exceed 12% grade (please note: Engineering Division requirements may be more restrictive).

31. Cul-de-sac and dead-end streets shall not exceed 350 feet in FR-1 areas. In all other areas, cul-de-sacs shall not exceed six hundred (600) feet in total length, unless otherwise approved by the Fire Department.

32. Required fire flow for this project, as determined by California Fire Code Appendix 'B', is as follows: GPM = 4,250 at 20 psi residual; for 4 hour duration A reduction in the required fire flow rate may be allowed per the exceptions specified in the California Fire Code. System shall be looped with minimum eight

DRAFT

(8) inch mains; six (6) inch laterals; six (6) inch risers; six (6) inch diameter hydrants with one 2 ½" outlet and one 4" outlet.

33. Approved fire hydrants capable of supplying required fire flow shall be provided to all premises upon which facilities, buildings or portions of buildings are constructed or moved within the jurisdiction. When any portion of the facility or building protected is in excess of 400 feet from a fire hydrant on a public street, as measured by an approved route around the exterior of the facility or building, additional fire hydrants meeting the required fire flow shall be provided.

34. Fire hydrants shall be installed at locations to be determined by the California Fire Code (2022) Appendix "C". Required fire flow to be determined by the California Fire Code (2022) Appendix "B". Minimum fire flow shall not be less than 1500 gpm.

ENGINEERING DIVISION (909) 797-2489 EXT. 228

35. Submit WQMP Plan for Approval.

36. The natural drainage courses traversing the site shall not be occupied or obstructed.

37. Applicant shall demonstrate that the site does not create concentrated discharges to adjacent properties and/or public right-of-way in excess of historical flows. If project does create concentrated or sheet flows off-site that are greater than historical, the applicant shall demonstrate that the downstream facilities can accommodate flows; otherwise, applicant shall provide on-site detention for excess flows in accordance with the approved WQMP.

38. Final improvement plans and profiles shall indicate the location of any existing utility facility which would affect construction. Existing utility poles shall be shown on the improvement plans and relocated as necessary without cost to the City.

39. Continuous water spraying or other approved methods must be used during grading operations to control fugitive dust.

40. Improvement plans for infrastructure adjacent to flood control facilities and storm drain improvement plans for drainage outlets into a San Bernardino County Flood Control District (SBCFCD) facility shall be prepared by a Registered Civil Engineer and submitted to the SBCFCD for review, approval and encroachment permit as required.

THE FOLLOWING CONDITIONS SHALL BE MET PRIOR TO ISSUANCE OF A GRADING PERMIT:

ENGINEERING DIVISION (909) 797-2489 EXT. 228

DRAFT

41. Applicant shall submit a Notice of Intent and comply with the requirements of the General Construction Activity Storm Water Permit from the State Water Resources Control Board if the project site is 1 acre or greater. In addition, the Storm Water Pollution Prevention Plan (SWPPP) is required to be submitted to the City Engineer for review and approval.

42. Groundwater pollution from urban run-off water generated by the project shall be mitigated using various structural and non-structural best management practices (BMPs), per the requirements of the California Regional Water Quality Control Board, Santa Ana Region and/or as indicated in the "New Development/Redevelopment Guidelines." All provisions of the Water Quality Management Plan (WQMP) consistent with the 2010 MS4 permit and most recent regulatory mandates shall be met, including but not limited to approval of a Preliminary WQMP.

43. The applicant shall provide documentation indicating that the WQMP, grading plan, erosion control plan and landscape plan are consistent with each other. The documentation shall indicate that each document has been reviewed by the applicant for consistency.

44. The applicant's plans indicates a significant portion of the site to be improved with impervious surfaces. Design features shall be included to direct storm water run-off flows into landscaped pervious areas before any run-off flows into public rights-of-way.

45. In addition to the drainage, traffic related, or other requirements stated herein, other "on-site" or "off-site" improvements may be required which cannot be determined from tentative plans at this time and would have to be reviewed after more complete improvement plans and profiles have been submitted to the City Engineer.

46. A topographic map shall be provided to facilitate the design and review of necessary drainage facilities at the time the site is developed.

PLANNING DIVISION (909) 797-2489 EXT. 224

47. Grading permits shall not be issued for any areas to be graded and remain undeveloped until a revegetation plan is approved by the Planning Division and Landscape Architect, and until bonds are posted for revegetation.

48. The project shall implement the mitigation measures listed in the adopted Mitigation Monitoring and Reporting Program.

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THE FOLLOWING CONDITIONS SHALL BE MET PRIOR TO ISSUANCE OF A BUILDING PERMIT:

BUILDING AND SAFETY DIVISION (909) 797-2489 EXT. 225

49. This project will require one or more building permits. Permits will require a complete permit application and complete building plans to be submitted for approval prior to commencement of work.

50. The site shall be developed in compliance with all current model codes. All plans shall be designed in compliance with the latest editions of the California Building Codes, California Energy Codes, California Accessibility Codes, and Yucaipa Municipal Codes as adopted by the City of Yucaipa.

51. Site development shall be designed to comply with California Accessibility Codes. Provide access to all entrances and exterior ground floor exits and access to normal paths of travel, and where necessary to provide access. Paths of travel shall incorporate (but not limited to) exterior stairs, landings, walks and sidewalks, pedestrian ramps, curb ramps, warning curbs, detectable warnings, signage, gates, lifts and walking surface material. The accessible route(s) of travel shall be the most practical direct route between accessible building entrances, site facilities, accessible parking, public sidewalks, and the accessible entrance(s) to the site. California Building Code (CBC) 11B.

    a. City of Yucaipa enforces the State of California provisions of the California Building Code disabled access requirements. The Federal ADA standards differ in some cases from the California State requirements. It is the building owner's responsibility to be aware of those differences and comply accordingly.

    b. Disabled access parking shall be located on the shortest accessible route. Relocate parking spaces accordingly.

52. Structures on the site shall be accessible per California Building Code (CBC) 11B.

53. Separate submittals and permits are required for all structures, accessory structures such as but not limited to, trash enclosures, patios, trellises, gazebos block walls, signage, and storage buildings.

54. Pursuant to California Business and Professions Code Section 6737, this project is required to be designed by a California licensed architect or engineer.

55. The perimeter of the jobsite shall have a properly installed, 6' high, construction fence with privacy cloth attached. The fencing and cloth shall be maintained and

DRAFT

kept in good condition until such a time that the project has been completed, or a permanent perimeter wall is in place. All construction entrances/exits shall be approved in advance by city personnel.

56. Three copies of a Landscape Documentation Package shall be submitted for Building & Safety Division review and approval. **Building Permits shall not be issued until Landscape Documentation has been approved.** Said Landscape Documentation Package shall be consistent with the requirements of Chapter 4, of Division 10, of the Development Code and include all of the following elements:

A. Project Information

(1) Date

(2) Project Applicant

(3) Project Address (if available, parcel and/or lot number(s))

(4) Total Landscape Area (square feet)

(5) Project Type (e.g., new, rehabilitated, public, private, cemetery, homeowner-installed)

(6) Water Supply Type (e.g., potable, recycled, well) and identify the local retail water purveyor if the applicant is not served by a private well

(7) Checklist of All Documents in Landscape Documentation Package

(8) Project Contacts (to include contact information for the project applicant and property owner)

(9) Applicant Signature and Date (with statement, “I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package”).

(B) Water Efficient Landscape Worksheet

(1) Hydrozone Information Table

(2) Water Budget Calculations

(I) Maximum Applied Water Allowance (MAWA)

(II) Estimated Total Water Use (ETWU)

(C) Soil Management Report

(D) Landscape Design Plan

(E) Irrigation Design Plan

(F) Grading Design Plan

(G) Certification of Substantial Completion (to be submitted after installation of the project).

A copy of the approved Landscape Documentation Package shall be provided to the property owner or site manager along with the record drawings and any other information normally forwarded to the property owner or site manager. A copy of the Water Conservation Concept Statement and the Certificate of Substantial Completion shall be sent by the project manager to the local retail water purveyor.

57. Three (3) copies of a landscape and irrigation plan prepared by a Registered Landscape Architect for the planting (drought tolerant landscaping shall be utilized to minimize water consumption) and permanent irrigation system for the development, including setback areas and parkways, shall be submitted to the Building & Safety Division for review and approval. Said plans must be consistent with the City of Yucaipa Landscape Design and Installation Guidelines and include the following details:

A. Voltage boxes, mailboxes, trash enclosures, maintenance structures, backflow devices, automatic controls, air conditioning/heating units, etc., to be shown on the plan and screened with landscaping and/or decorative fencing/trim.

B. A permanent automatically-controlled irrigation system.

C. Landscaping shall consist of drought tolerant vegetation appropriate to the local climate. Trees, shrubs and ground covers in the following quantities shall be required as follows:

1. Compost

Compost at a rate of a minimum of 4 cubic yards per 1,000 square feet of permeable area shall be incorporated to a depth of six (6) inches into the soil. Soils with greater than six percent (6%) organic matter in the top six (6) inches of soil are exempt from adding Compost and tilling.

2. Tree planting (15 gallon size):

   a. 1 for each 600 sq. ft. of total landscaped area (one required, minimum);
   b. 80% of total trees required to be 15 gallon;
   c. 1 for every 12 parking stalls;

3. 24 to 96 inch box trees:

   a. 20% of total trees required (one required, minimum).

4. Tree Spacing/location:

   a. small trees: 20 feet O.C. max.;
   b. large trees: 30 feet O.C. max.;
   c. street trees: 15 gal. min./30 feet O.C. max.;
   d. min. 6 feet from curbs, paving and sidewalks; trees in parkway between sidewalk and curb shall be provided with a linear root barrier.

5. 5 gallon shrubs:

   a. 60% of total shrubs required to be 5 gallon;
   b. 10 for each 300 sq. ft. of landscaped area.

6. 1 gallon shrubs:

   a. 40% of total shrubs required.

7. Ground Cover:

   a. Drought tolerant adapted when mature, or native;
   b. Maximum spacing: 12 inches O.C., or as suitable for planting material;
   c. Hydroseeding (establish recommended mixture); specify weight or volume per unit area.

7. Mulch:

   a. Apply a minimum three- (3-) inch layer of mulch on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated. To provide habitat for beneficial insects and other wildlife, leave up to

DRAFT

five percent (5%) of the landscape area without mulch. Designated insect habitat must be included in the landscape design plan as such

D. Parking/vehicular circulation areas screened with landscaped berms adjacent to streets.

E. Landscape detail of trash enclosures, to be located within 200 ft. of building pad.

F. All walls and fences shall be shown, at the top of slope (if applicable), with the style, design, materials, and colors indicated.

G. Design features to direct storm water run-off into landscaped pervious areas to achieve percolation into the ground before run-off flows reach the public right-of-way of Calimesa Boulevard.

H. Detector-check valve assembly screening and camouflage, which shall include landscaped berms and/or depressions, shrub screening, and the painting of the equipment to match the landscaping. The height of the equipment shall not exceed the minimum ground clearance established by the applicable code. It is not permitted to be located within the front yard building setback area, unless otherwise approved by City Inspector.

ENGINEERING DIVISION (909) 797-2489 EXT. 228

58. Submit engineered road improvement plans to the City Engineer.

59. The WQMP shall be approved and the developer shall provide a financial mechanism for the maintenance of the detention basins which shall be set in place and approved by the City Engineer. The WQMP maintenance agreement shall be executed and recorded by the applicant.

PLANNING DIVISION (909) 797-2489 EXT. 224

60. Prior to issuance of a Demolition Permit, a vector control survey must be conducted. For more information, call San Bernardino County Vector Control Program at (909) 388-4600.

61. The enrollment of the Yucaipa Joint Unified School District is severely impacted by new development. To mitigate the impact of this project, developer shall pay such taxes as are required by the Yucaipa Joint Unified School District Community Facilities District No. 1, and any other fees assessed by Government Code Section 53080, and 65995-65997.

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62. The Covenants, Conditions & Restrictions (CC&Rs), which covenant shall run with the land, in a form satisfactory to the City Planner, shall require that the owners of the lots shall immediately remove any graffiti placed on publicly viewable trees, rocks or structures thereon to the City's satisfaction. The CC&Rs shall also prohibit the future subdivision of the site.

63. Two copies of the CC&R's shall be submitted to the Planning Division and City Attorney's office for review and approval to ensure consistency with City policies and standards.

64. The City of Yucaipa has implemented development impact fees for various infrastructure and capital facilities needs generated by new development. These fees will provide for various capital facilities including, but not limited to, roads, parks, flood control and drainage, public facilities, and fire fighting facilities. This project shall be subject to all such development impact fees which are in effect at the time building permits are issued.

65. The applicant/owner shall process a Condition Compliance Review through the City for verification of conditions prior to the issuance of building permits.

66. Water service and sewage disposal shall be by Yucaipa Valley Water District. The Yucaipa Valley Water District letter dated November 13, 2023, is included as a Condition of Approval. Submit evidence of service to Building and Safety at time of Condition Compliance review.

67. Prior to building permit, applicant shall submit a report for risk assessment of potential health hazards from exposure to hazardous materials. For information, contact County Fire Department/Hazardous Materials Division/Local Oversite Program at (909) 386-8401.

68. Verification of application for a sign registration and plot plan approval by the Planning Division must be submitted prior to the issuance of a building permit for the installation, wiring, remodeling or reconstruction of any sign or portion thereof which requires a building permit.

69. The applicant shall submit a "Solid Waste Recycling Plan" for review and approval. This Plan shall address two (2) principal recycling programs: 1) the recycling of construction waste/debris during the demolition and/or development phase of the project, and 2) the recycling of the solid waste that is generated daily by each proposed use during the operational phase of the project. The construction waste component shall include: complete information on the individual or firm that will be responsible for implementing the recycling plan; complete information on all proposed recycling facilities that will receive waste products; and estimates of the volume or weight of each type of material that will be recycled. The operational waste component shall include: complete information on the location, access, sizes, and numbers of solid waste and recycling bins needed to serve each proposed use that is located within the

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project. For information on the types of waste disposal services that are available, you may contact Yucaipa Disposal, Inc. at (909) 797-9125 for assistance.

70. Proof of fee payment of Fish and Game fees and/or County Administrative handling fees pursuant to California State Assembly Bill 3158 shall be submitted.

71. Provide detailed building elevations including materials, finishes, colors, and signage for all buildings for Planning Division review and approval prior to issuance of building permits. Building elevations shall be consistent with those approved by the Planning Commission.

72. The applicant/property owner shall grant to the City, in writing, the irrevocable right of entry over, and access to, such property, upon twenty-four (24) hours posted notice, by authorized City employees or agents, for the purpose of removing or painting over graffiti on any designated graffiti attracting surfaces.

73. The project shall implement the mitigation measures listed in the adopted Mitigation Monitoring and Reporting Program.

FIRE DEPARTMENT (909) 797-2489 EXT. 246

74. Water delivery system plans, designed to meet the required fire flow for this project and/or development shall be submitted to the Fire Department for approval.

75. Applicant-Developer shall provide the Fire Department with a letter from the water company serving the project-development, verifying that financial arrangements have been made and bonds posted for the required Fire Department approved water improvements.

76. A fuel break of one hundred (100) feet (brush and weed clearance) is required prior to construction. The clearance shall be maintained on a year-round basis.

77. Fire hydrants shall be installed and operational as per approved water system delivery plans prior to any framing, construction, or delivery of combustible materials to project site.

78. An alternative type of construction providing a higher level of fire resistance is required. Contact the Fire Department or City Building Official for more information.

79. The project shall implement the mitigation measures listed in the Mitigation Monitoring and Reporting Program adopted for the project.

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SUBJECT PROPERTY SHALL NOT BE OCCUPIED AND/OR USED FOR PURPOSES APPLIED FOR UNTIL THE FOLLOWING CONDITIONS HAVE BEEN MET:

BUILDING AND SAFETY DIVISION (909) 797-2489 EXT. 225

80. The Site shall be developed in compliance with all current model codes. All plans shall be designed in compliance with the latest editions of the California Building Codes as adopted by the City of Yucaipa.

81. Paths of travel shall incorporate (but not be limited to) exterior stairs, landings, walks and sidewalks, pedestrian ramps, curb ramps, warning curbs, detectable warnings, signage, gates, lifts and walking surface material. The accessible route(s) of travel shall be the most practical direct route between accessible building entrances, site facilities, accessible parking, public sidewalks, and the accessible entrance(s) to the site. California Building Code (CBC) 11A and 11B.

82. Buildings on the site shall be accessible per California Building Code (CBC) 11B.

83. Separate submittals and permits are required for all accessory structures such as but not limited to trash enclosures, patios, block walls, and storage buildings.

FIRE DEPARTMENT (909) 797-2489 EXT. 246

84. Fire Department access roadways and/or public/private streets exceeding one hundred fifty (150) feet in length shall have a Fire Department approved turn-around at the terminus (cul-de-sac). Minimum radius shall be not less than 40 feet.

85. Driveways exceeding 150 feet shall have a Fire Department approved turn-around at the terminus (hammer-head tee).

86. Fire Department access roadways and/or public/private streets and driveways shall extend to within one hundred fifty (150) feet of and shall give reasonable access to all portions of the exterior walls of the first story of any building. An access road, approved by the Fire Department, shall be provided to within fifty (50) feet of all structures when the natural grade between access road and structure is in excess of 30%. Where an approved access road cannot be provided, a fire protection system shall be required and approved by the Fire Department.

87. Manual operated gates across Fire Department access roadways, public and/or private streets and driveways, shall be equipped with approved emergency key-operated (“Knox” type) locks. For automatic gates, a “Knox” keyed emergency access switch shall be installed at location determined by Fire Department, and shall over-ride all command functions and open gate automatically upon activation. All automatic gates shall have a manual over-ride for use during loss

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of electric power. "Knox box" request forms are available from the Fire Department.

88. Address numbers shall be placed on all new and existing commercial and multi-family residential structures in such a manner as to be plainly visible and legible from the access roadway or street. Structures shall have numbers of 8" height, 3/8" stroke on contrasting background. Address numbers shall be illuminated so as to be visible and legible from access roadway or street. Industrial occupancies shall have address numbers of 12" height, ½" stroke and shall be illuminated so as to be visible and legible from access roadway or street. Where structure setback exceeds one hundred (100) feet from the access roadway or street, additional non-illuminated numbers are 6" in height, 3/8" stroke, on contrasting background shall be displayed at property access entrance.

89. Commercial retail structures with rear access shall place address numbers on rear entry doorways, 4" in height, 3/8" stroke, on contrasting background.

90. Prior to final inspection, there shall be posted at each entrance of the complex an illuminated diagrammatic representation of the complex showing the locations of the viewer, the unit designations within the complex, and the locations of fire hydrants. The developer shall submit a drawing detail to the Fire Department for approval.

91. "No Parking - Fire Lane" signs shall be posted at locations designated by Fire Marshall. Fire lane curbs shall be painted red with white letters stating "No Parking – Fire Lane".

92. On site fire hydrants capable of supplying required fire flow shall be installed at locations identified by the Fire Marshall. System shall be looped with minimum eight (8) inch mains; six (6) inch laterals; six (6) inch risers; six (6) inch diameter hydrants with one 2 ½" outlet and one 4" outlet.

93. Approved fire hydrant pavement markers shall be installed.

94. Automatic fire sprinklers shall be installed according to NFPA 13 and Fire Department requirements. Submit three (3) sets of shop plans with material cut sheets and hydraulic calculations, indicating the type of occupancy, type of materials to be stored (if any), for Fire Department review and approval prior to any installation. Submit copy of California C-16 license.

95. Automatic fire sprinkler control devices (P.I.V. & O.S.&Y.) shall be visible from Fire Department access roadway, and identify system being controlled and address of structure. Fire Department Connection (FDC) shall be located no closer than fifty (50) feet and not to exceed one hundred fifty (150) feet from structure. Required fire hydrant shall have a maximum distance from FDC of thirty (30) feet. FDC shall identify address and system of structure being protected.

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96. A minimum of one 2A-10BC fire extinguisher shall be installed for each 3,000 sq. ft. of floor area. Travel distance to any one fire extinguisher shall not exceed 75 feet. Additional fire extinguishers, size and class to be determined by Fire Department, may be required. Fire extinguishers shall be serviced annually and shall have a current sfm service tag attached.

97. An automatic fire detection and alarm system meeting the requirements of UFC Article 10, CBC and NFPA 72 shall be installed. Three (3) sets of shop plans with material cut sheets and calculations shall be submitted to the Fire Department for review and approval prior to installation.

98. Smoke detectors, hard wired with battery back-up, shall be installed in all sleeping areas and in all hallways leading to sleeping areas. Smoke detectors shall be installed at the top of all stairways.

99. Carbon Monoxide detectors shall be installed pursuant to manufacture specifications.

100. A class “A” roof covering structure with “bird stops” shall be installed.

101. High Fire Hazard Areas FR-1 & FR-2: one-hour fire resistive construction is required for exterior walls. Contact Fire Marshall or City Building Official for more information.

102. The main electrical panel and all sub-panels shall be labeled on inside cover for all circuits.

103. Water heater (fuel fired) shall be properly vented to exterior of structure. Water heater shall be seismic strapped to wall and be located 18” above a garage floor.

104. A one-hour fire rated, solid core, self closing door shall be installed between an attached garage and living space.

105. Commercial and industrial structures/occupancies and gated complexes shall have a “knox box” system installed on the exterior of the buildings or complex. Location of device to be determined by the Fire Department. The box shall contain keys necessary to gain access and may contain pre-plans and msds information as required by the Fire Department.

106. Commercial exit requirements:

    A. Required exit doors shall be maintained in an operable condition at all times.
    B. Required exit doors shall swing outward and away in the direction of exit travel.
    C. Obstructions shall not be placed in the required width of an exit. Exits shall not be blocked or locked shut or obstructed in any manner during business hours.

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D. Exit paths shall be illuminated when structure is occupied.
E. Exit path illumination shall be supplied from two (2) sources of power when occupant load is one hundred (100) persons or more.
F. When exit way/exit pathway and/or exit doorway is not easily identified, additional exit signs shall be installed.
G. Exit signs shall be internally or externally illuminated by two lamps or shall be of the self-luminous type.

107. Provide occupancy separation between R and F-1 per CBC wherever mixed-use occupancies occur. Please add a note to plans when submitting to the building and safety department.

ENGINEERING DIVISION (909) 797-2489 EXT. 228

108. Construct driveway approach/entrance. Commercial driveways require radius type approaches.

109. Developer shall be required to place construction traffic control in public right-of-way during the construction of off-site improvements (including driveway approach in public right-of-way) as needed. Traffic control devices shall be maintained 24 hours a day 7 days a week as directed by the City Engineer.

110. The Applicant shall submit the signed original Water Quality Management Plan (WQMP) Certification form to verify consistency of the BPMs shown on the as-built grading plans and landscape plans. In case of inconsistency, the Applicant shall revise the WQMP to match the as-built plans.

PLANNING DIVISION (909) 797-2489 EXT. 224

111. Parking and on-site circulation requirements shall be provided as identified on the approved site plan.

112. Prior to installation, plans for underground or aboveground tank systems shall be reviewed and approved by County Fire Department/Hazardous Materials Division/Field Services Section. For information call (909) 386-8464.

113. All access drives and parking areas shall be surfaced with a minimum of 2 inches of asphalt concrete surfacing, City Road Specification No. 39, which shall be appropriately striped to accommodate safe vehicular circulation.

114. All access drives shall be a minimum of 24 feet wide to facilitate two-way traffic.

115. Any lights used to illuminate the site shall be hooded and designed so as to reflect away from adjoining properties and public thoroughfares.

116. All parking stalls shall be clearly striped and permanently maintained with double or hairpin lines on the surface of the facility, with the two lines being located an

equal nine (9) inches on either side of the stall sidelines; arrows shall be painted on the paving to indicate direction of traffic flow.

117. All landscaping and irrigation shown on the approved landscape and irrigation plans and all required walls shall be completed. Trees in the parkway between sidewalk and curb/gutter shall be provided with a linear root barrier. Provide the City with a Certificate of Substantial Completion from the certified professional that prepared the approved landscape and irrigation plans.

118. All roof top mechanical equipment is to be screened from ground vistas.

119. Developers of commercial/industrial/institutional projects shall submit a report detailing the percentage of project costs spent in the City of Yucaipa. At a minimum, this report shall contain a list of local businesses/individuals that have been solicited for bids and/or received contracts for materials or services.

120. Developers of commercial, industrial, or institutional projects shall submit all applicable documentation that is required to verify the volume of weight of each type of construction waste or debris that has been recycled or otherwise disposed of in a lawful manner.

121. Provide a bicycle parking rack in a suitable location.

122. A video surveillance and recording system shall be installed that is capable of covering all exterior portions of the subject property, including parking areas and service alleys. The entrance to the site and shared property line shall also have coverage.

123. Developers shall ensure that they recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste.

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YUCAIPA BUSINESS PARK DEVELOPMENT

33193 YUCAIPA BLVD.
YUCAIPA, CALIFORNIA 92399

PROJECT DIRECTORY

OWNER/CLIENT INFORMATION
TECK PROPERTIES
P.O. BOX 674
FOREST FALLS. CA. 92339
CONTACT : GLENN SCHMIDT
(909)-240-9132

ARCHITECT INFORMATION
BROESKE ARCHITECTS & ASSOCIATES, INC.
JAMES L. BROESKE
4344 LATHAM ST., SUITE 100
RIVERSIDE, CA. 92501
(951) 300-1866 (951) 300-1868 fax

CIVIL ENGINEER INFORMATION
MTH2 ENGINEERING, INC.
MARTEN ANDERSON
639 LAKEWOOD DRIVE
RIVERSIDE, CA. 92506
(951) 850-2190

SCOPE OF WORK

SCOPE OF WORK:
- NEW 46 UNIT COMMERCIAL BUILDING BUSINESS PARK.

- 4 LIVE/ WORK UNITS w/ 1ST &2ND FLOOR STUDIO APARTMENTS.

- SITE IMPROVEMENTS, INCLUDING STORAGE YARDS, TRASH ENCLOSURES, SITE LIGHTING, CODE CONTROLLED ENTRY GATES AND LANDSCAPING

SITE TO BE DEVELOPED IN SINGLE PHASE

PROJECT DATA

OCCUPANCY TYPE: F1 COMMERCIAL BUILDING
NUMBER OF STORIES : 2
CONSTRUCTION TYPE: V-B, SPRINKLERED
BUILDING AREA : SEE SHEET A1.1
OCCUPANT LOAD : SEE SHEET A1.1

SITE DATA:
APN: 0318-013-11

ZONING : CG GENERAL COMMERCIAL
SUB NO 2 A PART OF DUNLAP RANCH LOT 3 AND PTN LOT G ADJ ON S LOT 3 EX N 335 FT W 130FT AND EX PTN TO FLOOD CONTROL & EX ST

SITE AREA : 5.7 ACRES (248,292 S.F.)

TOTAL PARKING SPACES REQUIRED = 182 SPACES
TOTAL SPACES PROVIDED = 189 SPACES

ACCESSIBLE PARKING
REQUIRED : 6
PROVIDED : 6

ALL WORK SHALL COMPLY WITH:

2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIA PLUMBING CODE
2022 CALIFORNIA ELECTRICAL CODE
2022 CALIFORNIA ENERGY CODE
2022 CALIFORNIA GREEN BUILDING STANDARD CODE
2022 CALIFORNIA HISTORICAL BUILDING CODE

UTILITY PROVIDERS

WATER : WESTERN HEIGHTS WATER COMPANY
32352 AVENUE E, YUCAIPA, CA 92399
(909) 790-1901

SEWER : YUCAIPA VALLEY WATER DISTRICT
12 770 2ND STREET, YUCAIPA , CA 92399
909-797-5117

ELECTRIC : SOUTHERN CALIFORNIA EDISON
PO BOX 800
ROSEMEAD, CA 91770
800-990-7788

GAS : SOUTHERN CALIFORNIA GAS COMPANY
PO BOX 1626
MONTERY PARK, CA 91754
800-427-2000

WASTE HAULING / RECYCLING SERVICE :
YUCAIPA DISPOSAL / BURRTEC
111 E Mill St, San Bernardino, CA 92408
(909) 889-1969
inlandempirecs@burrtec.com
- DISPOSAL SCHEDULE PER SERVICE PROVIDER

TELEPHONE : VERIZON
33561 Yucaipa Blvd, Ste B5, Yucaipa, CA 92399
(909)500-4002

TV/CABLE : CHARTER COMMUNICATIONS / SPECTRUM
33694 Yucaipa Blvd, Stes 6-8, Yucaipa, CA 92399
(866) 874-2389

SHEET INDEX

ARCHITECTURAL

A0.1	TITLE SHEET
A0.2	BUILDING PLANS
A1.1	SITE PLAN
A1.1C	SITE PLAN - COLOR
A1.2	SITE ELEMENTS
A1.3	FIRE DEPARTMENT ACCESS, SITE ACCESSIBILITY
A2.1	BUILDING A, B FLOOR PLANS
A2.2	BUILDING C,D FLOOR PLANS
A2.2N	NORTH BUILDING C,D FLOOR PLANS
A2.3	BUILDING E, F FLOOR PLANS
A2.4	ROOF PLANS
A3.1	BUILDING A EXTERIOR ELEVATIONS
A3.1C	BUILDING A EXTERIOR COLOR ELEVATIONS
A3.2	BUILDING B EXTERIOR ELEVATIONS
A3.2C	BUILDING B EXTERIOR COLOR ELEVATIONS
A3.3	BUILDING C EXTERIOR ELEVATIONS
A3.3C	BUILDING C EXTERIOR COLOR ELEVATIONS
A3.3N	NORTH BUILDING C EXTERIOR ELEVATIONS
A3.3NC	NORTH BUILDING C EXTERIOR COLOR ELEVATIONS
A3.4	BUILDING D EXTERIOR ELEVATIONS
A3.4C	BUILDING D EXTERIOR COLOR ELEVATIONS
A3.4N	NORTH BUILDING D EXTERIOR ELEVATIONS
A3.4NC	NORTH BUILDING D EXTERIOR COLOR ELEVATIONS
A3.5	BUILDING E EXTERIOR ELEVATIONS
A3.5C	BUILDING E EXTERIOR COLOR ELEVATIONS
A3.6	BUILDING F EXTERIOR ELEVATIONS
A3.6C	BUILDING F EXTERIOR COLOR ELEVATIONS
A3.7	NORTH ELEVATIONS - YUCAIPA BLVD.

VICINITY MAP

N.T.S.

PROJECT LOCATION

broeske architects & associates, inc.
4344 latham street, suite 100
riverside, ca 92501-1773
ph. (951) 300 1866
fx. (951) 300 1868

LICENSED ARCHITECT JAMES L. BROESKE No. C009174 Ren 11-30-2025 STATE OF CALIFORNIA

CONSULTANTS

YUCAIPA BUSINESS PARK
33193 YUCAIPA BLVD., YUCAIPA, CA., 92399

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APN	•	0318-013-11
JOB NO.	•	23-009
DATE	•	09/15/23
DRAWN BY	•	GMH
CHECKED BY	•	--
SCALE	•	

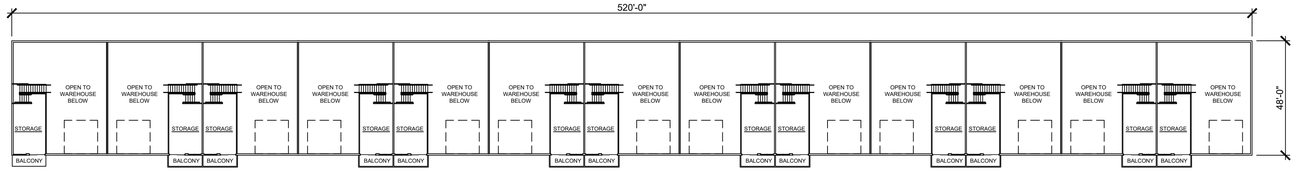
REVISIONS △

SHEET TITLE

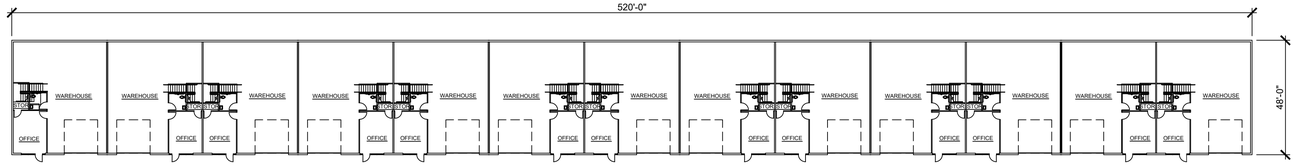
TITLE SHEET

SHEET NO.

A0.1



BUILDING B - 2ND FLOOR



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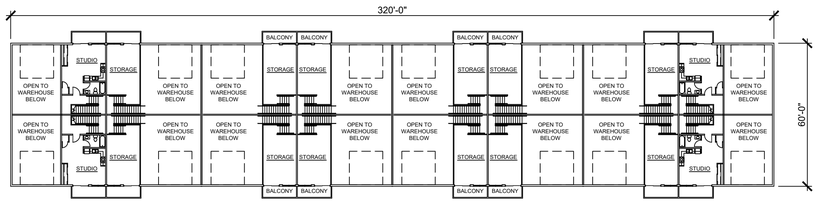

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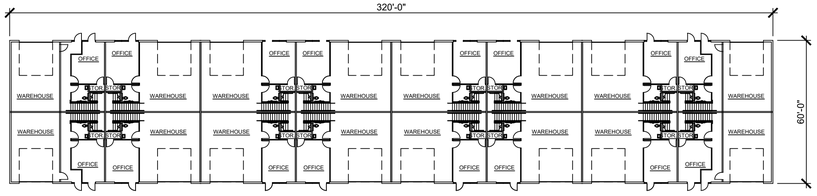

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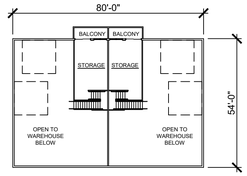

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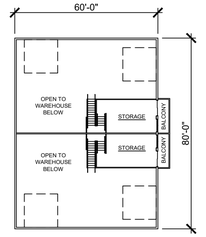
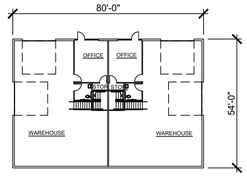


BUILDING E - 2ND FLOOR



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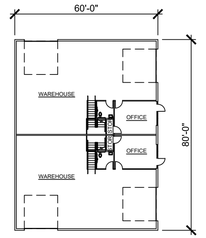

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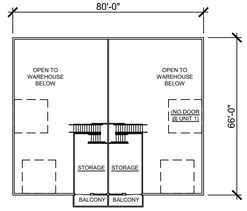
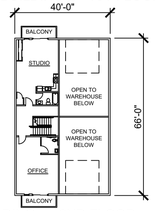
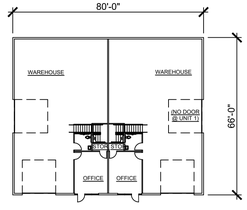


BUILDING D - 2ND FLOOR



BUILDING F - 2ND FLOOR



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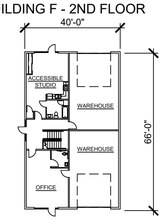

BUILDING F - 1ST FLOOR

BUILDING PLANS

1"=30'-0"

BUILDING F 2 LIVE WORK UNITS)

FIRST FLOOR :	
OFFICE :	394 S.F.
WAREHOUSE	1,420 S.F.
STUDIO APARTMENT	532 S.F.
ACCESSORY* :	302 S.F.
TOTAL 1ST FLOOR :	2,630 S.F.

SECOND FLOOR :	
OFFICE	394 S.F.
STUDIO APARTMENT	532 S.F.
ACCESSORY*	302 S.F.
TOTAL 2ND FLOOR :	1,228 S.F.

TOTAL : 3,858 S.F.

TOTAL BUILDING F : 3,858 S.F.
(1,402 S.F. WAREHOUSE/STORAGE),
788 S.F. OFFICE)

BUILDING D (4 WAREHOUSE/STORAGE UNITS)

FIRSTS FLOOR :	
OFFICE :	250 S.F.
WAREHOUSE	2,228 S.F.
STORAGE :	22 S.F.
ACCESSORY* :	148 S.F.
TOTAL 1ST FLOOR :	2.648 S.F.

SECOND FLOOR :	
STORAGE	342 S.F.

TOTAL : 2,990 S.F.
x4 UNITS = **11,960 S.F.**

TOTAL BUILDING D : 11,960 S.F.
(10,368 S.F. WAREHOUSE/STORAGE),
1,000 S.F. OFFICE)

BUILDING E (2 WAREHOUSE/STORAGE UNITS)

FIRSTS FLOOR :	
OFFICE :	250 S.F.
WAREHOUSE	1,988 S.F.
STORAGE :	22 S.F.
ACCESSORY* :	148 S.F.
TOTAL 1ST FLOOR :	2,408 S.F.

SECOND FLOOR :	
STORAGE	342 S.F.

TOTAL : 2,750 S.F.
x2 UNITS = **5,500 S.F.**

TOTAL BUILDING E : 5,500 S.F.
(4,084 S.F. WAREHOUSE/STORAGE),
500 S.F. OFFICE)

BUILDING B (13 WAREHOUSE/STORAGE UNITS)

FIRST FLOOR :	
OFFICE :	250 S.F.
WAREHOUSE	1,504 S.F.
STORAGE :	22 S.F.
ACCESSORY* :	148 S.F.
TOTAL 1ST FLOOR :	1,924 S.F.

SECOND FLOOR :	
STORAGE	342 S.F.

TOTAL : 2,266 S.F.
x13 UNITS = **29,458 S.F**

TOTAL BUILDING B : 29,458 S.F.
(24,284 S.F. WAREHOUSE/STORAGE),
3,250 S.F. OFFICE)

* ACCESSORY INCLUDES STAIRS, RESTROOMS & HALLWAYS

BUILDING C (10 WAREHOUSE/STORAGE UNITS)

FIRST FLOOR :	
OFFICE :	250 S.F.
WAREHOUSE	1,744 S.F.
STORAGE :	22 S.F.
ACCESSORY* :	148 S.F.
TOTAL 1ST FLOOR :	2,164 S.F.

SECOND FLOOR :	
STORAGE	342 S.F.

TOTAL : 2,506 S.F.
x10 UNITS = **25,060 S.F**

TOTAL BUILDING C : 25,060 S.F.
(21,080 S.F. WAREHOUSE/STORAGE),
2,500 S.F. OFFICE)

BUILDING A (12 WAREHOUSE/STORAGE UNITS)

FIRST FLOOR :	
OFFICE :	250 S.F.
WAREHOUSE	780 S.F.
STORAGE :	22 S.F.
ACCESSORY* :	148 S.F.
TOTAL 1ST FLOOR :	1,200 S.F.

SECOND FLOOR :	
STORAGE	342 S.F.

TOTAL : 1,542 S.F.
x12 UNITS = **18,504 S.F.**

BUILDING A (4 LIVE WORK UNITS)

FIRST FLOOR :	
OFFICE :	230 S.F.
WAREHOUSE	634 S.F.
STORAGE :	22 S.F.
ACCESSORY* :	314 S.F.
TOTAL 1ST FLOOR :	1,200 S.F.

SECOND FLOOR :	
STUDIO APARTMENT :	410 S.F.
ACCESSORY :	70 S.F.
TOTAL 2ND FLOOR :	480 S.F.

TOTAL : 1,680 S.F.
x4 UNITS = **6,720 S.F.**

TOTAL BUILDING A : 25,224 S.F.
(14,060 S.F. WAREHOUSE/STORAGE),
3,250 S.F. OFFICE)

* ACCESSORY INCLUDES STAIRS, RESTROOMS & HALLWAYS

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LICENSED ARCHITECT
JAMES L. BROESKE
No. C009174
Ren 11-30-2025
STATE OF CALIFORNIA

CONSULTANTS

YUCAIPA BUSINESS PARK

33193 YUCAIPA BLVD., YUCAIPA, CA., 92399

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JOB NO.	23-009
DATE	09/15/23
DRAWN BY	GMH
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SCALE	

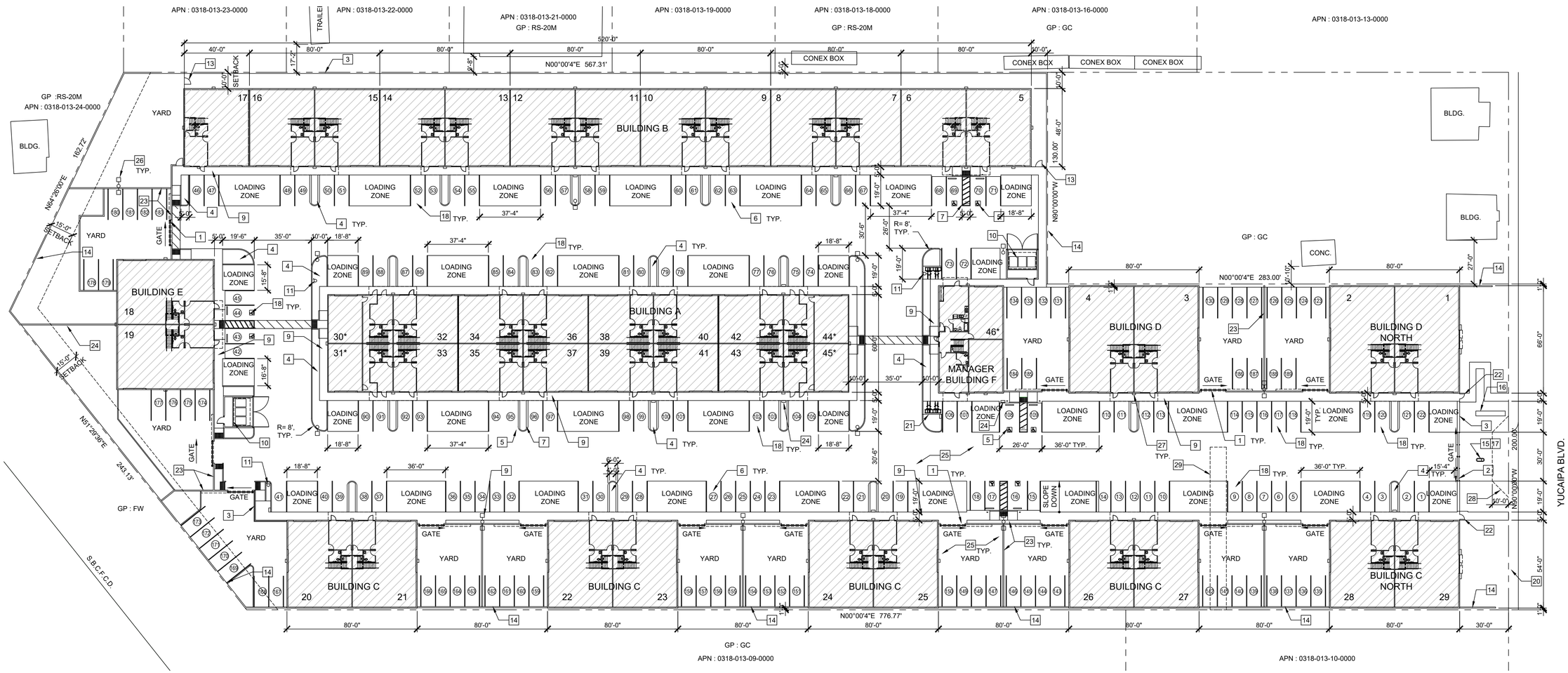
REVISIONS

SHEET TITLE

BUILDING PLANS

SHEET NO.

A0.2



SITE PLAN

1"=30'-0"

SITE COVERAGE

LOT COVERAGE CALCULATIONS

SITE AREA =	248,292 S.F.	(100%)
BUILDING AREA =	83,310 S.F.	(33.4%)
PAVING AREA =	97,750 S.F.	(39.6%)
HARDSCAPE AREA =	42,381 S.F.	(17.0%)
LANDSCAPE AREA =	24,851 S.F.	(10.0%)

PARKING

TOTAL BUILDING A (WAREHOUSE - 16 UNITS) :		
WAREHOUSE / STORAGE : 14,060 S.F. /1000	=	**15 SPACES**
OFFICE : 3,420 S.F./250	=	**14 SPACES**
2ND FLOOR LIVING : 1,640 S.F.(2 PER UNIT) x2	=	**4 SPACES**
1 SPACE PER VEHICLE OPERATED	=	**16 SPACES**
TOTAL PARKING SPACES REQUIRED	=	**49 SPACES**
TOTAL BUILDING B :		
WAREHOUSE / STORAGE : 24,284 S.F. /1000	=	**25 SPACES**
OFFICE : 3,250 S.F./250	=	**13 SPACES**
1 SPACE PER VEHICLE OPERATED	=	**13 SPACES**
TOTAL PARKING SPACES REQUIRED	=	**51 SPACES**
TOTAL BUILDING C :		
WAREHOUSE / STORAGE : 21,080 S.F. /1000	=	**22 SPACES**
OFFICE : 2,500 S.F./250	=	**10 SPACES**
1 SPACE PER VEHICLE OPERATED	=	**10 SPACES**
TOTAL PARKING SPACES REQUIRED	=	**42 SPACES**

PARKING

TOTAL BUILDING D :		
WAREHOUSE / STORAGE : 10,368 S.F. /1000	=	**11 SPACES**
OFFICE : 1,000 S.F./250	=	**4 SPACES**
1 SPACE PER VEHICLE OPERATED	=	**4 SPACES**
TOTAL PARKING SPACES REQUIRED	=	**19 SPACES**
TOTAL BUILDING E :		
WAREHOUSE / STORAGE : 4,080 S.F. /1000	=	**5 SPACES**
OFFICE : 500 S.F./250	=	**2 SPACES**
1 SPACE PER VEHICLE OPERATED	=	**2 SPACES**
TOTAL PARKING SPACES REQUIRED	=	**9 SPACES**
TOTAL BUILDING F :		
WAREHOUSE / STORAGE : 1,402 S.F. /1000	=	**2 SPACES**
1ST FLOOR OFFICE : 788 S.F./250	=	**4 SPACES**
2ND FLOOR LIVING : 1,064 S.F.(2 PER UNIT) x2	=	**4 SPACES**
1 SPACE PER VEHICLE OPERATED	=	**2 SPACES**
TOTAL PARKING SPACES REQUIRED	=	**12 SPACES**
TOTAL PARKING SPACES REQUIRED	=	**182 SPACES**
TOTAL SPACES PROVIDED	=	**189 SPACES**

SITE PLAN KEYNOTES :

1. YARD GATE, ROLLING GATE WITH LOCK, 15' WIDE
2. ENTRY GATE, DOUBLE ROLLING GATE (2), 15' WIDE DOUBLE KEYPAD CONROLLED
3. 6' HIGH WROUGHT IRON FENCE
4. LANDSCAPE AREA - REFER TO LANDSCAPE DWGS.
5. ACCESSIBLE PARKING STALL, SLOPE SHALL NOT EXCEED 1/4" PER FOOT IN ANY DIRECTION
6. PARKING STALL, 9' x 19'
7. ACCESSIBLE AISLE, PAINT 12" HIGH "NO PARKING" SIGN PER CITY REQUIREMENTS
8. CONCRETE PARKING PER CIVIL DWGS.
9. CONCRETE WALKWAY
10. TRASH ENCLOSURE PER CITY OF YUCAIPA STANDARDS
11. FIRE HYDRANT PER CITY OF YUCAIPA REQUIREMENTS
12. PROPOSED TRANSFORMER
13. ACCESS GATE, 4' WIDE
14. 6' HIGH C.M.U. WALL
15. ENTRY KEY PAD
16. MONUMENT SIGN
17. KNOX BOX
18. STANDARD PARKING AREA
19. ACCESSIBLE RAMP
20. SIDEWALK AT PUBLIC R.O.W.
21. BICYCLE PARKING AREA
22. ACCESSIBLE PEDESTRIAN ENTRANCE GATE
23. 8' HIGH C.M.U. WALL
24. EV CHARGING STATION (TYP. OF 10)
25. CONCRETE PAVING
26. LIGHT POLE & FOOTING
27. EXTERIOR BUILDING LIGHTING
28. CLEAR SITE TRIANGLE @ INTERSECTION OF DRIVE ENTRANCE AND PUBLID R.O.W. PER YUCAIPA DEVELOPMENT CODE 87.0815
29. EXIST. SCE EASMENT TO BE ABANDONED

NOTES :
- * DENOTES LIVE / WORK UNIT
- NO EXISTING HILLY TERRAIN OR DRAINAGE CHANNELS ON SITE
- REFER TO BIOLOGY REPORT FOR PROTECTED PLANTS EXISTING ON SITE

LEGEND :

LIGHT POLE & FOOTING

FIRE HYDRANT

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LICENSED ARCHITECT JAMES L. BROESKE No. C009174 Ren 11-30-2025 STATE OF CALIFORNIA

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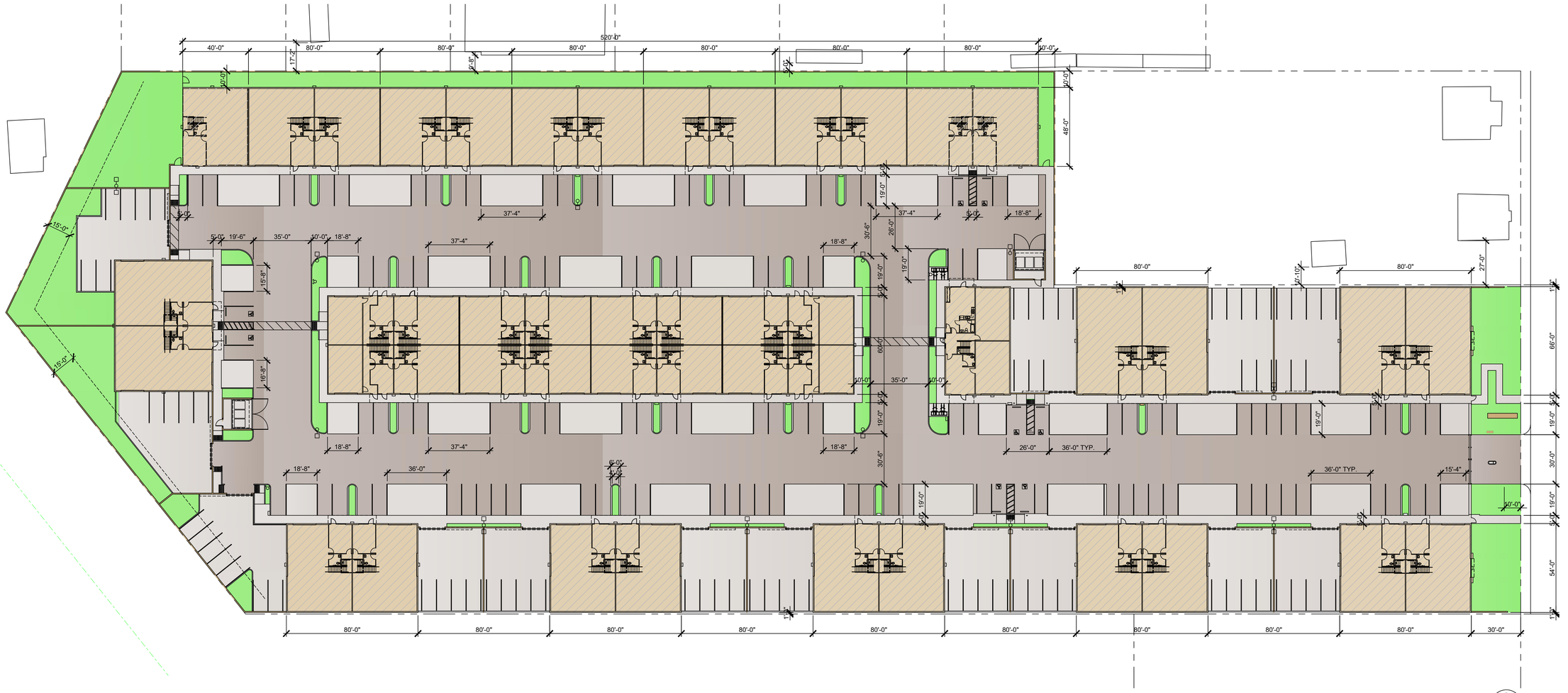
REVISIONS △

SHEET TITLE

SITE PLAN

SHEET NO.

A1.1



SITE PLAN

1"=30'-0"

SITE LEGEND - COLORS :

NEW CONCRETE PAVING

NEW CONCRETE SIDEWALKS, CURBS, YARDS

NEW WALL / FENCE

NEW LANDSCAPING

NEW BUILDING

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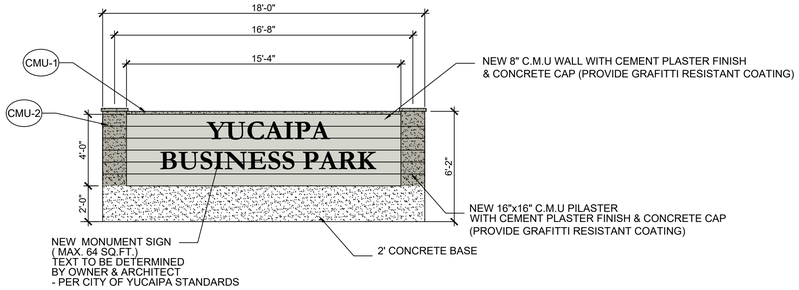
SHEET TITLE

SITE PLAN
- COLOR

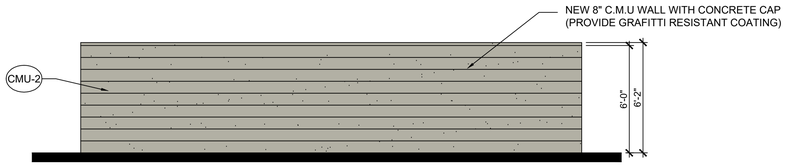
SHEET NO.

A1.1C



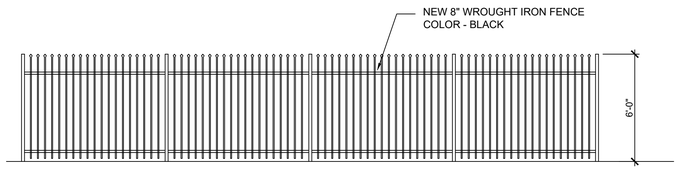
NEW MONUMENT SIGN

SCALE : 1/4" = 1'-0"



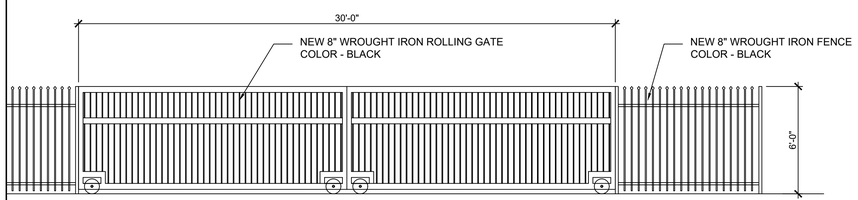
C.M.U. WALL @ SITE PERIMETER

SCALE : 1/4" = 1'-0"



WROUGHT IRON FENCE

SCALE : 1/4" = 1'-0"



WROUGHT IRON GATE & FENCE

SCALE : 1/4" = 1'-0"

NOTES:

1. THIS DESIGN DOES **NOT** ALLOW GRADE DIFFERENTIALS ON MORE THAN 6" ON OPPOSING SIDES OF THE WALL. THIS IS **NOT** A RETAINING WALL.
2. FENCE HEIGHTS ARE REGULATED - CONSULT ZONING REGULATIONS BEFORE BEGINNING CONSTRUCTION
3. NO WATER COURSE OR NATURAL DRAINAGE SHALL BE OBSTRUCTED.
4. GROUT ONLY THE CELLS CONTAINING REBAR. THIS WALL IS NOT DESIGNED FOR ALL CELLS TO BE GROUTED.
5. ALL REBAR TO BE ASTM SPEC. A615, GRADE 40 MIN.
6. ALL REBAR LAP SPLICES TO BE 24" MIN.
7. ALL MASONRY UNITS TO BE ASTM C-90 GRADE N.
8. REBAR TO BE CENTERED IN MASONRY CELLS.

WHEN A PERMIT IS REQUIRED THE FOLLOWING INSPECTIONS ARE REQUIRED:

CHECK WITH THE BUILDING DEPARTMENT TO VERIFY IF A BUILDING PERMIT IS REQUIRED.

1. FOOTING: EXCAVATION TRENCH CLEAN WITH STEEL IN PLACE AND SUPPORTED 3" ABV. AND AWAY FROM THE SURROUNDING EARTH /DIRT.
2. REBAR / PRE-GROUT: BOND BEAM REBAR AND VERTICAL REBAR IN PLACE - INSPECTION PRIOR TO PLACING GROUT.
3. FINAL: AFTER GROUT IS PLACED - PRIOR TO ANY DECORATIVE CAP PLACEMENT.

DESIGN PARAMETERS:

ACTIVE SOIL PRESSURE (PSF) = 30
COEFFICIENT OF FRICTION = 0.25
WIND = 85 MPH, EXPOSURE C
PASSIVE SOIL BEARING (PSF) = 150
ALLOWABLE SOIL BEARING (PSF) = 1500
SEISMIC DESIGN CATERGORY 'E', SITE CLASS 'D'

TABLE 'A'		
"H"	"W"	VERTICAL REINFORCEMENT
3'	19"	#4 @ 48" O.C.
4'	22"	#4 @ 48" O.C.
5'	29"	#4 @ 48" O.C.
6'	34"	#4 @ 24" O.C.

ALL FOOTINGS ADJACENT TO SLOPES TO BE AT LEAST 5' TO DAYLIGHT AS SHOWN BELOW

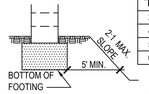
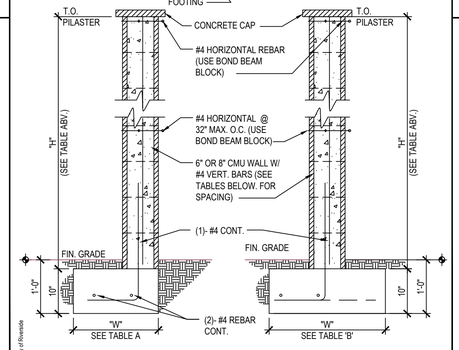


TABLE 'B'		
"H"	"W"	VERTICAL REINFORCEMENT
3'	17"	#4 @ 48" O.C.
4'	20"	#4 @ 48" O.C.
5'	23"	#4 @ 48" O.C.
6'	29"	#4 @ 24" O.C.



DISCLAIMER: ALTERNATE DESIGNS MAYBE POSSIBLE WHEN PROVIDED WITH AN ENGINEERED ANALYSIS. USE OF THIS STANDARD DESIGN IS AT THE OWNER'S RISK AND CARRIES NO IMPLIED OR INFERRED GUARANTEE AGAINST FAILURE OR DEFECTS.

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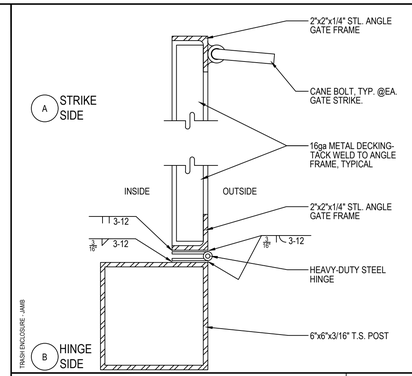
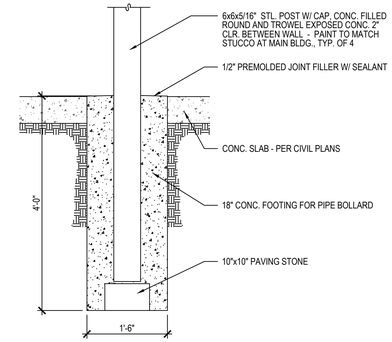


TRASH ENCLOSURE - JAMB

TYP. TRASH ENCL. GATE JAMB

SCALE 3"=1'-0" — 1



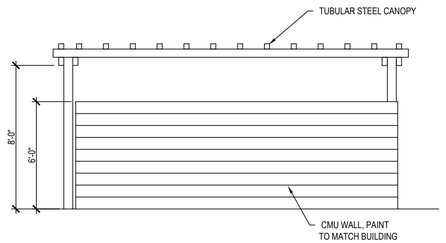
Trash Enclosure - Post Footing

POST FOOTING

SCALE 3/4"=1'-0" — 2

C.M.U. WALL

SCALE 3/4"=1'-0" — 6

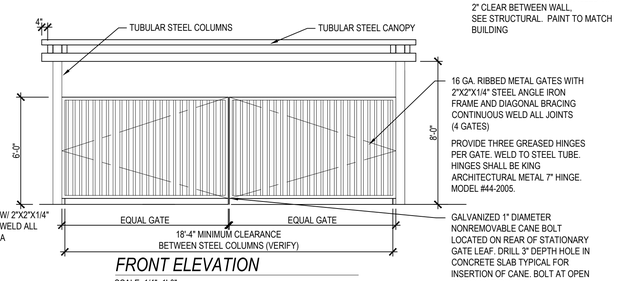


SIDE ELEVATION

SCALE: 1/4"=1'-0"

NOTE: THE DUMPSTER PAD SHALL ALWAYS BE FLUSH WITH THE GROUND & SHALL NEVER SIT ON THE CURB UNLESS REQUIRED BY JURISDICTIONS.

FLOOR DRAIN:
SEE CIVIL ENGINEERING DRAWINGS FOR FLOOR DRAIN(S) INFORMATION



PAIR 3'-0" 16 GA. RIBBED METAL MAN-GATE W/ 2"X2"X1/4" STEEL ANGLE FRAME AND DIAG. BRACING. WELD ALL JOINTS CONT. LATCH TO COMPLY WITH ADA

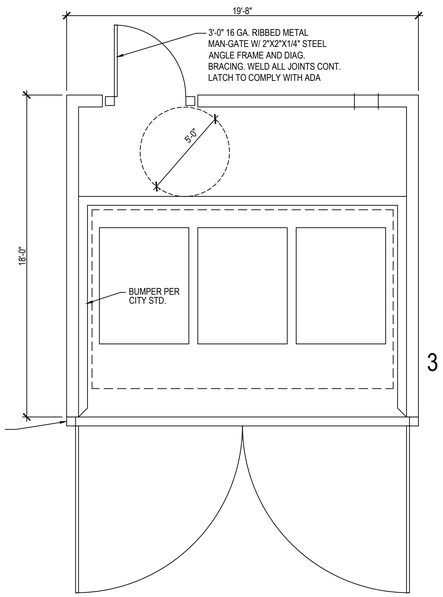
16 GA. RIBBED METAL GATES WITH 2"X2"X1/4" STEEL ANGLE IRON FRAME AND DIAGONAL BRACING CONTINUOUS WELD ALL JOINTS (4 GATES)

PROVIDE THREE GREASED HINGES PER GATE. WELD TO STEEL TUBE. HINGES SHALL BE KING ARCHITECTURAL METAL 7" HINGE. MODEL #44-2005.

GALVANIZED 1" DIAMETER NONREMOVABLE CANE BOLT LOCATED ON REAR OF STATIONARY GATE LEAF. DRILL 3" DEPTH HOLE IN CONCRETE SLAB TYPICAL FOR INSERTION OF CANE. BOLT AT OPEN AND CLOSE POSITION.

FRONT ELEVATION

SCALE: 1/4"=1'-0"



NOTE : TRASH PICKUP SCHEDULE PER YUCAIPA DISPOSSAL / BURRTEC REQUIREMENTS

3

TRASH ENCLOSURE PLAN, ELEVATIONS12

SCALE 1/4" = 1'-0" — 4

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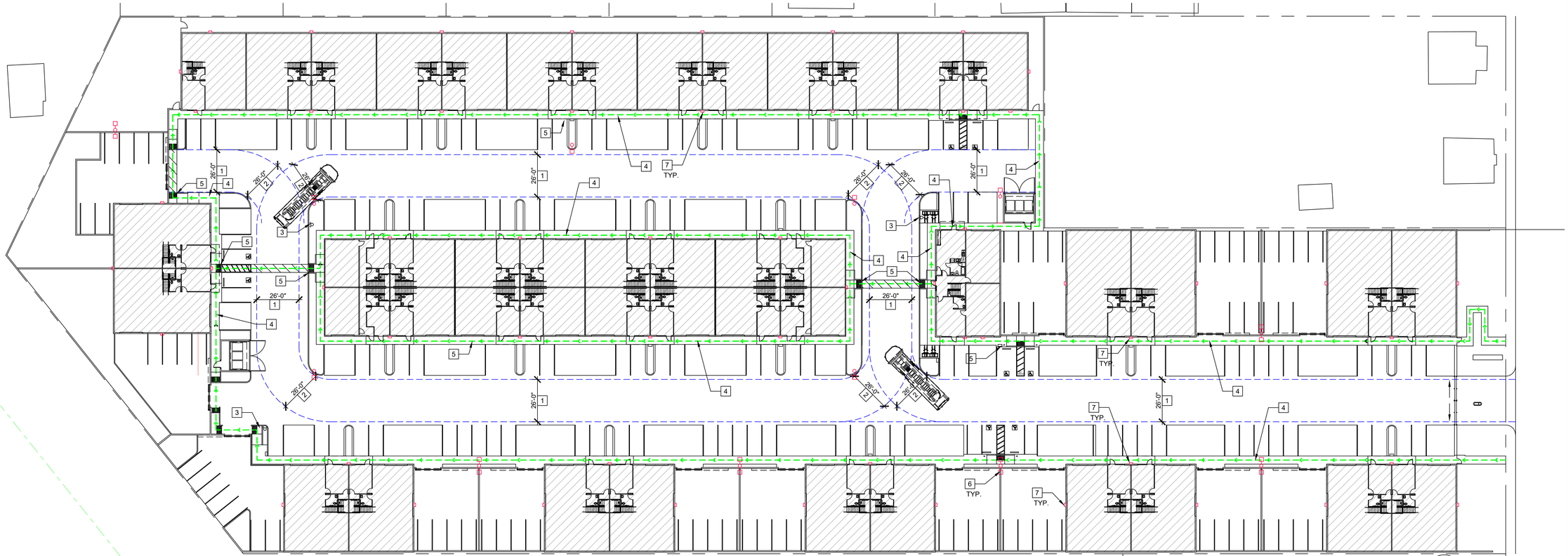
REVISIONS △

SHEET TITLE

SITE ELEMENTS

SHEET NO.

A1.2



SITE ACCESS PLAN

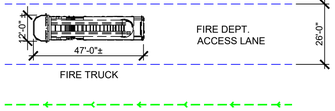
1"=30'-0"

SITE ACCESS & LIGHTING KEYNOTES :

1. FIRE DEPT. ACCESS MIN. 26' WIDE
2. FIRE DEPT. ACCESS LANE - MIN. 26' WIDE, w/ MIN. 19' INSIDE TURNING RADIUS, MIN. 45' OUTSIDE TURNING RADIUS
3. FIRE HYDRANT
4. ACCESSIBLE PATH OF TRAVEL FROM PUBLIC R.O.W.
5. ACCESSIBLE CURB RAMP w/ DETECABLE WARNING SURFACE
6. POLE MOUNTED AREA LIGHTING
7. BUILDING MOUNTED AREA LIGHTING

LEGEND :

- POLE MOUNTED LIGHT FIXTURE
- BUILDING MOUNTED LIGHT FIXTURE



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SHEET TITLE

SITE ACCESS PLAN, LIGHTING

SHEET NO.

A1.3

POLE MOUNTED SITE LIGHTING SPECS

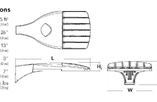
D-Series Size 0
Legacy LED Area Luminaire

d-series

Catalog Number
Notes
Type

Specifications

EPA: 0.95 ft² (.09 m²)
Length: 26" (66 cm)
Width: 10" (25 cm)
Height$_1$: 9" (23 cm)
Height$_2$: 3" (8 cm)
Weight (max): 16 lbs (7.3 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 400W metal halide with typical energy savings of 70% and expected service life of over 100,000 hours.

Ordering Information EXAMPLE: DSX0 LED P6 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD G1

DSX0 LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX0 LED	Forward optics P1 P5 P2 P6 P3 P7 P4 Rotated optics P8¹ P12¹ P10¹ P11¹	30K 3000 K 40K 4000 K 50K 5000 K	T1S Type I Short (Automotive) T2S Type II Short T2M Type II Medium T3S Type III Short T3M Type III Medium T4W Type IV Wide BLC Backlight control⁴ LCCO Left corner cut (BLC)⁴ RCCO Right corner cut (BLC)⁴	MVOLT 120V-277V⁵⁶ HVOLT 347V-480V⁵⁶ XVOLT 277V⁶⁷ 240⁸ 277⁸ 347⁸ 480⁸	Shipped included SPA Square pole mounting RPA Round pole mounting⁹ WBA Wall mount¹⁰ SPUMBA Square pole universal mounting adapter¹¹ RPUMBA Round pole universal mounting adapter¹¹ Shipped separately KMA8 DDBXD Mast arm mounting bracket adapter (specify 8" or 12")¹² Control options Shipped installed NLTAIR2 Network, Bluetooth and dimming, 7-pin, 120 - 277V, 480V, ambient sensor enabled at 25 fc¹³¹⁴¹⁵¹⁶¹⁷¹⁸ NLTAIR2 PIR Network, Bluetooth and dimming, 7-pin, 120 - 277V, 480V, motion/ambient sensor enabled at 25 fc¹³¹⁴¹⁵¹⁶¹⁷¹⁸¹⁹ NLTAIR2 PIRHN Network, Bluetooth and dimming, 7-pin, 120 - 277V, 480V, high/low motion/ambient sensor enabled at 25 fc¹³¹⁴¹⁵¹⁶¹⁷¹⁸¹⁹ PIR Bluetooth and dimming, 7-pin, 120 - 277V, motion sensor enabled at 25 fc¹³¹⁴¹⁵¹⁶¹⁷¹⁸¹⁹ PIRHN Bluetooth and dimming, 7-pin, 120 - 277V, high/low motion/ambient sensor enabled at 25 fc¹³¹⁴¹⁵¹⁶¹⁷¹⁸¹⁹ DMG 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)¹⁴ PER NEMA twist-lock receptacle only (control ordered separately)¹⁵ PER5 Five-pin receptacle only (control ordered separately)¹⁵ PERT5CCV Five-pin receptacle only (Control Compatible Voltage) (control ordered separately)¹⁵ PERT7CCV Seven-pin receptacle only (Control Compatible Voltage) (control ordered separately)¹⁵ DMG Shipped separately BS Bird spikes²⁰ EGS External glare shield	Other options HS House-side shield²¹ SF Single fuse (120, 277, 347V)²² DF Double fuse (208, 240, 480V)²² L/R Left or right notch²³ RAL* Factory applied finish²⁴ BRZ Bronze finish WHT White finish DNATCH Textured dark bronze DNLBTCH Textured black DNATCH Textured natural dark bronze DWHGD Textured white DDBTXD Textured dark bronze DBLBTXD Textured black DNATXD Textured natural dark bronze DWHGXD Textured white	Finish (required) DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DSSTXD Textured dark bronze DBLBTXD Textured black DNATXD Textured natural dark bronze DWHGXD Textured white Installation (required) S2 Generation 2

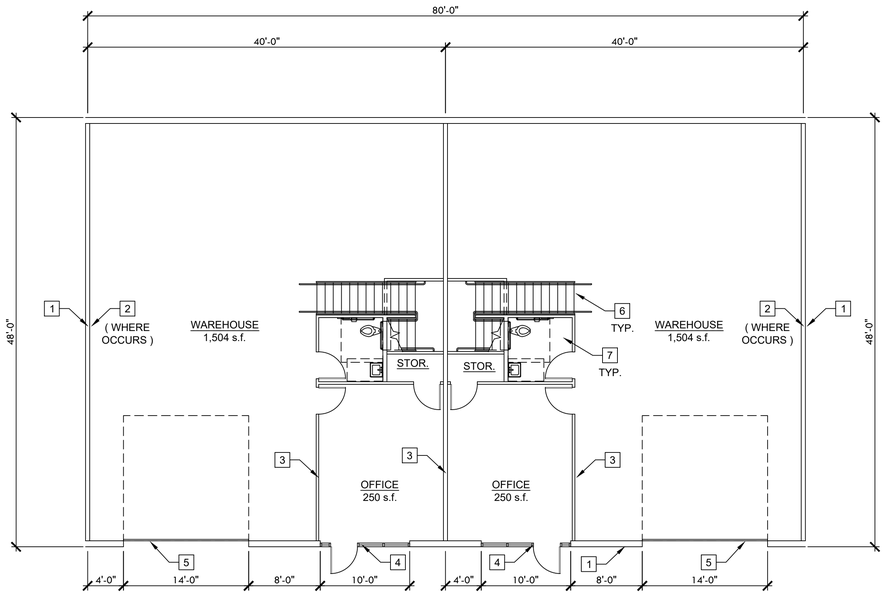
Ordering Information

Accessories
Ordered and shipped separately.

BLSSP-U-SB	Pintrail - SS mast arm (DSX0 P*)
BLSMP-U-SB	Pintrail - SS mast arm (DSX0 P*)
DSSMF3RT	Square pole universal mount adapter
DSMBT3RT	Drum tray kit
DSMAT3RT	Base slip fitter for PT, DT, and PA
DSMAT3RT2	Base slip fitter for PT, DT, and PA (Gen 2)
DSMAT3RT3	Base slip fitter for PT, DT, and PA (Gen 3)
DSMBS3RT	Diffused drum for Qualcomm NT
PARKSMBSU-V*	Square pole universal mount adapter
	Sleeve adapter (specify tenon OD)
RAKSSMBSU	Black pre-assembled pedestal adapter (specify tenon OD)
DSMSSUMBSU-V*	Universal pole mount

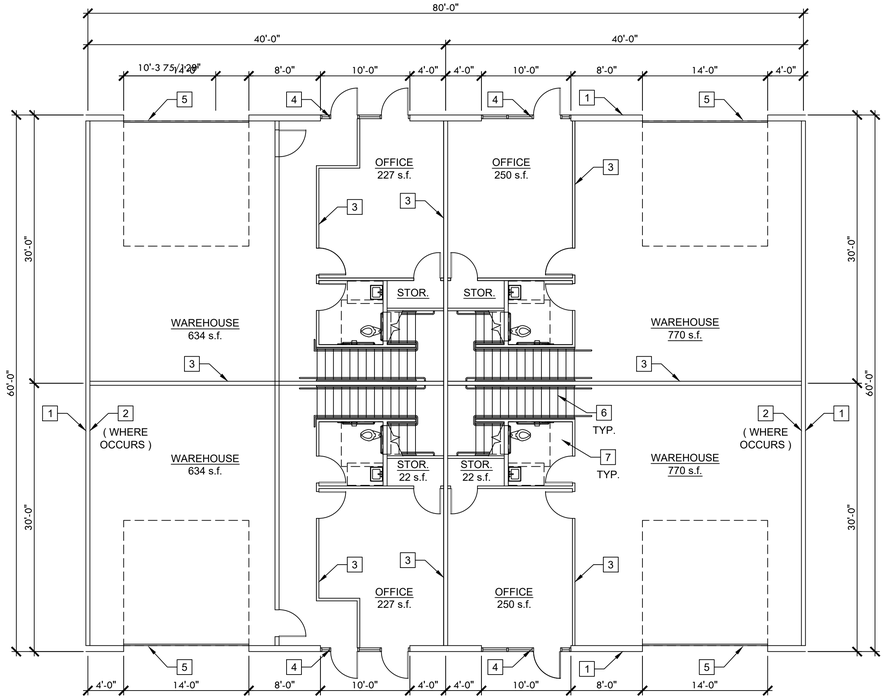
For more control options, see ROAM and ROAM adaptive cards on page 7.

NOTES
1. Not available with P6, P7, and P10.
2. P1A, P1T, P1D and P1S and forward optics (LO or WO) only available together.
3. Not available with P10, P11, P12, P13, P14, P15, P16, P17, P18, P19, P20, P21, P22, P23, P24, P25, P26, P27, P28, P29, P30, P31, P32, P33, P34, P35, P36, P37, P38, P39, P40, P41, P42, P43, P44, P45, P46, P47, P48, P49,



BUILDING B 1ST FLOOR PLAN

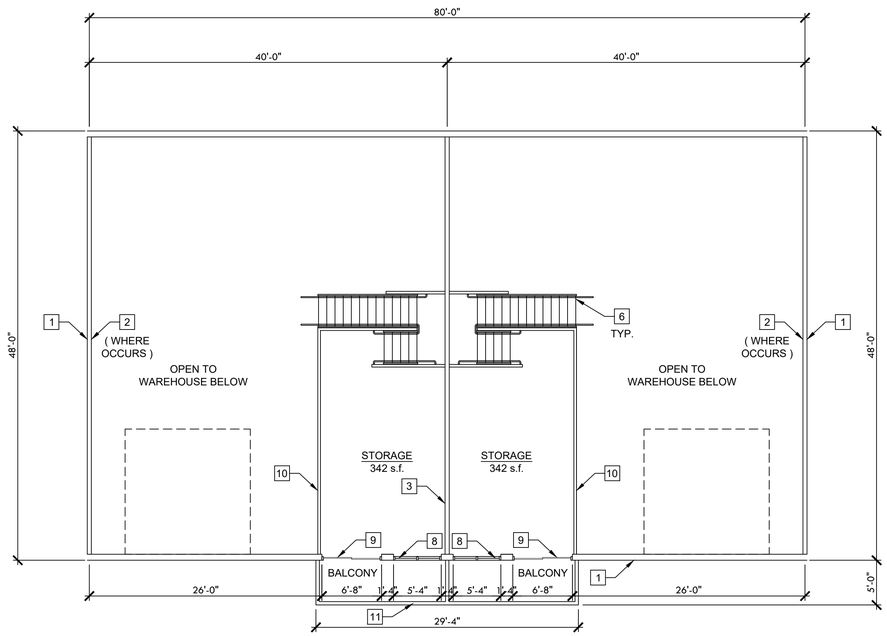
1'8" = 1'-0"



BUILDING A 1ST FLOOR PLAN

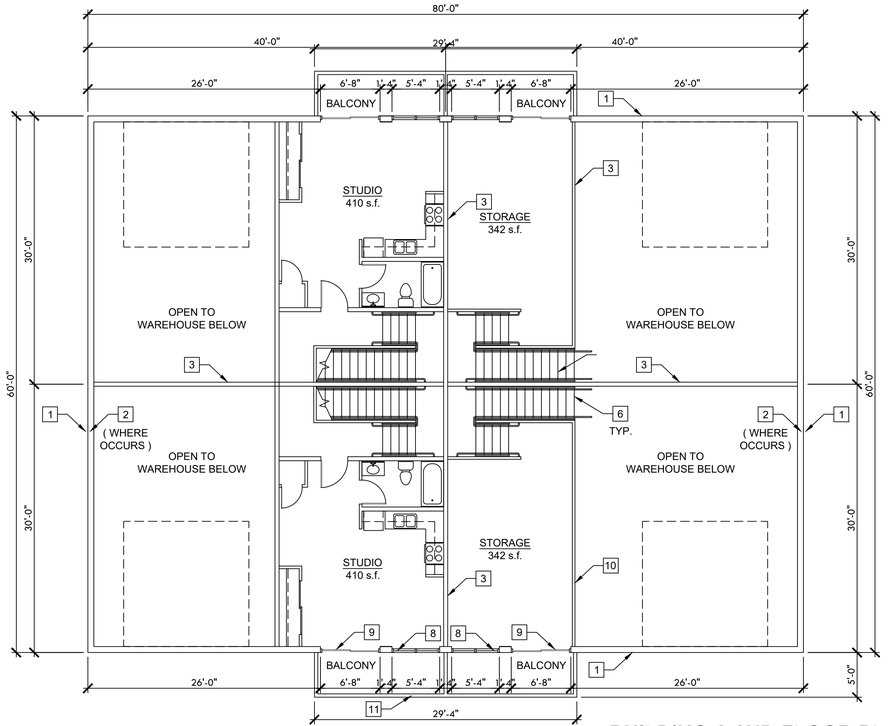
1'8" = 1'-0"

NOTE :
UNIT A LIVE WORK UNITS @ SOUTH END, BUILDING A ONLY



BUILDING B 2ND FLOOR PLAN

1'8" = 1'-0"



BUILDING A 2ND FLOOR PLAN

1'8" = 1'-0"

NOTE :
UNIT A LIVE WORK UNITS @ SOUTH END, BUILDING A ONLY

FLOOR PLAN KEYNOTES

1	8" C.M.U. EXTERIOR WALL
2	8" C.M.U INTERIOR WALL
3	2x WOOD STUD INTERIOR WALL
4	ALUM. STOREFRONT & DOOR w/ INSUL. GL.
5	METAL OVERHEAD SECTIONAL DOOR
6	WOOD STAIRS w/ METAL HANDRAIL
7	ACCESSIBLE RESTROOM
8	ALUM. WINDOW FRAME w/ INSUL. GL.
9	ALUM. SLIDING GLASS DOOR
10	MIN. 42" H. GUARDRAIL w/ GYP. BD. FINISH
11	MIN. 42" H. BLACONY RAIL w/ CEM. PLAS. FINISH

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JAMES L. BROESKE
No. C009174
Ren 11-30-2025
STATE OF CALIFORNIA

CONSULTANTS

YUCAIPA BUSINESS PARK

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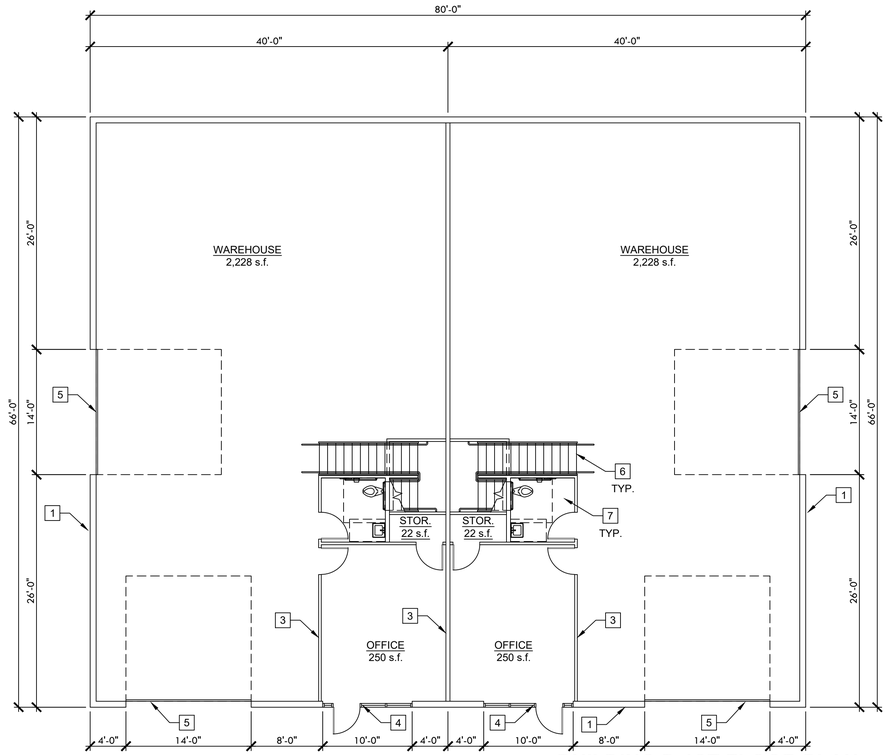
SHEET TITLE

BUILDING A & B
FLOOR PLANS

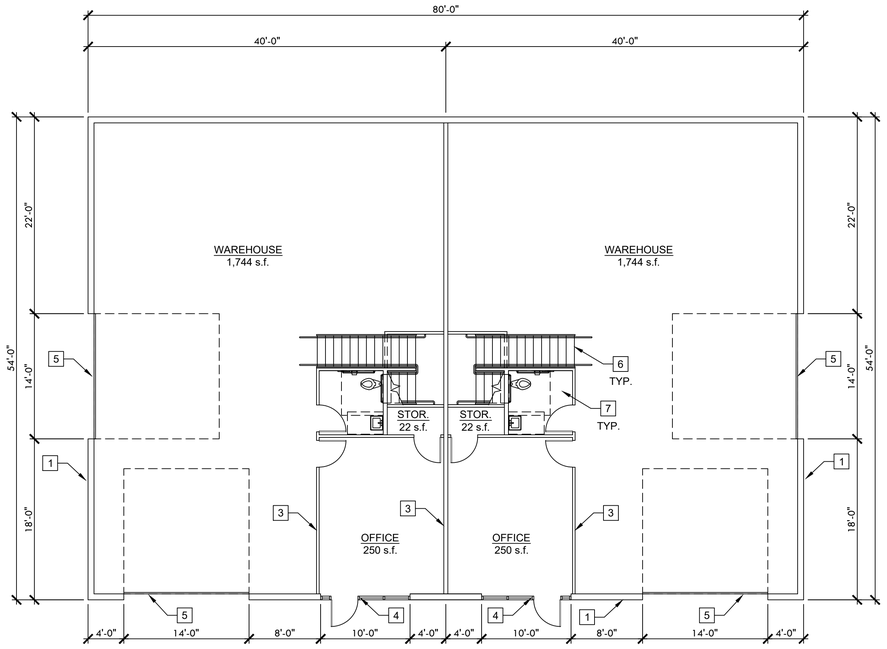
SHEET NO.

A2.1



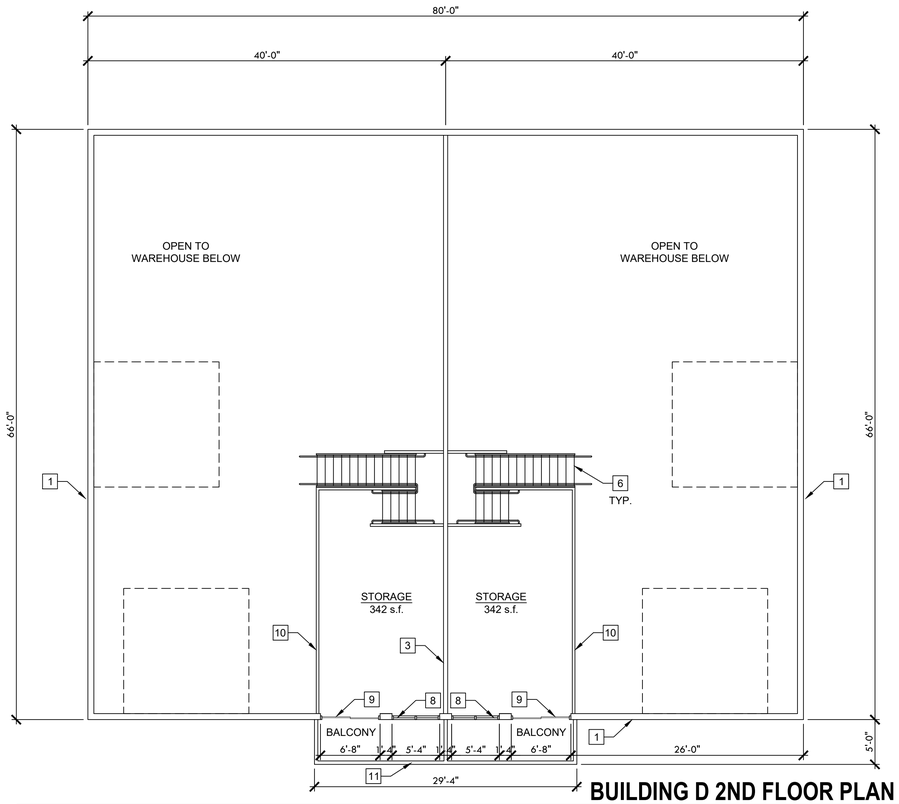
BUILDING D 1ST FLOOR PLAN

1'8" = 1'-0"



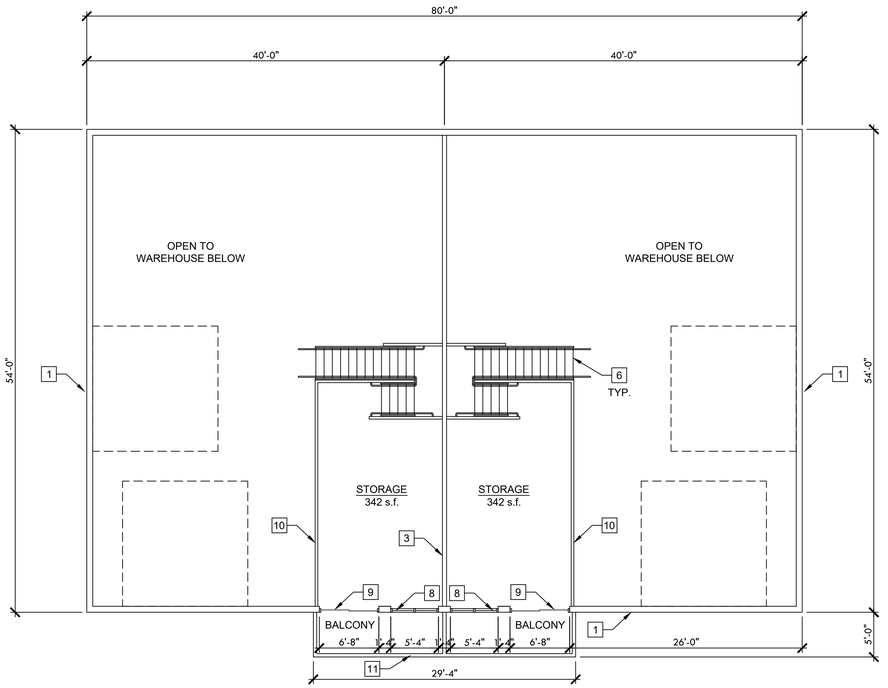
BUILDING C 1ST FLOOR PLAN

1'8" = 1'-0"



BUILDING D 2ND FLOOR PLAN

1'8" = 1'-0"



BUILDING C 2ND FLOOR PLAN

1'8" = 1'-0"

FLOOR PLAN KEYNOTES

1. 8" C.M.U. EXTERIOR WALL
2. 8" C.M.U INTERIOR WALL
3. 2x WOOD STUD INTERIOR WALL
4. ALUM. STOREFRONT & DOOR w/ INSUL. GL.
5. METAL OVERHEAD SECTIONAL DOOR
6. WOOD STAIRS w/ METAL HANDRAIL
7. ACCESSIBLE RESTROOM
8. ALUM. WINDOW FRAME w/ INSUL. GL.
9. ALUM. SLIDING GLASS DOOR
10. MIN. 42" H. GUARDRAIL w/ GYP. BD. FINISH
11. MIN. 42" H. BLACONY RAIL w/ CEM. PLAS. FINISH

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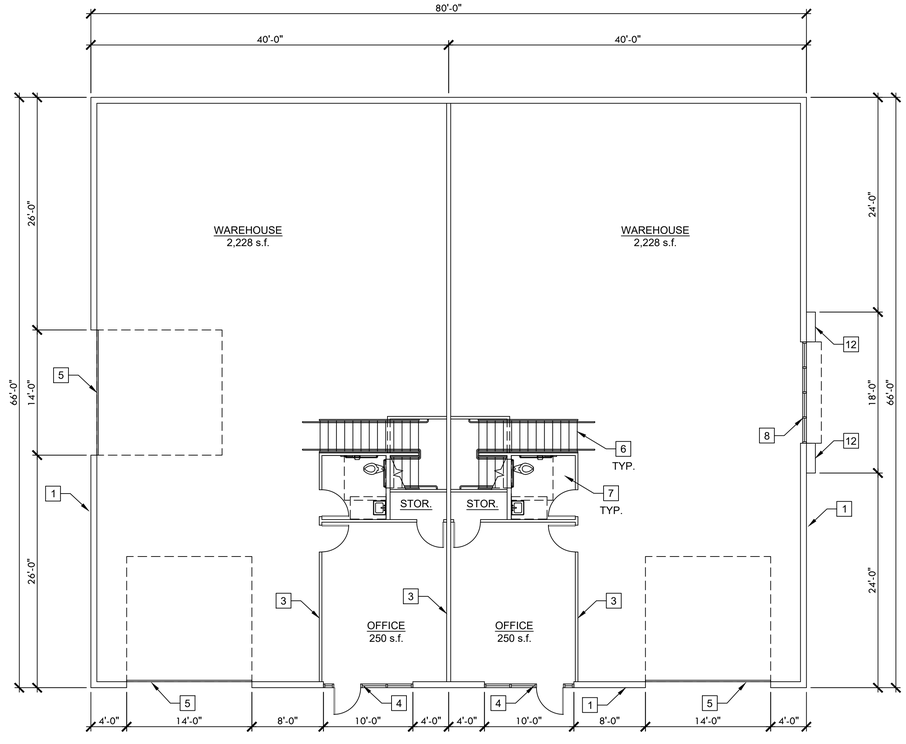
SHEET TITLE

BUILDING C & D
FLOOR PLANS

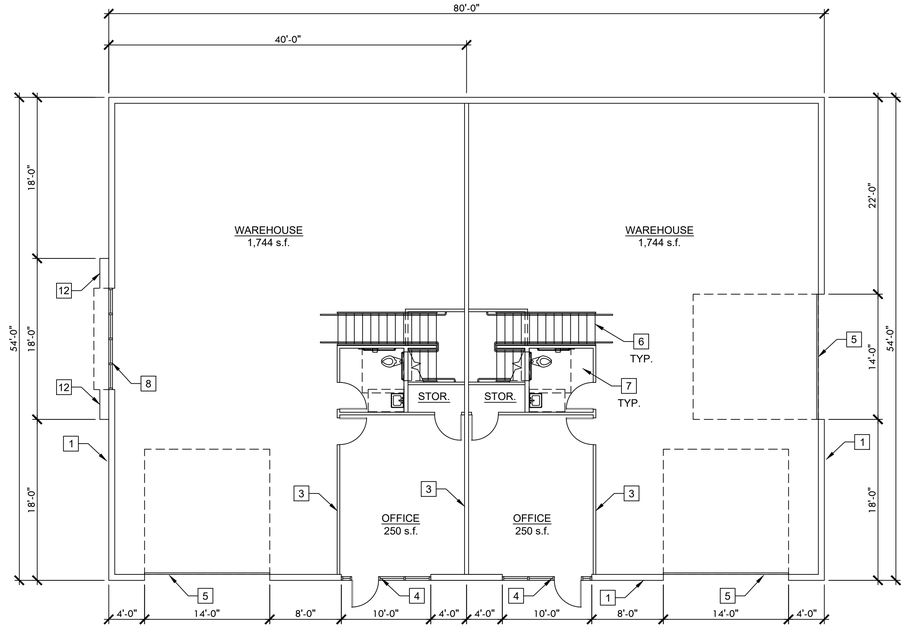
SHEET NO.

A2.2



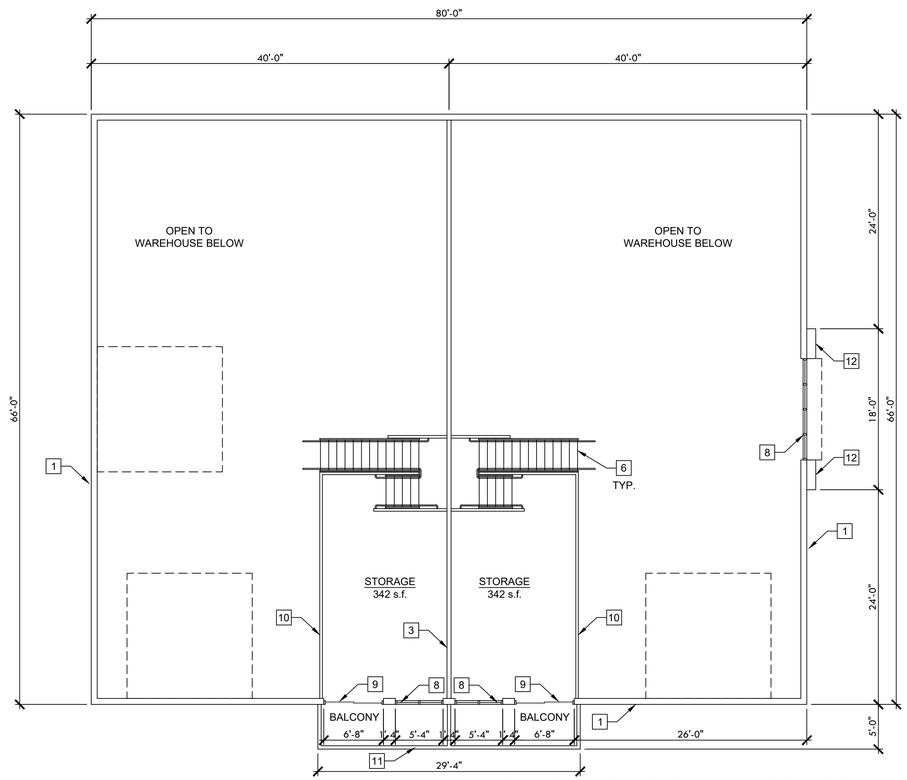
BUILDING D - NORTH 1ST FLOOR PLAN

1'8" = 1'-0"



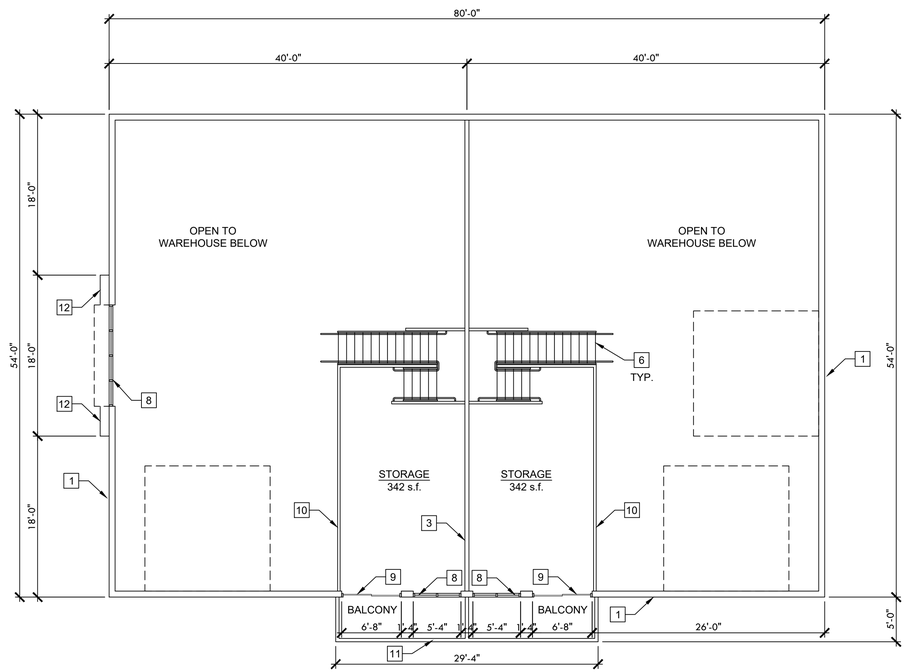
BUILDING C - NORTH 1ST FLOOR PLAN

1'8" = 1'-0"



BUILDING D - NORTH 2ND FLOOR PLAN

1'8" = 1'-0"



BUILDING C - NORTH 2ND FLOOR PLAN

1'8" = 1'-0"

FLOOR PLAN KEYNOTES

1. 8" C.M.U. EXTERIOR WALL
2. 8" C.M.U INTERIOR WALL
3. 2x WOOD STUD INTERIOR WALL
4. ALUM. STOREFRONT & DOOR w/ INSUL. GL.
5. METAL OVERHEAD SECTIONAL DOOR
6. WOOD STAIRS w/ METAL HANDRAIL
7. ACCESSIBLE RESTROOM
8. ALUM. WINDOW FRAME w/ INSUL. GL.
9. ALUM. SLIDING GLASS DOOR
10. MIN. 42" H. GUARDRAIL w/ GYP. BD. FINISH
11. MIN. 42" H. BLACONY RAIL w/ CEM. PLAS. FINISH
12. C.M.U PILASTER

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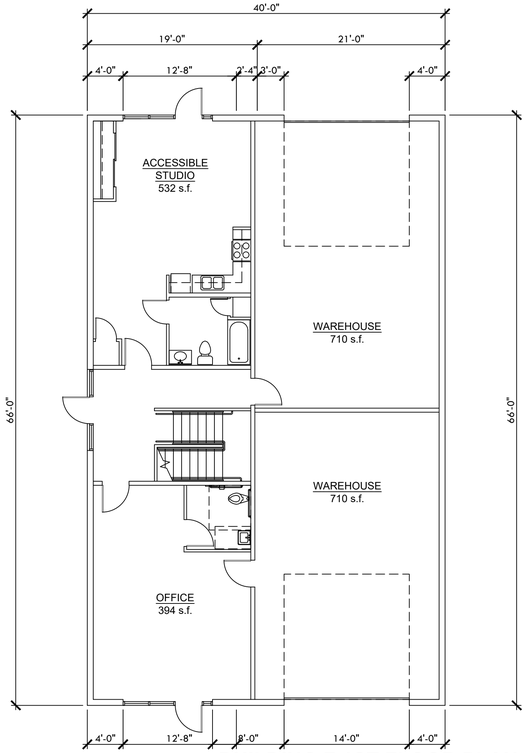
SHEET TITLE

NORTH BUILDING
C,D FLOOR PLANS

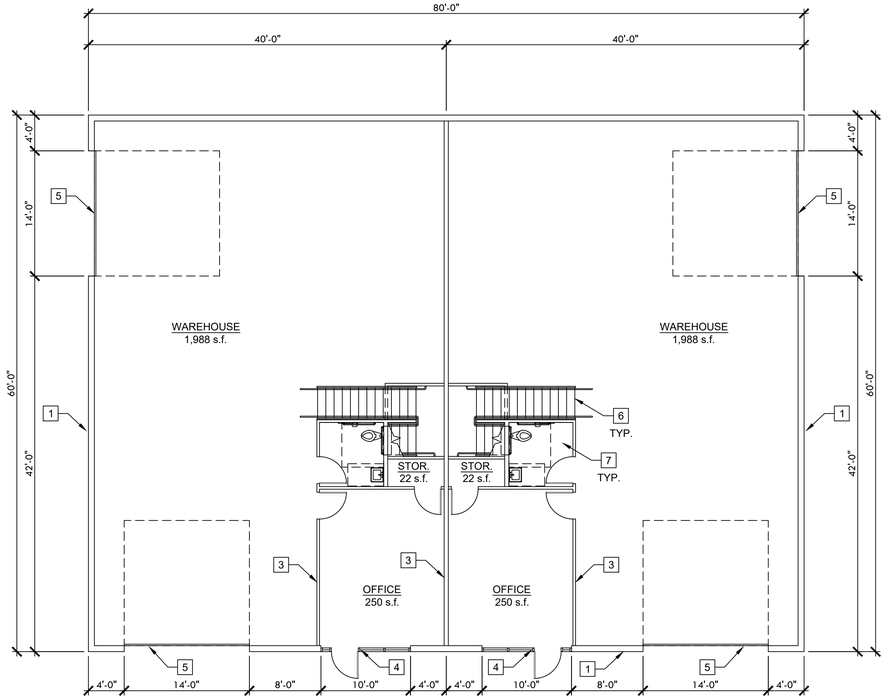
SHEET NO.

A2.2N



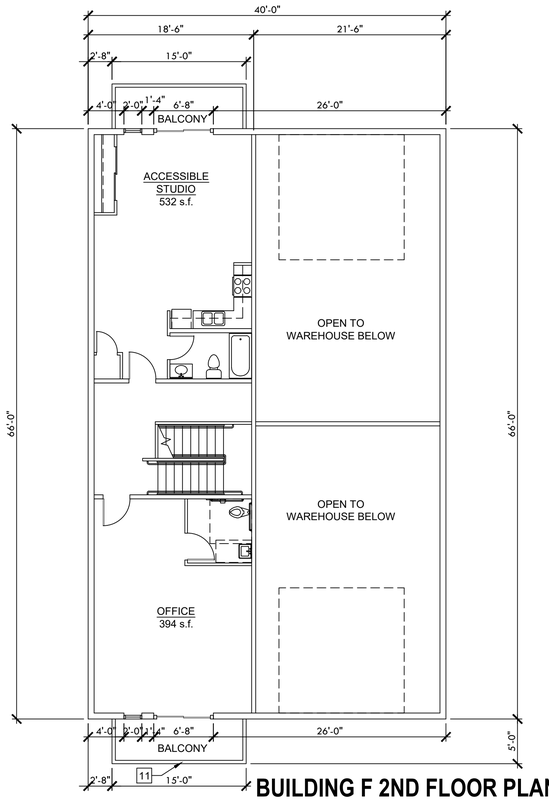
BUILDING F 1ST FLOOR PLAN

1'8" = 1'-0"



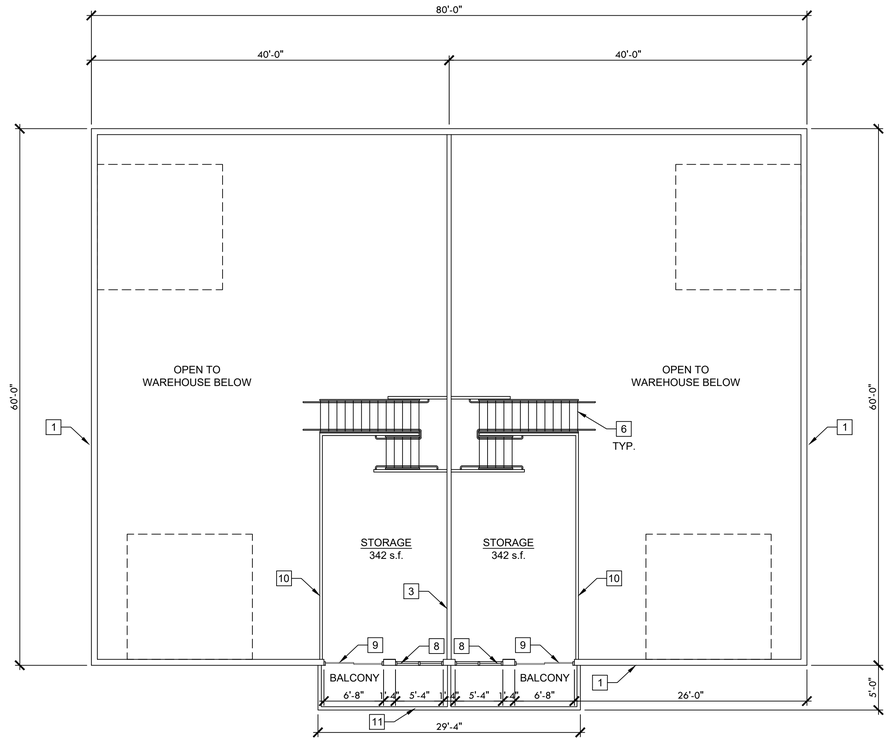
BUILDING E 1ST FLOOR PLAN

1'8" = 1'-0"



BUILDING F 2ND FLOOR PLAN

1'8" = 1'-0"



BUILDING E 2ND FLOOR PLAN

1'8" = 1'-0"

FLOOR PLAN KEYNOTES

1. 8" C.M.U. EXTERIOR WALL
2. 8" C.M.U INTERIOR WALL
3. 2x WOOD STUD INTERIOR WALL
4. ALUM. STOREFRONT & DOOR w/ INSUL. GL.
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7. ACCESSIBLE RESTROOM
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Ren. 11-30-2025
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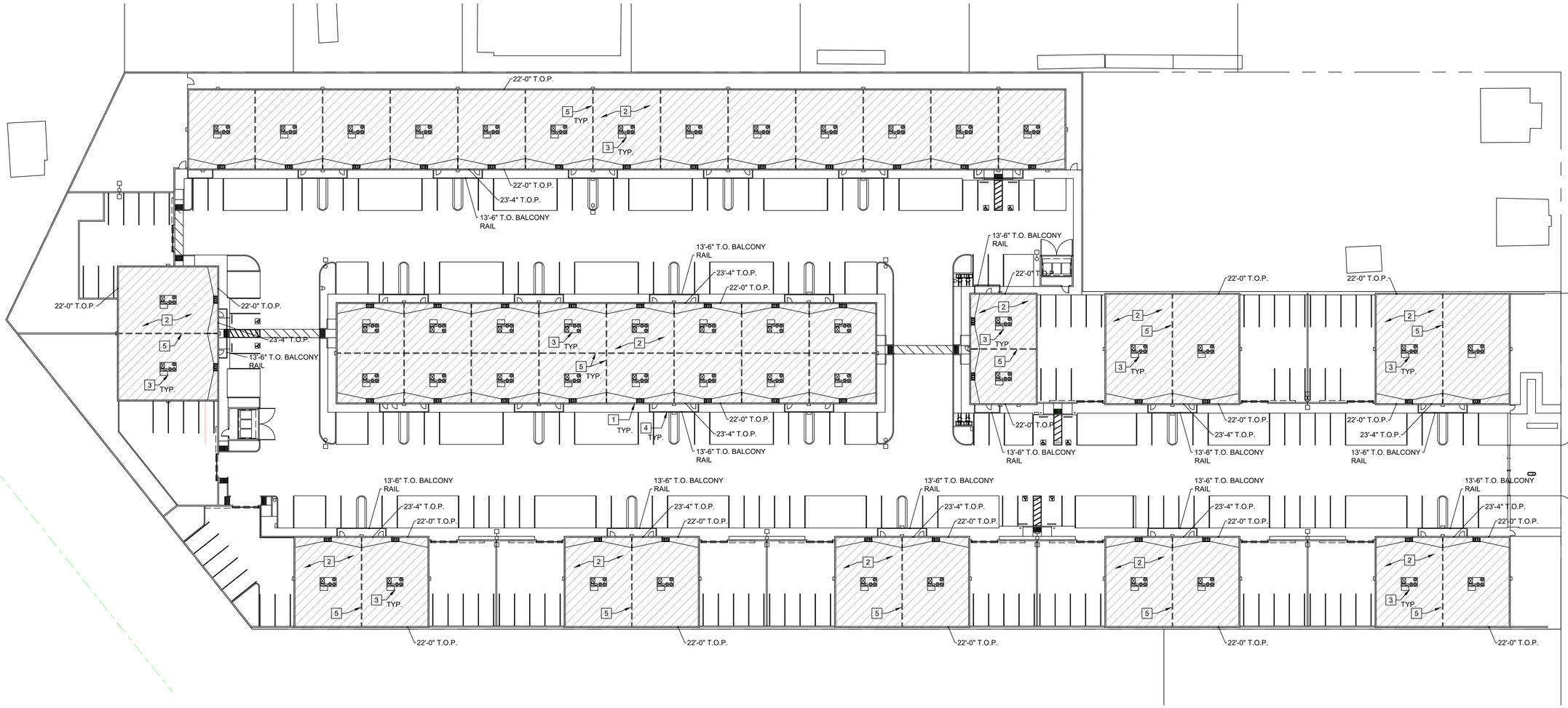
SHEET TITLE

BUILDING E & F
FLOOR PLANS

SHEET NO.

A2.3



ROOF PLAN KEYNOTES :

1	METAL PARAPET CAP
2	BUILT UP ROOF
3	ROOFTOP HVAC EQUIP. - TO BE SCREENED FROM VIEW
4	BALCONY RAIL w/ METAL CAP
5	UNIT PARTITION (BELOW)

ROOF PLAN

1"=30'-0"

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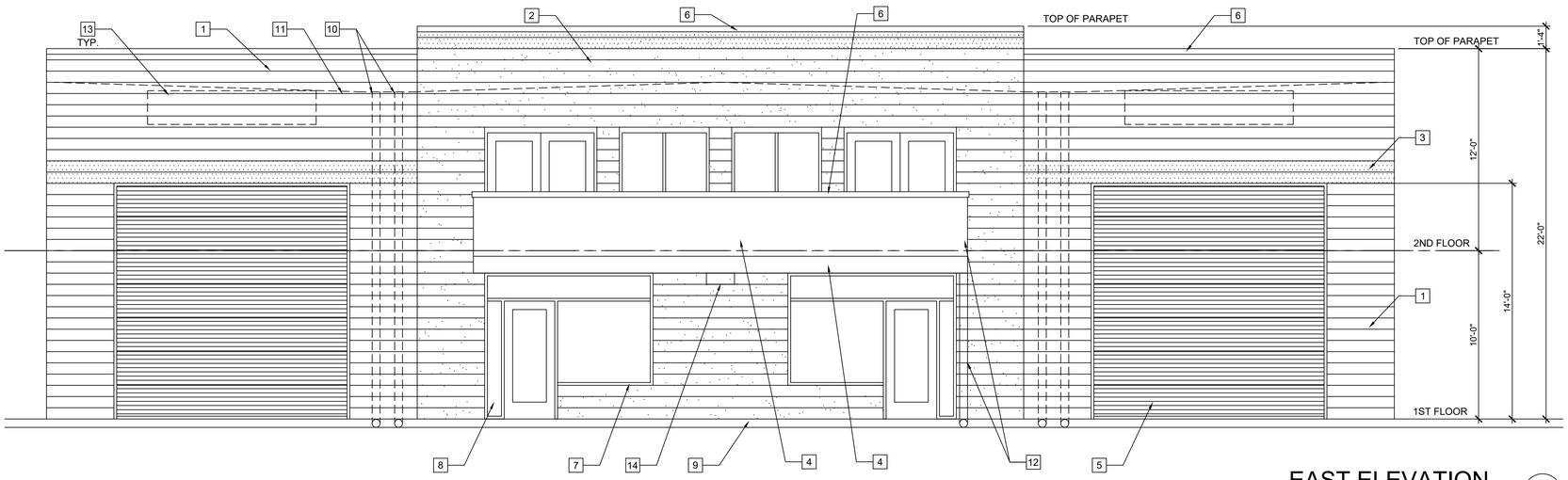
SHEET TITLE

ROOF PLAN

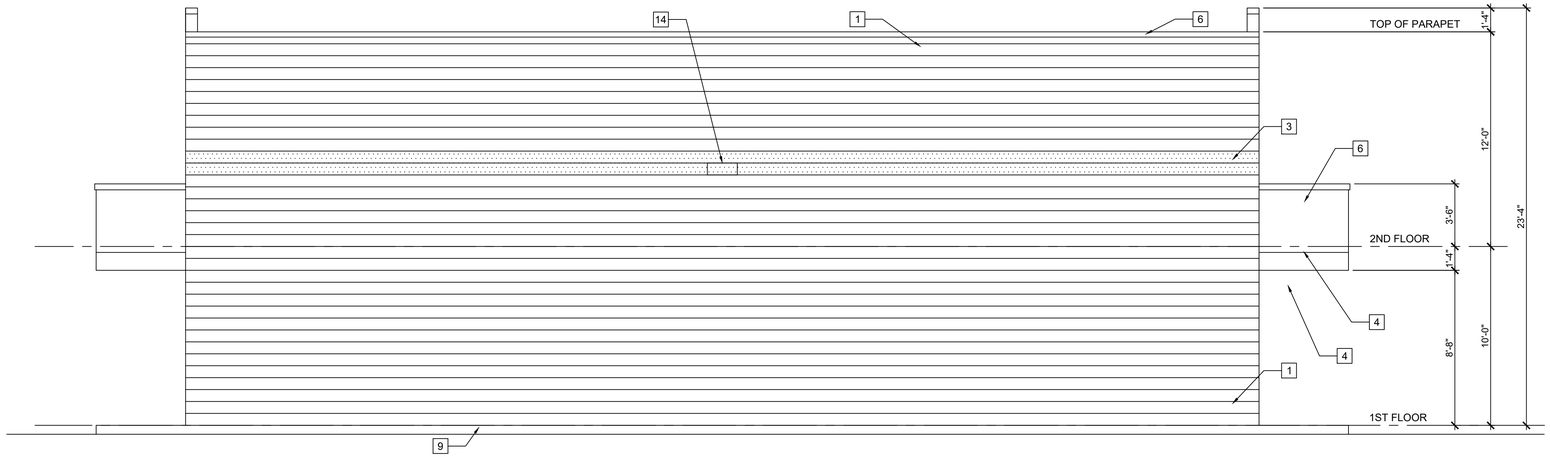
SHEET NO.

A2.4



EAST ELEVATION

1/4" = 1'-0" (1)



NORTH ELEVATION (SOUTH ELEVATION SIMILAR, MIRRORED)

1/4" = 1'-0" (2) (3)

WEST ELEVATION

1/4" = 1'-0" (4)

EXTERIOR ELEVATIONS KEYNOTES

1. CMU - LIGHT GREY (STANDARD PRECISION)
2. CMU - MEDIUM GREY (PRECISION)
3. CMU - BLACK (PRECISION)
4. EXTERIOR CEMENT PLASTER - PAINTED
5. STEEL OVERHEAD SECTIONAL DOOR - PAINTED
6. METAL WALL / PARAPET CAP - PAINTED
7. ALUM. STOREFRONT WINDOW & DOOR FRAME
8. INSUL. WINDOW & DOOR GLAZING
9. CONCRETE SIDEWALK / CURB
10. INTERIOR ROOF DRAINS & OVERFLOW THRU CURB FACE
11. ROOF OUTLINE (BEYOND)
12. WALK-ON BALCONY w/ NON-SLIP FINISH, SLOPE TO DRAIN -PROVIDE: BUILDING FACE MOUNTED DRAIN w/ CURB FACE DRAIN
13. BUILDING BUSINESS SIGN - ILLUMINATED STOREFRONT CHANNEL LETTERS & LOGO MAX. SIZE PER CITY OF YUCAIPA ORDINANCE
14. BUILDING MOUNTED AREA LED LIGHTING

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& associates, inc.

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LICENSED ARCHITECT
MARC L. BROESKE
No. C009174
Ren 11-30-2025
STATE OF CALIFORNIA

CONSULTANTS

YUCAIPA BUSINESS PARK

33193 YUCAIPA BLVD., YUCAIPA, CA., 92399

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APN	•	0318-013-11
JOB NO.	•	23-009
DATE	•	09/15/23
DRAWN BY	•	GMH
CHECKED BY	•	--
SCALE	•	

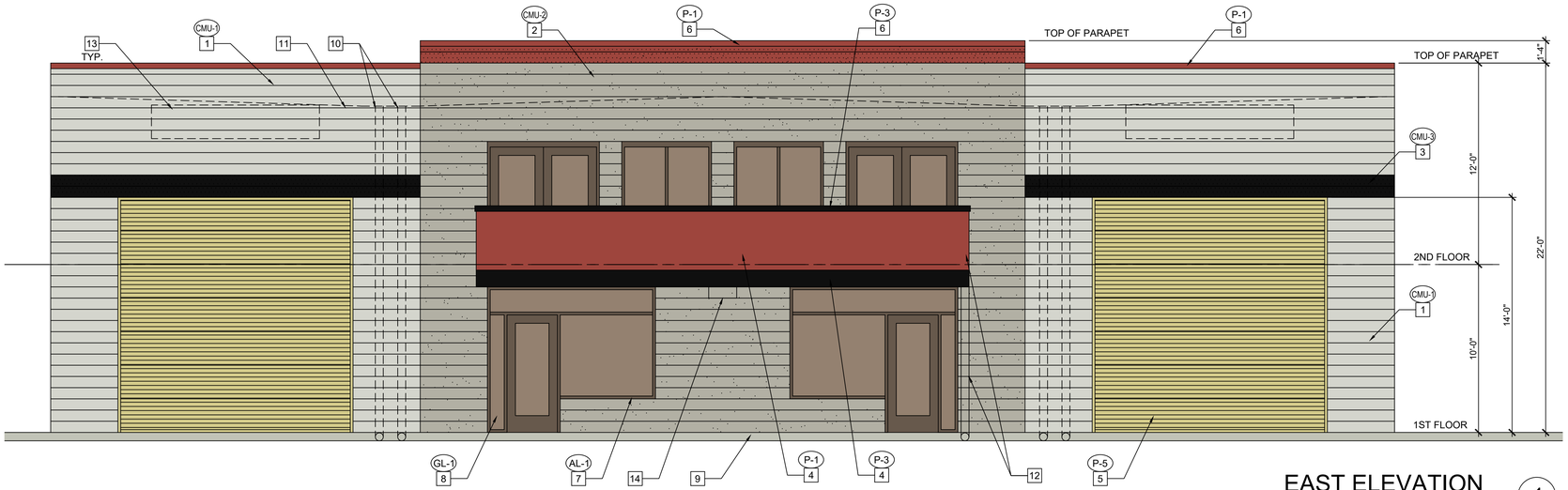
REVISIONS △

SHEET TITLE

EXTERIOR ELEVATIIONS - BUILDING A

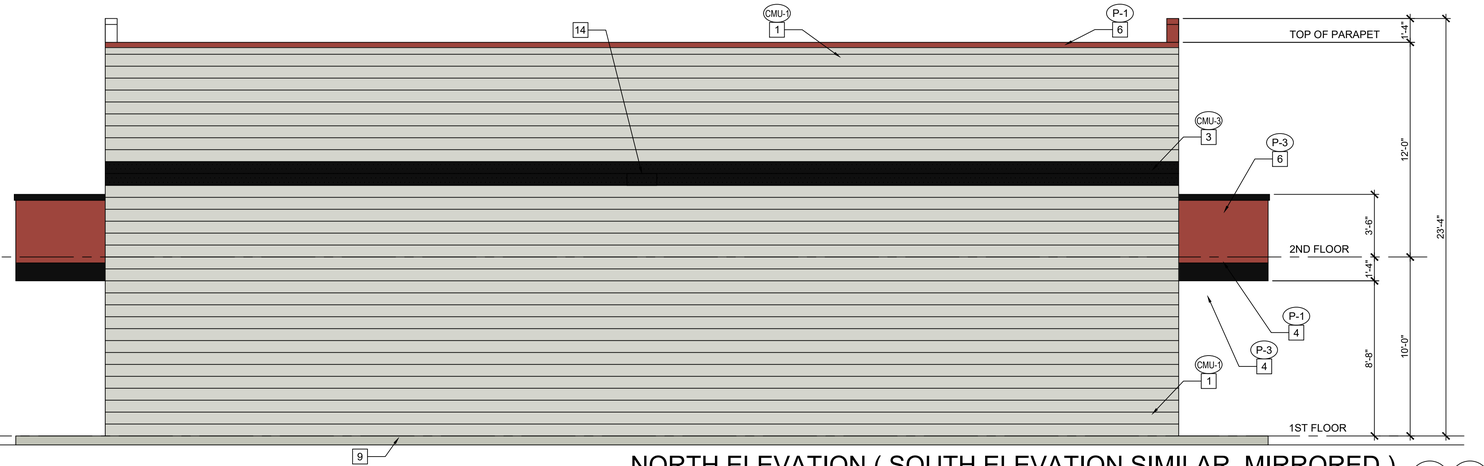
SHEET NO.

A3.1



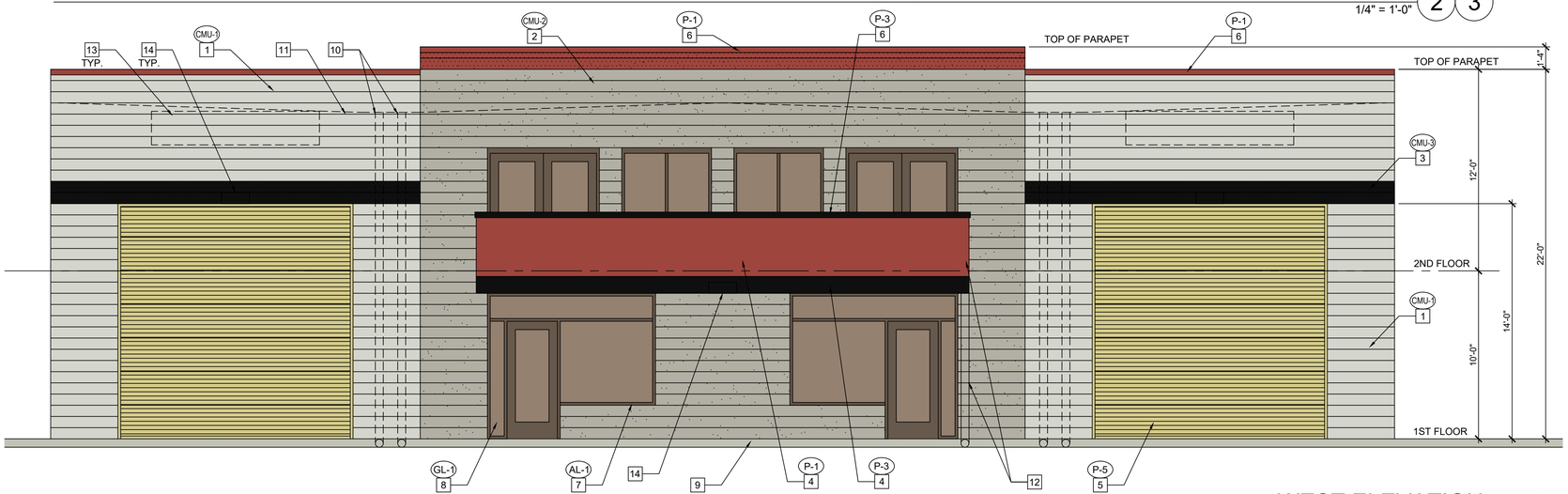
EAST ELEVATION

1/4" = 1'-0" (1)



NORTH ELEVATION (SOUTH ELEVATION SIMILAR, MIRRORED)

1/4" = 1'-0" (2) (3)



WEST ELEVATION

1/4" = 1'-0" (4)

EXTERIOR ELEVATIONS KEYNOTES

1. CMU - LIGHT GREY (STANDARD PRECISION)
2. CMU - MEDIUM GREY (PRECISION)
3. CMU - BLACK (PRECISION)
4. EXTERIOR CEMENT PLASTER - PAINTED
5. STEEL OVERHEAD SECTIONAL DOOR - PAINTED
6. METAL WALL / PARAPET CAP - PAINTED
7. ALUM. STOREFRONT WINDOW & DOOR FRAME
8. INSUL. WINDOW & DOOR GLAZING
9. CONCRETE SIDEWALK / CURB
10. INTERIOR ROOF DRAINS & OVERFLOW THRU CURB FACE
11. ROOF OUTLINE (BEYOND)
12. WALK-ON BALCONY w/ NON-SLIP FINISH, SLOPE TO DRAIN -PROVIDE BUILDING FACE MOUNTED DRAIN w/ CURB FACE DRAIN
13. BUILDING BUSINESS SIGN - ILLUMINATED STOREFRONT CHANNEL LETTERS & LOGO MAX. SIZE PER CITY OF YUCAIPA ORDINANCE
14. BUILDING MOUNTED AREA LED LIGHTING

EXTERIOR ELEVATIONS MATERIALS /COLORS

- CMU-1 — CMU - LIGHT GREY (STANDARD PRECISION)
- CMU-2 — CMU - MEDIUM GREY (STANDARD PRECISION)
- CMU-3 — CMU - BLACK (STANDARD PRECISION)
- P-1 — PAINT - RED DUNN EDWARDS POMEGRANATE (DEW380) (OR APPROVED EQUAL)
- P-2 — PAINT - WHITE DUNN EDWARDS WARM WHITE (DE5090) (OR APPROVED EQUAL)
- P-3 — PAINT - BLACK DUNN EDWARDS DARK ENGINE (DE6350) (OR APPROVED EQUAL)
- P-4 — PAINT - TAN DUNN EDWARDS CROSSROADS (DE5359) (OR APPROVED EQUAL)
- AL-1 — ALUM. STOREFRONT WINDOW & DOOR FRAME - DARK BRONZE
- GL-1 — INSUL. WINDOW & DOOR GLAZING - SOLAR BRONZE

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LICENSED ARCHITECT — MARC L. BROESKE — No. C009174 Ren: 11-30-2025 — STATE OF CALIFORNIA

CONSULTANTS

YUCAIPA BUSINESS PARK

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APN	0318-013-11
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DRAWN BY	GMH
CHECKED BY	--
SCALE	

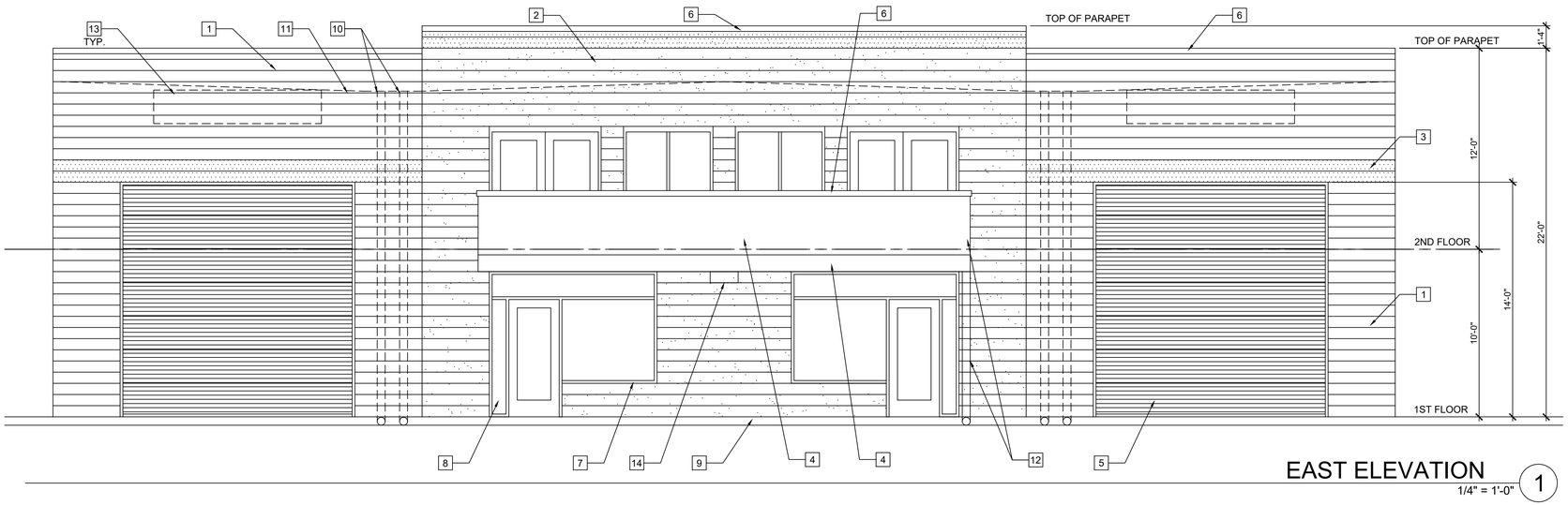
REVISIONS

SHEET TITLE

EXTERIOR ELEVATIIONS - BUILDING A COLOR

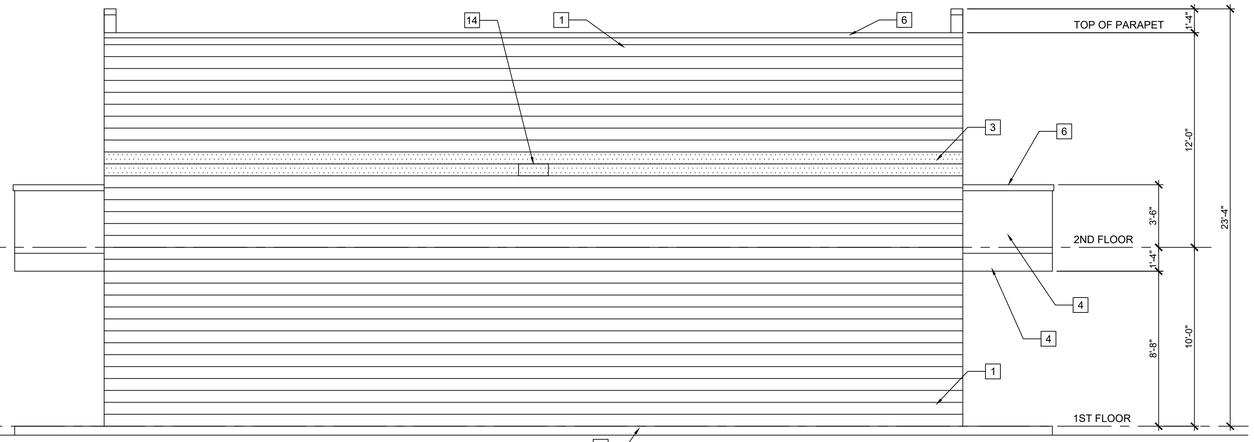
SHEET NO.

A3.1C



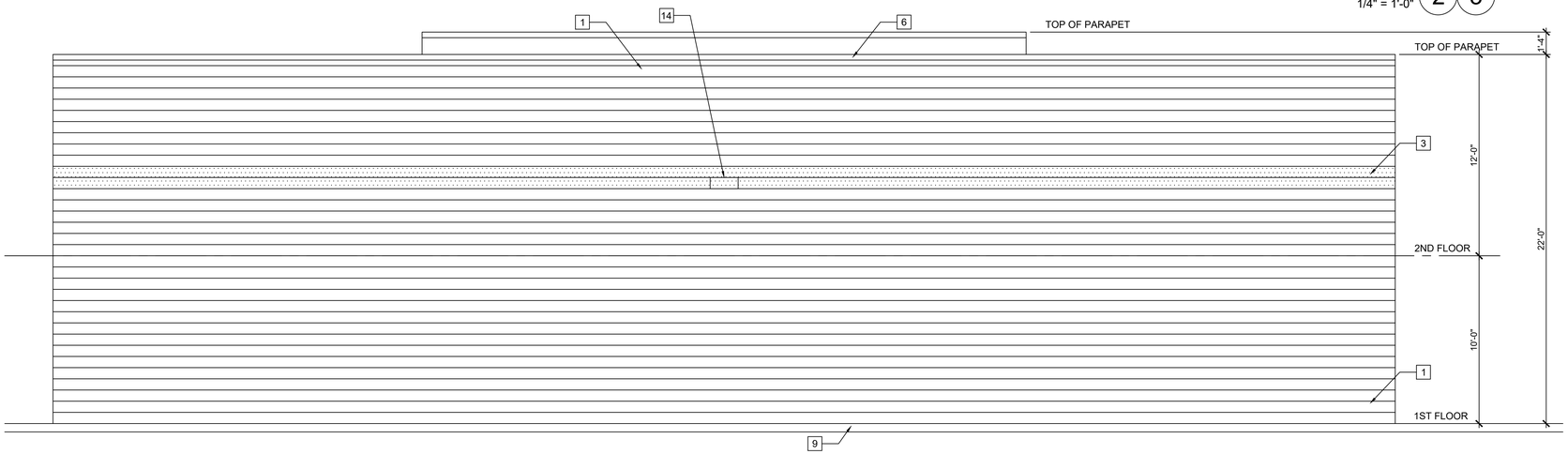
EAST ELEVATION

1/4" = 1'-0" 1



NORTH ELEVATION (SOUTH ELEVATION SIMILAR, MIRRORED)

1/4" = 1'-0" 2 3



WEST ELEVATION

1/4" = 1'-0" 4

EXTERIOR ELEVATIONS KEYNOTES

1. CMU - LIGHT GREY (STANDARD PRECISION)
2. CMU - MEDIUM GREY (PRECISION)
3. CMU - BLACK (PRECISION)
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9. CONCRETE SIDEWALK / CURB
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11. ROOF OUTLINE (BEYOND)
12. WALK-ON BALCONY w/ NON-SLIP FINISH, SLOPE TO DRAIN -PROVIDE: BUILDING FACE MOUNTED DRAIN w/ CURB FACE DRAIN
13. BUILDING BUSINESS SIGN - ILLUMINATED STOREFRONT CHANNEL LETTERS & LOGO MAX. SIZE PER CITY OF YUCAIPA ORDINANCE
14. BUILDING MOUNTED AREA LED LIGHTING

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Ren: 11-30-2025
STATE OF CALIFORNIA

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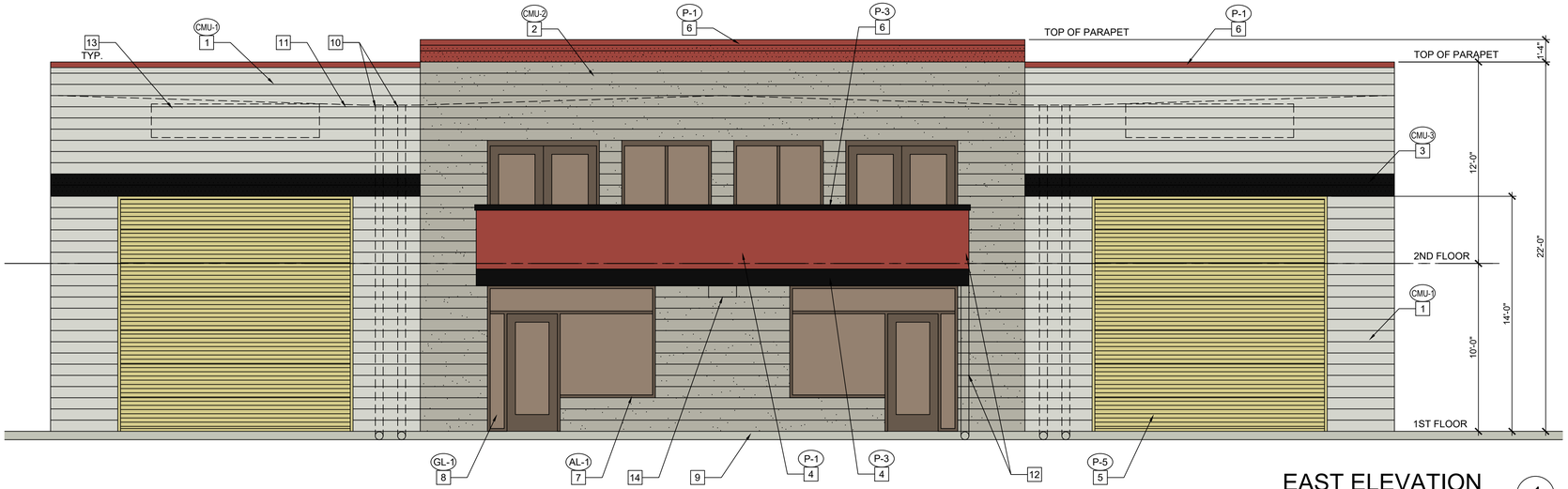
REVISIONS △

SHEET TITLE

EXTERIOR ELEVATIIONS - BUILDING B

SHEET NO.

A3.2

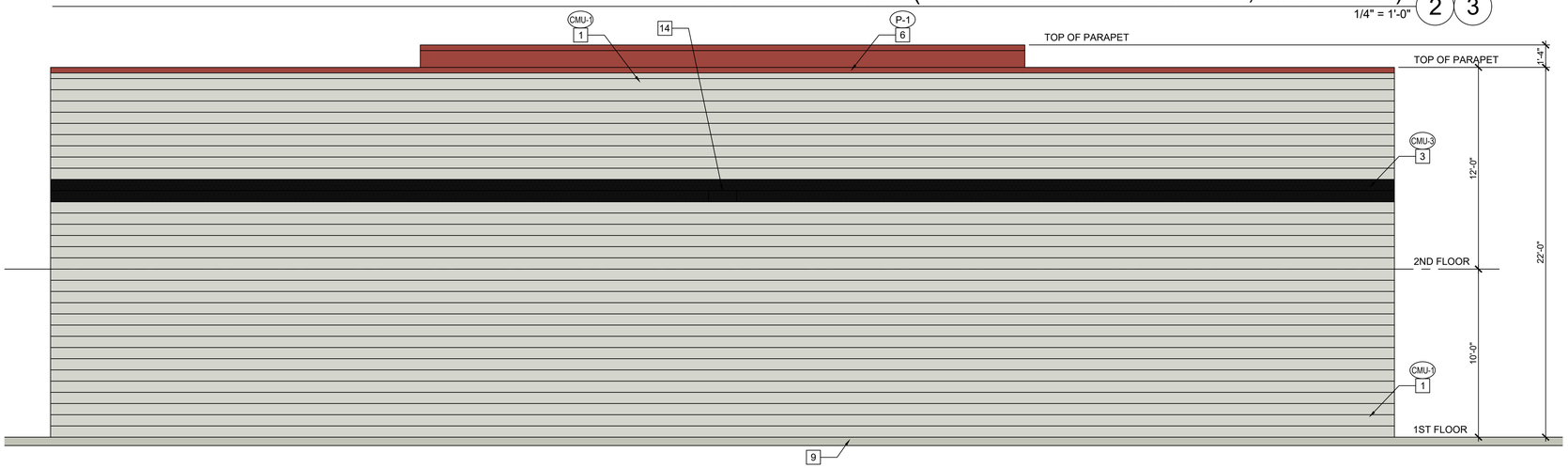


EAST ELEVATION

1/4" = 1'-0" 1

NORTH ELEVATION (SOUTH ELEVATION SIMILAR, MIRRORED)

1/4" = 1'-0" 2 3



WEST ELEVATION

1/4" = 1'-0" 4

EXTERIOR ELEVATIONS KEYNOTES

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14. BUILDING MOUNTED AREA LED LIGHTING

EXTERIOR ELEVATIONS MATERIALS /COLORS

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SCALE	

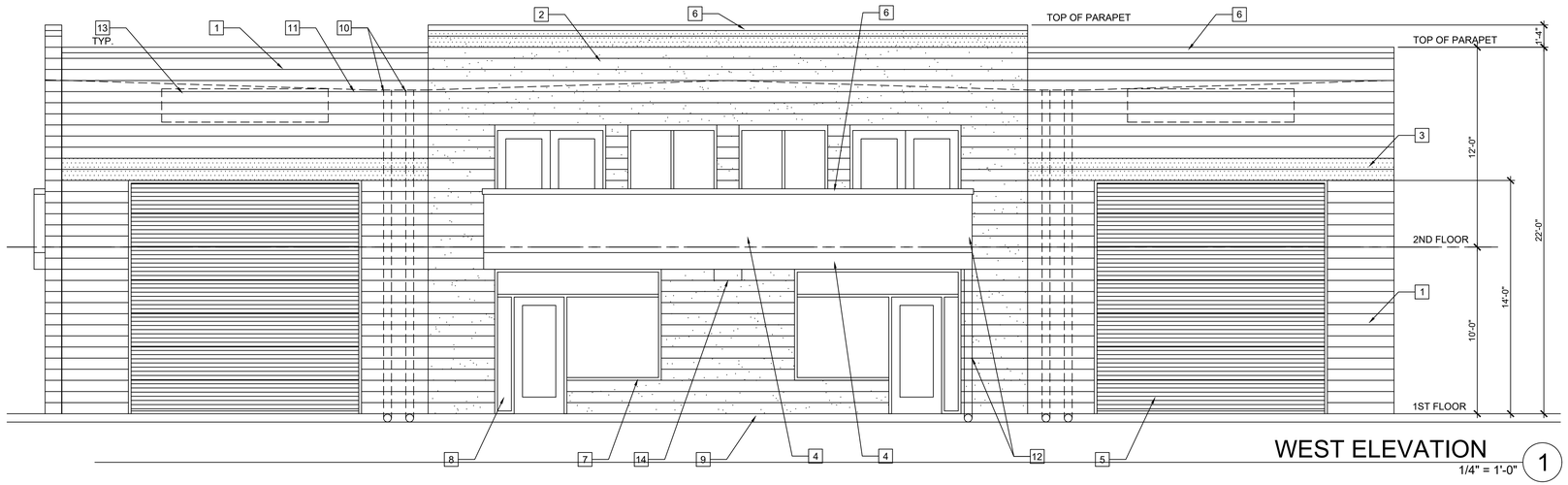
REVISIONS

SHEET TITLE

EXTERIOR ELEVATIIONS - BUILDING B COLOR

SHEET NO.

A3.2C



WEST ELEVATION
1/4" = 1'-0" 1

EXTERIOR ELEVATIONS KEYNOTES

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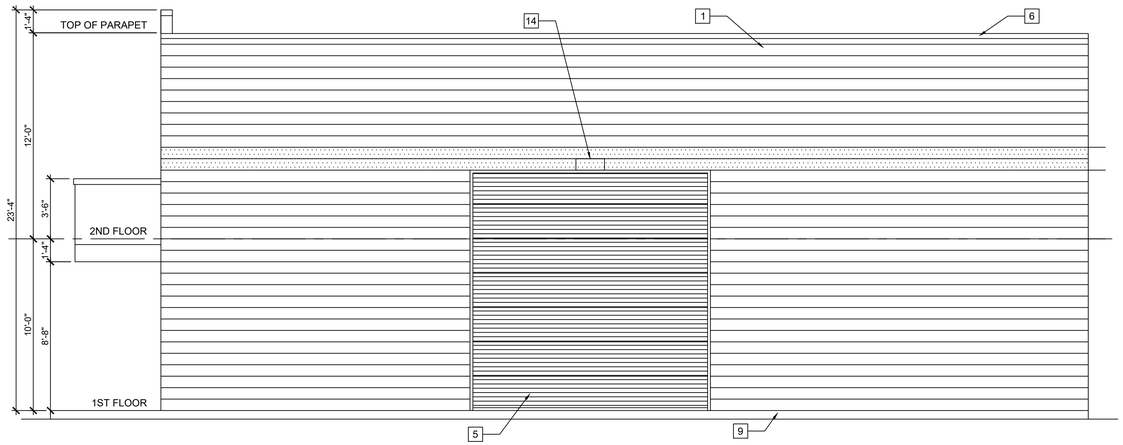
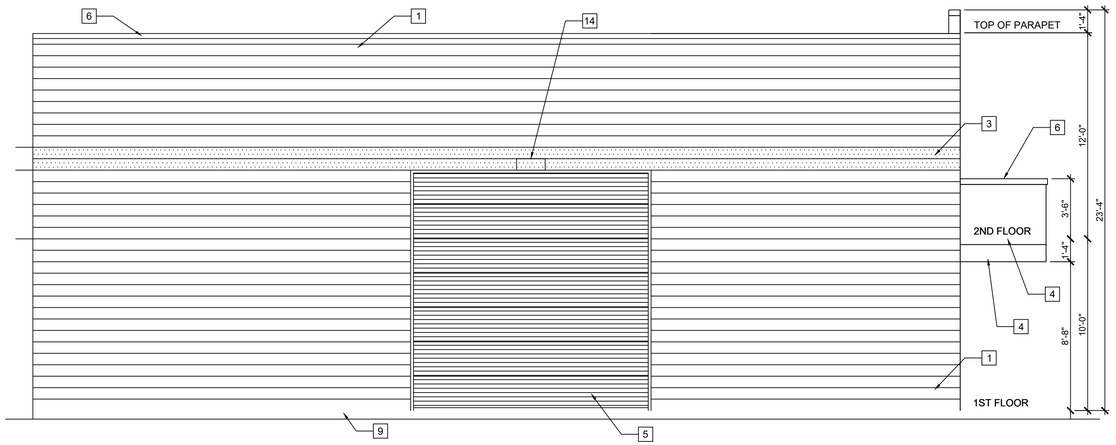
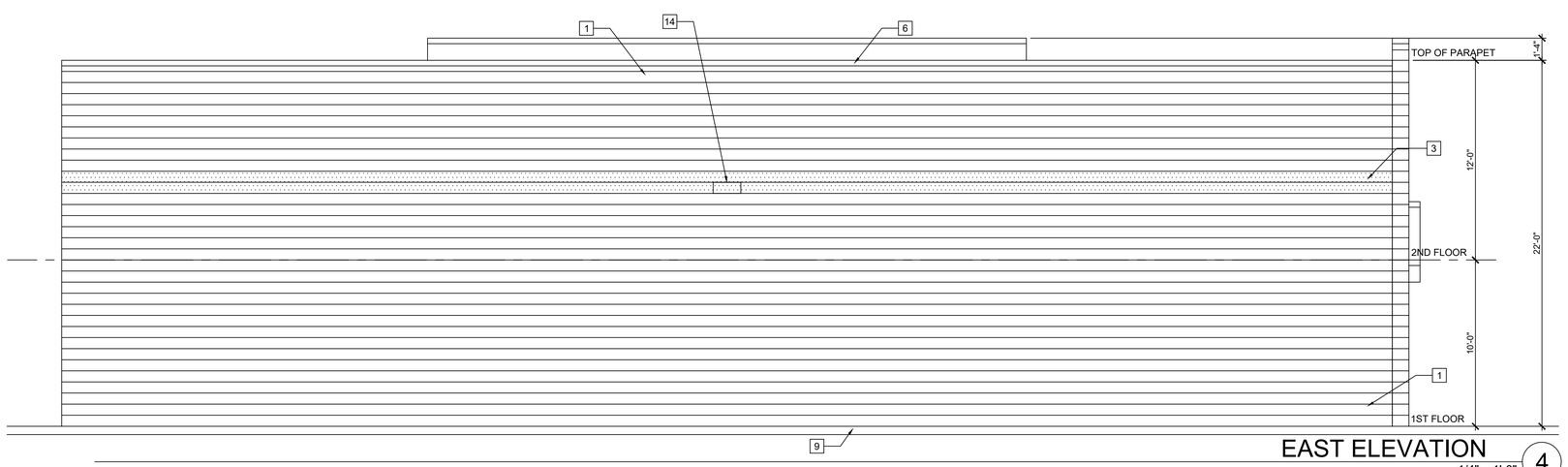
14. BUILDING MOUNTED AREA LED LIGHTING
15. 16" DP. CMU PILASTER
16. 16" DP. CMU LINTEL
17. 2" SQ. TUBE STEEL TRELLIS



SOUTH ELEVATION
1/4" = 1'-0" 2



NORTH ELEVATION
1/4" = 1'-0" 3



EAST ELEVATION
1/4" = 1'-0" 4

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SCALE	•	

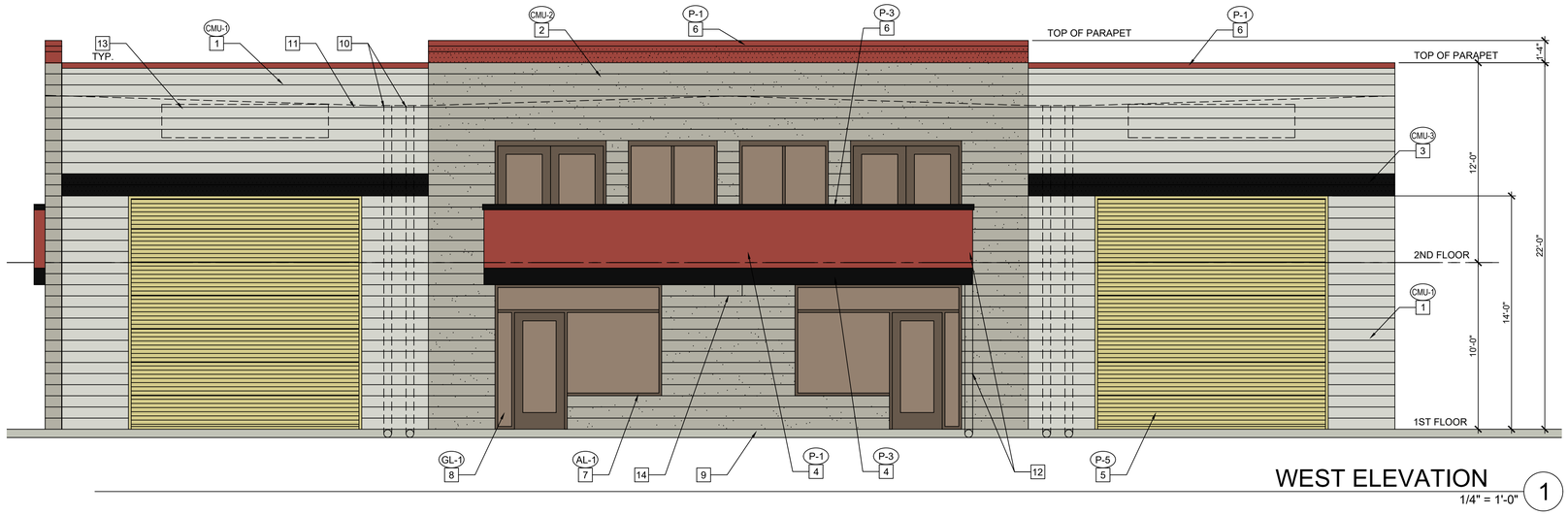
REVISIONS △

SHEET TITLE

EXTERIOR ELEVATIIONS - BUILDING C

SHEET NO.

A3.3



WEST ELEVATION

1/4" = 1'-0" (1)

EXTERIOR ELEVATIONS KEYNOTES

1. CMU - LIGHT GREY (STANDARD PRECISION)
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15. 16" DP. CMU PILASTER
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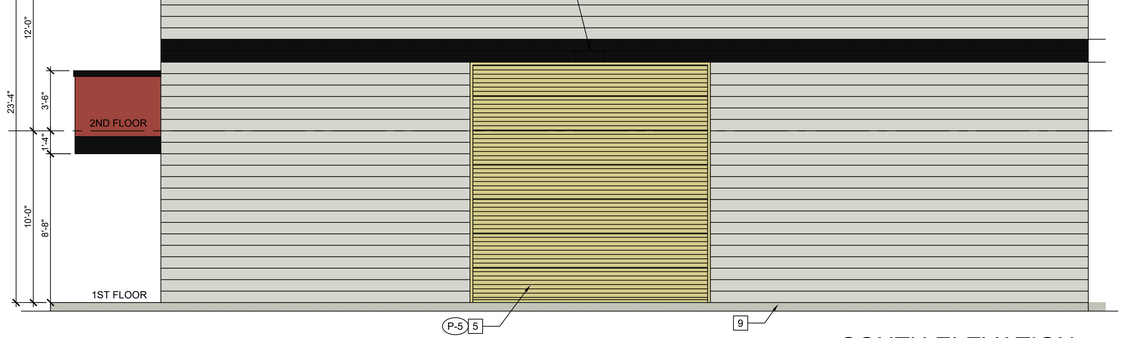
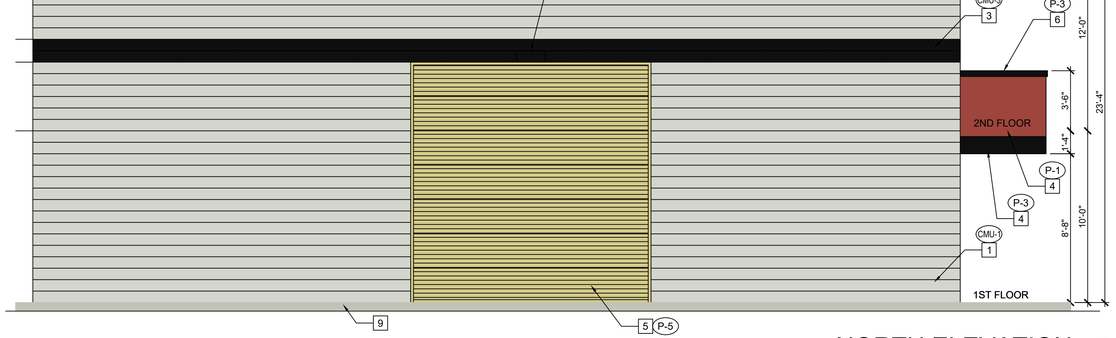
17. 2" SQ. TUBE STEEL TRELLIS



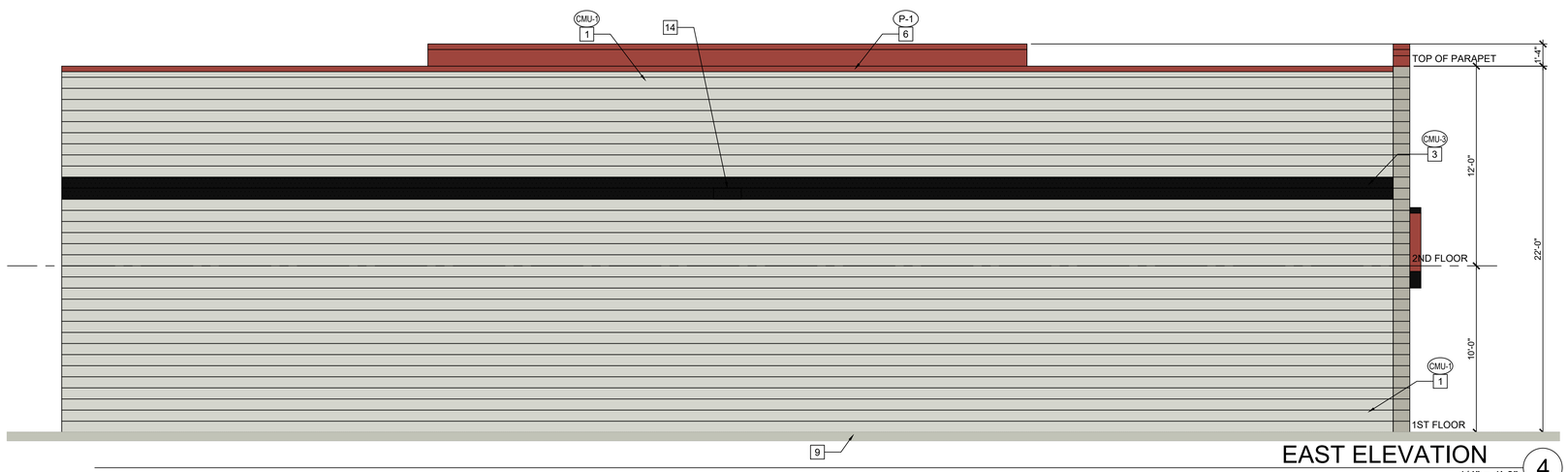
SOUTH ELEVATION

1/4" = 1'-0" (2)



NORTH ELEVATION

1/4" = 1'-0" (3)



EAST ELEVATION

1/4" = 1'-0" (4)

EXTERIOR ELEVATIONS MATERIALS /COLORS

- CMU-1 — CMU - LIGHT GREY (STANDARD PRECISION)
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REVISIONS

SHEET TITLE

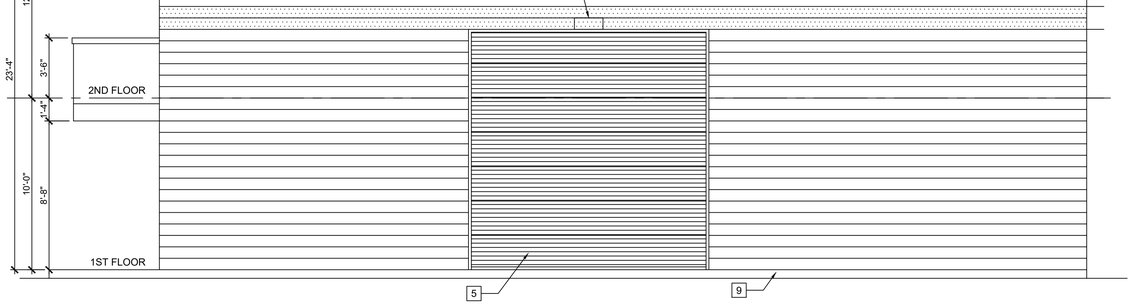
EXTERIOR ELEVATIIONS - BUILDING C COLOR

SHEET NO.

A3.3C

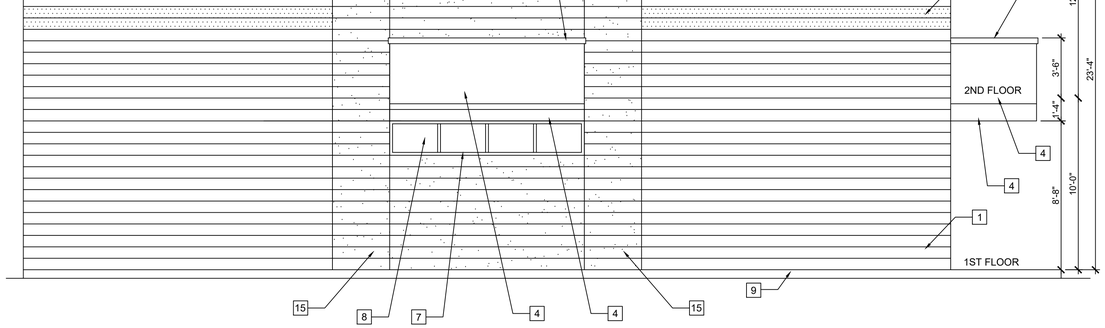
WEST ELEVATION

1/4" = 1'-0" (1)



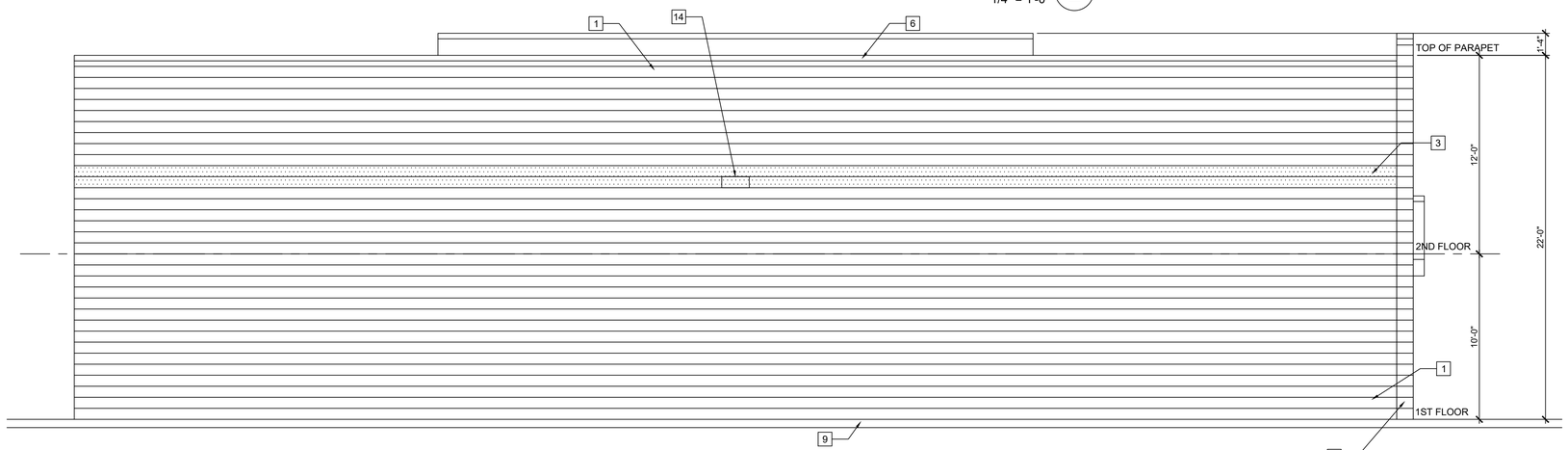
SOUTH ELEVATION

1/4" = 1'-0" (2)



NORTH ELEVATION (@ BUILDING FACING YUCAIPA BLVD. ONLY)

1/4" = 1'-0" (3)



EAST ELEVATION

1/4" = 1'-0" (4)

EXTERIOR ELEVATIONS KEYNOTES

1. CMU - LIGHT GREY (STANDARD PRECISION)
2. CMU - MEDIUM GREY (PRECISION)
3. CMU - BLACK (PRECISION)
4. EXTERIOR CEMENT PLASTER - PAINTED
5. STEEL OVERHEAD SECTIONAL DOOR - PAINTED
6. METAL WALL / PARAPET CAP - PAINTED
7. ALUM. STOREFRONT WINDOW & DOOR FRAME
8. INSUL. WINDOW & DOOR GLAZING
9. CONCRETE SIDEWALK / CURB
10. INTERIOR ROOF DRAINS & OVERFLOW THRU CURB FACE
11. ROOF OUTLINE (BEYOND)
12. WALK-ON BALCONY w/ NON-SLIP FINISH, SLOPE TO DRAIN -PROVIDE BUILDING FACE MOUNTED DRAIN w/ CURB FACE DRAIN
13. BUILDING BUSINESS SIGN - ILLUMINATED STOREFRONT CHANNEL LETTERS & LOGO MAX. SIZE PER CITY OF YUCAIPA ORDINANCE
14. BUILDING MOUNTED AREA LED LIGHTING
15. 16" DP. CMU PILASTER
16. 16" DP. CMU LINTEL
17. 2" SQ. TUBE STEEL TRELLIS

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4344 latham street, suite 100
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LICENSED ARCHITECT
MICHAEL L. BROESKE
No. C009174
Ren 11-30-2025
STATE OF CALIFORNIA

CONSULTANTS

YUCAIPA BUSINESS PARK

33193 YUCAIPA BLVD., YUCAIPA, CA., 92399

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DATE	•	09/15/23
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SCALE	•	

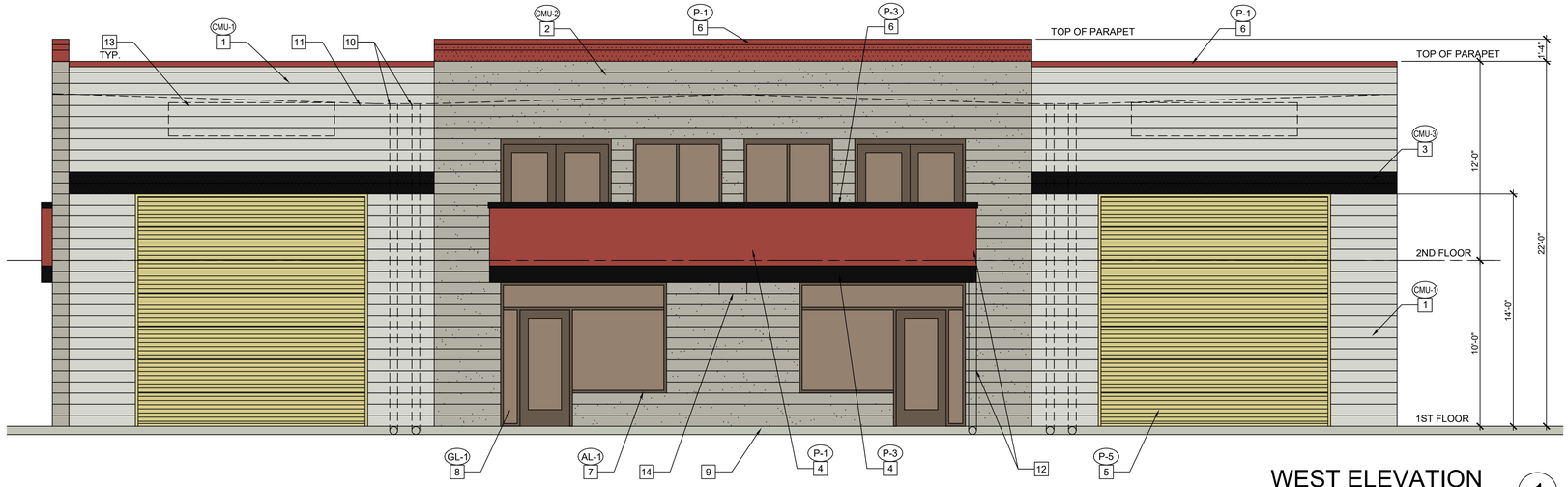
REVISIONS

SHEET TITLE

EXTERIOR ELEVATIIONS - BUILDING C - NORTH

SHEET NO.

A3.3N



WEST ELEVATION

1/4" = 1'-0" 1

EXTERIOR ELEVATIONS KEYNOTES

1. CMU - LIGHT GREY (STANDARD PRECISION)
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7. ALUM. STOREFRONT WINDOW & DOOR FRAME
8. INSUL. WINDOW & DOOR GLAZING
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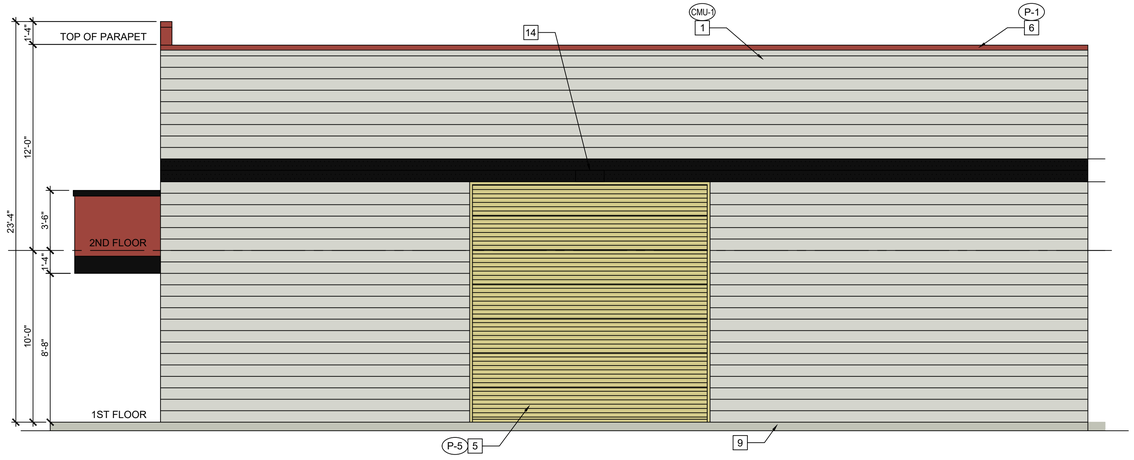
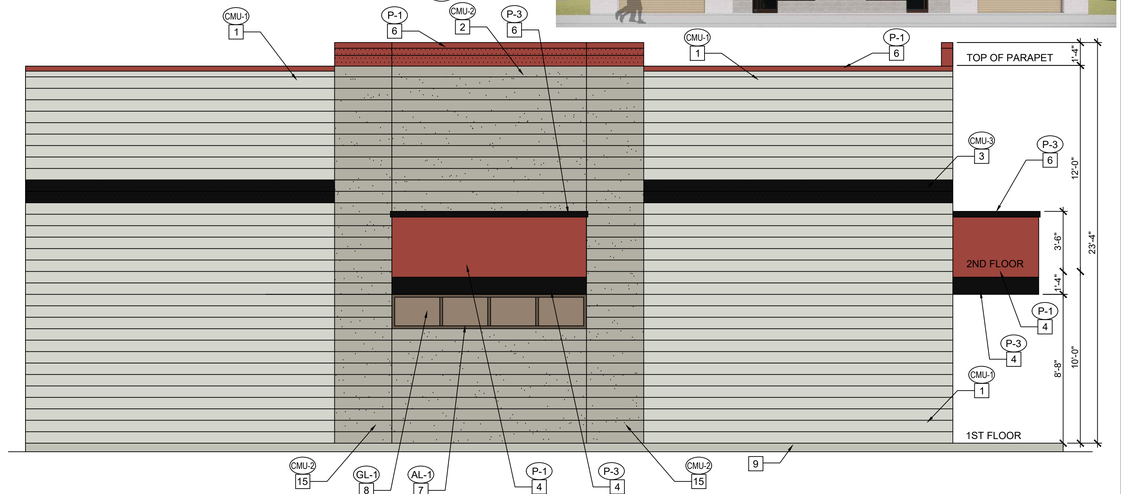
15. 16" DP. CMU PILASTER
16. 16" DP. CMU LINTEL
17. 2" SQ. TUBE STEEL TRELLIS



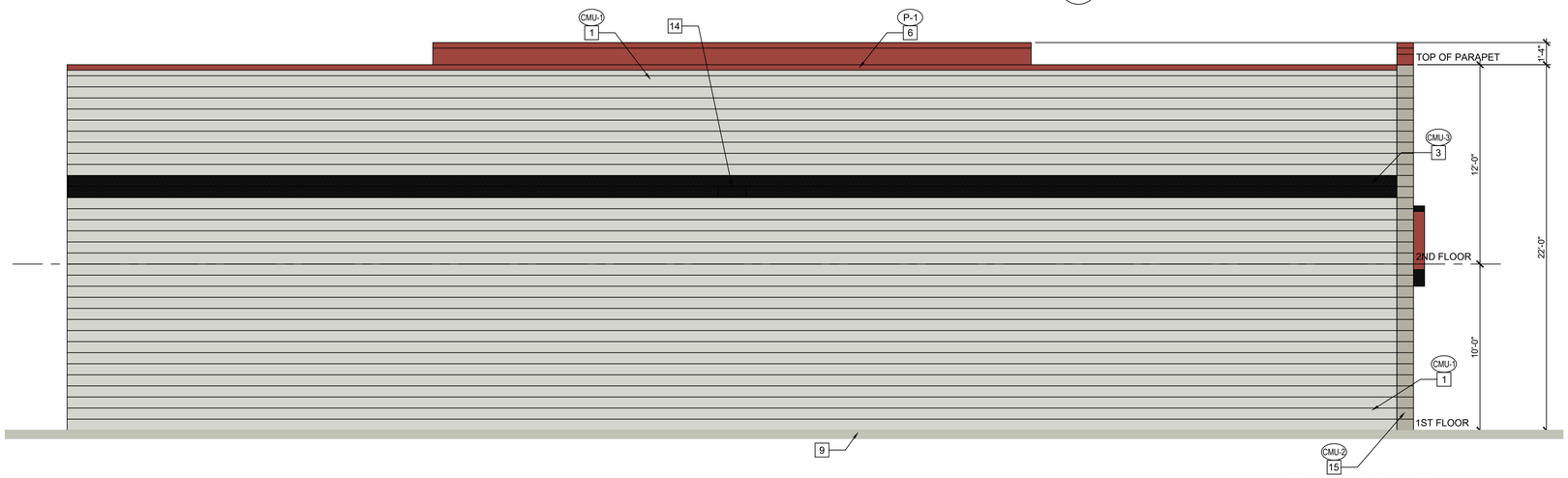
SOUTH ELEVATION

1/4" = 1'-0" 2



NORTH ELEVATION (@ BUILDING FACING YUCAIPA BLVD. ONLY)

1/4" = 1'-0" 3



EAST ELEVATION

1/4" = 1'-0" 4

EXTERIOR ELEVATIONS MATERIALS /COLORS

- CMU-1 — CMU - LIGHT GREY (STANDARD PRECISION)
- CMU-2 — CMU - MEDIUM GREY (STANDARD PRECISION)
- CMU-3 — CMU - BLACK (STANDARD PRECISION)
- P-1 — PAINT - RED DUNN EDWARDS POMEGRANATE (DEW380) (OR APPROVED EQUAL)
- P-2 — PAINT - WHITE DUNN EDWARDS WARM WHITE (DE5090) (OR APPROVED EQUAL)
- P-3 — PAINT - BLACK DUNN EDWARDS DARK ENGINE (DE6350) (OR APPROVED EQUAL)
- P-4 — PAINT - TAN DUNN EDWARDS CROSSROADS (DE5359) (OR APPROVED EQUAL)
- AL-1 — ALUM. STOREFRONT WINDOW & DOOR FRAME - DARK BRONZE
- GL-1 — INSUL. WINDOW & DOOR GLAZING - SOLAR BRONZE

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LICENSED ARCHITECT MARC L. BROESKE No. C009174 Ren 11-30-2025 STATE OF CALIFORNIA

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SCALE	
REVISIONS	

SHEET TITLE

EXTERIOR ELEVATIIONS - BUILDING C NORTH

SHEET NO.

A3.3NC

EAST ELEVATION

1/4" = 1'-0" 1

EXTERIOR ELEVATIONS KEYNOTES

1. CMU - LIGHT GREY (STANDARD PRECISION)
2. CMU - MEDIUM GREY (PRECISION)
3. CMU - BLACK (PRECISION)
4. EXTERIOR CEMENT PLASTER - PAINTED
5. STEEL OVERHEAD SECTIONAL DOOR - PAINTED
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7. ALUM. STOREFRONT WINDOW & DOOR FRAME
8. INSUL. WINDOW & DOOR GLAZING
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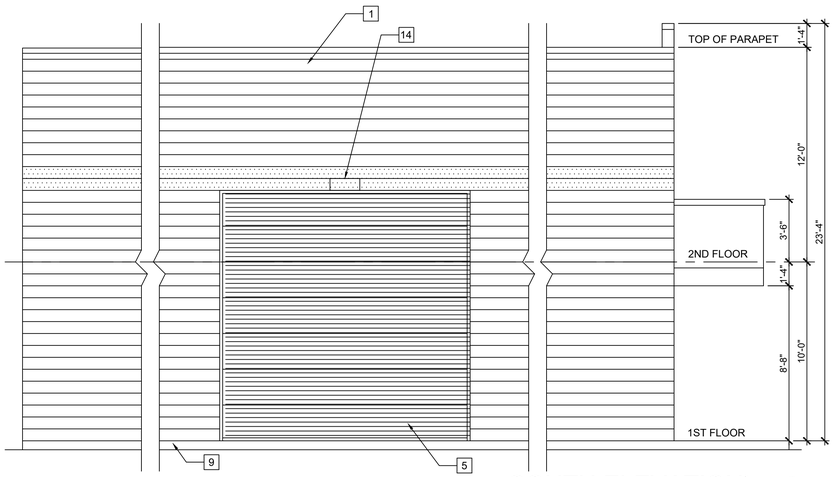
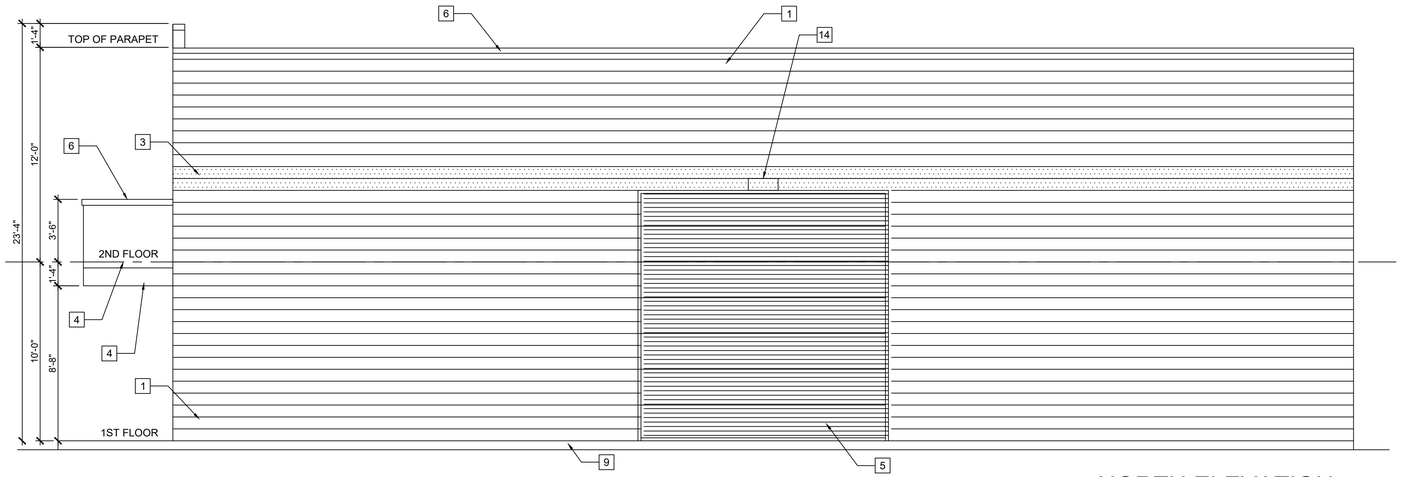
15. 16" DP. CMU PILASTER
16. 16" DP. CMU LINTEL
17. 2" SQ. TUBE STEEL TRELLIS



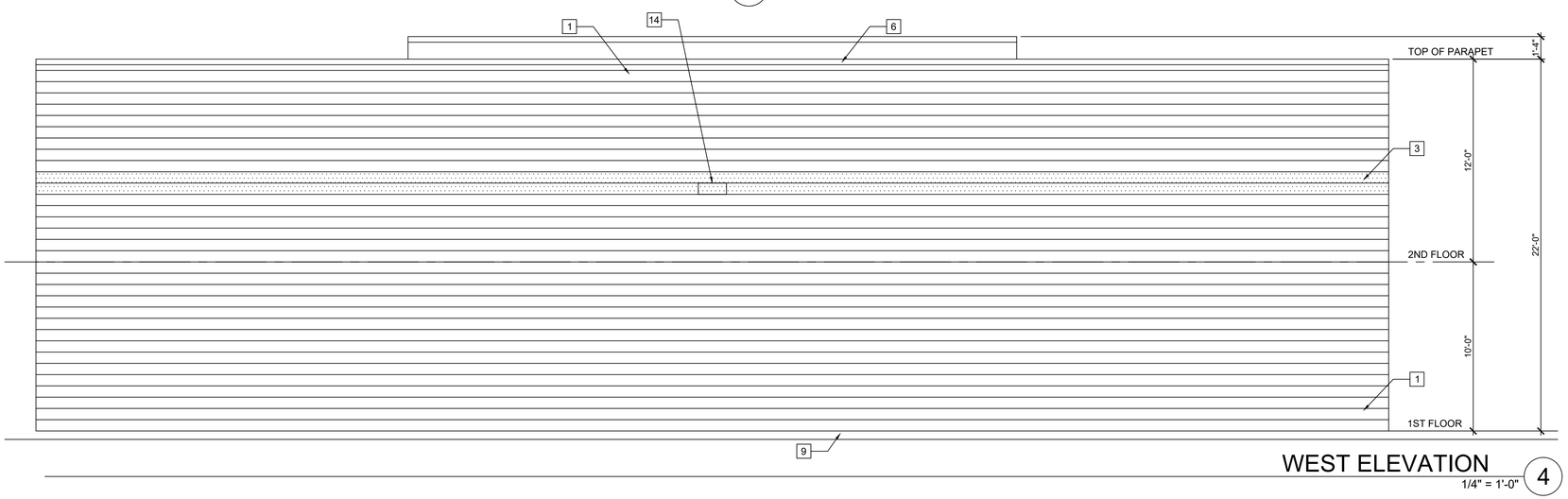
SOUTH ELEVATION)

1/4" = 1'-0" 2



NORTH ELEVATION

1/4" = 1'-0" 3



WEST ELEVATION

1/4" = 1'-0" 4

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& associates, inc.

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STATE OF CALIFORNIA

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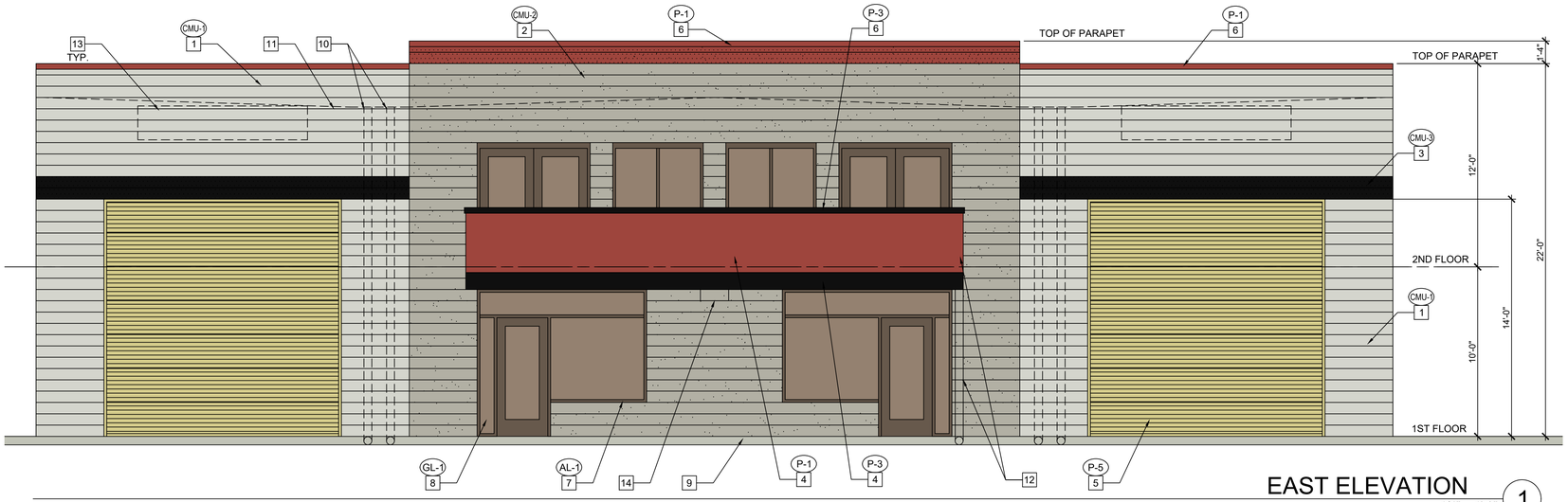
SHEET TITLE

EXTERIOR ELEVATIIONS - BUILDING D

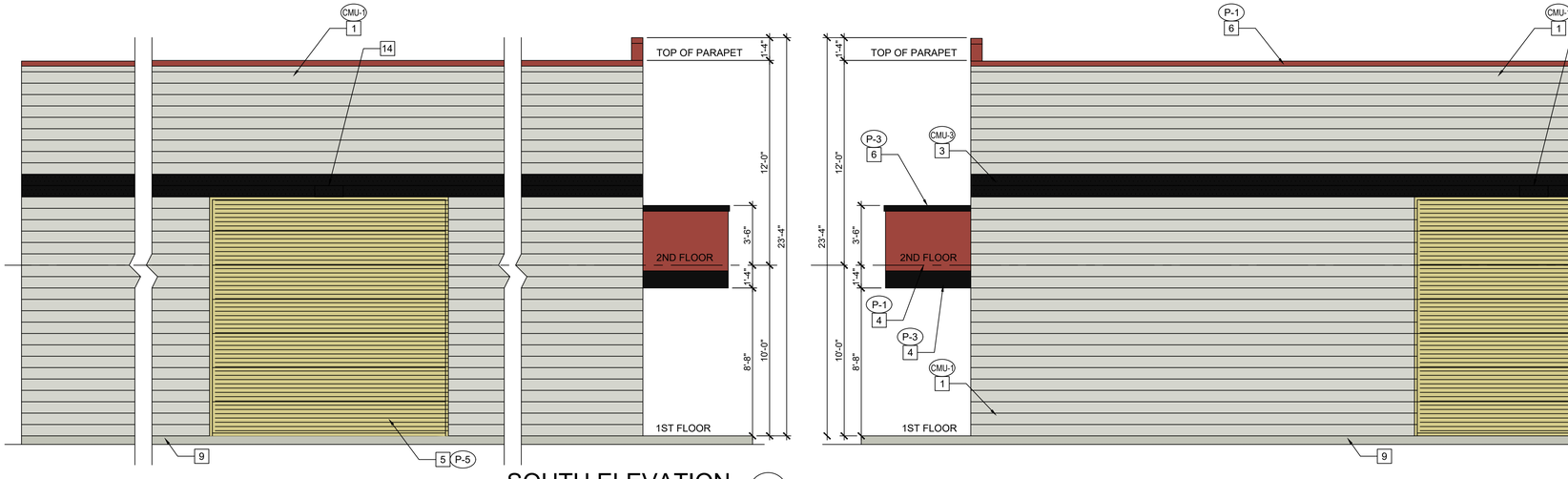
SHEET NO.

A3.4



EAST ELEVATION

1/4" = 1'-0" (1)

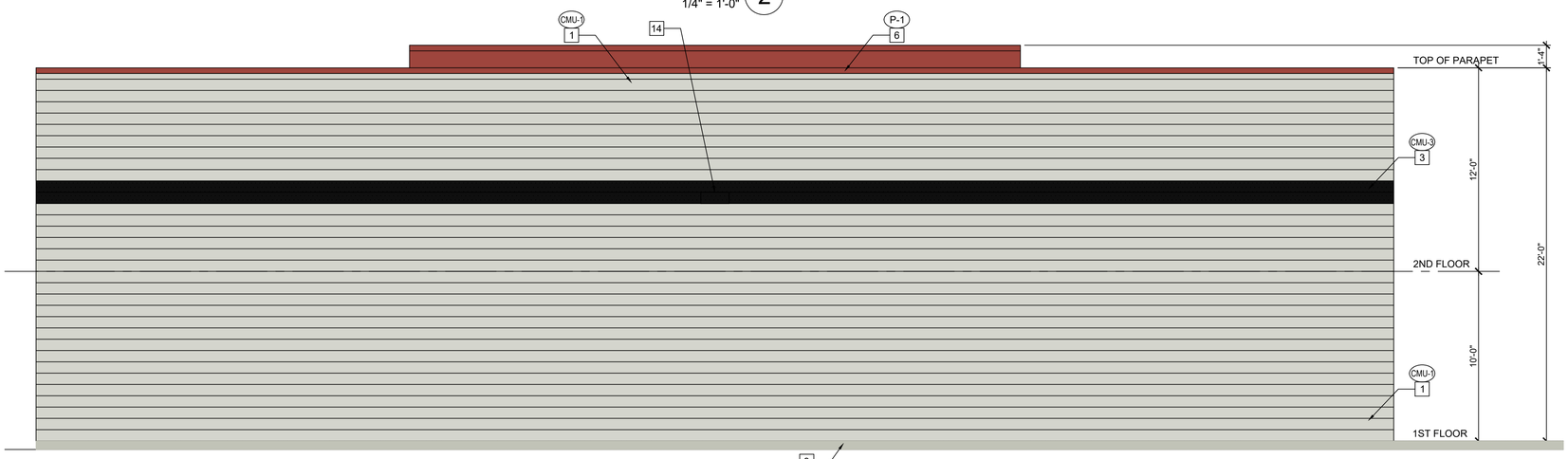


SOUTH ELEVATION

1/4" = 1'-0" (2)

NORTH ELEVATION

1/4" = 1'-0" (3)



WEST ELEVATION

1/4" = 1'-0" (4)

EXTERIOR ELEVATIONS KEYNOTES

1. CMU - LIGHT GREY (STANDARD PRECISION)
2. CMU - MEDIUM GREY (PRECISION)
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14. BUILDING MOUNTED AREA LED LIGHTING
15. 16" DP. CMU PILASTER
16. 16" DP. CMU LINTEL
17. 2" SQ. TUBE STEEL TRELLIS

EXTERIOR ELEVATIONS MATERIALS /COLORS

- CMU-1 — CMU - LIGHT GREY (STANDARD PRECISION)
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LICENSED ARCHITECT — JAMES L. BROESKE — No. C009174 — Ren 11-30-2025 — STATE OF CALIFORNIA

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SCALE	

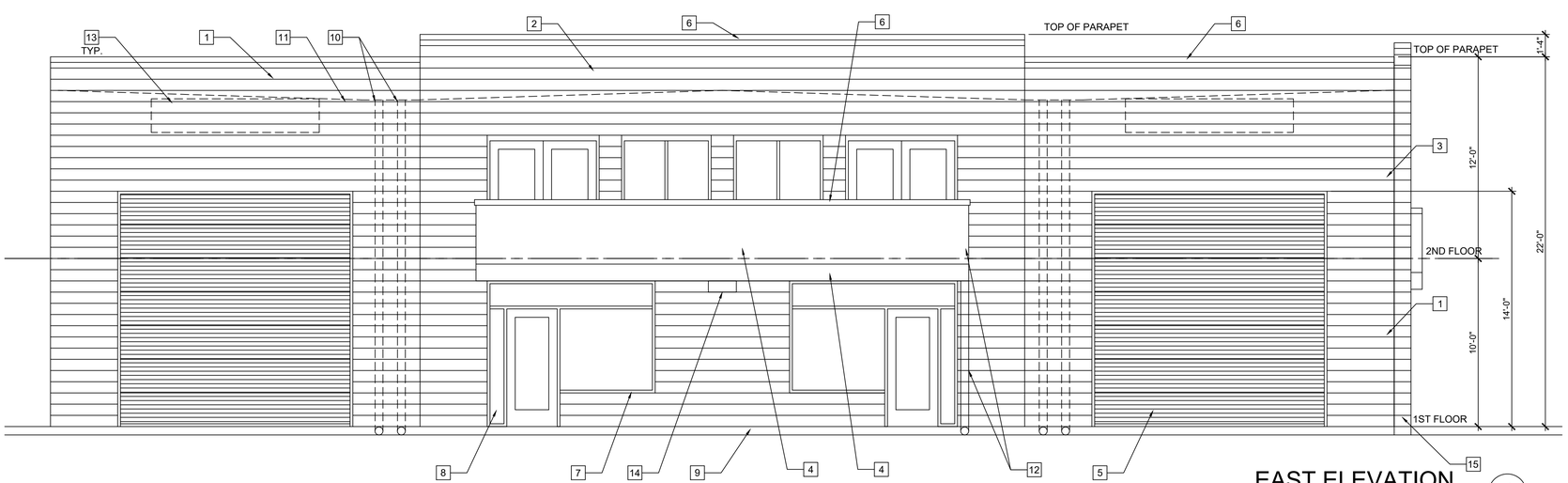
REVISIONS △

SHEET TITLE

EXTERIOR ELEVATIIONS - BUILDING D

SHEET NO.

A3.4C



EAST ELEVATION
1/4" = 1'-0" 1

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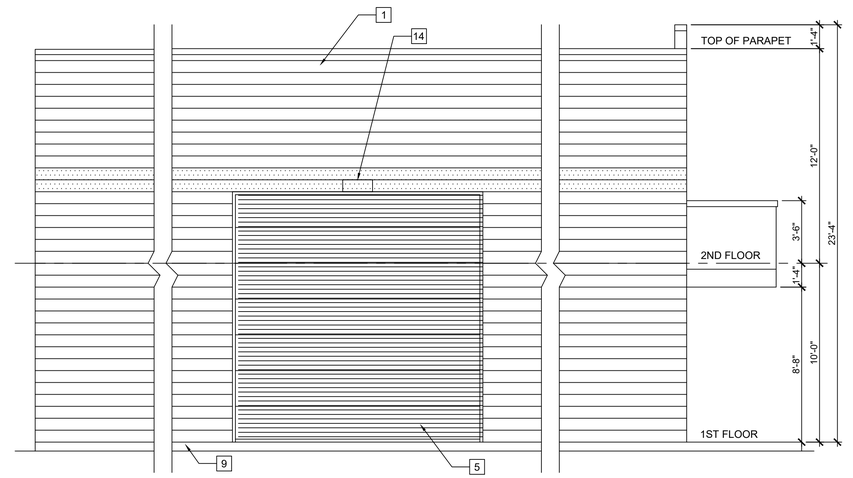
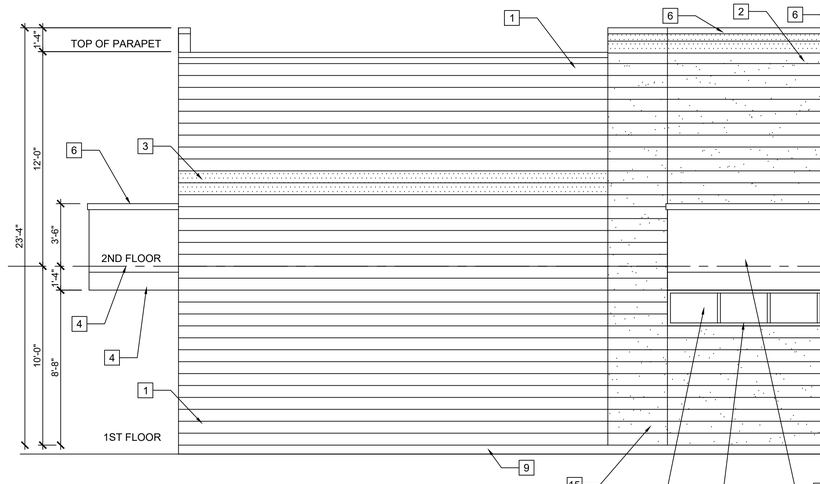
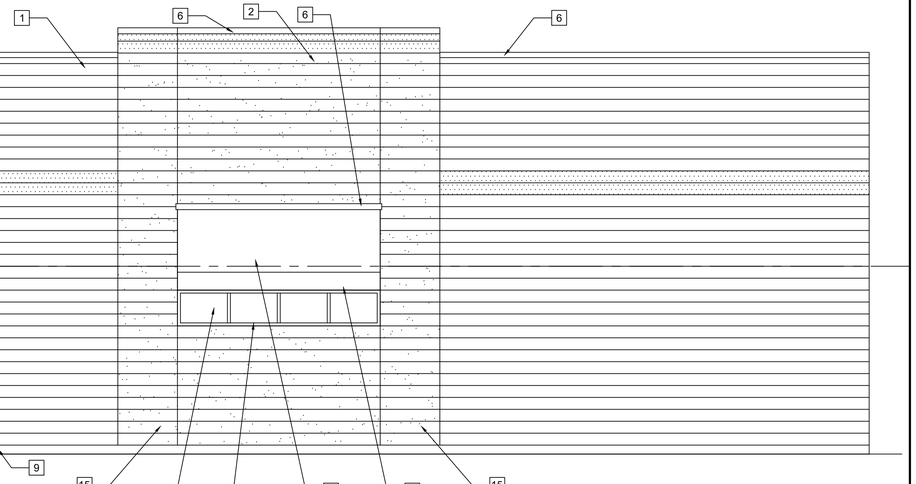
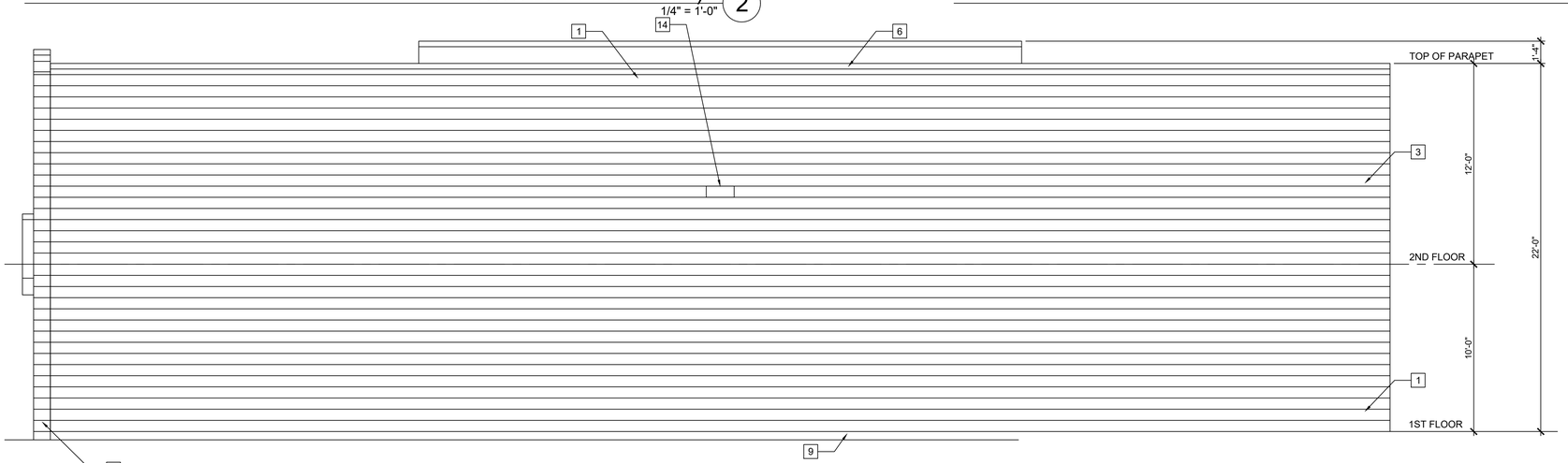


SOUTH ELEVATION)
1/4" = 1'-0" 2





NORTH ELEVATION
1/4" = 1'-0" 3



WEST ELEVATION
1/4" = 1'-0" 4

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SCALE	•	

REVISIONS △

SHEET TITLE

EXTERIOR ELEVATIIONS - BUILDING D - NORTH

SHEET NO.

A3.4N

EAST ELEVATION

1/4" = 1'-0" (1)

EXTERIOR ELEVATIONS KEYNOTES

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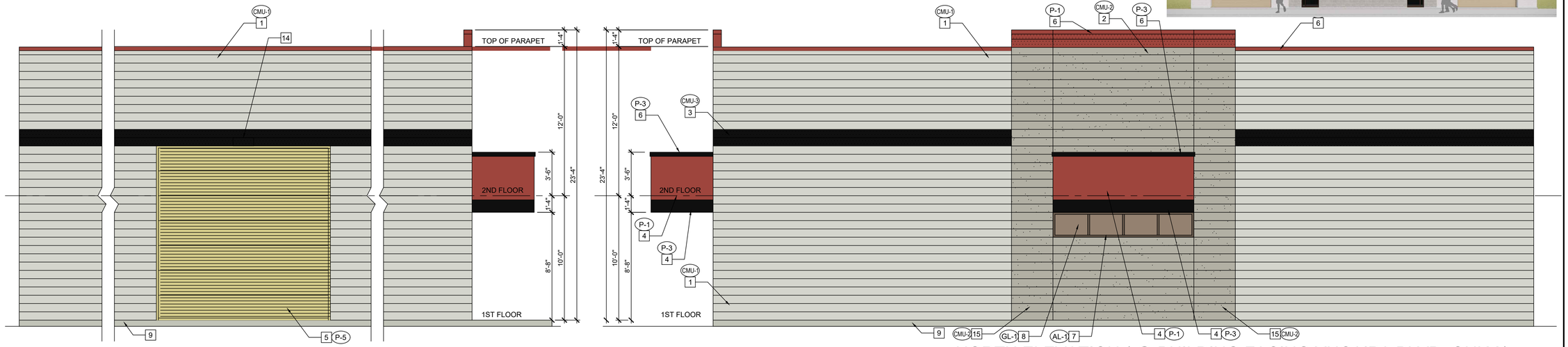
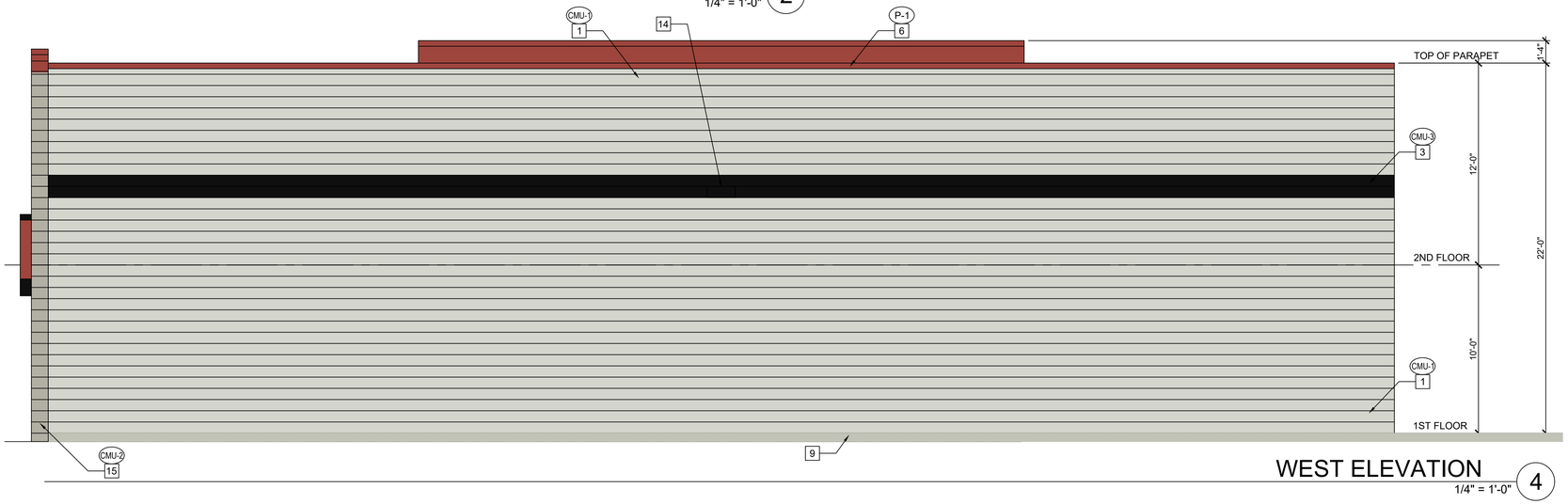


SOUTH ELEVATION

1/4" = 1'-0" (2)

NORTH ELEVATION (@ BUILDING FACING YUCAIPA BLVD. ONLY)

1/4" = 1'-0" (3)



WEST ELEVATION

1/4" = 1'-0" (4)

EXTERIOR ELEVATIONS MATERIALS /COLORS

- CMU-1 — CMU - LIGHT GREY (STANDARD PRECISION)
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YUCAIPA BUSINESS PARK

33193 YUCAIPA BLVD., YUCAIPA, CA., 92399

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APN	0318-013-11
JOB NO.	23-009
DATE	09/15/23
DRAWN BY	GMH
CHECKED BY	--
SCALE	

REVISIONS

SHEET TITLE

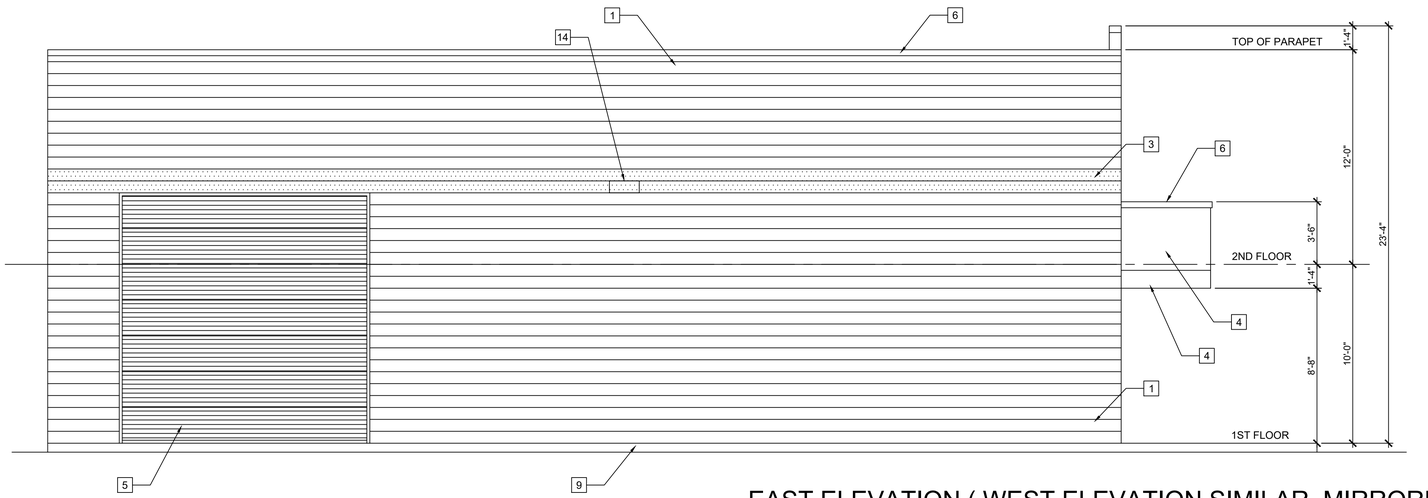
EXTERIOR ELEVATIONS - BUILDING D NORTH

SHEET NO.

A3.4NC

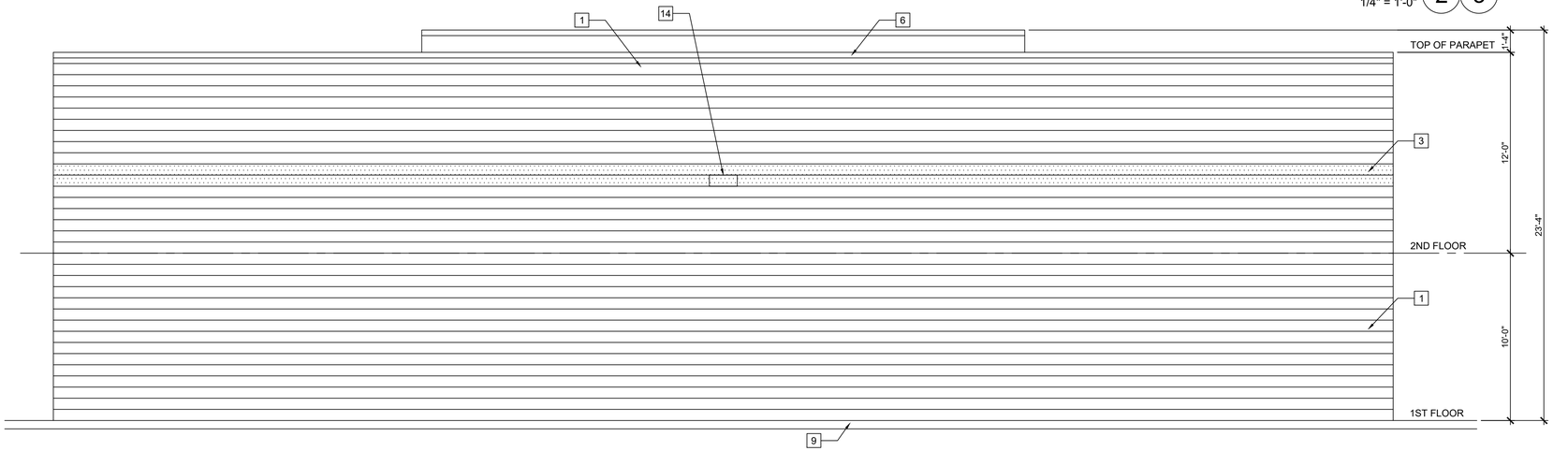
NORTH ELEVATION

1/4" = 1'-0" 1



EAST ELEVATION (WEST ELEVATION SIMILAR, MIRRORED)

1/4" = 1'-0" 2 3



SOUTH ELEVATION

1/4" = 1'-0" 4

EXTERIOR ELEVATIONS KEYNOTES

1. CMU - LIGHT GREY (STANDARD PRECISION)
2. CMU - MEDIUM GREY (PRECISION)
3. CMU - BLACK (PRECISION)
4. EXTERIOR CEMENT PLASTER - PAINTED
5. STEEL OVERHEAD SECTIONAL DOOR - PAINTED
6. METAL WALL / PARAPET CAP - PAINTED
7. ALUM. STOREFRONT WINDOW & DOOR FRAME
8. INSUL. WINDOW & DOOR GLAZING
9. CONCRETE SIDEWALK / CURB
10. INTERIOR ROOF DRAINS & OVERFLOW THRU CURB FACE
11. ROOF OUTLINE (BEYOND)
12. WALK-ON BALCONY w/ NON-SLIP FINISH, SLOPE TO DRAIN -PROVIDE: BUILDING FACE MOUNTED DRAIN w/ CURB FACE DRAIN
13. BUILDING BUSINESS SIGN - ILLUMINATED STOREFRONT CHANNEL LETTERS & LOGO MAX. SIZE PER CITY OF YUCAIPA ORDINANCE
14. BUILDING MOUNTED AREA LED LIGHTING

broeske architects & associates, inc.

4344 latham street, suite 100
riverside, ca 92501-1773
ph. (951) 300 1866
fx. (951) 300 1868

LICENSED ARCHITECT
MICHAEL L. BROESKE
No. C009174
Ren 11-30-2025
STATE OF CALIFORNIA

CONSULTANTS

YUCAIPA BUSINESS PARK

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SCALE	•	

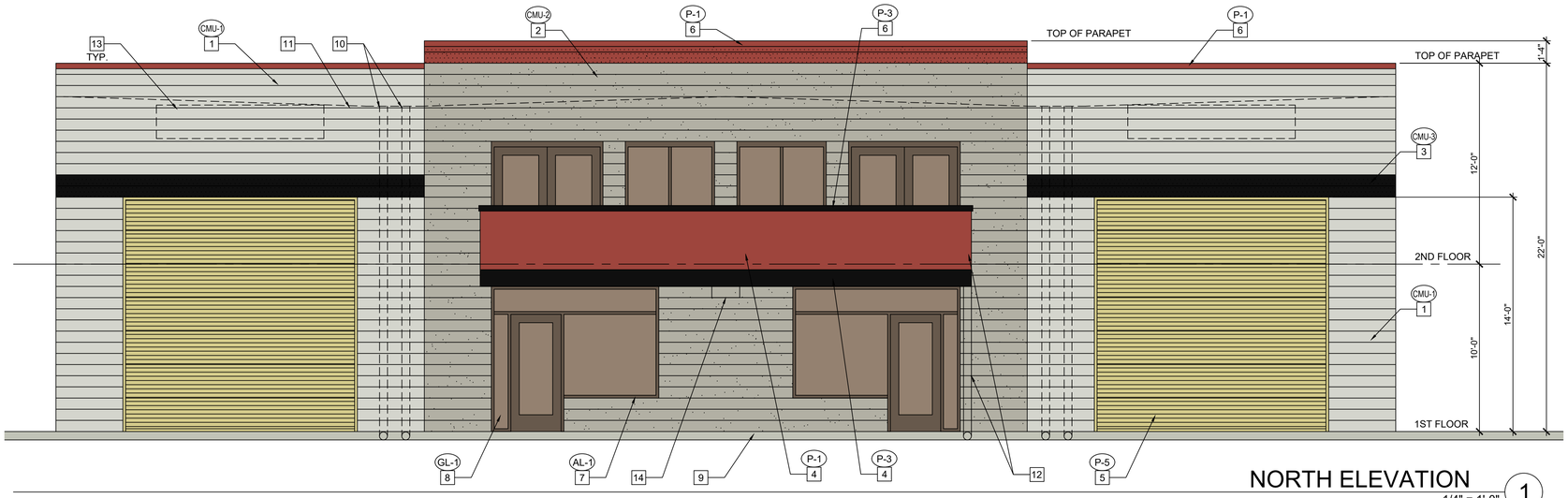
REVISIONS △

SHEET TITLE

EXTERIOR ELEVATIIONS - BUILDING E

SHEET NO.

A3.5

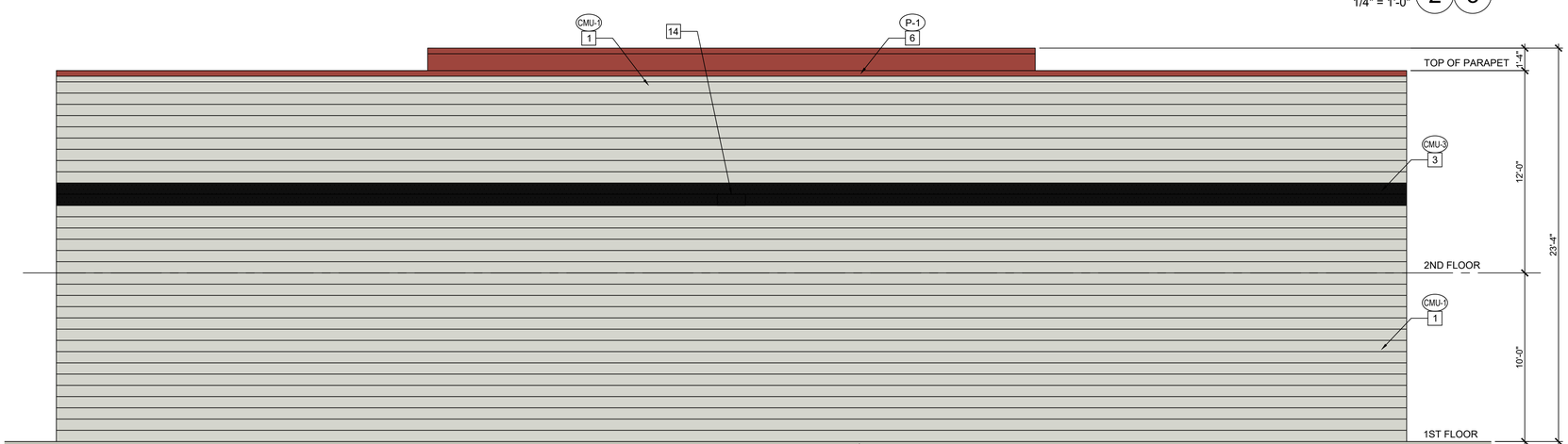


NORTH ELEVATION

1/4" = 1'-0" (1)

EAST ELEVATION (WEST ELEVATION SIMILAR, MIRRORED)

1/4" = 1'-0" (2) (3)



SOUTH ELEVATION

1/4" = 1'-0" (4)

EXTERIOR ELEVATIONS KEYNOTES

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2. CMU - MEDIUM GREY (PRECISION)
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4. EXTERIOR CEMENT PLASTER - PAINTED
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13. BUILDING BUSINESS SIGN - ILLUMINATED STOREFRONT CHANNEL LETTERS & LOGO MAX. SIZE PER CITY OF YUCAIPA ORDINANCE
14. BUILDING MOUNTED AREA LED LIGHTING

EXTERIOR ELEVATIONS MATERIALS /COLORS

- CMU-1 — CMU - LIGHT GREY (STANDARD PRECISION)
- CMU-2 — CMU - MEDIUM GREY (STANDARD PRECISION)
- CMU-3 — CMU - BLACK (STANDARD PRECISION)
- P-1 — PAINT - RED DUNN EDWARDS POMEGRANATE (DEW380) (OR APPROVED EQUAL)
- P-2 — PAINT - WHITE DUNN EDWARDS WARM WHITE (DE5090) (OR APPROVED EQUAL)
- P-3 — PAINT - BLACK DUNN EDWARDS DARK ENGINE (DE6350) (OR APPROVED EQUAL)
- P-4 — PAINT - TAN DUNN EDWARDS CROSSROADS (DE5359) (OR APPROVED EQUAL)
- AL-1 — ALUM. STOREFRONT WINDOW & DOOR FRAME - DARK BRONZE
- GL-1 — INSUL. WINDOW & DOOR GLAZING - SOLAR BRONZE

broeske architects & associates, inc.
4344 latham street, suite 100
riverside, ca 92501-1773
ph. (951) 300 1866
fx. (951) 300 1868

LICENSED ARCHITECT — MICHAEL L. BROESKE — No. C009174 — Ren 11-30-2025 — STATE OF CALIFORNIA

CONSULTANTS

YUCAIPA BUSINESS PARK

33193 YUCAIPA BLVD., YUCAIPA, CA., 92399

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SCALE	•	

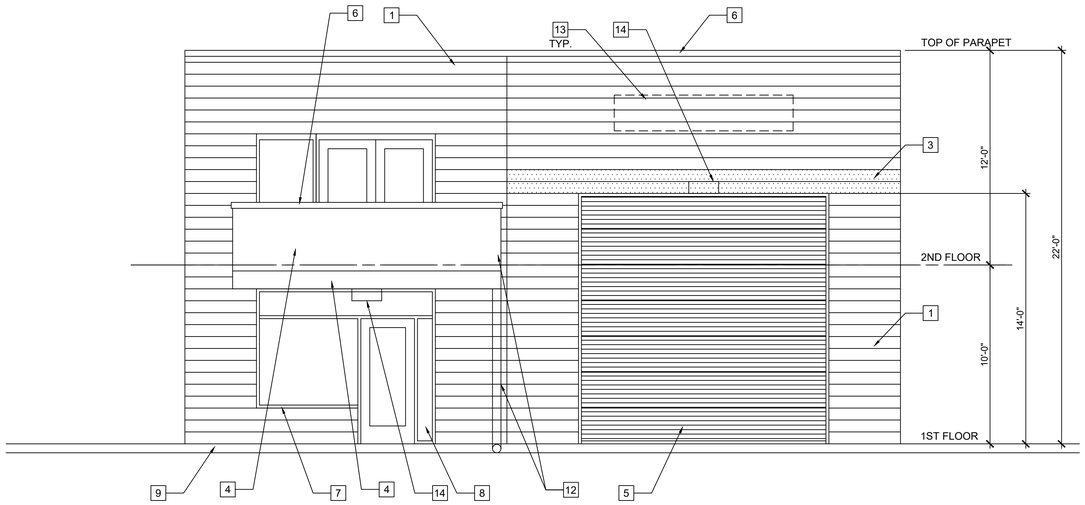
REVISIONS △

SHEET TITLE

EXTERIOR ELEVATIIONS - BUILDING E COLOR

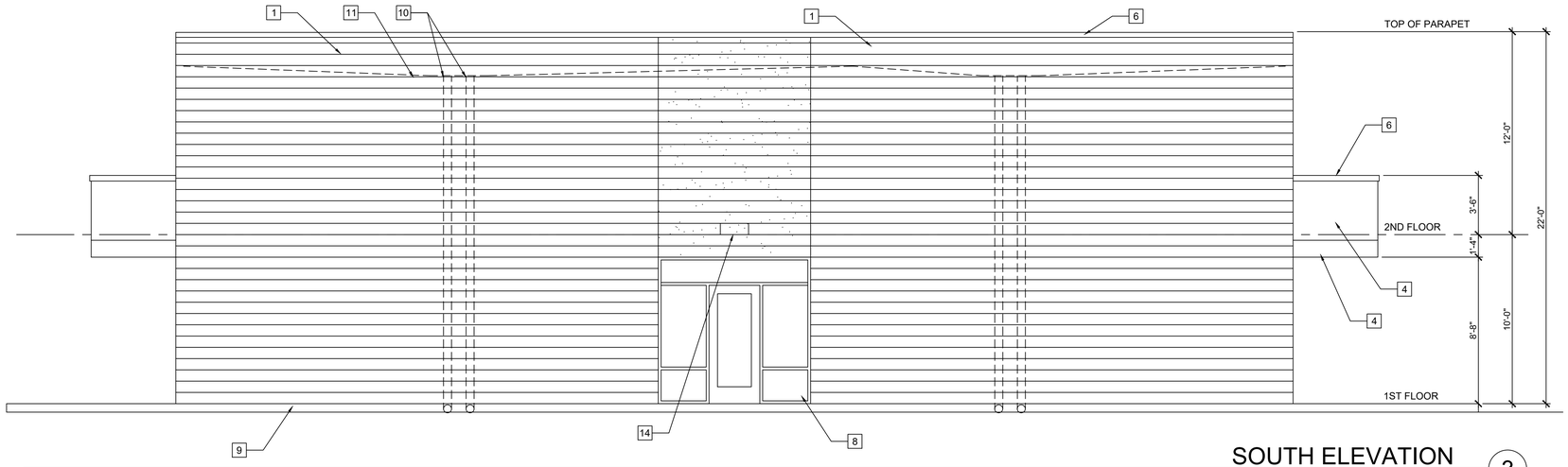
SHEET NO.

A3.5C



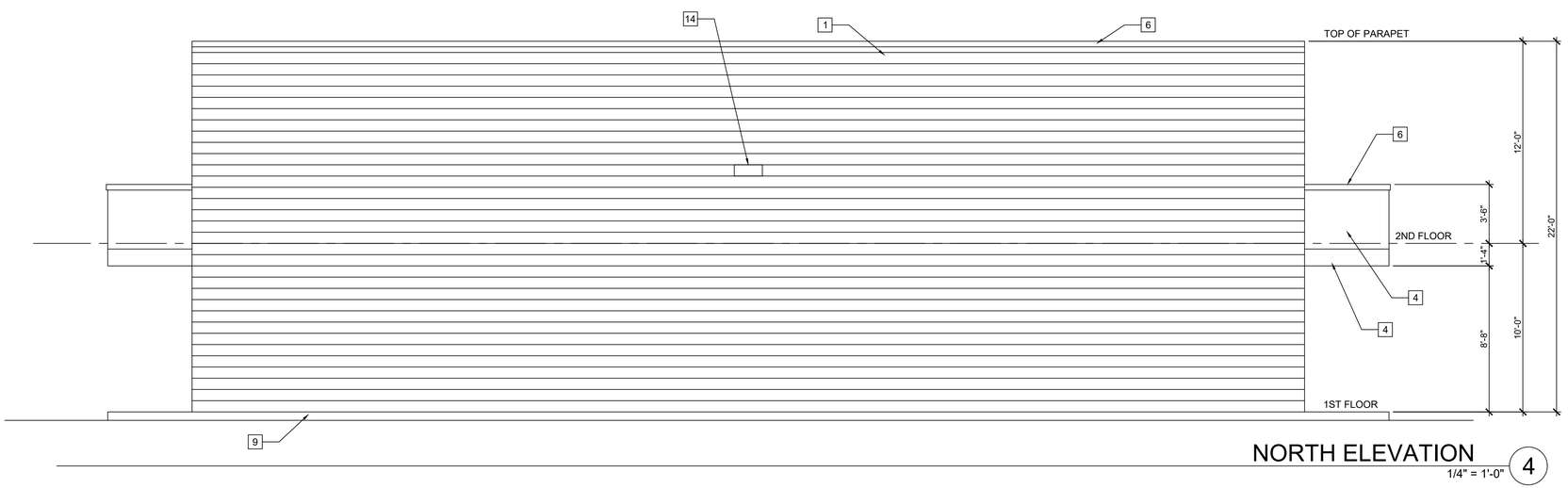
EAST ELEVATION (WEST ELEVATION SIMILAR, MIRRORED)

1/4" = 1'-0" (1 2)



SOUTH ELEVATION

1/4" = 1'-0" (3)



NORTH ELEVATION

1/4" = 1'-0" (4)

EXTERIOR ELEVATIONS KEYNOTES

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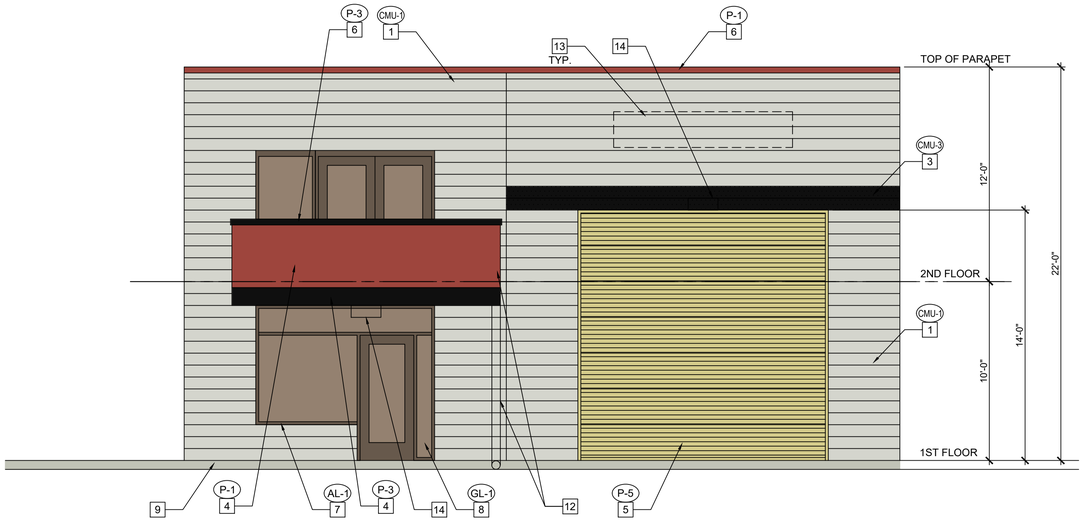
SHEET TITLE

EXTERIOR ELEVATIIONS - BUILDING F

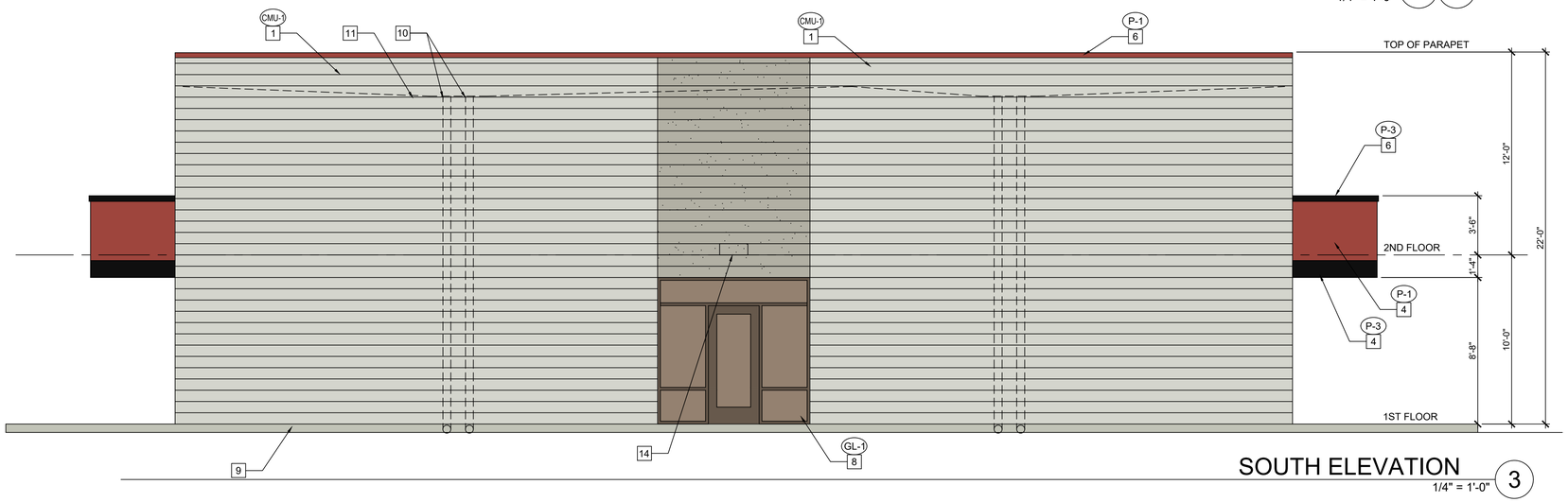
SHEET NO.

A3.6



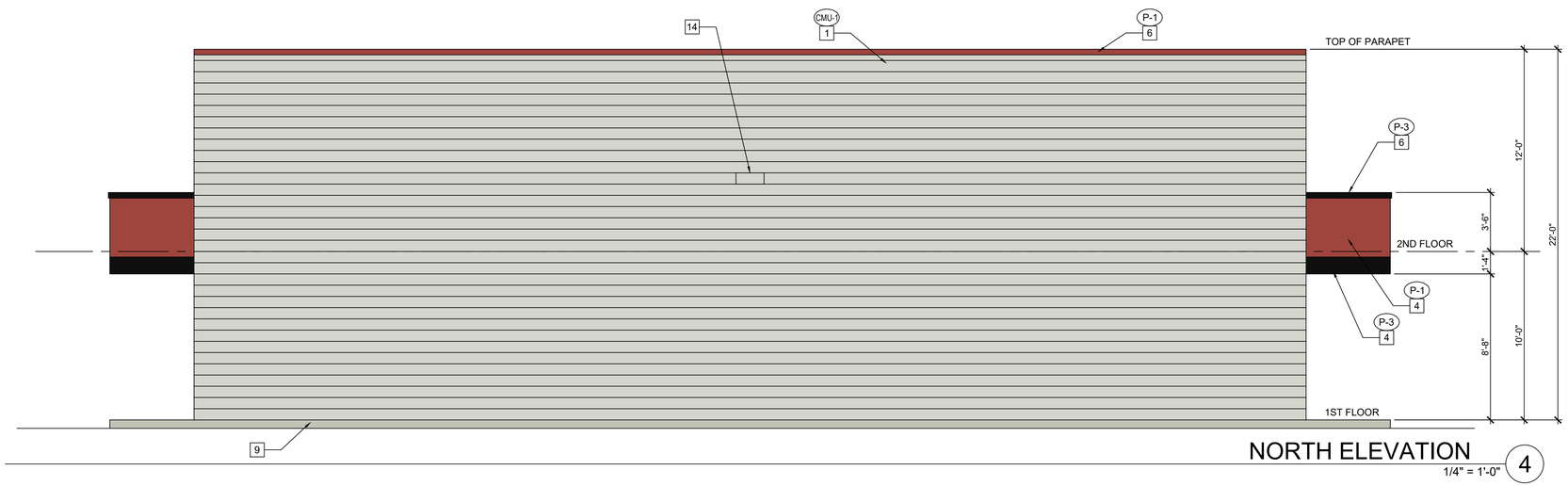
EAST ELEVATION (WEST ELEVATION SIMILAR, MIRRORED)

1/4" = 1'-0" 1 2



SOUTH ELEVATION

1/4" = 1'-0" 3



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- AL-1 — ALUM. STOREFRONT WINDOW & DOOR FRAME - DARK BRONZE
- GL-1 — INSUL. WINDOW & DOOR GLAZING - SOLAR BRONZE

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LICENSED ARCHITECT JAMES L. BROESKE No. C009174 Ren 11-30-2025 STATE OF CALIFORNIA

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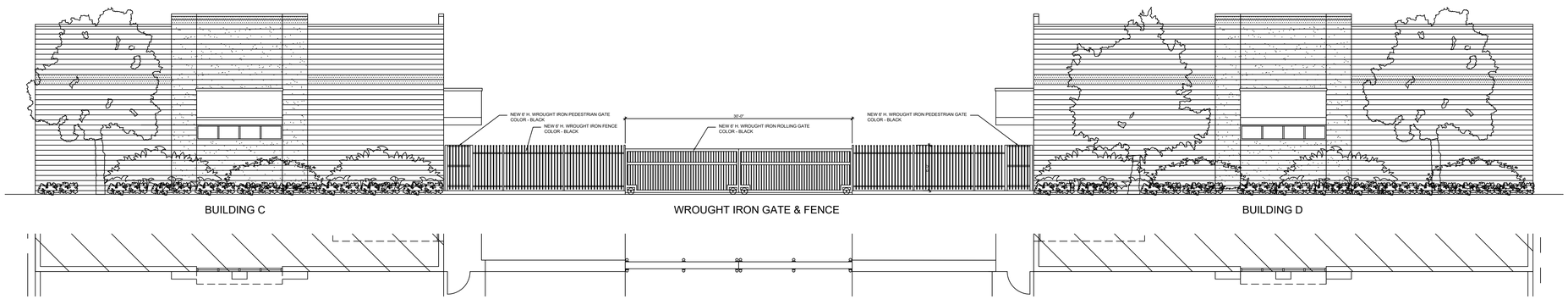
REVISIONS △

SHEET TITLE

EXTERIOR ELEVATIIONS - BUILDING F COLOR

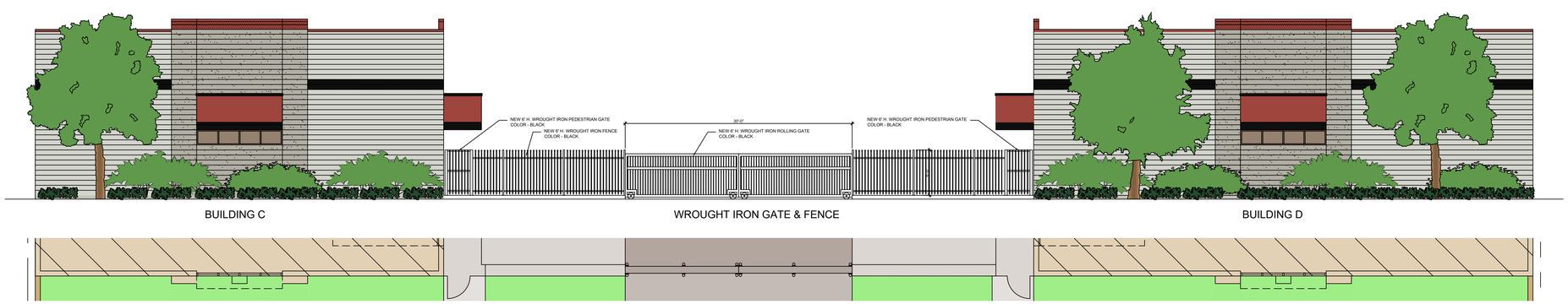
SHEET NO.

A3.6C



NORTH ELEVATIONS - YUCAIPA BLVD. 1

1/8" = 1'-0"



NORTH ELEVATIONS - YUCAIPA BLVD. - COLOR 2

broeske architects
& associates, inc.

4344 latham street, suite 100
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REVISIONS △

SHEET TITLE

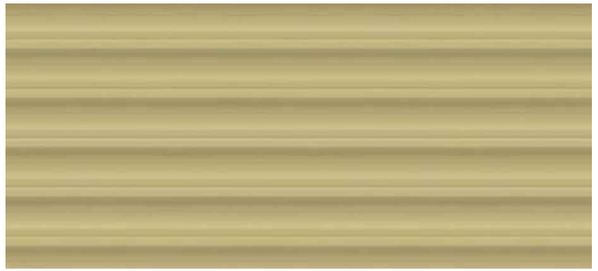
NORTH ELEVATIONS
- YUCAIPA BLVD.

SHEET NO.

A3.7

GL-1
INSUL. WINDOW & DOOR
GLAZING- SOLAR BRONZE

AL-1
ALUM. STOREFRONT
WINDOW & DOOR FRAME - DARK BRONZE



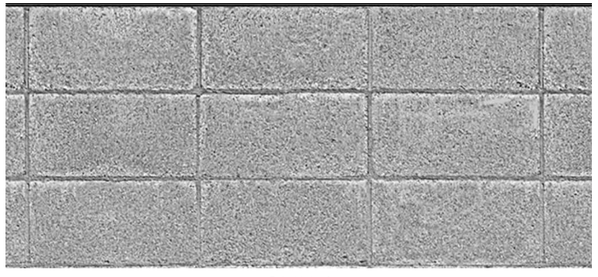
P-4
PAINT - TAN
DUNN EDWARDS - CROSSROADS (DE5359)

P-3
PAINT - BLACK
DUNN EDWARDS - DARK ENGINE (DE6350)

P-1
PAINT - RED
DUNN EDWARDS - POMEGRANATE (DEW380)

CMU-3
CMU - BLACK
(PRECISION)

CMU-2
CMU - SPLIT FACE - MEDIUM GREY
(PRECISION)



CMU-1
CMU - LIGHT GREY
(STANDARD PRECISION)

P-2
PAINT - WHITE
DUNN EDWARDS - WARM WHITE (DE5090)

COLOR BOARD

YUCAIPA BUSINESS PARK

broeske a
& associ
4344 latham street, suite # 10
riverside, ca 92501-1773
ph. (951) 300-1866
fx. (951) 300-1868

PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY	WATER USE
	ARB STR	ARBUTUS UNEDO / STRAWBERRY TREE	15 GAL.	POT	20	LOW-MEDIUM
	LAG IND	LAGERSTROEMIA INDICA / CRAPE MYRTLE	24"	BOX	8	MEDIUM
	OLE MUL	OLEA EUROPAEA / FRUITLESS OLIVE MULTI-TRUNK	15 GAL.	POT	8	VERY LOW - LOW
	PHO DAC	PHOENIX DACTYLIFERA / DATE PALM	24"	BOX	2	LOW- MEDIUM
	POD GRA	PODOCARPUS GRACILIOR / FERN PINE	15 GAL	POT	16	MEDIUM

SHRUBS	CODE	BOTANICAL/ COMMON NAME	SIZE	CONTAINER	QTY	WATER USE
	AGA BLG	AGAVE X 'BLUE GLOW / BLUE GLOW AGAVE	1 GAL.	POT	24	LOW
	CAL LJN	CAL.LISTEMON VIMINALIS 'LITTLE JOHN' / LITTLE JOHN WEEPING BOTTLEBRUSH	1 GAL.	POT	240	LOW- MEDIUM
	DIA VGT	DIANELLA CAERULEA "VARIEGATA" / VARIEGATED FLAX LILY	1 GAL.	POT	224	LOW- MEDIUM
	DIE GRA	DIETES GRANDIFLORA / FORTNIGHT LILY	5 GAL.	POT	134	LOW- MEDIUM
	WES FRU	WESTRINGIA FRUTICOSA / COAST ROSEMARY	5 GAL.	POT	202	LOW

GROUND COVERS	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	SPACING	QTY	WATER USE
	CAR TUM	CAREX TUMULICOLA / FOOTHILL SEDGE	FLATS	PLUG	12"o.c.	3,863	LOW
	TUR III	TURF MARATHON III/ MARATHON III	SOD			1.795 SF	

LANDSCAPE AREA CALCULATIONS

TOTAL SITE AREA: 248,479 S.F.

10% LANDSCAPE REQUIRED: 24,848 S.F.

TOTAL LANDSCAPE AREA PROVIDED: 24,851 S.F. (10%)

TREES REQUIRED: 41

TOTAL TREES PROVIDED: 55

TOTAL 15 GALLON PROVIDED: 44 (80%)

TOTAL 24" BOX PROVIDED: 11 (20%)

SHRUBS REQUIRED: 824

TOTAL SHRUBS PROVIDED: 824

TOTAL 1 GALLON PROVIDED: 488 (60%)

TOTAL 5 GALLON PROVIDED: 336 (40%)

30 15 0 30 60

SCALE: 1"=30'

CLIENT / OWNER

Teck Properties, LLC
Patricia Carbajal
33193 Yucaipa Blvd.
Yucaipa, CA 92399
(909) 794-5997

LANDSCAPE ARCHITECT

KDLA, inc
Korlander Design
Landscape Architecture
13743 Lighthouse Ct
Fontana, Ca 92336
909.744.4376

SEAL

LICENSED LANDSCAPE ARCHITECT
Michael S. Salazar 4788
Signature
9-30-24
Renewal Date
Date
STATE OF CALIFORNIA

PROJECT INFORMATION

PROJECT NAME:
YUCAIPA BUSINESS PARK DEVELOPMENT
33193 Yucaipa Blvd
Yucaipa, CA 92399

PROJECT DESCRIPTION:
Preliminary Landscape Plan

REVISIONS

DESIGNER

Project Manager	Project Number
MS	23108
Designer	Date
MS	01.10.24
Drawn By	Scale
MS	AS SHOWN

SHEET TITLE

LANDSCAPE CONCEPTUAL PLAN

SHEET NUMBER

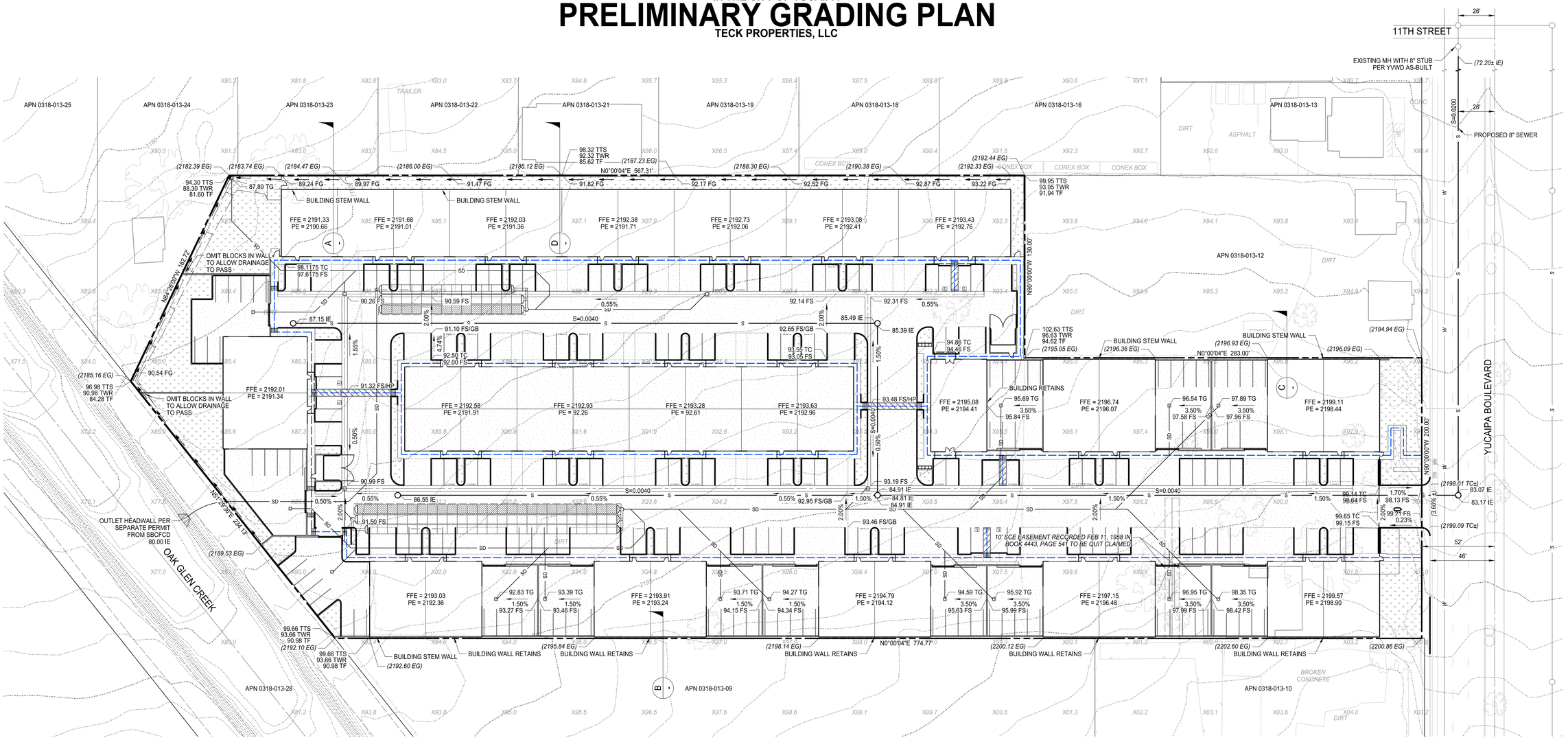
L-1

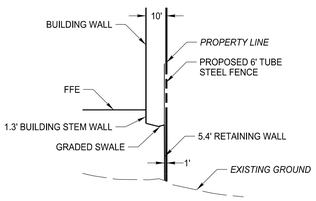
SHT. 1 OF 1

IN THE CITY OF YUCAIPA

PRELIMINARY GRADING PLAN

TECK PROPERTIES, LLC





A - SECTION
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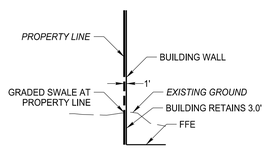

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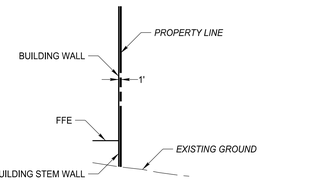

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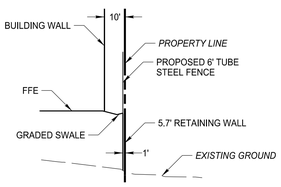


D - SECTION
NTS

SCALE: 1" = 30'

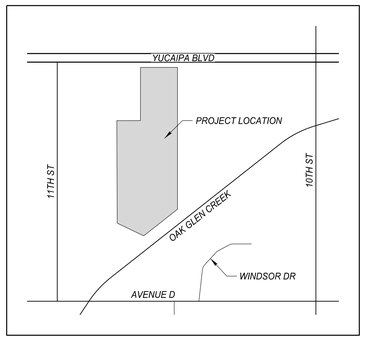
30 0 30 60

MTH2 engineering, inc
639 Lakewood Drive
Riverside, CA 92506
(951) 850-2190
www.mth2engineering.com
civil • water resources • storm water
urban design and planning

DATE	BY	REVISIONS
2/8/2024	MTH2	ADDRESSED PLANNING REVIEW COMMENTS

ABBREVIATIONS

ADA	AMERICANS WITH DISABILITIES ACT
CONC	CONCRETE
EG	EXISTING GROUND
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FS	FINISHED SURFACE
GB	GRADE BREAK
HP	HIGH POINT
IE	INVERT ELEVATION
MAX	MAXIMUM
MIN	MINIMUM
NO	NUMBER
PE	PAD ELEVATION
TC	TOP OF CURB
TG	TOP OF GRATE
TTS	TOP OF TUBE STEEL FENCE
TWR	TOP OF RETAINING WALL



VICINITY MAP
NOT TO SCALE

LEGEND

EXISTING BOUNDARY	
EXISTING CENTERLINE	
EXISTING PROPERTY LINE	
EXISTING RIGHT-OF-WAY LINE	
EXISTING BUILDING	
EXISTING CONTOUR MAJOR	100
EXISTING CONTOUR MINOR	99
EXISTING CURB	
EXISTING EDGE OF CONCRETE	
EXISTING FENCE - CHAINLINK	
EXISTING FENCE - TUBE STEEL	
EXISTING FENCE - WOOD	
EXISTING WALL - CONCRETE OR MASONRY	
EXISTING SPOT ELEVATION	24.50
EXISTING POWER POLE	
EXISTING SEWER MANHOLE	SMH
EXISTING SIGN	
EXISTING STREET LIGHT	
EXISTING TELEPHONE RISER	TR
EXISTING WATER METER	WM
EXISTING WATER VALVE	WV
EXISTING ELECTRIC - OVERHEAD	OHE
EXISTING SEWER	S
PROPOSED ADA PATH OF TRAVEL	
PROPOSED BUILDING	
PROPOSED CURB	
PROPOSED EDGE OF PCC PAVING	
PROPOSED GRADEBREAK LINE	
PROPOSED WALL - CONCRETE OR MASONRY	
PROPOSED ELEVATION	24.50
PROPOSED PCC PAVEMENT	
PROPOSED LANDSCAPE AREA	

BENCHMARK

FD CONC NAIL IN TOP OF SOUTH CURB RETURN AT THE SW CORNER OF THE INTERSECTION OF 10TH STREET AND AVENUE D PER SAN BERNARDINO COUNTY FIELD BOOK 4011 PAGE 1567.
DATED FEB 3, 1987
ELEV = 2209.90 FEET

FEMA FLOODZONE

ZONE X PER FIRM MAP NO 06071C8740H, EFFECTIVE DATE AUG 28, 2008

ESTIMATED GRADING QUANTITIES

ESTIMATED EXCAVATION:	10,250 C.Y.
ESTIMATED EMBANKMENT:	10,250 C.Y.

NOTE: THE GRADING QUANTITIES SHOWN HEREON ARE RAW QUANTITIES AND DO NOT ACCOUNT FOR SUBSIDENCE OR SHRINKAGE. THIS PROJECT IS DESIGNED TO BALANCE.

OWNER

TECK PROPERTIES, LLC
PO BOX 674
FOREST FALLS, CA 92339
CONTACT: GLENN SCHMIDT
(909) 240-9132

ENGINEER/CONTACT PERSON

THIS PLAN WAS PREPARED UNDER THE DIRECTION OF MARTEN L. ANDERSON, A REGISTERED CIVIL ENGINEER IN THE STATE OF CALIFORNIA.

17-APR-2024

MARTEN L. ANDERSON — DATE
RCE 51313
MTH2 ENGINEERING, INC.
639 LAKEWOOD DRIVE
RIVERSIDE, CA 92506
(951) 850-2190

REGISTERED PROFESSIONAL ENGINEER
MARTEN L. ANDERSON
No. 51313
Exp. 6-30-24
CIVIL
STATE OF CALIFORNIA

LEGAL DESCRIPTION

BLOCK 3, ACCORDING TO MAP OF SUBDIVISION NO. 2 OF PART OF DUNLAP RANCH, AS PER PLAT RECORDED IN BOOK 20 OF MAPS, PAGE 47, RECORDS OF SAID COUNTY EXCEPTING THAT PORTION DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT IN THE NORTHWEST CORNER OF SAID BLOCK, SAID POINT BEING IN THE CENTER LINE OF YUCAIPA BLVD., (FORMERLY REDLANDS BOULEVARD); THENCE SOUTH ALONG THE WEST BOUNDARY OF SAID BLOCK, 335 FEET; THENCE EAST AT RIGHT ANGLES 130 FEET; THENCE NORTH AT RIGHT ANGLES 335 FEET TO THE POINT IN THE CENTER LINE OF YUCAIPA BOULEVARD; THENCE WEST ALONG SAID CENTER LINE 130 FEET TO THE POINT OF BEGINNING. ALSO THAT PORTION OF BLOCK "G" LYING SOUTHERLY FROM AND ADJOINING SAID BLOCK 3, ACCORDING TO MAP OF SUBDIVISION, NO. 2, OF PART OF DUNLAP RANCH, AS PER PLAT RECORDED IN BOOK 20 OF MAPS, PAGE 47, RECORDS OF SAID COUNTY. EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT BY DEED RECORDED SEPTEMBER 8, 1964, IN BOOK 6227, PAGE 250, OFFICIAL RECORDS.
NOTE: THE MAP OF THE ABOVE DESCRIBED SUBDIVISION SHOWS THAT AREAS AND DISTANCES OF SAID LOTS ARE COMPUTED TO STREET CENTERS.

ASSESSOR'S PARCEL NUMBER

0318-013-11

BASIS OF BEARINGS

THE BEARING OF EAST FOR THE CENTERLINE OF YUCAIPA BOULEVARD AS SHOWN ON PARCEL MAP NO.3621, FILED IN BOOK 2 PAGE 12 OF PARCEL MAPS ON FILE IN THE OFFICE OF THE COUNTY RECORDED OF SAN BERNARDINO COUNTY WAS USED AS THE BASIS OF BEARINGS SHOWN.

Item No. 3

CITY OF Yucaipa

AGENDA REPORT

DATE: May 7th, 2025

TO: Honorable Chair and Planning Commissioners

FROM: Christian Farmer, Associate Planner CF

SUBJECT: **SG Opal** (PLN-PHE-25-0005): A Land Use Compliance Review and Major Variance of a fifty (50) foot pylon sign that provides signage for the future tenants on site, including digital fuel pricing, with the proposed Variance to allow for an increase in structure height, and a separate ten (10) foot monument sign limited to a five-tier fuel pricing structure.

RECOMMENDATION:

That the Planning Commission conduct a public hearing and if appropriate:

1. Approve Major Variance and Land Use Compliance Review No. PLN-PHE-25-0005, subject to the Conditions of Approval as contained in this Agenda Report;
2. Adopt the Major Variance Findings as contained in the Agenda Report;
3. Find that the Project is exempt from CEQA pursuant to Section 15305 & 15311 of the State CEQA Guidelines; and
4. Direct staff to file a Notice of Exemption.

BACKGROUND/DISCUSSION:

Area Land Use Designations; Improvement Levels; and existing Land Uses:

Site:	CS (Service Commercial)	IL-1	SG Opal Development
North:	FW (Floodway)	IL-1	Wilson Creek Channel
South:	CR (Regional Commercial)	IL-1	Vacant
East:	NC (Neighborhood Commercial)	IL-1	Vacant
West:	CS	IL-1	Non-conforming SFR

BACKGROUND:

On January 23, 2023, the City Council approved Case No. 21-026/CUP/DA, a Conditional Use Permit and Development Agreement for the phased development of a commercial center that includes a fuel station with a 9,000 square foot building that includes a convenience store (c-store), quick service restaurant, and office space, fuel canopy with 16 fuel dispensers and an express carwash, and a 66-room hotel with a rooftop bar and restaurant at 32788 Oak Glen Road. Following the initial approval, the Project then received approval for the Architectural Review of the site and is now under construction with the first phase estimated to be complete by July.

Aerial of Site

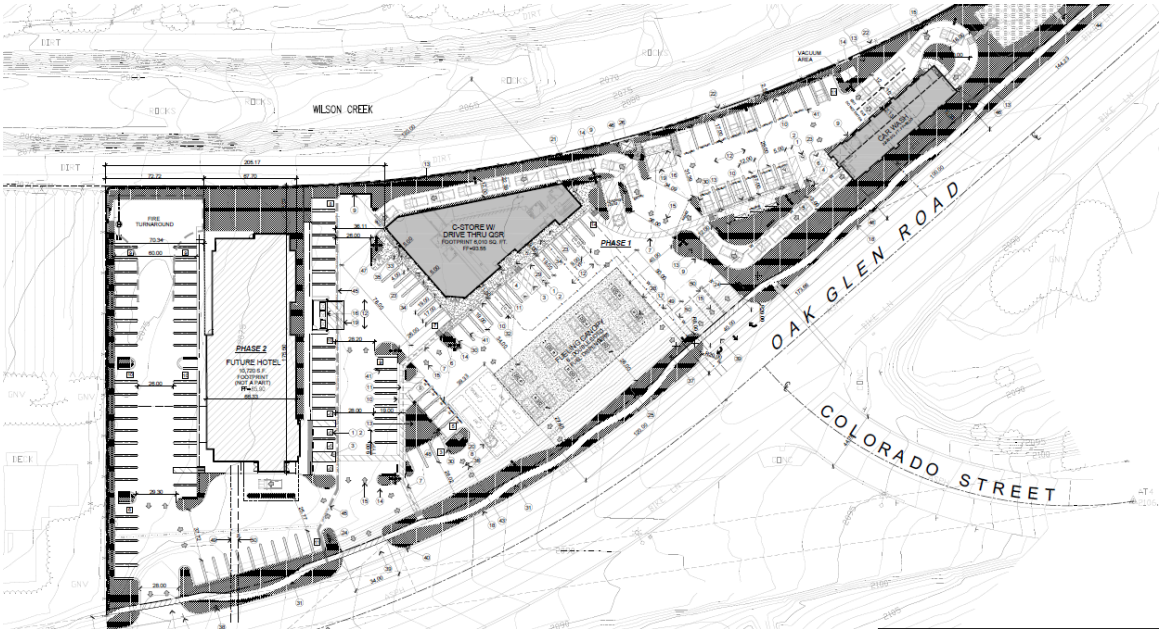
Location and Setting:

The proposed Project is located on a 3.41-acre triangular site on the north side of Oak Glen Road, across from the intersection of Oak Glen Road and Colorado Street. The subject site includes three (3) parcels (APNs: 0301-174-52, -53 and -54) that are currently being developed. The site is generally below the existing roadway grade, and features a significant elevation change along the western portion of the site (phase two of the project and the proposed location of the freestanding sign), but is otherwise relatively flat. To the north of the site is the Dunlap channel owned by the County of San Bernardino Flood Control District, to the west of the site is a legal, nonconforming residence with minor agricultural crop production, and to the south is vacant land within the Freeway Corridor Specific Plan.

Land Use Compliance Review:

The proposal consists of a Land Use Compliance Review (LUCR) to permit two (2) signs, a 50-foot-tall freestanding sign with 245 square feet of sign area and a ten (10) foot tall, freestanding monument

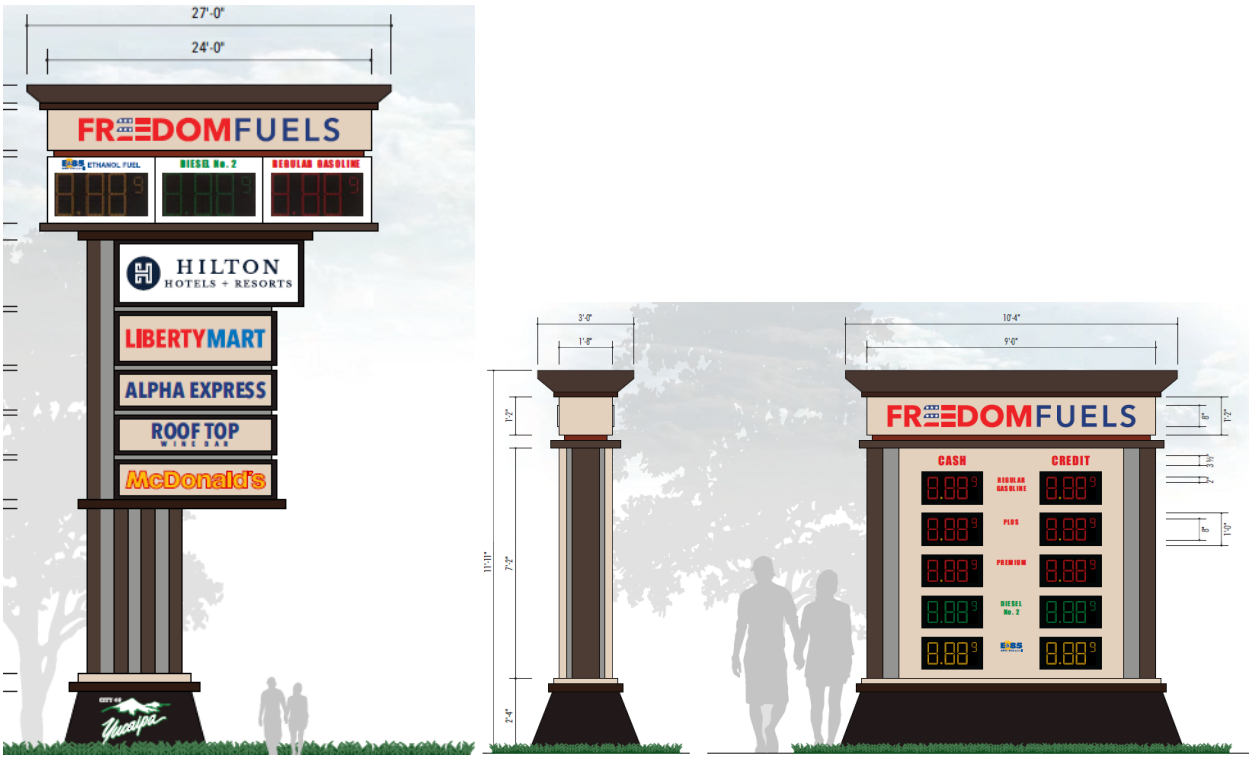
sign. Pursuant to Development Code Section 84.0350, the underlying District allows for one monument sign per frontage, per lot so long as they are separated by over 100 linear feet, subject to the LUCR process to be approved by the Planning Commission. The project has been designed to create a cohesive center with elements carried throughout the site, including the colors and materials that are incorporated with the proposed signs. Due to the size of the freestanding sign a variance is proposed and discussed below.



Proposed Site Layout

This project includes the review of a new monument sign to accompany the proposed fuel station. The sign is eleven (11) feet tall and approximately nine (9) feet wide. It should be noted that the square footage of signage used to display fuel pricing is excluded from signage calculations, as such information is required by state regulations to be both visible and legible. Although the sign exceeds the standard height limit, it is considered conforming due to its sole purpose of displaying fuel prices, which include five fuel types and both cash and credit options. The monument sign will be internally illuminated and constructed using materials and colors consistent with the overall development. It will also feature a decorative cap and base.

This LUCR also includes the review of the proposed freestanding sign. The freestanding sign is fifty (50) feet tall and includes a total of 245 square feet of signage, with 25 to 72 square feet allocated for each tenant. It is designed to match the monument sign, including the use of materials, a decorative base and cap, and is integrated with the overall site design. Placement of both signs will maintain the required clear sight triangle to ensure safe visibility.



Proposed Signs

Major Variance:

The proposed Project includes a Major Variance request for an increase in the overall area of the accessory freestanding sign. The Service Commercial land use district allows for a 200 square foot and 25-foot-tall freestanding sign, and the 245 square foot, 50-foot-tall sign therefore represents a 22.25 percent increase in sign area and 100 percent increase in height.

In order to construct the Project as proposed, the Planning Commission must adopt all four of the mandatory Findings that are required for the approval of a Variance (see attached Findings). These Findings recognize that there are extraordinary or unusual circumstances that apply to the property or to the intended use in order to justify the reduction of a particular development standard. Below are the four Major Variance Findings and staff's recommendation that the Findings have been met for the Variance. The Findings focus on the fact that similar signage is permitted on nearby parcels, and that the orientation is required for visibility.

***Variance Finding 1**:*

> *The granting of this variance will not be materially detrimental to other properties or land uses in the area and will not substantially interfere with the present or future ability to use solar energy systems.*

Staff Response:

The applicant is requesting to increase the maximum allowable height and square footage of the freestanding signage for their commercial site from the CS District's standard of 200 to 245 square

feet and from 25 feet tall to 50 feet tall. The design is compatible with the surrounding commercial area and similar in scale to the signage permitted for other nearby properties. Because of the location of the sign and the natural topography of the area and the site, the sign is almost solely directed towards eastbound traffic and the commercial area near the freeway, while being nearly hidden from westbound traffic (shown in photos below). The granting of this variance would not alter any previously approved building footprint or the capacity for solar on-site. The sign will provide business advertising oriented toward traffic coming from the freeway and will be consistent with existing/approved commercial uses. The sign will be placed not to obstruct clear sight triangle.

Variance Finding 2:

> *There are exceptional circumstances or conditions applicable to this property and its permitted use that do not apply to other properties in the vicinity and in particular the same subdivision.*

Staff Response:

The location of this site is unique due to the topography of the surrounding public travel areas. Directly east of the site, Oak Glen Road has a significant curve, and a landscaped trail area that includes large, mature trees (pictured below) as well as a significant change in grade from the eastern portion of the site to the west. This means that the visibility from the more residential areas more easterly is almost completely negligible. In addition, the main goal for the freestanding sign is to advertise to traffic exiting the freeway, similar to the signage approved for the site at 32610 Oak Glen Road. The proposed height of the sign allows traffic entering Yucaipa from the freeway to see the proposed sign, with the additional height allowing visibility over the adjacent hillside. In addition, the future phase of the site will feature a hotel structure, that with tower its features, will be taller than the sign structure.

View from I10 entrance

Lack of Visibility from Westbound Traffic

Variance Finding 3:

> *The strict application of the land use district deprives this property of privileges enjoyed by other properties enjoyed by others in the vicinity or in the same land use district.*

Staff Response:

There are signs within the City of Yucaipa of a similar height and size to what has been proposed at this location, including the Yucaipa Point freeway-oriented sign which is 84 feet tall and 1,250 square feet. Additionally, within a 2,000-foot radius, two similar variances were approved; one for a commercial center to include a 45-foot-tall 230 square foot sign, and one for the Yucaipa Gateway Project which is a 55-foot-tall freeway oriented sign that is 280 square feet. These signs have all been designed to capture freeway traffic.

Variance Finding 4:

> *The granting of the variance is compatible with the objectives, policies, general land uses and programs specified in the General Plan and any applicable plan.*

Staff Response:

The proposed Variance promotes the establishment of a land use that is otherwise consistent with the standards of the Service Commercial (CS) District and the proposed signs meet the intent and objectives of the City Development Code Section 87.0701. In addition, the Variance is consistent with the Variance Review procedures per City Development Code Section 83.030905 and is necessary for the sign to be visible from the east bound traffic along Oak Glen Road and for advertising in a manner consistent with other properties in the area.

Processing and Procedural Actions:

Notices of the Project were sent to all property owners adjacent to the project site and no responses were received.

Environmental Review:

The Project site is within a developed portion of the City. Pursuant to Section 15311 of the CEQA Guidelines, this Project qualifies for a Class 11 Categorical Exemption. This exemption applies to the proposed Project because it is characterized as an accessory structure. A deviation from the zoning regulations is addressed by a proposed Variance for the Project. The Variance that is proposed qualifies under Section 15305 of the CEQA Guidelines, as the Variance would result in minor land use modification associated with the signage. The approval of the Variance would not result in any new environmental impacts from the Project.

CONCLUSION:

The proposed signs are consistent with the CS Land Use District and the General Plan and Development Code standards for the District after the adoption of a Major Variance and the applicable Variance findings. The required findings for approval of the Major Variance have been made and are attached.

Attachments: Land Use District & Location Map
Findings
Conditions of Approval
Project Plans

Approved by:

Benjamin J. Matlock, Deputy Director of Community Development/City Planner
Development Services Department

FINDINGS: MAJOR VARIANCE 25-0005

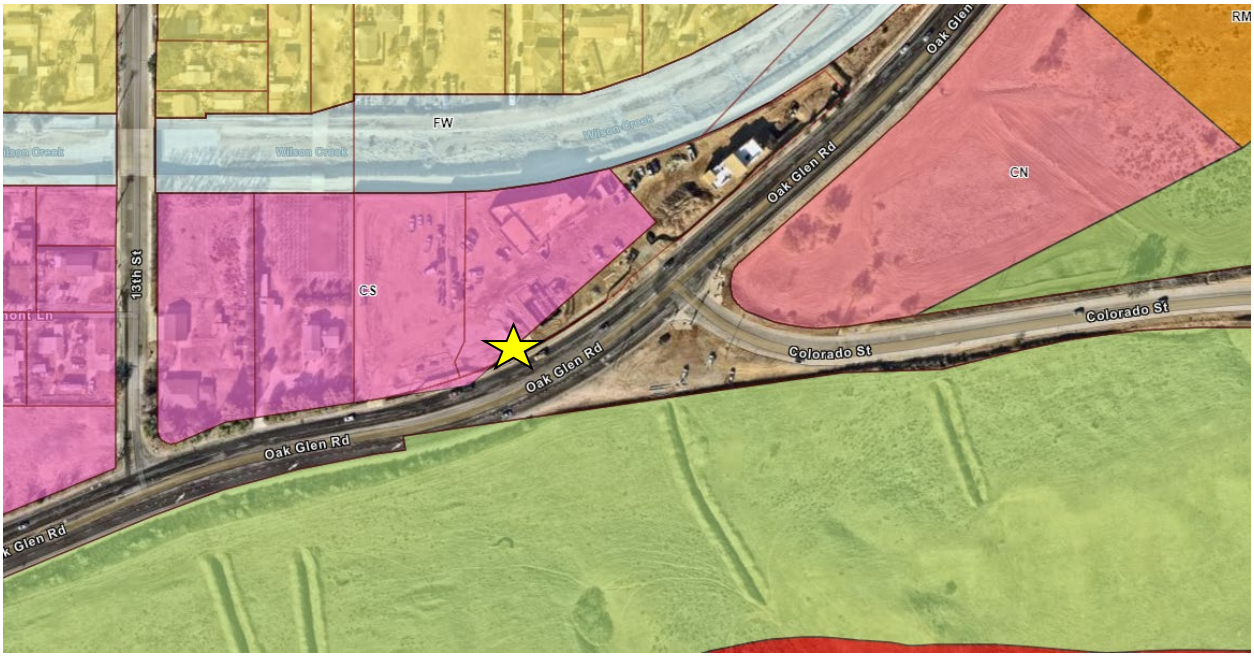
1. The granting of such variance will not be materially detrimental to other properties or land uses in the area and will not substantially interfere with the present or future ability to use solar energy systems, because the applicant is requesting to increase the maximum allowable height and square footage of the freestanding signage for their commercial site from the CS District's standard of 200 to 245 square feet and from 25 feet tall to 50 feet tall. The design is compatible with the surrounding commercial area and similar in scale to the signage permitted for other nearby properties. Because of the location of the sign and the natural topography of the area and the site, the sign is almost solely directed towards eastbound traffic and the commercial area near the freeway, while being nearly hidden from westbound traffic (shown in photos below). The granting of this variance would not alter any previously approved building footprint or the capacity for solar on-site. The sign will provide business advertising oriented toward traffic coming from the freeway and will be consistent with existing/approved commercial uses. The sign will be placed not to obstruct clear sight triangle.

2. There are exceptional or extraordinary circumstances or conditions applicable to the property or to the intended use that do not apply to other properties in the same district or vicinity, because the location of this site is unique due to the topography of the surrounding public travel areas. Directly east of the site, Oak Glen Road has a significant curve, and a landscaped trail area that includes large, mature trees (pictured below) as well as a significant change in grade from the eastern portion of the site to the west. This means that the visibility from the more residential areas more easterly is almost completely negligible. In addition, the main goal for the freestanding sign is to advertise to traffic exiting the freeway, similar to the signage approved for the site at 32610 Oak Glen Road. The proposed height of the sign allows traffic entering Yucaipa from the freeway to see the proposed sign, with the additional height allowing visibility over the adjacent hillside. In addition, the future phase of the site will feature a hotel structure, that with tower its features, will be taller than the sign structure.

3. The strict application of the land use district deprives such property of privileges enjoyed by other properties in the vicinity or in the same land use district, because there are signs within the City of Yucaipa of a similar height and size to what has been proposed at this location, including the Yucaipa Point freeway-oriented sign which is 84 feet tall and 1,250 square feet. Additionally, within a 2,000-foot radius, two similar variances were approved; one for a commercial center to include a 45-foot-tall 230 square foot sign, and one for the Yucaipa Gateway Project which is a 55-foot-tall freeway oriented sign that is 280 square feet. These signs have all been designed to capture freeway traffic.

4. The granting of the variance is compatible with the objectives, policies, general land uses, and programs specified in the City's General Plan and any other applicable plan, because the proposed Variance promotes the establishment of a land use that is otherwise consistent with the standards of the Service Commercial (CS) District and the proposed signs meet the intent and objectives of the City Development Code Section 87.0701. In addition, the Variance is consistent with the Variance Review procedures per City Development Code Section 83.030905 and is necessary for the sign to be visible from the east bound traffic along Oak Glen Road and for advertising in a manner consistent with other properties in the area.

LAND USE: SERVICE COMMERCIAL (CS)



LOCATION

Site Photos

Sign from Westbound Traffic

SIGN FROM EASTBOUND TRAFFIC

Applicant: SG Opal
PLN-PHE-25-0005
DRAFT Conditions 05-07-2025

CONDITIONS OF APPROVAL

ON-GOING CONDITIONS/GENERAL REQUIREMENTS:

PLANNING DIVISION (909) 797-2489 EXT. 224

1. This Project consists of a Land Use Compliance Review and Major Variance for the construction of a two monument signs, including one fuel price sign and a proposed 50-foot-tall sign to be located on a Service Commercial property at 32788 Oak Glen Road; APN: 0301-174-52. Any alteration or expansion of these facilities or increase in the developed area of the site from that shown on the approved site plan, may require the submission of a new application or an additional application for Revisions for review and approval.

2. The use granted by this Land Use Compliance Review and Major Variance shall be subject to all Zoning, Fire, and Building Codes of the City.

3. In compliance with Development Code Section 81.0150, the applicant shall agree to defend at his sole expense any action brought against the City, its agents, officers, or employees, because of the issuance of such approval, or in the alternative, to relinquish such approval. The applicant shall reimburse the City, its agents, officers or employees for any Court costs and attorney's fees which the City, its agents, officers, or employees may be required to pay as a result of such action. The City may, at its sole discretion, participate in the defense of any such action but such participation shall not relieve applicant of his obligations under this condition, including City expenses.

4. All conditions of this Permit are continuing conditions. Failure of the applicant and/or operator to comply with any or all of said conditions at any time may result in the revocation of the permit granted to use the property.

THE FOLLOWING CONDITIONS SHALL BE MET PRIOR TO ISSUANCE OF A GRADING PERMIT:

BUILDING AND SAFETY DIVISION (909) 797-2489 EXT. 263

5. This project will require one or more building permits. Permits will require a complete permit application and complete building plans to be submitted for approval prior to commencement of work.

6. This project shall comply with the latest requirements as set forth in the latest editions of the California Green Code, California Energy Code, California Accessibility Code, California Building Code, California Electrical Code, California Mechanical Code, California Plumbing Code, City of Yucaipa Municipal Code, San Bernardino County Environmental Health Service codes/regulations, and any other agency’s codes/regulations that may govern this project.

7. Yucaipa Valley Water District prohibits cleanouts and backwater valves installed within the garage.

8. Separate submittals and permits are required for all structures, accessory structures such as but not limited to, trash enclosures, patios, trellises, gazebos block walls, signage, and storage buildings.

LANDSCAPE DIVISION (909) 797-2489 EXT. 284

9. Applicant shall maintain all landscaping per the approved landscaping plans. Modifications to this plan shall be submitted to the City's Landscape Architect for review and approval.

CREATING VISUAL IMPACT

Yucaipa, CA

SCOPE OF WORK

A | Proposed One (1) Double Sided Face Lit Pylon Sign
B | Proposed One (1) Double Sided Face Lit Monument Sign

The design is per 2022 California Building Standards Code:
- 2022 California Building Code
- 2022 California Electrical Code
- 2022 California Building Energy Efficiency Standards

TOTAL SUMMARY OF ALL SIGNAGE ON SITE

- **BUILDING ONE: ILLUMINATED WALL SIGN (C-STORE)**
  (1) Wall sign to read "Liberty Mart" South Elevation
- **BUILDING TWO: ILLUMIANTED WALL SIGN (CARWASH)**
  (1) Wall sign to read "ALPHA XPRESS CARWASH" South Elevation
  (1) Wall sign to read "ALPHA XPRESS" West Elevation
  (1) Wall sign to read "ALPHA XPRESS" East Elevation
- **BUILDING THREE: ILLUMINATED WALL SIGN (FUEL STATION CANOPY)**
  (1) Canopy sign to read "FREEDOM FUELS" South Elevation
  (1) Canopy sign to read "FREEDOM" East Elevation
  (1) Canopy sign to read "FREEDOM" West Elevation

LEGEND

- [x] Conceptual Plan
- [ ] Permit Plan
- [ ] Production Plan
- [ ] Install Plan
- [x] New Proposed
- [ ] Reface/ Refurbish
- [ ] Existing Sign To Be Removed
- [ ] Existing Sign To Remain

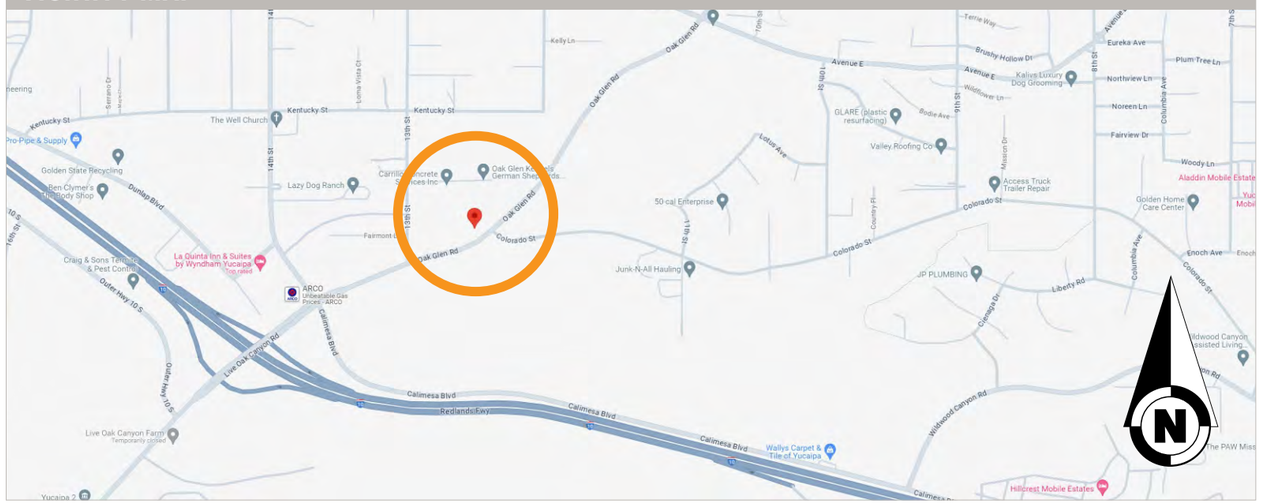
PROJECT

FREEDOMFUELS

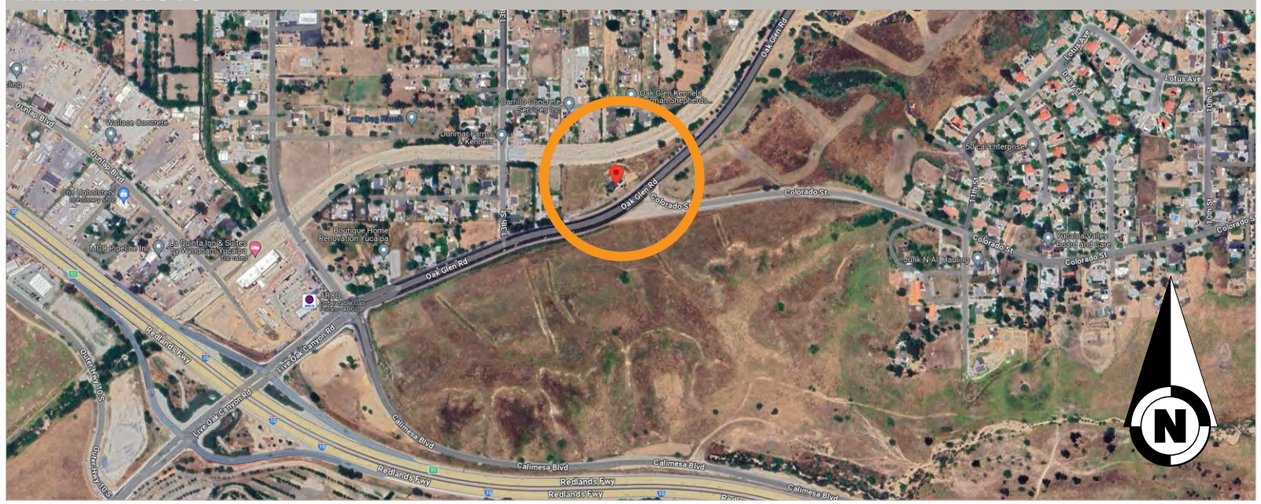
32788 Oak Glen Rd, Yucaipa, CA 92154
PYLON SIGN

SIGN CODE

VICINITY MAP



AERIAL PHOTO



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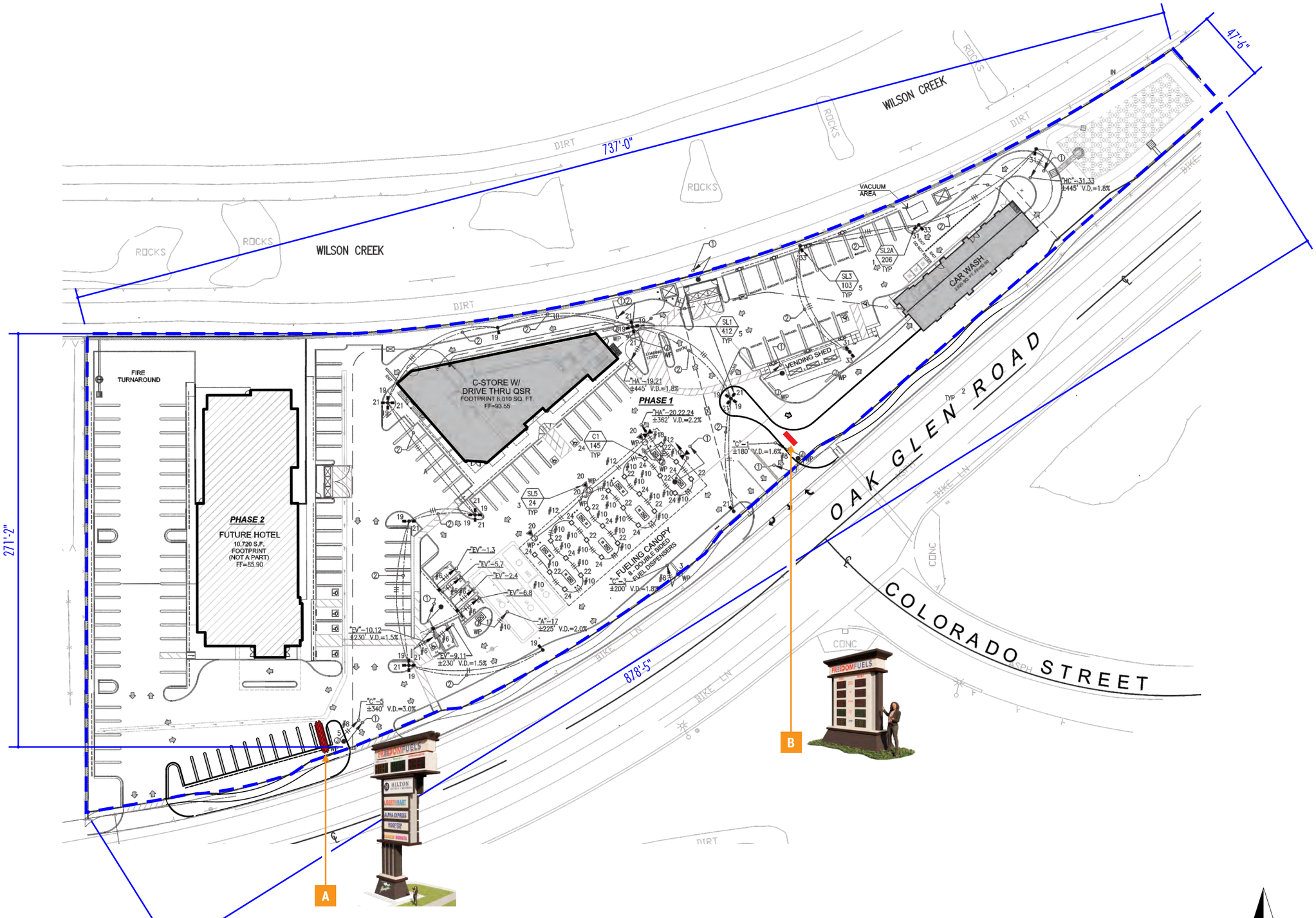
IF YOU WOULD LIKE TO SEE A SAMPLE OF ANY COLOR, PLEASE REQUEST AN ACTUAL SAMPLE FROM YOUR SALESPERSON OR PROJECT MANAGER. WITHOUT A SIGNED COLOR SAMPLE, FX SIGNS, ITS VENDORS AND AFFILIATES ARE NOT RESPONSIBLE FOR DIFFERENCES, REAL OR PERCEIVED, BETWEEN THE WAY YOUR PRODUCT APPEARS ON SCREEN OR PAPER AND THE FINAL PRODUCT.



1 SITE PLAN

SCALE: 1' = 1/64"

LEGEND

Conceptual Plan	Permit Plan	Production Plan	Install Plan	New Proposed	Reface/ Refurbish	Existing Sign To Be Removed	Existing Sign To Remain
☑	☐	☐	☐	☑	■	■	■

CREATING VISUAL IMPACT
12155 MAGNOLIA AVE BLDG 11-A
RIVERSIDE, CA 92503
(951) 689-0270
FXCVI.COM
LIC# 1014540

SITE LOCATION:

FREEDOM FUEL

32788 Oak Glen Rd.
Yucaipa, CA 92154

CLIENT:

SG OPAL INC.
FREEDOM FUEL

Axesh (Alex) Patel
Email: axesh89@gmail.com
Phone: (909) 831-5837

PROPERTY OWNER / MGT

PROJECT MANAGER
Pankaj (Ben) Patel
Email: gaps1462@gmail.com
Cell: (909) 709-7497

CREATED DATE:

June 07, 2024

JOB NUMBER:

1159 R15

SALES REP:	DRAWN BY:
FL	SP

REVISION: R15
04 25 2025

REVISED BY: SP

CLIENT APPROVAL: **DATE:**

LANDLORD APPROVAL: **DATE:**

Approved For Construction

ACCOUNT MANAGER: **DATE:**

DESIGNER: **DATE:**

PRODUCTION: **DATE:**

SHEET: 2 OF 12

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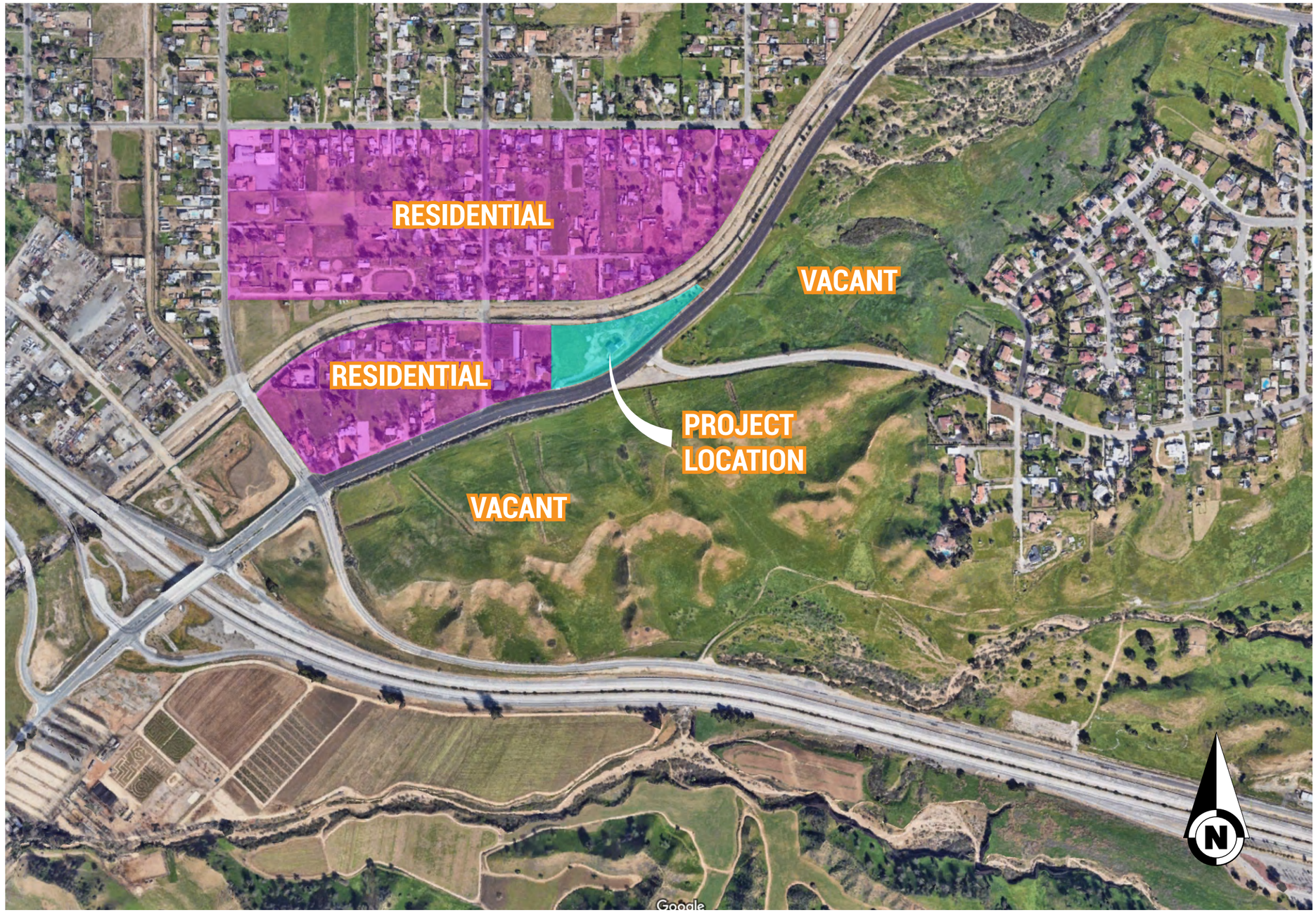

1 GENERAL PLAN LAND USE DISTRICT ADJACENT AREAS

LEGEND

RESIDENTIAL | VACANT | PROJECT LOCATION

ADJACENT AREAS

NORTH: Residential
SOUTH: Vacant
WEST: Residential
EAST: Vacant

CREATING VISUAL IMPACT
12155 MAGNOLIA AVE BLDG 11-A
RIVERSIDE, CA 92503
(951) 689-0270
FXCVI.COM
LIC# 1014540

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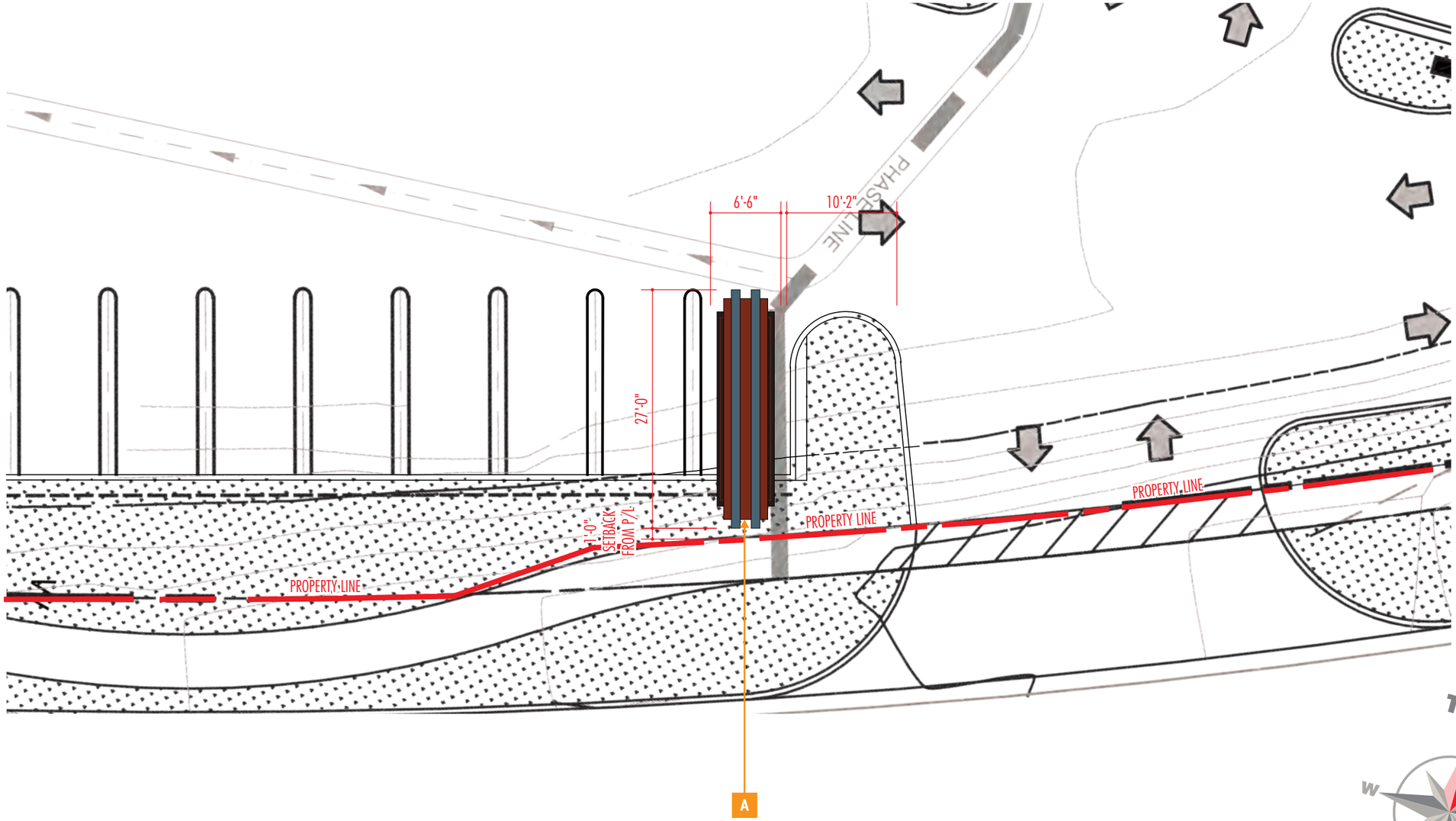

1 SITE PLAN

SCALE: 3/32" = 1'-0"

LEGEND

Conceptual Plan	Permit Plan	Production Plan	Install Plan	New Proposed	Reface/ Refurbish	Existing Sign To Be Removed	Existing Sign To Remain
☑	☐	☐	☐				

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SHEET: 4 OF 12

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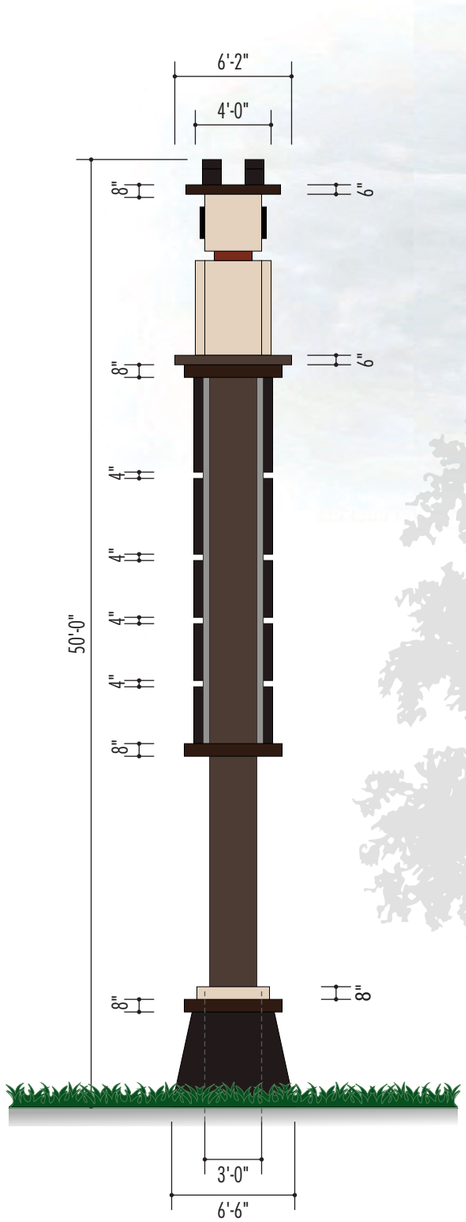

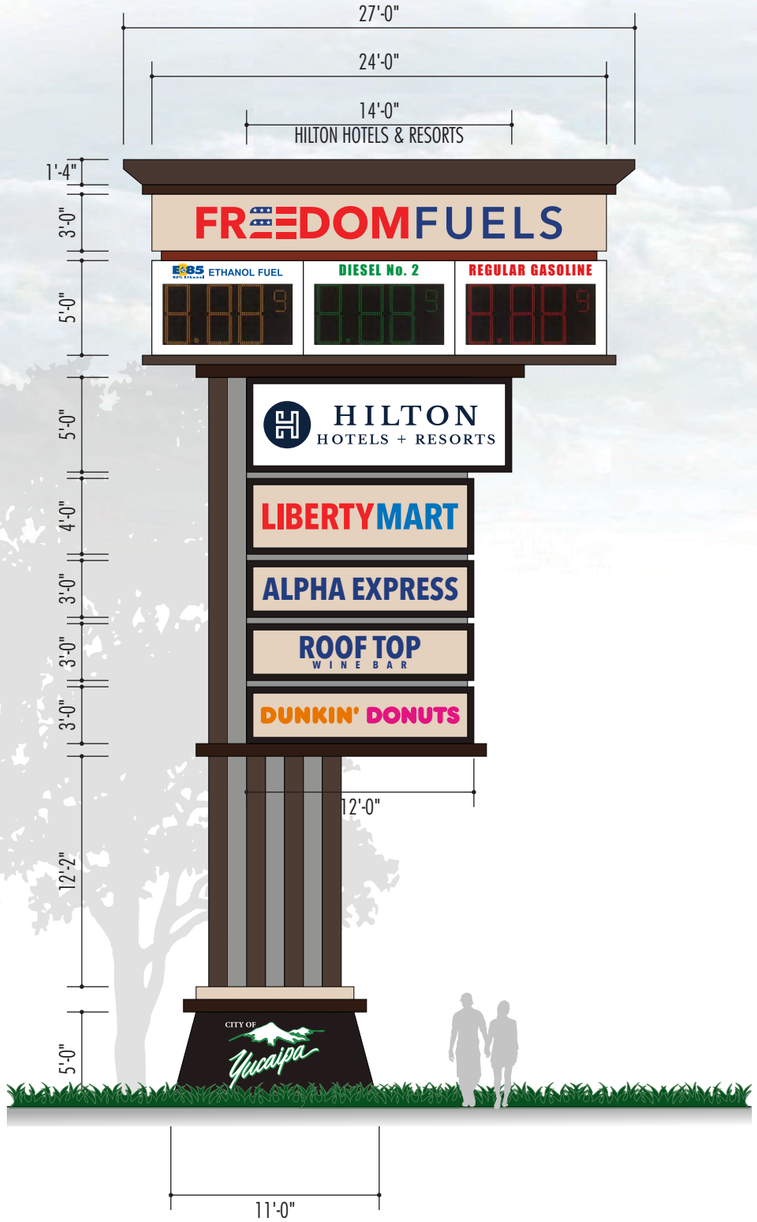

1 SIDE VIEW

SCALE: 1/8" = 1'-0"

A SIGN ELEVATION LAYOUT

SIGN AREA: 1,350.00

Quantity: One (1) Required

SCALE: 1/8" = 1'-0"

2 3D RENDERING

NOT TO SCALE

CREATING VISUAL IMPACT

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SHEET: 6 OF 12

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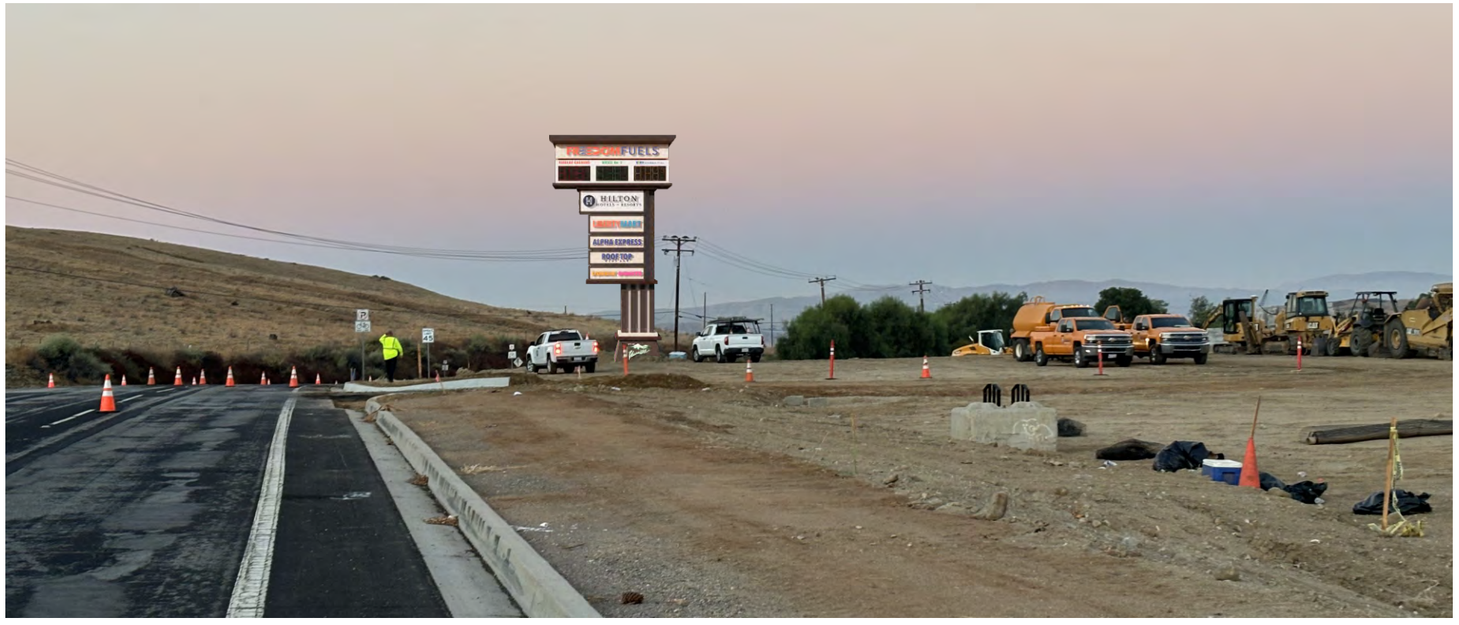
1 WEST ELEVATION (PROPOSED SIGNAGE)

SCALE: 1/32" = 1'-0"



2 EAST ELEVATION (PROPOSED SIGNAGE)

SCALE: 1/32" = 1'-0"

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SHEET: 7 OF 12

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1 WEST ELEVATION (PROPOSED SIGNAGE)

SCALE: 1/16" = 1'-0"

FX
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1 EAST ELEVATION (PROPOSED SIGNAGE)

SCALE: 1/16" = 1'-0"

CREATING VISUAL IMPACT
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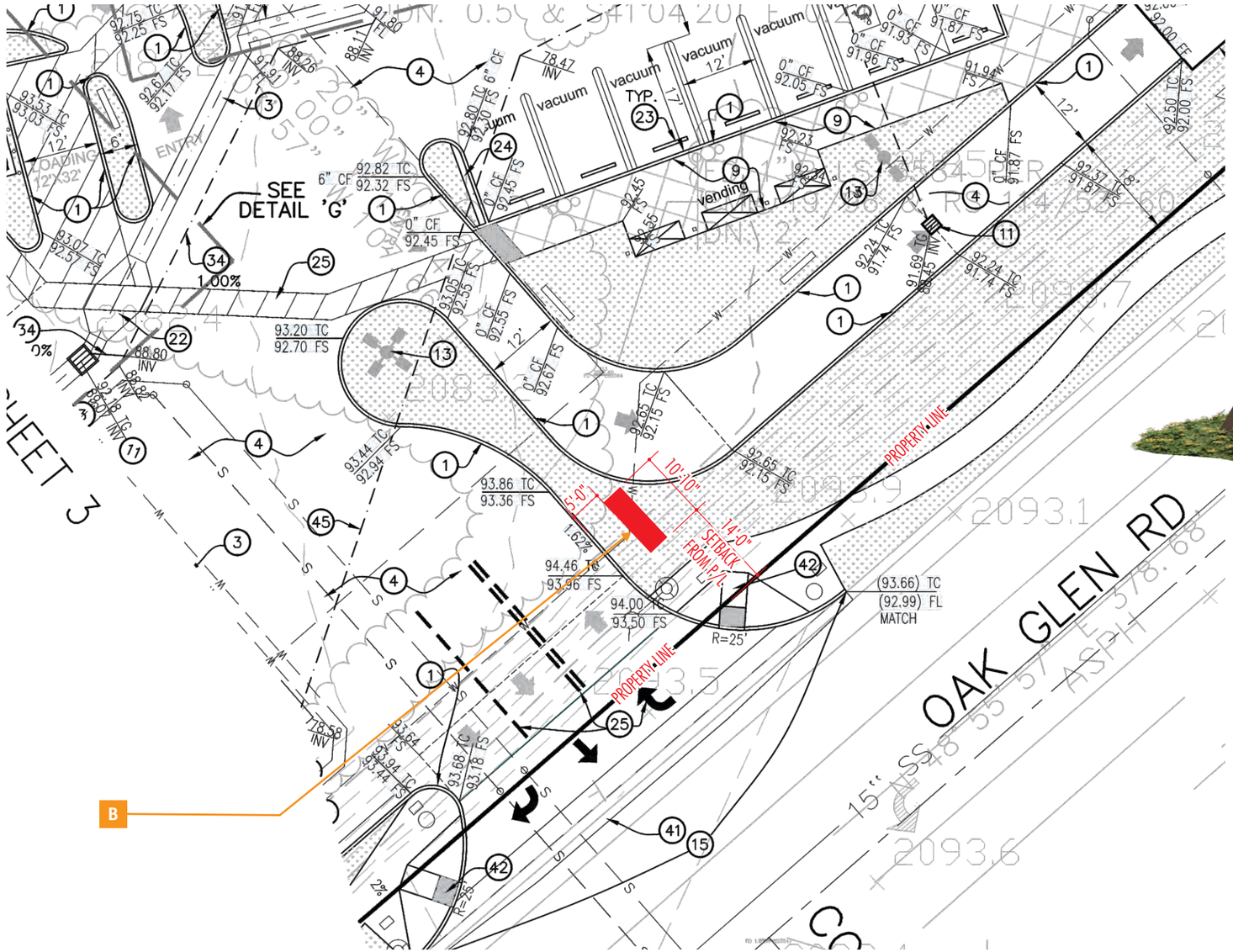

1 SITE PLAN

SCALE: 1" = 20'-0"

LEGEND

Conceptual Plan	Permit Plan	Production Plan	Install Plan	New Proposed	Reface/ Refurbish	Existing Sign To Be Removed	Existing Sign To Remain
☑	☐	☐	☐	☑	■	■	■

CREATING VISUAL IMPACT

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(951) 689-0270
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SHEET: 10 OF 12

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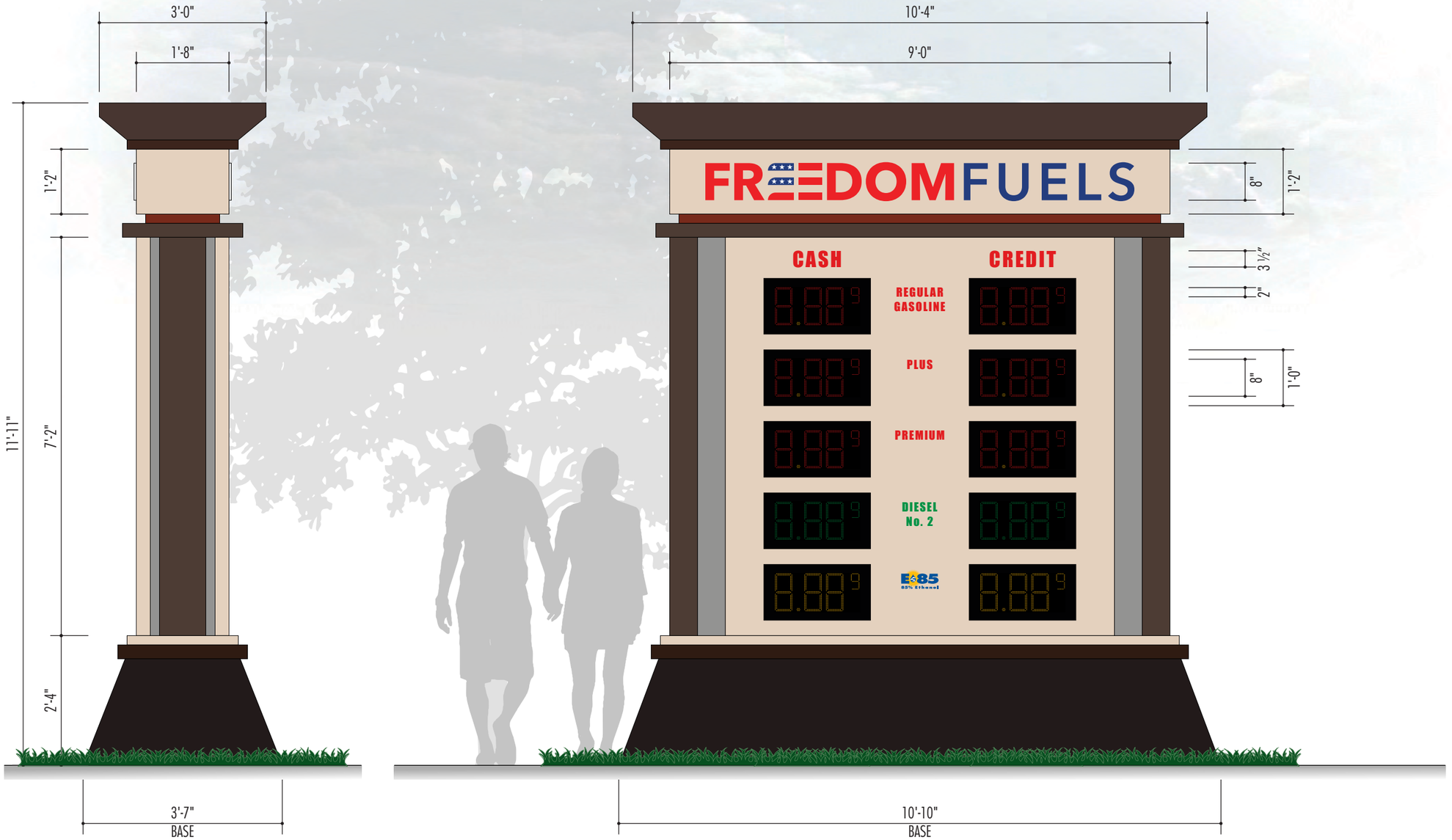

1 SIDE VIEW

SCALE: ½" = 1'-0"

B SIGN ELEVATION LAYOUT

SIGN AREA: 129.00

Quantity: One (1) Required

SCALE: ½" = 1'-0"

CREATING VISUAL IMPACT

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