Appendix A

Ynez Road Widening Project – Focused Air Quality, Greenhouse Gas, and Energy Impact Study, City of Temecula, CA

MD Acoustics

October 1, 2025

MD ACOUSTICS
Sound Solutions for Planning and Design

AZ Office
4960 S. Gilbert Road, Ste 1-461
Chandler, AZ 85249
p. (602) 774-1950

CA Office
1197 Los Angeles Avenue, Ste C-256
Simi Valley, CA 93065
p. (805) 426-4477

www.mdacoustics.com

October 1, 2025

Mr. Travis McGill
ELMT Consulting, Inc.
2201 N Grand Ave, Ste #10098
Santa Ana, CA 92711

Subject:
Ynez Road Widening Project – Focused Air Quality, Greenhouse Gas, and Energy Impact Study, City of Temecula, CA

Dear Mr. McGill:

MD Acoustics, LLC (MD) has completed a focused Air Quality, Greenhouse Gas, and Energy Impact Evaluation for the proposed Ynez Road Widening Project in the City of Temecula, CA. The purpose of this focused study is to evaluate the air quality, greenhouse gas, and energy construction emissions generated by the proposed project and to compare the project emissions to South Coast Air Quality Management District's (SCAQMD) thresholds of significance as it relates to residential and commercial uses and consistency to the City's General Plan. A list of definitions and terminology is located in Appendix A.

1.0 Project Description

The project proposes to widen the easterly side of Ynez Road, from Rancho Vista Road north roughly 1600 feet, to two lanes in each direction and complete missing segments of curb and gutter, sidewalk, and striped medians in coordination with adjacent development between Tierra Vista Road and Rancho Vista Road. The nearest sensitive receptors are the single-family residences located approximately 65 feet to the southwest.

2.0 AQ/GHG Thresholds of Significance

2.1 AQ Significance Thresholds

Project emissions were compared to both regional and localized SCAQMD's thresholds of significance for construction emissions[1,2].

2.2 GHG Significance Thresholds

The project emissions were compared to the SCAQMD's 3,000 $MTCO_2e$ draft threshold for all land uses[3].

3.0 Evaluation Procedure/Methodology

MD utilized the latest version of CalEEMod (2022.1.1.29) to calculate both the construction emissions from the project site[4]. Project construction is modeled to commence no earlier than January 2026 and be completed by September 2026. Construction assumes grubbing & land clearing; grading & excavation; drainage, utilities, & sub-grade; and paving. CalEEmod defaults were utilized. Assumptions and output calculations are provided in Appendix B.

[1] https://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf
[2] https://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds
[3] https://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds/page/2
[4] https://www.caleemod.com/

4.0 Local Ambient Conditions

The project site is located in South Coast Air Basin (SCAB) in the Temecula Valley Source Receptor Area (SRA 26)[5]. The nearest air monitoring station to the project site is the Pechanga Reservation Monitoring Station. Historical air quality data for the vicinity can be found both at CARB and SCAQMD's websites[6,7]. Temperature and historical precipitation data can be found at the WRCC[8].

5.0 Findings

The following outlines the emissions for the project:

5.1 Regional Construction Emissions

The construction emissions for the project would not exceed the SCAQMD's daily emission thresholds at the regional level as indicated in Table 1, and therefore the impact would be considered less than significant.

Table 1: Regional Significance – Construction Emissions (lbs/day)

Activity	Pollutant Emissions (pounds/day)					
	VOC	**NOx**	**CO**	**SO_2**	**PM10**	**PM2.5**
Grubbing & Land Clearing						
On-Site[2]	0.46	4.04	4.49	0.01	0.42	0.22
Off-Site[3]	0.03	0.03	0.41	0.00	0.10	0.02
Total	**0.49**	**4.07**	**4.90**	**0.01**	**0.52**	**0.24**
Grading & Excavation						
On-Site[2]	3.50	29.90	36.60	0.07	2.76	1.36
Off-Site[3]	0.16	0.18	2.70	0.00	0.50	0.11
Total	**3.66**	**30.08**	**39.30**	**0.07**	**3.26**	**1.47**
Drainage, Utilities, & Sub-Grade						
On-Site[2]	1.79	16.00	19.70	0.04	1.24	0.64
Off-Site[3]	0.11	0.10	1.80	0.00	0.33	0.08
Total	**1.90**	**16.10**	**21.50**	**0.04**	**1.57**	**0.72**
Paving						
On-Site[2]	0.81	7.53	11.70	0.02	0.30	0.28
Off-Site[3]	0.08	0.39	1.36	0.00	0.32	0.08
Total	**0.89**	**7.92**	**13.06**	**0.02**	**0.62**	**0.36**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds	No	No	No	No	No	No

Notes:
[1] Source: CalEEMod Version 2022.1.1.29
[2] On-site emissions from equipment operated on-site that is not operated on public roads.
[3] Off-site emissions from equipment operated on public roads.
[4] Architectural coatings and paving phases may overlap.

5.2 Localized Construction Emissions

Utilizing the construction equipment list and associated acreages per 8-hour day provided in the SCAQMD "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds" (South Coast Air Quality Management District 2011b), the maximum number of acres disturbed in a day would be 4.0 acres during

[5] https://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf?sfvrsn=6
[6] https://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year
[7] https://www.arb.ca.gov/adam/
[8] https://www.wrcc.dri.edu/summary/Climsmsca.html

grading & excavation (as shown in Table 2 below); therefore, the project emissions have been compared to the 2-acre per day localized significance threshold, the next conservative threshold.

Table 2: Maximum Number of Acres Disturbed Per Day[1]

Activity	Equipment	Number	Acres/8hr-day	Total Acres
Grading & Excavation	Graders	2	0.5	1.0
	Rubber Tired Dozers	1	0.5	0.5
	Scrapers	2	1.0	2.0
	Crawler Tractor	1	0.5	0.5
Total Per Phase				**4.0**

Notes:

[1.] Source: CalEEMod output and South Coast AQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2

None of the analyzed criteria pollutants would exceed the LST emission thresholds at the nearest sensitive receptors as shown in Table 3. Therefore, the impact would be less than significant from construction.

Table 3: Localized Significance – Construction Emissions (lbs/day)

Phase	On-Site Pollutant Emissions (pounds/day)[1]			
	NOx	**CO**	**PM10**	**PM2.5**
Grubbing & Land Clearing	4.04	4.49	0.42	0.22
Grading & Excavation	29.90	36.60	2.76	1.36
Drainage, Utilities, & Sub-Grade	16.00	19.70	1.24	0.64
Paving	7.53	11.70	0.30	0.28
SCAQMD Threshold for 25 meters (82 feet) or less[2]	**234**	**1,100**	**7**	**4**
Exceeds Threshold?	No	No	No	No

Notes:
[1] Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for two acres in the Temecula Valley Source Receptor Area (SRA 26). Project will disturb a maximum of 4.0 acres per day (see Table 7).
[2] The nearest sensitive receptor is located 20 meters southwest; therefore, the 25-meter threshold has been used.

5.3 GHG Emissions

Table 5 outlines the construction GHG emissions for the project. The project's emissions are below (444.36 $MTCO_2e$) the SCAQMD's draft screening threshold of 3,000 $MTCO_2e$ for all land uses and; therefore, the impact is less than significant.

Table 5: Opening Year Project-Related Greenhouse Gas Emissions

Activity	Emissions ($MTCO_2e$)[1]		
	Onsite	**Offsite**	**Total**
Grubbing & Land Clearing	5.18	0.80	5.98
Grading & Excavation	282.00	19.06	301.06
Drainage, Utilities, & Sub-Grade	101.00	7.97	108.97
Paving	21.70	6.65	28.35
Total	409.88	34.48	**444.36**
SCAQMD Draft Screening Threshold			**3,000**
Exceeds Threshold?			**No**

Notes:
[1.] $MTCO_2e$=metric tons of carbon dioxide equivalents (includes carbon dioxide, methane and nitrous oxide).

5.4 Consistency with Applicable Plans

Consistency with the City's General Plan

The project site is located in the City of Temecula. The proposed project consists of the widening of the existing Ynez Road. Therefore, the proposed project is consistent with the land use and zoning designations of the City's.

The project will be subject to the policies and ordinances pertaining to air quality and climate change in the City's General Plan. Although the project would generate greenhouse gas emissions, either directly or indirectly, these emissions are short-term and not considered to have a significant impact on the environment. Furthermore, project emissions have demonstrated that they will be below any significant thresholds as outlined by SCAQMD.

In addition, as shown below, the project's GHG impacts have been evaluated by assessing the project's consistency with applicable statewide, regional, and local GHG reduction plans and strategies.

Consistency with Executive Orders S-03-05 and B-30-15

Executive Orders S-3-05 and B-30-15 are orders from the State's Executive Branch for the purpose of reducing GHG emissions. These strategies call for developing more efficient land-use patterns to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. The project includes elements of smart land use as it is well-served by transportation infrastructure and near public transit.

Although the project's emissions level in 2050 cannot be reliably quantified, statewide efforts are underway to facilitate the State's achievement of that goal and it is reasonable to expect the project's emissions profile to decline as the regulatory initiatives identified by ARB in the First Update are implemented, and other technological innovations occur. As such, given the reasonably anticipated decline in project emissions once fully constructed and operational, the project is consistent with the Executive Order's horizon-year goal. Therefore, the project is consistent with Executive Orders S-3-05 and B-30-15.

Consistency with AB32 Scoping Plan

The ARB Board approved a Climate Change Scoping Plan in December 2008. The Scoping Plan outlines the State's strategy to achieve the 2020 greenhouse gas emissions limit. The Scoping Plan "proposes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health" (California Air Resources Board 2008). The measures in the Scoping Plan have been in place since 2012.

This Scoping Plan calls for an "ambitious but achievable" reduction in California's greenhouse gas emissions, cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 10 percent from today's levels. On a per-capita basis, that means reducing annual emissions of 14

tons of carbon dioxide for every man, woman and child in California down to about 10 tons per person by 2020.

In May 2014, CARB released its *First Update to the Climate Change Scoping Plan* (CARB 2014). This *Update* identifies the next steps for California's leadership on climate change. While California continues on its path to meet the near-term 2020 greenhouse gas limit, it must also set a clear path toward long-term, deep GHG emission reductions. This report highlights California's success to date in reducing its GHG emissions and lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050.

In November 2017, CARB release the 2017 Scoping Plan. This Scoping Plan incorporates, coordinates, and leverages many existing and ongoing efforts and identifies new policies and actions to accomplish the State's climate goals, and includes a description of a suite of specific actions to meet the State's 2030 GHG limit. In addition, Chapter 4 provides a broader description of the many actions and proposals being explored across the sectors, including the natural resources sector, to achieve the State's mid and long-term climate goals.

Guided by legislative direction, the actions identified in the 2017 Scoping Plan reduce overall GHG emissions in California and deliver policy signals that will continue to drive investment and certainty in a low carbon economy. The 2022 Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Plan includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and Trade Program, which constrains and reduces emissions at covered sources.

As the latest, 2022 Scoping Plan builds upon previous versions, project consistency with applicable strategies of both the 2008 and 2017 Plan are assessed as well in Table 6. As shown in Table 6, the project is consistent with the applicable strategies and would result in a less than significant impact.

Table 6: Project Consistency with CARB Scoping Plan Policies and Measures[1]

2008 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
California Light-Duty Vehicle Greenhouse Gas Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Energy Efficiency – Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	Consistent. The project will be compliant with the current Title 24 standards.
Low Carbon Fuel Standard – Develop and adopt the Low Carbon Fuel Standard.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.

Vehicle Efficiency Measures – Implement light-duty vehicle efficiency measures.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Medium/Heavy-Duty Vehicles – Adopt medium and heavy-duty vehicle efficiency measures.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Green Building Strategy – Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	Consistent. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards, that are mandatory in the 2019 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The project will be subject to these mandatory standards.
High Global Warming Potential Gases – Adopt measures to reduce high global warming potential gases.	Consistent. CARB identified five measures that reduce HFC emissions from vehicular and commercial refrigeration systems; vehicles that access the project that are required to comply with the measures will comply with the strategy.
Recycling and Waste – Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	Consistent. The state is currently developing a regulation to reduce methane emissions from municipal solid waste landfills. The project will be required to comply with City programs, such as City's recycling and waste reduction program, which comply, with the 75 percent reduction required by 2020 per AB 341.
Water – Continue efficiency programs and use cleaner energy sources to move and treat water.	Consistent. The project will comply with all applicable City ordinances and CAL Green requirements.

2017 Scoping Plan Recommended Actions to Reduce Greenhouse Gas Emissions	Project Compliance with Recommended Action
Implement Mobile Source Strategy: Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Car regulations.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025 and at least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NOX standard.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.

Implement Mobile Source Strategy: Last Mile Delivery: New regulation that would result in the use of low NOX or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement SB 350 by 2030: Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.	Consistent. The project will be compliant with the current Title 24 standards.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	Consistent. The project will be required to comply with City programs, such as City's recycling and waste reduction program, which comply, with the 75 percent reduction required by 2020 per AB 341.
2022 Scoping Plan Recommended Actions to Reduce Greenhouse Gas Emissions	**Project Compliance with Recommended Action**
Deploy ZEVs and reduce driving demand	Consistent. The project will be within an existing residential community.
Coordinate supply of liquid fossil fuels with declining California fuel demand	Consistent. The project will be compliant with the current Title 24 standards.
Generate clean electricity	Consistent. The project will be compliant with the current Title 24 standards and would not interfere with clean energy generation.
Decarbonize industrial energy supply	Consistent. The project will be compliant with the current Title 24 standards and would be commercial, therefore would not interfere with this goal.
Decarbonize buildings	Consistent. The project will be compliant with the current Title 24 standards.
Reduce non-combustion emissions	Consistent. The project will be compliant with the current Title 24 standards.
Source: CARB Scoping Plan (2008, 2017, and 2022)	

Consistency with SCAG's 2024-2050 RTP/SCS

At the regional level, the 2024-2050 RTP and Sustainable Communities Strategy represent the region's Climate Action Plan that defines strategies for reducing GHGs. In order to assess the project's potential to conflict with the RTP/SCS, this section analyzes the project's land use profile for consistency with those in the Sustainable Communities Strategy. Generally, projects are considered consistent with the provisions and general policies of applicable City and regional land use plans and regulations, such as SCAG's Sustainable Communities Strategy, if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals.

Table 7 demonstrates the project's consistency with the Actions and Strategies set forth in the 2024-2050 RTP/SCS. As shown in Table 7, the project would be consistent with the GHG reduction related actions and strategies contained in the 2024-2050 RTP/SCS.

Table 7: Project Consistency with SCAG 2024-2050 RTP/SCS[1]

Actions and Strategies	Responsible Party(ies)	Consistency Analysis
Land Use Strategies		
Reflect the changing population and demands, including combating gentrification and displacement, by increasing housing supply at a variety of affordability levels.	Local Jurisdictions	Consistent. The proposed project is a road widening project and will not displace existing housing.
Focus new growth around transit.	Local Jurisdictions	Consistent. The proposed project is a road widening project that would be consistent with the 2024 RTP/SCS focus on growing near transit facilities.
Plan for growth around livable corridors, including growth on the Livable Corridors network.	SCAG, Local Jurisdictions	Consistent. The proposed project is a road widening project that would be consistent with the 2024 RTP/SCS focus on growing along the 2,980 miles of Livable Corridors in the region.
Provide more options for short trips through Neighborhood Mobility Areas and Complete Communities.	SCAG, Local Jurisdictions	Consistent. The proposed project would help further jobs/housing balance objectives. The proposed project is also consistent with the Complete Communities initiative that focuses on creation of mixed-use districts in growth areas.
Support local sustainability planning, including developing sustainable planning and design policies, sustainable zoning codes, and Climate Action Plans.	Local Jurisdictions	Not Applicable. This strategy calls on local governments to adopt General Plan updates, zoning codes, and Climate Action Plans to further sustainable communities. The proposed project would not interfere with such policymaking and would be consistent with those policy objectives.
Protect natural and farmlands, including developing conservation strategies.	SCAG, Local Jurisdictions	Consistent. The proposed project is a road widening project that would help reduce demand for growth in urbanizing areas that threaten green fields and open spaces.
Transportation Strategies		
Preserve our existing transportation system.	SCAG, County Transportation Commissions, Local Jurisdictions	Not Applicable. This strategy calls on investing in the maintenance of our existing transportation system. The proposed project would not interfere with such policymaking.
Manage congestion through programs like the Congestion Management Program, Transportation Demand Management, and Transportation Systems Management strategies.	County Transportation Commissions, Local Jurisdictions	Consistent. The proposed project is a road widening project that will minimize congestion impacts on the region.
Promote safety and security in the transportation system.	SCAG, County Transportation Commissions, Local Jurisdictions	Not Applicable. This strategy aims to improve the safety of the transportation system and protect users from security threats. The proposed project would not interfere with such policymaking.
Complete our transit, passenger rail, active transportation, highways and arterials, regional express lanes goods movement, and airport ground transportation systems.	SCAG, County Transportation Commissions, Local Jurisdictions	Consistent. The proposed project would be a part of this larger goal of investing in the transportation system.
Technological Innovation and 21st Century Transportation		

Promote zero-emissions vehicles.	SCAG, Local Jurisdictions	Not Applicable. The project would be a road widening project and would not interfere with the goal of promoting zero-emission vehicles.
Promote neighborhood electric vehicles.	SCAG, Local Jurisdictions	Not Applicable. The project would be a road widening project and would not interfere with the goal of promoting electric vehicles.
Implement shared mobility programs.	SCAG, Local Jurisdictions	Not Applicable. This strategy is designed to integrate new technologies for last-mile and alternative transportation programs. The proposed project would not interfere with these emerging programs.

Notes:
[1] Source: Southern California Association of Governments; 2020–2045 RTP/SCS, May 2020.

5.5 Energy Analysis

Information from the CalEEMod 2022.1.1.29 Daily and Annual Outputs contained in the air quality and greenhouse gas analyses above was utilized for this analysis. The CalEEMod outputs detail project related construction equipment, transportation energy demands, and facility energy demands.

Construction Energy Demand

Construction Equipment Fuel Estimates

Using the CalEEMod data input, the project's construction phase would consume electricity and fossil fuels as a single energy demand, that is, once construction is completed their use would cease. CARB's 2017 Emissions Factors Tables show that on average aggregate fuel consumption (gasoline and diesel fuel) would be approximately 18.5 hp-hr-gal.[9] As presented in Table 8 below, project construction activities would consume an estimated 48,438 gallons of diesel fuel.

Table 8: Construction Equipment Fuel Consumption Estimates

Phase	Number of Days	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	HP hrs/day	Total Fuel Consumption (gal diesel fuel)[1]
Grubbing & Land	18	Crawler Tractors	1	8	87	0.43	299	291
	18	Excavators	2	8	36	0.38	219	213
Grading & Excavation	81	Crawler Tractors	1	8	87	0.43	299	1,310
	81	Excavators	3	8	36	0.38	328	1,438
	81	Graders	2	8	187	0.41	1,227	5,371
	81	Rollers	2	7	80	0.38	426	1,863
	81	Rubber Tired Dozers	1	8	247	0.40	790	3,461
	81	Scrapers	2	8	423	0.48	3,249	14,224
	81	Tractors/Loaders/Backhoes	4	8	97	0.37	1,148	5,028
Drainage,	54	Air Compressors	1	8	37	0.48	142	415

[9] Aggregate fuel consumption rate for all equipment was estimated at 18.5 hp-hr/day (from CARB's 2017 Emissions Factors Tables and fuel consumption rate factors as shown in Table D-21 of the Moyer Guidelines: (https://www.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017_gl_appendix_d.pdf).

Utilities, & Sub-Grade	54	Generator Sets	1	8	84	0.74	497	1,452
	54	Graders	1	8	187	0.41	613	1,790
	54	Plate Compactors	1	8	8	0.43	28	80
	54	Pumps	1	8	11	0.74	65	190
	54	Rough Terrain Forklifts	1	8	96	0.40	307	897
	54	Scrapers	1	8	423	0.48	1,624	4,741
	54	Tractors/Loaders/Backhoes	3	8	97	0.37	861	2,514
Paving	27	Pavers	1	8	130	0.42	437	637
	27	Paving Equipment	1	8	132	0.36	380	555
	27	Rollers	2	8	80	0.38	486	710
	27	Tractors/Loaders/Backhoes	3	8	97	0.37	861	1,257
CONSTRUCTION FUEL DEMAND (gallons of diesel fuel)								**48,438**

Notes:
[1]Using Carl Moyer Guidelines Table D-21 Fuel consumption rate factors (bhp-hr/gal) for engines less than 750 hp.
(Source: https://www.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017_gl_appendix_d.pdf)

Construction Worker Fuel Estimates

It is assumed that all construction worker trips are from light duty autos (LDA) along area roadways. With respect to estimated 92,408 VMT, the construction worker trips would generate an estimated 92,408 VMT. Vehicle fuel efficiencies for construction workers were estimated in the air quality and greenhouse gas analysis using information generated using CARB's EMFAC model. Table 9 shows that an estimated 2,986 gallons of fuel would be consumed for construction worker trips.

Table 9: Construction Worker Fuel Consumption Estimates

Phase	Number of Days	Worker Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Grubbing & Land Clearing	18	7.5	18.5	2497.5	30.95	81
Grading & Excavation	81	37.5	18.5	56,194	30.95	1,816
Drainage, Utilities, & Sub-Grade	54	25	18.5	24,975	30.95	807
Paving	27	17.5	18.5	8,741	30.95	282
Total Construction Worker Fuel Consumption						**2,986**

Notes:
[1]Assumptions for the worker trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.29 defaults.

Construction Vendor/Hauling Fuel Estimates

Tables 10 and 11 show the estimated fuel consumption for vendor and hauling during building construction and architectural coating. With respect to estimated VMT, the vendor and hauling trips would generate an estimated 3,580 VMT. For the architectural coatings it is assumed that the contractors would be responsible for bringing coatings and equipment with them in their light duty vehicles.[10] Tables 10 and 11 show that an estimated 388 gallons of fuel would be consumed for vendor and hauling trips.

Table 10: Construction Vendor Fuel Consumption Estimates (MHD Trucks)[1]

[10] Vendors delivering construction material or hauling debris from the site during grading would use medium to heavy duty vehicles with an average fuel consumption of 9.22 mpg for medium heavy-duty trucks and 6.74 mpg for heavy heavy-duty trucks (see Appendix C for details).

Phase	Number of Days	Vendor Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Grubbing & Land Clearing	18	0	10.2	0	9.22	0
Grading & Excavation	81	1	10.2	826	9.22	90
Drainage, Utilities, & Sub-Grade	54	0	10.2	0	9.22	0
Paving	27	10	10.2	2,754	9.22	299
Total Vendor Fuel Consumption						**389**

Notes:
[1] Assumptions for the vendor trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.29 defaults.

Table 11: Construction Hauling Fuel Consumption Estimates (HHD Trucks)[1]

Phase	Number of Days	Hauling Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Grubbing & Land Clearing	18	0	20	0	6.74	0
Grading & Excavation	81	0.0	20	0	6.74	0
Drainage, Utilities, & Sub-Grade	54	0	20	0	6.74	0
Paving	27	0	20	0	6.74	0
Total Construction Hauling Fuel Consumption						**0**

Notes:
[1]Assumptions for the hauling trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.29 defaults.

Construction Energy Efficiency/Conservation Measures

Construction equipment used over the approximately 9-month construction phase would conform to CARB regulations and California emissions standards and is evidence of related fuel efficiencies. In addition, the CARB Airborne Toxic Control Measure limits idling times of construction vehicles to no more than five minutes, thereby minimizing unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Furthermore, the project has been designed in compliance with California's Energy Efficiency Standards and 2022 CALGreen Standards.

Construction of the proposed development would require the typical use of energy resources. There are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

6.0 Conclusions

Construction project emissions were evaluated and compared to both regional and localized SCAQMD's thresholds of significance. In addition, project GHG emissions were evaluated and compared to SCAQMD's draft threshold of 3,000 MTCO2e per year for all land uses. Project emissions are anticipated to be below SCAQMD's thresholds of significance with no mitigation. Therefore, the impact is less than significant.

Furthermore, construction of the project would not result in wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources. The proposed project does not include any unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities and is a road widening project that is not proposing any additional features that would require a larger energy demand than other projects of similar scale and configuration. The energy demands of the project are anticipated to be accommodated within the context of available resources and energy delivery systems. The project would therefore not cause or result in the need for additional energy producing or transmission facilities. The project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California. The Project has been designed in compliance with California's Energy Efficiency Standards and 2022 CALGreen Standards. The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency; therefore, impacts would be less than significant.

MD is pleased to provide this focused Air Quality, Greenhouse Gas, and Energy Impact Evaluation. If you have any questions regarding this analysis, please don't hesitate to call us at (805) 426-4477.

Sincerely,
MD Acoustics, LLC

Tyler Klassen, EIT
Air Quality Specialist

Appendix A

Glossary of Terms

AQMP	Air Quality Management Plan
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH_4	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DPM	Diesel particulate matter
GHG	Greenhouse gas
HFCs	Hydrofluorocarbons
LST	Localized Significant Thresholds
$MTCO_2e$	Metric tons of carbon dioxide equivalent
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
NAAQS	National Ambient Air Quality Standards
NOx	Nitrogen Oxides
NO_2	Nitrogen dioxide
N_2O	Nitrous oxide
O_3	Ozone
PFCs	Perfluorocarbons
PM	Particle matter
PM10	Particles that are less than 10 micrometers in diameter
PM2.5	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact
PPM	Parts per million
PPB	Parts per billion
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SF_6	Sulfur hexafluoride
SIP	State Implementation Plan
SOx	Sulfur Oxides
SRA	Source/Receptor Area
TAC	Toxic air contaminants
VOC	Volatile organic compounds
WRCC	Western Regional Climate Center

Appendix B
Site Plan

CITY OF TEMECULA
STREET IMPROVEMENT PLAN
YNEZ ROAD IMPROVEMENTS-PHASE I, PW23-02

GENERAL NOTES

1. STANDARDS. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE CITY'S IMPROVEMENT STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION (AND SUBSEQUENT AMENDMENTS), THE CITY'S ENGINEERING AND CONSTRUCTION MANUAL, CITY CODES AND REQUIREMENTS.
2. EMERGENCY TELEPHONE NUMBERS. (ANSWERING MACHINE IS NOT ACCEPTABLE):
   KIM BERRY REDTAIL ACQUISITIONS 949-433-5610
   (RESPONSIBLE PERSON/DEVELOPER) (COMPANY) (24-HR PHONE NUMBER)
   JAY SKJERVEN REDWOOD CONSTRUCTION 949-299-0875
   (RESPONSIBLE PERSON/CONTRACTOR) (COMPANY) (24-HR PHONE NUMBER)
3. LICENSE/PERMIT REQUIREMENT.
   a. PRIOR TO START OF ANY WORK, A BUSINESS LICENSE SHALL BE OBTAINED FROM THE CITY.
   b. A GRADING PERMIT SHALL BE OBTAINED, PRIOR TO ANY WORK ON PRIVATE DEVELOPMENT. THE PERMIT AND AN APPROVED SET OF IMPROVEMENT PLANS MUST BE PRESENT AT THE JOBSITE DURING CONSTRUCTION.
4. NOTIFICATIONS. PUBLIC WORKS INSPECTION SHALL BE NOTIFIED VIA EMAIL AT LDINSPECTIONS@TEMECULACA.GOV AT LEAST TWO (2) BUSINESS DAYS IN ADVANCE OF BEGINNING ANY CONSTRUCTION/GRADING OPERATIONS.
5. ERRORS OR OMISSIONS. APPROVAL OF THESE PLANS BY THE CITY DOES NOT RELIEVE THE APPLICANT AND ENGINEER OF RECORD FROM THE RESPONSIBILITY FOR THE CORRECTION OF ERRORS OR OMISSIONS DISCOVERED DURING CONSTRUCTION.
6. WORKING HOURS. CITY ORDINANCE NO. 94-25 STATES THAT NO PERSON SHALL ENGAGE IN OR CONDUCT CONSTRUCTION ACTIVITY, WHEN THE CONSTRUCTION SITE IS WITHIN ONE-QUARTER OF A MILE OF AN OCCUPIED RESIDENCE, BETWEEN THE HOURS OF 6:30 PM AND 6:30 AM, MONDAY THROUGH FRIDAY AND SHALL ONLY ENGAGE IN OR CONDUCT CONSTRUCTION ACTIVITY BETWEEN THE HOURS OF 7:00 AM AND 6:30 PM ON SATURDAY. NO CONSTRUCTION ACTIVITY SHALL BE UNDERTAKEN ON SUNDAY AND NATIONALLY RECOGNIZED HOLIDAYS.
7. REGULATORY AGENCY CLEARANCES. THE ISSUANCE OF A PERMIT BY THE CITY DOES NOT IMPLY OR PROVIDE ANY CLEARANCES FROM STATE OR FEDERAL AGENCIES REGULATING THE PROVISIONS OF STATE OR FEDERAL ENDANGERED SPECIES ACTS OR WATER QUALITY REGULATIONS. THE APPROPRIATE CLEARANCES FROM THESE AGENCIES SHALL BE OBTAINED PRIOR TO ANY SITE DISTURBANCE OR GRADING.
8. CONSTRUCTION CHANGE. ANY CONSTRUCTION CHANGE MUST BE FIRST SUBMITTED TO THE CITY AS A REDLINE REVISION FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTING THE CHANGE IN THE FIELD. REFER TO THE CITY'S ENGINEERING AND CONSTRUCTION MANUAL.
9. PRE-CONSTRUCTION MEETING. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED TWO WORK DAYS PRIOR TO THE START OF CONSTRUCTION. DURING CONSTRUCTION, A DEPENDABLE AND RESPONSIVE CONTRACTOR'S REPRESENTATIVE SHALL BE AT THE JOB SITE AT ALL TIMES.
10. UTILITIES. APPROVAL OF THESE PLANS BY THE CITY DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OR COMPLETENESS OF THE LOCATION, NOR THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS. ANY UTILITY DAMAGED DURING THE PERFORMANCE OF THE WORK SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE GOVERNING AGENCY BY THE CONTRACTOR, AT HIS EXPENSE.
11. SURVEY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER OF RECORD AND TO INSTALL STREET CENTERLINE MONUMENTS, AS REQUIRED BY RIVERSIDE COUNTY ORDINANCE NO. 461. CENTERLINE TIES SHALL BE PROVIDED TO THE CITY ENGINEER, UPON COMPLETION OF THE PROJECT AND BEFORE ACCEPTANCE IS GRANTED. ALL EXISTING MONUMENTATION (DISTURBED OR DESTROYED DURING CONSTRUCTION) SHALL BE REPLACED TO CITY STANDARDS IN ACCORDANCE WITH THE LAND SURVEYORS ACT AND THE STREETS AND HIGHWAY CODE, AND AS APPROVED BY THE CITY ENGINEER. UPON REQUEST, SURVEY CUTS SHEETS SHALL BE PROVIDED TO THE CITY ENGINEER.
12. DUST CONTROL. DUST SHALL BE CONTROLLED BY WATERING OR OTHER METHODS, AS APPROVED BY THE CITY ENGINEER AND SHALL COMPLY WITH SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT'S (SCAQMD) RULE 403.
13. CONSTRUCTION FENCING. A SIX FOOT CHAIN LINK FENCE IS REQUIRED ON ALL INDUSTRIAL AND COMMERCIAL PROJECTS UNTIL ROOF SYSTEMS ARE COMPLETED OR AS DEEMED NECESSARY BY THE CITY ENGINEER FOR PUBLIC SAFETY. THE MAINTENANCE OF THE FENCE IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
14. INSPECTIONS. ALL WORK PERFORMED WITHOUT PROPER INSPECTION FROM THE CITY MAY BE SUBJECT TO REJECTION.
15. OTHER CONSTRUCTION NOTES. REFER TO SEPARATE NOTES FOR "GRADING," "EROSION AND SEDIMENT CONTROL," "PAVING" AND "TRAFFIC" REQUIREMENTS, IF APPLICABLE.
16. OTHER PERTINENT INFORMATION. REFER TO THE CITY OF TEMECULA MUNICIPAL CODE, TITLE 18, "CONSTRUCTION, GRADING AND ENCROACHMENTS".

CONTRACTORS NOTE

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND ANY OTHER LINES OR STRUCTURES NOT SHOWN ON THESE PLANS AND IS RESPONSIBLE FOR THE PROTECTION OF OR ANY DAMAGE TO THESE LINES OR STRUCTURES.

ALL RETAINING WALLS SHOWN ON THESE PLANS ARE SHOWN FOR REFERENCE ONLY AND ARE TO BE CONSTRUCTED PER SEPARATE PERMIT.

CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCEMENT OF WORK.

PROACTIVE ENGINEERING CONSULTANTS WEST,INC.
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6860

UTILITY CONTACTS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL UTILITIES. FOR LOCATION OF UNDERGROUND UTILIZES, OR FOR EMERGENCY ASSISTANCE CALL:

TELEPHONE:
FRONTIER COMMUNICATIONS
PH. 800-921-8101

GAS:
SOCAL GAS COMPANY
527 NORTH SAN JACINTO STREET
HEMET, CA 92543
PH. 800-427-2200

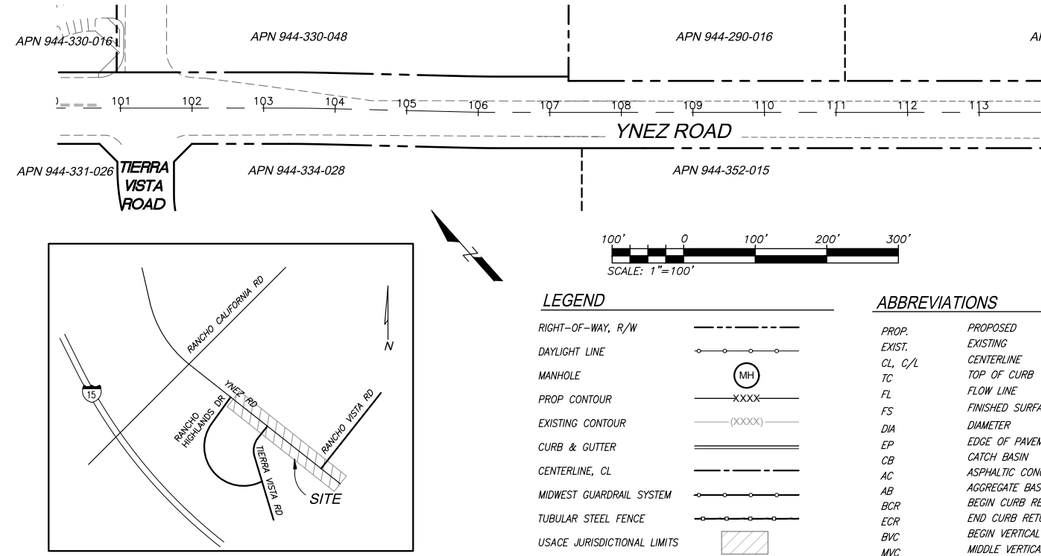
ELECTRICITY:
SOUTHERN CALIFORNIA EDISON
24487 PRIELIPP ROAD
WILDOMAR, CA 92595
PH. 800-684-8123

CABLE:
TIME WARNER CABLE
26487 YNEZ ROAD, SUITE G
TEMECULA, CA 92591
PH. 888-892-2253

SEWER:
EASTERN MUNICIPAL WATER DISTRICT
2270 TRUMBLE ROAD
PERRIS, CA 92572
PH. 800-698-0400

WATER:
RANCHO CALIFORNIA WATER DISTRICT
42135 WINCHESTER ROAD
TEMECULA, CA 92590
PH. 951-296-6900

SOLID WASTE:
CR&R INCORPORATED
1706 GOETZ ROAD
PERRIS, CA 92570
PH. 800-755-8112



VICINITY MAP
N.T.S.

SHEET INDEX

DECLARATION OF RESPONSIBLE CHARGE

I, GEORGE LENFESTEY, HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS AND CITY OF TEMECULA.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF TEMECULA IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME OF RESPONSIBILITIES FOR PROJECT DESIGN.

SURVEY NOTE

THE BEARINGS SHOWN HEREON ARE BASED ON THE BEARING OF NORTH 48° 15' 11" WEST PER TRACT NO. 23992, MB 231/9-12, ON FILE IN THE OFFICE OF THE RIVERSIDE COUNTY RECORDER.

LEGEND

RIGHT-OF-WAY, R/W
DAYLIGHT LINE
MANHOLE (MH)
PROP CONTOUR XXXX
EXISTING CONTOUR (XXXX)
CURB & GUTTER
CENTERLINE, CL
MIDWEST GUARDRAIL SYSTEM
TUBULAR STEEL FENCE
USACE JURISDICTIONAL LIMITS
CDFW JURISDICTIONAL LIMITS
CONCRETE
AC PAVING
COLD PLANE
REMOVE EX. AC PAVING
STREET LIGHT
FIRE HYDRANT
EXISTING FIRE HYDRANT
PROPOSED SIGN
EXISTING SIGN
TYPE E DETECTOR LOOP
TYPE F DETECTOR LOOP
TYPE Q DETECTOR LOOP (3'X6')
SECTION REFERENCE X / XX
SHEET REFERENCE

ABBREVIATIONS

PROP.	PROPOSED
EXIST.	EXISTING
CL, C/L	CENTERLINE
TC	TOP OF CURB
FL	FLOW LINE
FS	FINISHED SURFACE
DIA	DIAMETER
EP	EDGE OF PAVEMENT
CB	CATCH BASIN
AC	ASPHALTIC CONCRETE
AB	AGGREGATE BASE
BCR	BEGIN CURB RETURN
ECR	END CURB RETURN
BVC	BEGIN VERTICAL CURVE
MVC	MIDDLE VERTICAL CURVE
EVC	END VERTICAL CURVE
PRC	POINT OF REVERSE CURVE
PCC	POINT OF COMPOUND CURVE
PRVC	POINT OF REVERSE VERTICAL CURVE
(1329.02)	EXISTING ELEVATION
1479.70	PROPOSED ELEVATION
LT	LEFT
RT	RIGHT
FH	FIRE HYDRANT
ST	STREET
R/W	RIGHT OF WAY
D/W	DRIVEWAY
V.C.	VERTICAL CURVE
PI	POINT OF INTERSECTION
PVI	POINT OF VERTICAL INTERSECTION
PUE	PUBLIC UTILITY EASEMENT

DESIGN DATA

YNEZ ROAD
ROADWAY CALSSIFICATION:
DESIGN SPEED: 45 MPH

EARTHWORK VOLUMES

FILL..... 6,019.97 CY
CUT..... 9.71 CY
NET..... 6,010.26 CY FILL
NOTE VOLUMES ARE UNADJUSTED.

GRADING NOTES

SEE SHEET 2

BID ITEM TABLE

NO.	DESCRIPTION	QUANITY	UNIT
1	MOBILIZATION/DEMOBILIZATION	1	LS
2	CLEARING AND GRUBBING	1	LS
3	ENGINEERING/ CONSTRUCTION SURVEYING	1	LS
4	TRAFFIC CONTROL	1	LS
5	NPDES COMPLAINCE	1	LS
6	EARTHWORK	1	LS
7	CRUSHED AGGREGATE BASE (15-INCH)	2,500	C.Y.
8	ASPHALT CONCRETE PAVEMENT	1,944	TON
9	ASPHALT RUBBER HOT MIX	583	TON
10	SAWCUT AND REMOVE EXISTING BERM	1,579	L.F.
11	SAWCUT AND REMOVE EXISTING PAVEMENT	3,332	S.F.
12	REMOVE AC PAVEMENT	31,344	S.F.
13	CURB & GUTTER (TYPE A-6)	1,448	L.F.
14	CURB & GUTTER (TYPE A-8)	26	L.F.
15	CONCRETE SIDEWALK	9,701	S.F.
16	REMOVE EXISTING ADA ACCESS CURB RAMP	1	EA
17	ADA ACCESS CURB RAMP WITH TRUNCATED DOMES	1	EA
18	MEDIAN STAMPED CONCRETE	3,769	S.F.
19	MEDIAN CURB (TYPE D-8)	796	L.F.
20	MEDIAN CURB (TYPE D-6)	262	L.F.
21	MEDIAN ACCESS-SEWER MANHOLE	40	L.F.
22	V-DITCH	161	L.F.
23	RETAINING WALL	1	LS
24	RIPRAP (½ TON)	800	C.Y.
25	CONDUIT, WIRING, PULLBOXES, PULL ROPES, AND METER SERVICES PEDESTAL FOR STREET LIGHT	1	LS
26	STREETLIGHT	3	EA
27	RELOCATE TRAFFIC SIGNAL PULL BOX	5	EA
28	REMOVE AND SALVAGE PEDESTRIAN SIGNAL PEDESTAL	1	EA
29	INSTALL NEW PEDESTRIAN PUSH BOTTOM PEDESTAL	1	EA
30	TRAFFIC SIGNAL LOOP DETECTORS	22	EA
31	REMOVE EXISTING SIGN	1	LS
32	SIGNING AND STRIPING	1	LS
33a	RUBBERIZED EMULSION AGGREGATE SLURRY (REAS) - TYPE I	52,297	S.F.
33b	TIRE RUBBERIZED MODIFIED SLURRY SEAL (TRMSS) - TYPE II	52,297	S.F.
33c	RUBBER POLYMER MODIFIED SLURRY SEAL (RPMS) - TYPE II	52,297	S.F.
34	REMOVE AND REPLACE PAVEMENT DELINEATION	1	LS
35	REMOVE TREES PER ARBORIST RECOMMENDATIONS	9	EA
36	TREE PRUNING PER ARBORIST RECOMMENDATIONS	2	EA
37	MIDWEST GUARDRAIL SYSTEM	300	L.F.
38	TUBULAR STEEL FENCE	1,573	L.F.
39	ADJUST EXISTING MANHOLE TO GRADE (FRONTIER)	1	EA
40	ADJUST EXISTING VAULT TO GRADE (FRONTIER)	2	EA
41	ADJUST EXISTING VALVE TO GRADE (RCWD)	3	EA

CONSTRUCTION COORDINATION TABLE

AGENCY	IMPROVEMENT	DWG STD.	ESTIMATED DURATION	STATION	REMARKS
CHARTER	RELOCATE 2 VAULTS	-	2 WEEKS	107+65 & 111+90	CHARTER NEEDS 2 WEEK NOTICE PRIOR TO START OF WORK AND TO BEGIN AFTER ULTIMATE PARKWAY IS GRADED. CHARTER TO COMPLETE WORK AND COVER CONSTRUCTION COST.
EMWD	CONSTRUCT 1 MEDIAN ROLLED CURB ACCESS MANHOLE CUT OUT	SB-53 , SB-61, SB-183	-	101+75 - 117+75	CONTRACTOR TO PERFORM WORK
FRONTIER	ADJUST 2 EXISTING VAULTS AND MANHOLE TO GRADE	-	2 DAYS	110+07 & 116+23	CONTRACTOR TO PERFORM WORK. FRONTIER NEEDS 2 WEEK NOTICE PRIOR TO START OF WORK AND TO BEGIN AFTER A.C. 1st LIFT.
RCWD	RELOCATE 1 EXISTING FIRE HYDRANT, EXTEND LATERAL AND REPLACE BLOW OFF WITH HYDRANT	RW-8, RW-30	2 DAYS	108+55	RCWD NEEDS 4 WEEK NOTICE PRIOR TO START OF WORK AND TO BEGIN AFTER ULTIMATE PARKWAY IS GRADED. CONSTRUCTION COST IS COVERED BY RCWD.
RCWD	ADJUST VALVE TO GRADE	-			CONTRACTOR TO PERFORM WORK

Underground Service Alert
CALL TOLL FREE 1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (CCS83), ZONE 6 BASED LOCALLY ON N.G.S. CORS STATION "ROSA, PID-DX3769. DISTANCE SHOWN HEREON ARE GROUND DISTANCES. TO OBTAIN GRID LEVEL DISTANCES, MULTIPLY DISTANCES BY 1.00008466.

"AS BUILT"
DATE
RCE _____ EXP. _____
REVIEWED BY:
INSPECTOR DATE

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor					
Inspector					
Date Completed					

BENCHMARK
RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84"
ELEVATION: 1006.84'

SCALE
HORIZONTAL AS SHOWN
VERTICAL AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER GEORGE ALAN LENFESTEY No. 45920 CIVIL STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of
Date: 02/19/25
R.C.E. No. 45920 Expires 12/31/26

RECOMMENDED BY: _____ DATE: _____
AVLIN ODVIAR, PRINCIPAL CIVIL ENGINEER
ACCEPTED BY: _____ DATE: _____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER
R.C.E. No. 69156

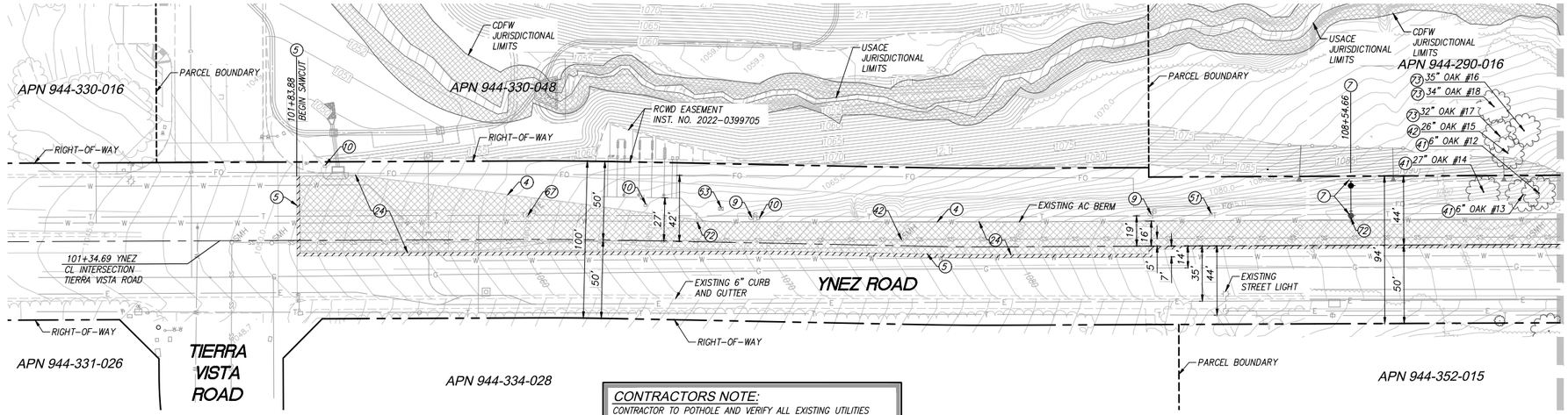
CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS
YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT, PW23-02
YNEZ ROAD STA 101+99.21 TO STA 117+61.56
TITLE SHEET, INDEX MAP AND NOTES

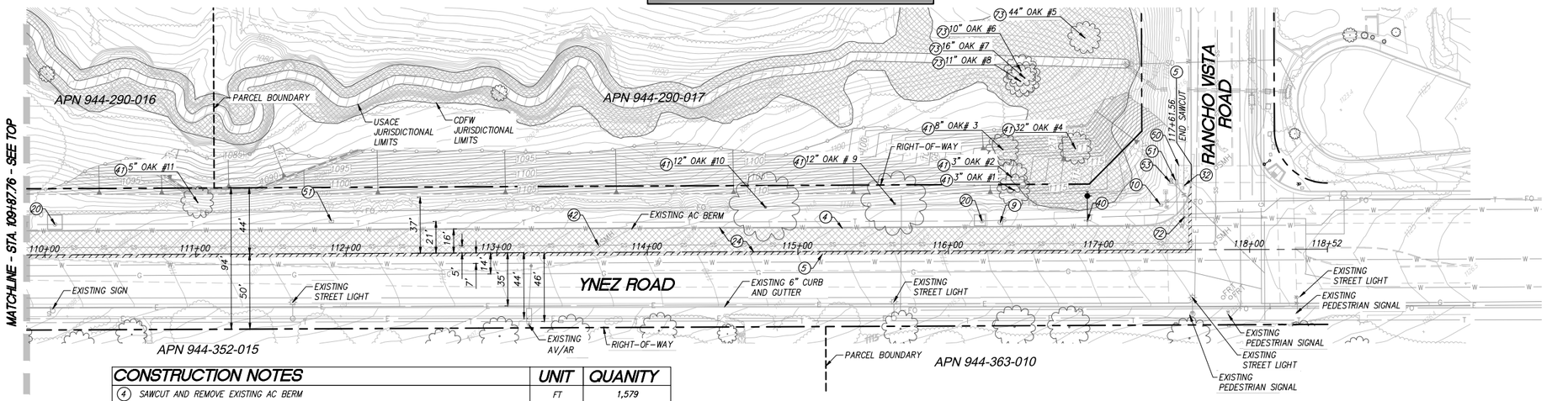
Drawing No. T-1
SHEET 1 OF 14

DWG: N:\01.204.000 Ynez Road Expansion\Drawings\Street Improvements\ST01-Title Sheet.dwg
Plotted: Feb 19, 2025 - 8:25am By: dalsyv

GRADING NOTES

1. STANDARDS. ALL CONSTRUCTION AND GRADING RELATED ACTIVITIES (I.E., STOCKPILING, LAND CLEARING, EROSION & SEDIMENT CONTROL, ETC) SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 18 OF THE CITY OF TEMECULA MUNICIPAL CODE, THE ENGINEERING AND CONSTRUCTION MANUAL, ALL APPLICABLE STANDARDS, THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE (APPENDIX J) AND, IT'S APPLICABLE, THE STATE WATER RESOURCES CONTROL BOARD (SWRCB) NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES.
2. PERMIT REQUIREMENTS. A GRADING PERMIT SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF ANY WORK ON THE SITE.
3. NOTIFICATIONS. PUBLIC WORKS SHALL BE NOTIFIED VIA EMAIL AT LDINSPECTIONS@TEMECULACA.GOV AT LEAST TWO (2) DAYS IN ADVANCE OF BEGINNING ANY CONSTRUCTION/GRADING OPERATIONS.
4. SOILS. ALL CONSTRUCTION/GRADING ACTIVITIES SHALL BE DONE IN CONFORMANCE WITH RECOMMENDATIONS OF THE PRELIMINARY SOILS INVESTIGATION BY LGC VALLEY, INC GEOTECHNICAL CONSULTING DATED 10/17/24. SAID REPORT SHALL BE CONSIDERED A PART OF THIS GRADING PLAN.
5. CUT/FILL.
   A. MAXIMUM CUT AND FILL SLOPES SHALL BE 2:1; UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER; AND SHALL COMPLY WITH THE RECOMMENDATIONS OF THE SOILS REPORT. FILL SLOPES SHALL NOT HAVE LESS THAN 90% RELATIVE COMPACTION OUT TO THE FINISH SURFACE.
   B. FILL MATERIAL SHALL NOT BE PLACED ON EXISTING GROUND UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, DEBRIS, TOPSOIL, VEGETATION AND OTHER DELETERIOUS MATERIAL. IF THE SLOPE RATIO EXCEEDS 5:1 AND IS GREATER THAN FIVE FEET, THE TERRAIN MUST BE KEYED AND BENCHED INTO EITHER BEDROCK OR NATIVE SOIL, AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
   C. STABILITY CALCULATIONS WITH A FACTOR-OF-SAFETY OF AT LEAST ONE AND FIVE TENTHS (1.5) SHALL BE SUBMITTED TO PUBLIC WORKS A REGISTERED CIVIL ENGINEER, SOILS ENGINEER OR GEOLOGIST FOR CUT AND FILL SLOPES OVER THIRTY FEET (30') IN VERTICAL HEIGHT.
   D. ALL GRADING SHALL BE DONE UNDER THE SUPERVISION OF A REGISTERED CIVIL ENGINEER, SOILS ENGINEER OR GEOLOGIST, WHO SHALL SUBMIT TWO SETS OF WRITTEN CERTIFICATION THAT ALL FILLS OVER ONE FOOT (1') IN DEPTH HAVE BEEN PROPERLY PLACED.
6. DRAINAGE.
   A. AS APPLICABLE, PROVIDE CONCRETE BROW DITCHES TO CONVEY 100-YEAR STORM FLOWS OR PROVIDE GRADED BERMS ALONG THE TOP OF ALL GRADED SLOPES OVER THREE FEET IN VERTICAL HEIGHT OR THAT ARE ADJACENT TO GRADED AREAS, TO DIRECT SURFACE RUNOFF AWAY FROM THE TOP OF SLOPES. ALL DRAINAGE DEVICES SHALL BE CONSTRUCTED PER THE APPROVED PLANS.
   B. EXISTING DRAINAGE COURSES SHALL CONTINUE TO FUNCTION AT ALL TIMES. NO OBSTRUCTION OF FLOOD PLAINS OR NATURAL WATER COURSES SHALL BE PERMITTED.
   C. TEMPORARY DRAINAGE SHALL BE PROVIDED UNTIL PERMANENT DRAINAGE STRUCTURES ARE INSTALLED. PROTECTIVE MEASURES SHALL BE IMPLEMENTED TO PROTECT ADJOINING AND DOWNSTREAM PROPERTIES FROM SILT DEPOSITION AND PONDING WATER DURING CONSTRUCTION/GRADING OPERATIONS.
   D. APPROVED PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING THE GRADING PROJECT.
   E. DRAINAGE EASEMENTS SHALL BE KEPT CLEAR OF ALL OBSTRUCTIONS; NO BUILDING OR WALLS SHALL BE PLACED WITHIN THE LIMITS OF EASEMENTS.
   F. THE MINIMUM GRADE FOR CONCRETE SURFACE DRAINAGE FACILITIES SHALL BE A ONE-HALF PERCENT (0.5%).
7. PROTECT CORNERS. ALL PROPERTY CORNERS SHALL BE CLEARLY DELINEATED IN THE FIELD PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION/GRADING ACTIVITY, AS DIRECTED BY THE CITY ENGINEER.
8. ROUGH GRADING INSPECTIONS PRIOR TO BUILDING PERMIT. INSPECTIONS SHALL BE REQUESTED VIA EMAIL TO THE PUBLIC WORKS INSPECTION LINE AT LDINSPECTIONS@TEMECULACA.GOV AT LEAST TWO (2) BUSINESS DAYS IN ADVANCE (PLEASE INDLUDE YOUR PERMIT # IN THE SUBJECT LINE).
   SUBMIT THE FOLLOWING:
   A. ONE (1) PAD ELEVATION CERTIFICATION (I.E., ROUGH GRADE) TO INCLUDE A STATEMENT THAT THE PAD ELEVATION COMPLIES WITH THE APPROVED GRADING PLAN. CERTIFICATION SHALL BE TO LINE, GRADE, ELEVATION AND LOCATION OF CUT/FILL SLOPES.
   B. ONE (1) PAD COMPACTION CERTIFICATION (I.E., FINAL GEOTECHNICAL/SOILS REPORT) TO INCLUDE A STATEMENT THAT THE GRADING COMPLIES WITH RECOMMENDATIONS OF THE PRELIMINARY SOILS REPORT.
9. FINAL INSPECTION PRIOR TO OCCUPANCY. REFER TO THE CITY'S ENGINEERING AND CONSTRUCTION MANUAL.
10. POST GRADING ACTIVITIES. POST GRADING ACTIVITIES SHALL INCLUDE, BUT NOT BE LIMITED TO, INSTALLING WHERE APPLICABLE: GROUNDCOVER, TREES, SHRUBS OR A COMBINATION THEREOF IN ACCORDANCE WITH THE TEMECULA MUNICIPAL CODE PRIOR TO FINAL INSPECTION. SLOPES OVER FOUR FEET (4') IN VERTICAL HEIGHT SHALL HAVE PERMANENT IRRIGATION SYSTEMS WITH BACKFLOW PREVENTION DEVICES. BACKFLOW PREVENTION DEVICES MUST COMPLY WITH THE UNIFORM PLUMBING CODE (U.P.C).
11. OTHER CONSTRUCTION NOTES. REFER TO SEPARATE NOTES FOR "PAVING," "GENERAL" AND "EROSION AND SEDIMENT CONTROL" REQUIREMENTS.





CONTRACTORS NOTE:

CONTRACTOR TO POTHOLE AND VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. UTILITY LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.

CONSTRUCTION NOTES

		UNIT	QUANITY
(4)	SAWCUT AND REMOVE EXISTING AC BERM	FT	1,579
(5)	SAWCUT AND REMOVE 1' WIDE (MIN.) OF EXISTING AC PAVEMENT AND COLD PLANE (2' MIN.) PER DETAIL ON SHEET 4	S.F.	3,332
(7)	EXISTING FIRE HYDRANT PER RCWD RW-8 TO BE RELOCATED BY RCWD	EA.	1
(9)	REMOVE EXISTING STREET SIGN	EA.	3
(10)	EXISTING TRAFFIC SIGNAL PULL BOX TO BE RELOCATED	EA.	4
(20)	EXISTING FRONTIER VAULT TO BE ADJUSTED TO GRADE BY CONTRACTOR	EA.	2
(24)	REMOVE AC PAVEMENT	S.F.	31,344
(32)	EXISTING PEDESTRIAN SIGNAL PEDESTAL TO BE REMOVED AND SALVAGED	EA.	1
(40)	RCWD TO EXTEND LATERAL AND REPLACE BLOW OFF WITH HYDRANT. PROPOSED LOCATION TO BE STAKED BY CONTRACTOR.	EA.	1
(41)	REMOVE TREE PER ARBORIST REPORT	EA.	10
(42)	TREE PRUNING AND PROTECT IN PLACE PER TREE PROTECTION DETAIL ON SHEET 4 AND REFER TO ARBORIST REPORT FOR PROTECTION SPECIFICATIONS	EA.	1
(50)	REMOVE EXISTING RAMP	EA.	1
(51)	EXISTING ABOVE GROUND TELECOMMUNICATIONS BOX TO BE RELOCATED BY CHARTER	EA.	3
(53)	EXISTING CATV PULL BOX TO BE RELOCATED BY CHARTER	EA.	2
(67)	EXISTING FRONTIER MANHOLE TO BE ADJUSTED TO GRADE BY CONTRACTOR	EA.	1
(72)	ADJUST RCWD VALVES TO GRADE BY CONTRACTOR	EA.	3
(73)	PROTECT EXISTING TREE IN PLACE PER TREE PROTECTION DETAIL ON SHEET 4 AND REFER TO ARBORIST REPORT FOR PROTECTION SPECIFICATIONS	EA.	7

LEGEND

- COLD PLANE
- REMOVE EX. AC PAVING
- EXISTING STREET LIGHT
- EXISTING TRAFFIC SIGNAL PULL BOX
- EXISTING EMWD SEWER MANHOLE (SMH)
- EXISTING RCWD F.H.
- EXISTING RCWD AV/AR
- EXISTING SIGN
- EXISTING FRONTIER MANHOLE (FRT)
- EXISTING FRONTIER VAULT
- EXISTING SCE TRANSFORMER
- CATV PULL BOX
- EXISTING TELECOMMUNICATIONS (T)
- EXISTING FRONTIER FIBER OPTIC (FO)
- EXISTING GAS (G)
- EXISTING EMWD SEWER (SS)
- EXISTING RCWD WATER (W)
- EXISTING SCE CONDUIT (E)
- PROPOSED RCWD FIRE HYDRANT
- EXISTING TREE

40' 0 40' 80' 120'
SCALE: 1"=40'

Underground Service Alert
CALL TOLL FREE 1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (CCS83), ZONE 6 BASED LOCALLY ON N.G.S. CORS STATION "ROSA, PID-DX3769. DISTANCE SHOWN HEREON ARE GROUND DISTANCES. TO OBTAIN GRID LEVEL DISTANCES, MULTIPLY DISTANCES BY 1.00008466.

PROACTIVE ENGINEERING CONSULTANTS WEST, INC.
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor					
Inspector					
Date Completed					

BENCHMARK
RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84"
ELEVATION: 1006.84'

SCALE
HORIZONTAL: AS SHOWN
VERTICAL: AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER GEORGE ALAN LENFEST No. 45920 CIVIL STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of
Date: 02/18/25
R.C.E. No. 45920 Expires 12/31/26

RECOMMENDED BY: _____ DATE: _____
AVLIN ODVIAR, PRINCIPAL CIVIL ENGINEER
ACCEPTED BY: _____ DATE: _____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER
R.C.E. No. 69156

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT, PW23-02
YNEZ ROAD STA 101+99.21 TO STA 117+61.56
DEMOLITION PLAN AND NOTES

Drawing No. C-1
SHEET 2 OF 14

Plotted: Feb 18, 2025 - 3:11pm By: dolyv
DWG: N:\01-204-000 Ynez Road Expansion\Drawings\Street Improvements\ST02-Demolition Plan.dwg

Appendix C
CalEEMod Output

Ynez Road Widening Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Ynez Road Widening
Construction Start Date	1/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	23.4
Location	33.50164468379312, -117.14695571841078
County	Riverside-South Coast
City	Temecula
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5554
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

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
Road Widening	0.30	Mile	100	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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.66	30.1	39.3	0.07	1.31	1.95	3.25	1.20	0.27	1.48	—	8,191	8,191	0.33	0.08	1.83	8,226
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.65	30.1	38.6	0.07	1.31	1.95	3.25	1.20	0.27	1.48	—	8,149	8,149	0.32	0.09	0.05	8,183
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.18	9.86	12.9	0.02	0.41	0.61	1.02	0.38	0.09	0.47	—	2,668	2,668	0.10	0.03	0.31	2,680
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.22	1.80	2.36	< 0.005	0.08	0.11	0.19	0.07	0.02	0.09	—	442	442	0.02	0.01	0.05	444

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.66	30.1	39.3	0.07	1.31	1.95	3.25	1.20	0.27	1.48	—	8,191	8,191	0.33	0.08	1.83	8,226

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.65	30.1	38.6	0.07	1.31	1.95	3.25	1.20	0.27	1.48	—	8,149	8,149	0.32	0.09	0.05	8,183
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.18	9.86	12.9	0.02	0.41	0.61	1.02	0.38	0.09	0.47	—	2,668	2,668	0.10	0.03	0.31	2,680
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.22	1.80	2.36	< 0.005	0.08	0.11	0.19	0.07	0.02	0.09	—	442	442	0.02	0.01	0.05	444

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2026) - Unmitigated

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

Location	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	0.46	4.04	4.49	0.01	0.21	—	0.21	0.20	—	0.20	—	632	632	0.03	0.01	—	634
Dust From Material Movement	—	—	—	—	—	0.21	0.21	—	0.02	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.20	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.2	31.2	< 0.005	< 0.005	—	31.3
Dust From Material Movement	—	—	—	—	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.16	5.16	< 0.005	< 0.005	—	5.18
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.41	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	95.1	95.1	< 0.005	< 0.005	0.01	96.3
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.75	4.75	< 0.005	< 0.005	0.01	4.81
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.80

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
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

3.3. Linear, Grading & Excavation (2026) - Unmitigated

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

Location	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	3.50	29.9	36.6	0.07	1.31	—	1.31	1.20	—	1.20	—	7,644	7,644	0.31	0.06	—	7,670
Dust From Material Movement	—	—	—	—	—	1.45	1.45	—	0.16	0.16	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.50	29.9	36.6	0.07	1.31	—	1.31	1.20	—	1.20	—	7,644	7,644	0.31	0.06	—	7,670
Dust From Material Movement	—	—	—	—	—	1.45	1.45	—	0.16	0.16	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.78	6.65	8.11	0.02	0.29	—	0.29	0.27	—	0.27	—	1,696	1,696	0.07	0.01	—	1,702

Dust From Material Movement	—	—	—	—	—	0.32	0.32	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.21	1.48	< 0.005	0.05	—	0.05	0.05	—	0.05	—	281	281	0.01	< 0.005	—	282
Dust From Material Movement	—	—	—	—	—	0.06	0.06	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.15	2.69	0.00	0.00	0.49	0.49	0.00	0.11	0.11	—	517	517	0.02	0.02	1.75	525
Vendor	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.1	30.1	< 0.005	< 0.005	0.08	31.6
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.16	2.04	0.00	0.00	0.49	0.49	0.00	0.11	0.11	—	476	476	0.01	0.02	0.05	481
Vendor	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.1	30.1	< 0.005	< 0.005	< 0.005	31.5
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.04	0.47	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	107	107	< 0.005	< 0.005	0.17	108
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.68	6.68	< 0.005	< 0.005	0.01	7.00
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.7	17.7	< 0.005	< 0.005	0.03	17.9
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.11	1.11	< 0.005	< 0.005	< 0.005	1.16
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

3.5. Linear, Drainage, Utilities, & Sub-Grade (2026) - Unmitigated

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

Location	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	1.79	16.0	19.7	0.04	0.62	—	0.62	0.57	—	0.57	—	4,089	4,089	0.17	0.03	—	4,103
Dust From Material Movement	—	—	—	—	—	0.62	0.62	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	2.36	2.92	0.01	0.09	—	0.09	0.08	—	0.08	—	605	605	0.02	< 0.005	—	607
Dust From Material Movement	—	—	—	—	—	0.09	0.09	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.05	0.43	0.53	< 0.005	0.02	—	0.02	0.02	—	0.02	—	100	100	< 0.005	< 0.005	—	101
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	1.80	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	345	345	0.01	0.01	1.17	350
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.21	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	47.5	47.5	< 0.005	< 0.005	0.07	48.1
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.86	7.86	< 0.005	< 0.005	0.01	7.97
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
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

3.7. Linear, Paving (2026) - Unmitigated

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

Location	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	0.81	7.53	11.7	0.02	0.30	—	0.30	0.28	—	0.28	—	1,768	1,768	0.07	0.01	—	1,774
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.56	0.86	< 0.005	0.02	—	0.02	0.02	—	0.02	—	131	131	0.01	< 0.005	—	131
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.7	21.7	< 0.005	< 0.005	—	21.7
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	1.26	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	241	241	0.01	0.01	0.82	245
Vendor	0.01	0.32	0.10	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	301	301	0.01	0.05	0.82	316
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.6	16.6	< 0.005	< 0.005	0.03	16.8

Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.3	22.3	< 0.005	< 0.005	0.03	23.3
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.75	2.75	< 0.005	< 0.005	< 0.005	2.79
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.69	3.69	< 0.005	< 0.005	< 0.005	3.86
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

4. Operations Emissions Details

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	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	1/1/2026	1/26/2026	5.00	18.0	—
Linear, Grading & Excavation	Linear, Grading & Excavation	1/27/2026	5/20/2026	5.00	81.0	—
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	5/21/2026	8/4/2026	5.00	54.0	—
Linear, Paving	Linear, Paving	8/5/2026	9/11/2026	5.00	27.0	—

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
Linear, Grubbing & Land Clearing	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grading & Excavation	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Grading & Excavation	Graders	Diesel	Average	2.00	8.00	148	0.41
Linear, Grading & Excavation	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Linear, Grading & Excavation	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Grading & Excavation	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43

Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Linear, Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Linear, Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Linear, Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Paving	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	7.50	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	0.00	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	37.5	18.5	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	1.00	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	0.00	20.0	HHDT

Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	25.0	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	0.00	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	10.0	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

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)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)

Linear, Grubbing & Land Clearing	—	—	100	0.00	—
Linear, Grading & Excavation	—	—	100	0.00	—
Linear, Drainage, Utilities, & Sub-Grade	—	—	100	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Road Widening	100	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	532	0.03	< 0.005

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	26.3	annual days of extreme heat
Extreme Precipitation	4.75	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	11.3	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	71.7
AQ-PM	28.9
AQ-DPM	71.4
Drinking Water	36.9
Lead Risk Housing	14.2
Pesticides	41.6
Toxic Releases	10.0
Traffic	74.2
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	77.2
Impaired Water Bodies	83.0
Solid Waste	0.00
Sensitive Population	—
Asthma	20.8
Cardio-vascular	72.8
Low Birth Weights	57.1
Socioeconomic Factor Indicators	—

Education	25.1
Housing	53.1
Linguistic	15.6
Poverty	46.4
Unemployment	84.6

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	69.03631464
Employed	27.87116643
Median HI	78.53201591
Education	—
Bachelor's or higher	58.29590658
High school enrollment	20.74939048
Preschool enrollment	82.06082382
Transportation	—
Auto Access	92.6344155
Active commuting	4.876170923
Social	—
2-parent households	89.38791223
Voting	70.58899012
Neighborhood	—
Alcohol availability	88.33568587
Park access	24.1498781
Retail density	13.58911844
Supermarket access	21.27550366

Tree canopy	57.47465674
Housing	—
Homeownership	85.25599897
Housing habitability	58.96317208
Low-inc homeowner severe housing cost burden	12.47273194
Low-inc renter severe housing cost burden	38.95803927
Uncrowded housing	75.52932119
Health Outcomes	—
Insured adults	49.96791993
Arthritis	8.2
Asthma ER Admissions	89.6
High Blood Pressure	12.4
Cancer (excluding skin)	13.2
Asthma	34.7
Coronary Heart Disease	17.4
Chronic Obstructive Pulmonary Disease	22.0
Diagnosed Diabetes	54.0
Life Expectancy at Birth	38.3
Cognitively Disabled	50.3
Physically Disabled	45.1
Heart Attack ER Admissions	48.9
Mental Health Not Good	50.5
Chronic Kidney Disease	35.4
Obesity	39.2
Pedestrian Injuries	19.6
Physical Health Not Good	46.9
Stroke	34.3
Health Risk Behaviors	—

Binge Drinking	38.6
Current Smoker	47.6
No Leisure Time for Physical Activity	59.9
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	83.0
Elderly	43.3
English Speaking	75.1
Foreign-born	17.5
Outdoor Workers	63.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	87.5
Traffic Density	71.0
Traffic Access	23.0
Other Indices	—
Hardship	31.1
Other Decision Support	—
2016 Voting	78.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	47.0
Healthy Places Index Score for Project Location (b)	65.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
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
Construction: Trips and VMT	Vendor trips included in paving for asphalt delivery