

Environmental Checklist Form

Project title: Hatch Road & Sullivan Road Trail	
Lead agency name and address:	City of Twentynine Palms 6136 Adobe Road Twentynine Palms, CA 92277
Contact person and phone number:	Keith Gardner, Planning Department 760-367-6799 x 1008 kgardner@29palms.org
Project location:	Located between Twentynine Palms Highway to the north and Adobe Road to the east, Twentynine Palms, CA, 92277
Project sponsor's name and address:	City of Twentynine Palms 6136 Adobe Road Twentynine Palms, CA 92277
Existing Circulation Plan designation:	Secondary Street

1. INTRODUCTION

1.1. Purpose and Need

The purpose of this Initial Study/Mitigated Negative Declaration (IS/MND) is to assess impacts resulting from the construction and operation of the Hatch & Sullivan Trail Project described below.

This document has been prepared pursuant to the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Sections 15000 et seq.). The City of Twentynine Palms will serve as the lead agency for CEQA purposes.

1.2. Project Description

The Hatch & Sullivan Trail Project (Project) is a corridor improvement project proposed on 2.15± miles of an existing transportation corridor including Hatch Road and Sullivan Road, located in the south-central region of Twentynine Palms in San Bernardino County, California.

Pursuant to the City Circulation Plan and Twentynine Palms Community Trail Master Plan, the Project proposes infrastructure development along Hatch Road and Sullivan Road to include a multimodal asphalt bike and pedestrian trail so as to accommodate two Class II bike lanes and a graded shoulder/pedestrian walkway. Existing paved roadways and walkways will be incorporated into the final design. Exhibit 5 (Project Site Plan) visually represents the street cross section with proposed and existing features. Below is a detail description of the Project's proposal for additional roadway improvements.

- *New Pavement:* Approximately 144,500 square feet of additional pavement along the south side of Hatch Road and Sullivan Road right-of-way is proposed to widen the streets to 45 feet. In most cases, approximately 14 feet of additional pavement is required to reach the proposed width. Pavement will reach a maximum depth of 30 inches.
- *Travel Lanes:* Two 11 foot wide travel lanes, each directing traffic one-way, are to be centered along the corridor.
- *Class II Bike Lanes:* Two 7 feet wide Class II bike lanes are proposed, each with a 2-foot wide painted buffer zone adjacent to the travel lanes.
- *Pedestrian Sidewalk:* A 5-foot wide graded shoulder/pedestrian sidewalk is proposed on the corridor's south side only. The path will consist of compacted soil.

The following section lists existing features that the Project will incorporate into the final design. Restriping the transportation corridor will be required to align all improvements.

- *Existing Paved Area:* Approximately 363,000 square feet of existing paved asphalt covers the site. The paved area consists of two one-way travel lanes. The paved area extends the entirety of the Project's 2.15± mile area.
- *Street Curbs:* Existing street curbs are limited within the following areas:
 - North side of Hatch Road between Twentynine Palms Highway and Manzanita Avenue.
 - South side of Hatch Road between El Sol Avenue and El Rey Avenue.
 - North side of Hatch Road between Datura Avenue and Stardune Avenue, along the Morongo Unified School District educational program facility.
 - North side of Sullivan Road near its intersection with Stardune Avenue
 - South side of Sullivan Road, immediately adjacent to the Care Haven building
 - South side of Sullivan Road between Bullion Avenue and Split Rock Avenue
 - North side of Sullivan Road, immediately adjacent to the industrial warehouse near Adobe Road
 - South side of Sullivan Road, immediately adjacent to Theater Twentynine
- *Existing Drainage:* For the majority of the Project route, adjacent to the corridor, a gradual decline on the road shoulder with a continuous soil barrier located immediately adjacent provides drainage for the streets. Additionally, the north side of Sullivan Road between Pine Avenue and Adobe Road is lined by a continuous asphalt barrier. Collectively, these features control and redirect runoff away from nearby development.
- *Pedestrian Sidewalk:* Paved sidewalks are limited within the following areas:
 - North side of Hatch Road, immediately adjacent to the Morongo Unified School District educational program facility.

- South side of Sullivan Road, immediately adjacent to the Care Haven building
- South side of Sullivan Road between Bullion Avenue and Split Rock Avenue
- South side of Sullivan Road, immediately adjacent to Theater Twentynine

Hatch Road and Sullivan Road are bound by major local corridors including Twentynine Palms Highway (SR-62) to the north and Adobe Road to the east. These streets direct traffic to Twentynine Palms “Downtown” area which is located 0.50± miles north from the Project site. The site’s proximity to the City’s commercial center provides an opportunity to serve as an outdoor recreational trail for residents and visitors. Improvements would especially serve existing development located within the site’s urban environment.

Consistent with the City’s General Plan Land Use map, the following section outlines designated land uses within the Project area. Exhibit 4 visually illustrates these land uses.

Existing Land Use Designations

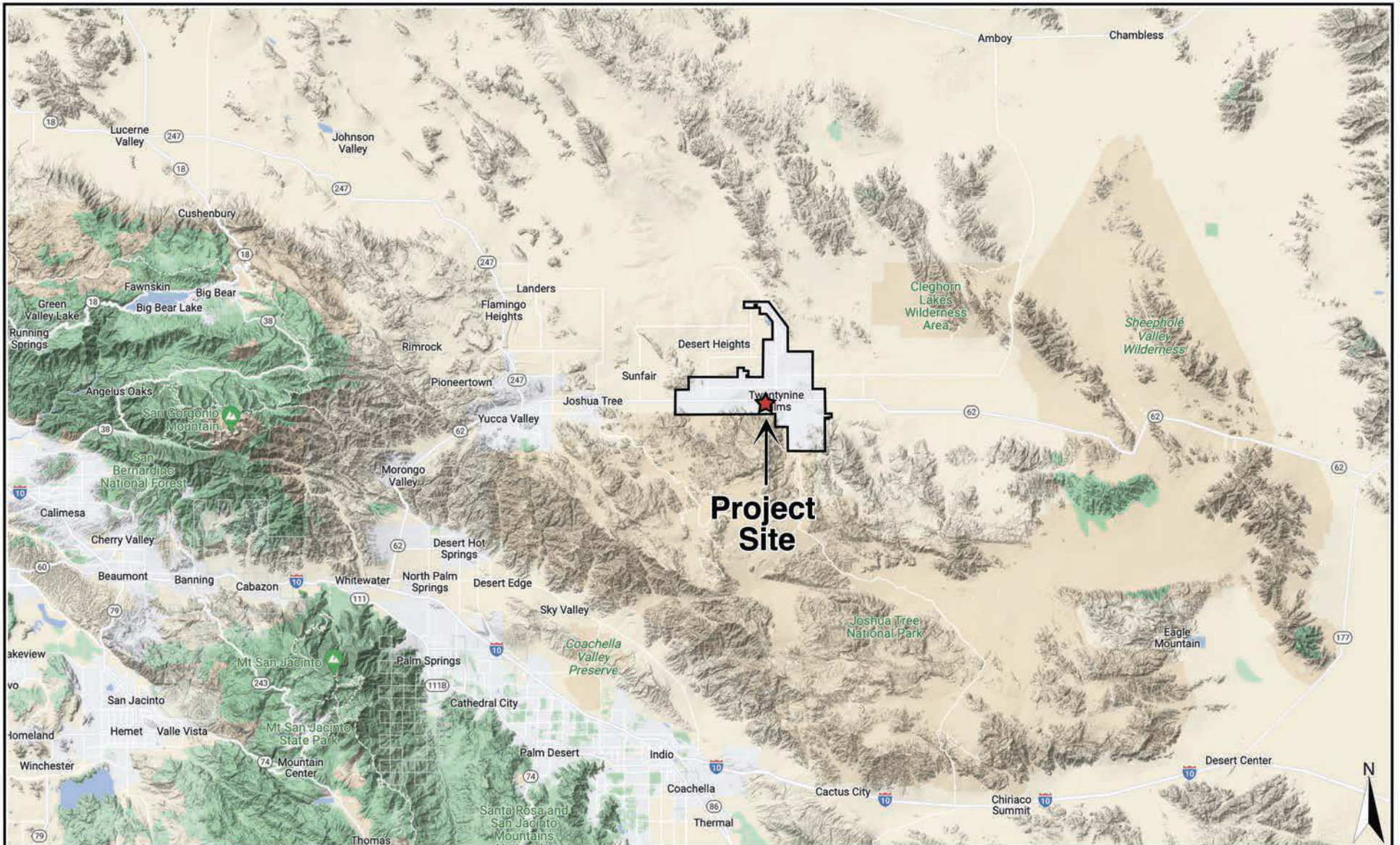
- *From Twentynine Palms Highway to Cactus Drive:* Designated for general commercial (CG) use, the area consists of single-story commercial retail stores with frontage to Twentynine Palms Highway.
- *From Cactus Drive to El Sol Avenue:* Designated for residential use (RS-4), the area consists of single-family residential units, physically divided by undeveloped parcels comprised of sandy soil and native desert vegetation.
- *From El Sol Avenue to Stardune Avenue:* Designated for mixed use, the area consists of residential (RS-4) and Public (P) use. Existing residential parcels are built at a maximum density of four dwelling units per acre. Public facilities include the Twentynine Palms Water District office building and the Morongo Unified School District educational program facility.
- *From Stardune Avenue to Bullion Avenue:* Designated for residential use (RS-4) on the north side and residential use (RS-1) on the south side, a mix of residential parcels are built at densities according to their respective designations. These parcels are divided by parcels currently undeveloped and unoccupied.
- *From Bullion Avenue and Adobe Road:* Designated for service commercial (CS) and public (P) use, the area consists of different commercial facilities including a retail store, a community service facility, and several industrial warehouses, including a warehouse with an outdoor storage space located on the northwest corner of Sullivan Road and Adobe Road. Public facilities are limited and primarily consists of Pioneer Park, which is undeveloped except for the portion of the park used by Theatre Twentynine.

The Project’s 2.15± mile site crosses these residential, public, and commercial land uses. Therefore, existing and future development within these land uses would largely benefit from proposed roadway improvements that emphasize pedestrian access to alternative

modes of transportation so as to promote recreational resources and environmental sustainability, as intended by the Twentynine Palms Community Trail Master Plan and mandated by policies under the City General Plan Circulation Element.

Other Public Agency Approvals

Funding: Caltrans



Source: Google Maps, 2024

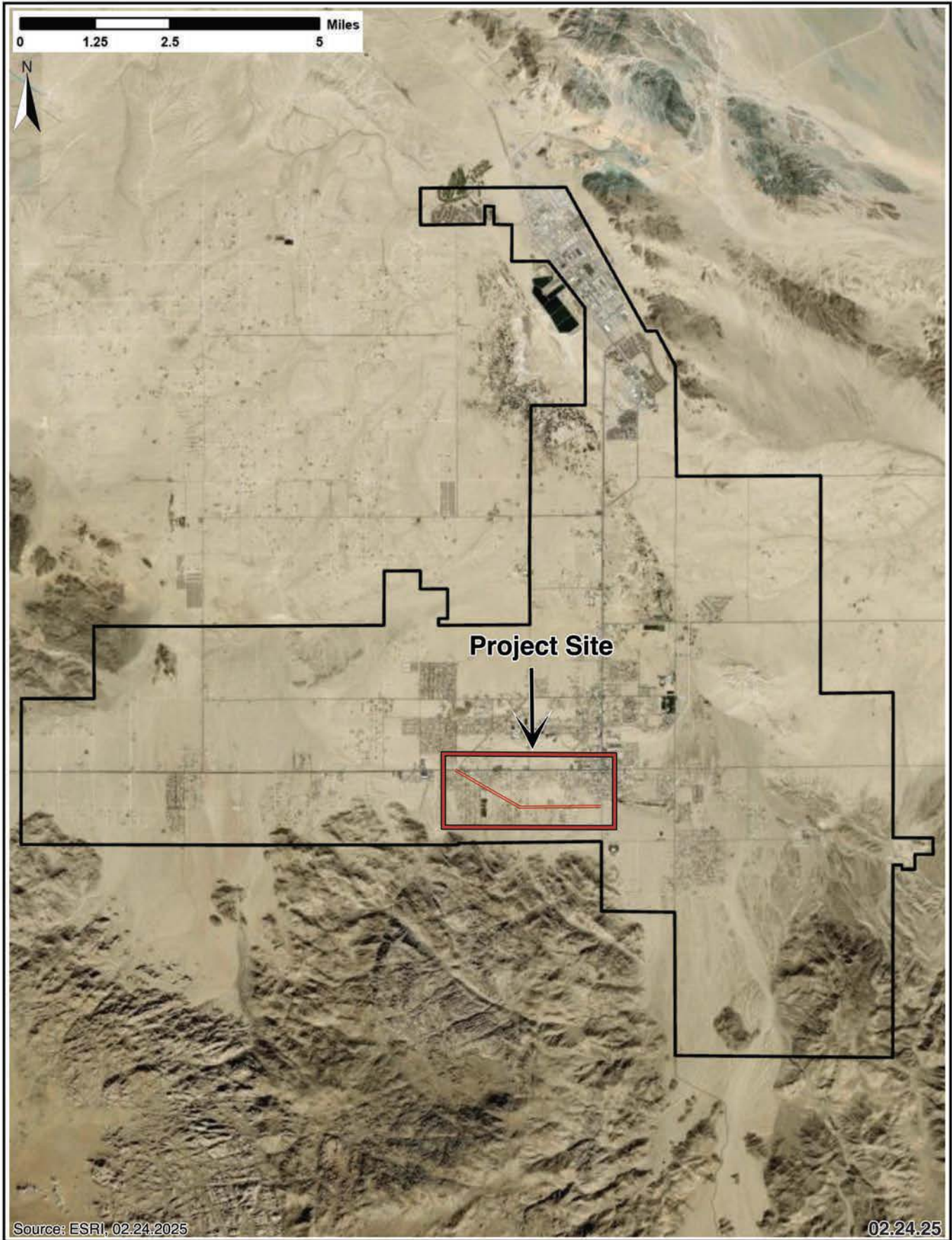
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**Regional Location Map
Twentynine Palms Trail
Twentynine Palms, California**

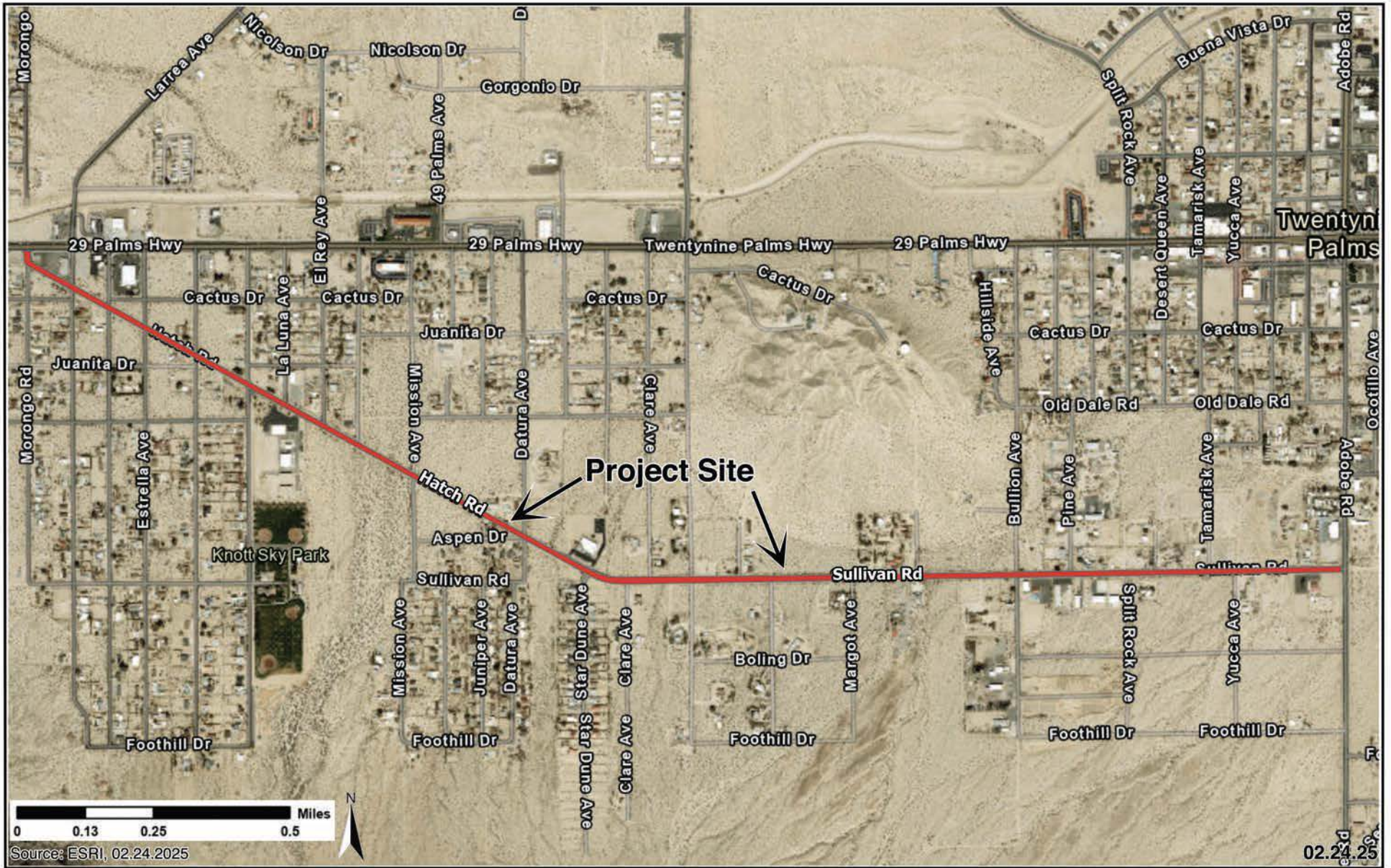
Exhibit

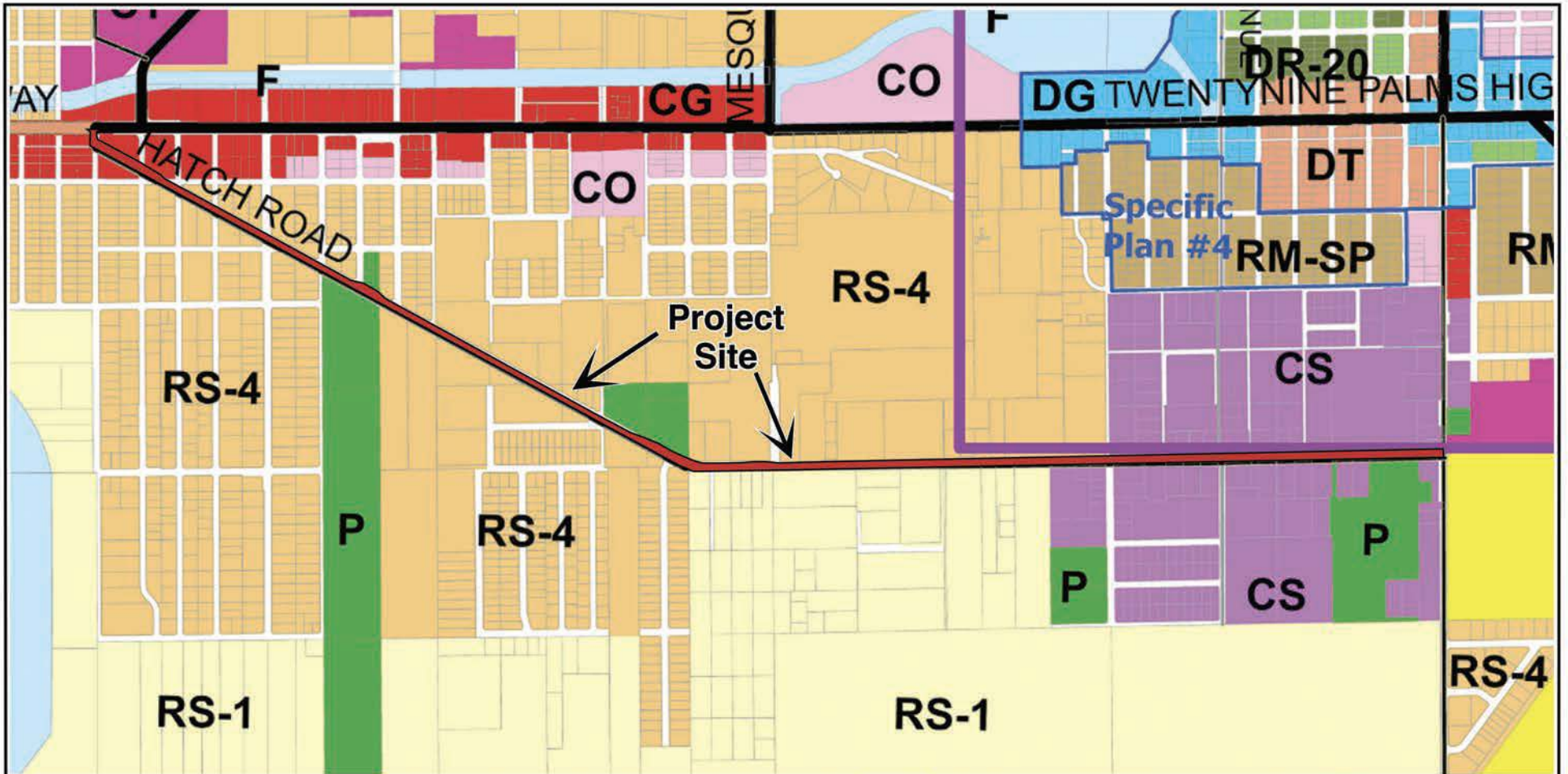
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Source: ESRI, 02.24.2025

02.24.25





- | | | | |
|---|--|---|-------------------------|
|  | Single-Family Residential - 1 du/ac (RS-1) |  | General Commercial (CG) |
|  | Single-Family Residential - 2 du/ac (RS-2) |  | Office Commercial (CO) |
|  | Single-Family Residential - 4 du/ac (RS-4) |  | Service Commercial (CS) |
|  | Multi-Family Residential Specific Plan (RM-SP) |  | Public (P) |



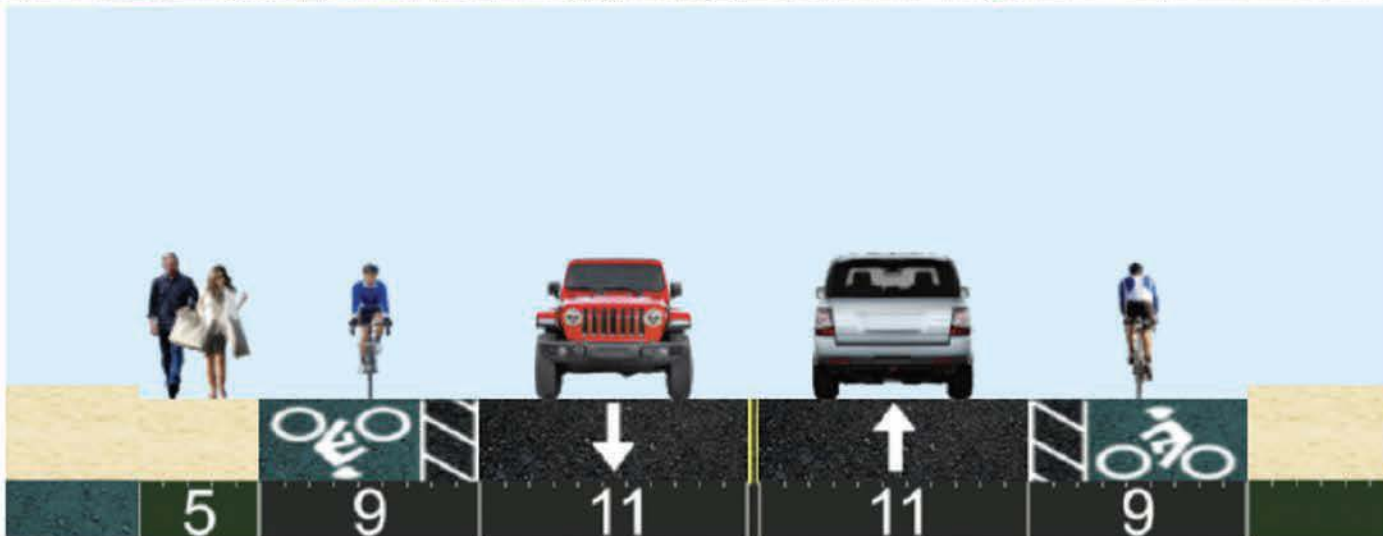
Source: City of Twentynine Palms General Plan Land Use and Zoning Map, revised 12.12.2022

02.24.25



**Land Use in the Project Vicinity
HR Green Twentynine Palms Trail
Twentynine Palms, California**

Exhibit
4



Source: HR Green, 02.2025

02.24.25

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" as indicated by the checklist on the following pages.

<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forestry Resources	<input type="checkbox"/>	Air Quality
<input type="checkbox"/>	Biological Resources	<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Energy
<input type="checkbox"/>	Geology /Soils	<input type="checkbox"/>	Greenhouse Gas Emissions	<input type="checkbox"/>	Hazards & Hazardous Materials
<input type="checkbox"/>	Hydrology / Water Quality	<input type="checkbox"/>	Land Use / Planning	<input type="checkbox"/>	Mineral Resources
<input type="checkbox"/>	Noise	<input type="checkbox"/>	Population / Housing	<input type="checkbox"/>	Public Services
<input type="checkbox"/>	Recreation	<input type="checkbox"/>	Transportation	<input type="checkbox"/>	Tribal Cultural Resources
<input type="checkbox"/>	Utilities / Service Systems	<input type="checkbox"/>	Wildfire	<input type="checkbox"/>	Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)
On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	I find that the proposed project MAY have a "potentially 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.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately 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.

Signature

Keith Elwood

Date

3/11/25

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) 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).
- 2) 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.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers 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: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than 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 XVII, "Earlier Analyses," may be cross-referenced).
- 5) Earlier analyses 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 explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In non-urbanized 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?				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

Sources: City of Twentynine Palms General Plan, April 2012; Google Earth Pro; Project Material.

Environmental Setting

The City of Twentynine Palms is a rural community, located in the high desert region to the east of the San Bernardino Mountains, north of Joshua Tree National Park in southern San Bernardino County. This area, known as the Morongo Basin, is part of the Mojave Desert Province which is generally characterized by its isolated mountain ranges separated by expansive desert plains. Twentynine Palms consists of similar features with Queen Mountain and Twentynine Palms Mountain abutting the City’s southern boundary, and Copper Mountain immediately northeast of the City limits. The planning area consists of developed and undeveloped parcels, with undeveloped parcels forming large, relatively undisturbed lots where the region’s natural landscape and native vegetation may be observed from local roadway corridors.

In Twentynine Palms, a number of natural landmarks are designated as local scenic resources including the Mesquite Dunes and Bosque, regional hillsides, and features adjacent to the Joshua Tree National Park. Man-made features are also categorized as local scenic resources such as historical and cultural murals painted on community walls and buildings throughout Twentynine Palms.

Discussion of Impacts

- a) **No Impact.** The Project will result in 2.15± miles of bike and pedestrian trails along the edge of existing roadways. No vertical structures are proposed. The proposed Project site is located within a semi-developed southern region of Twentynine Palms where parcels are zoned for residential, public, and commercial use. The

Project viewshed is dominated by development when in proximity given the location of these structures immediately adjacent to the corridor. However, beyond these areas, the Project's scenic views include natural landmarks such as views to Queen Mountain, and Twentynine Palms Mountain, which are visible within the expansive undeveloped parcels. The following section thoroughly details scenic views within the Project's 2.15± mile corridor.

From Twentynine Palms Highway to El Sol Avenue: Views are dominated by urban development including commercial retail stores along the south side of Twentynine Palms Highway, as well as single-family residential units that stretch along Hatch Road to the north and south until its intersection with El Sol Avenue. In between each residential parcel there are undeveloped parcels comprised of sandy soil and sparse desert shrubs. Although undeveloped, these parcels appear disturbed, likely due to illegal trash dumping, vehicle and pedestrian access, and/or surrounding land uses.

From El Sol Avenue to Stardune Avenue: Beyond the Twentynine Palms Water District's office building located on the southeast corner of Hatch Road and El Sol Avenue, there is desert terrain comprised of sandy soil and desert vegetation to the north and south. However, the south side also provides undisturbed views to Queen Mountain, that dominates the mid to low viewpoint. The north side consists of views to neighboring development as well as hillsides of Donnell Hill. Eastbound at the intersection of Hatch Road and Mission Avenue, the viewshed remains relatively the same only with greater visibility to residential development and undeveloped parcels.

From Stardune Avenue to Bullion Avenue: Similar views to residential development and vacant parcels are observed along the corridor, with partially obstructed views to Queen Mt. by single-story dwelling units and utility power lines that continue to the north side of Sullivan Road. At the intersection of Sullivan Road and Elm Drive, partially blocked views to Donnell Hill may be observed on the north side. Donnell Hill is covered by sandy sediment and dense desert shrub. Further eastbound towards Bullion Avenue, the viewshed is comprised of residential uses, undeveloped parcels, and utility infrastructure.

From Bullion Avenue to Adobe Road: A combination of residential and commercial development is observed immediately adjacent to the corridor. Most commercial uses include landscape to minimize the sharp contrast between the natural landscape and urban land use. Buildings located on Sullivan Road to the south, are at the forefront of the viewshed to Queen Mountain. These building partially obstruct views to Queen Mountain and in some instances, nearly obstruct views to Twentynine Palms Mountain. Visibility to the surrounding mountain range is regained in proximity to and at undeveloped parcels. Near the intersection between Sullivan Road and Adobe Road, an industrial facility with outdoor storage space bounds the site to the north and Theater Twentynine bounds the site to the south. At this point, views to the north are dominated by the commercial land use and views to the mountain range on the south are partially obstructed by the local community theater building.

The Project's scenic resource is comprised largely by the site's visibility to Queen Mountain to the south and Twentynine Palms Mountain to the southeast. However, throughout the Project's 2.15± mile area, these views are interrupted by neighboring development. Undeveloped parcels contribute to the site's viewshed but to a limited extent given their state of disturbance.

Buildout of the Project would add approximately 11.7 acres of paved area along the south side of Hatch Road and Sullivan Road, between Twentynine Palms Highway to the north and Adobe Road to the east. The additional pavement would allow for the painting of two 11 feet wide travel lanes, two 7 feet wide Class II bike lanes, and a 5-foot wide graded shoulder/pedestrian walkway. All development will occur along the corridor's south side. Besides these improvements, the Project's buildout would not include the construction of buildings or other structures which would otherwise cause a visual obstruction within the 2.15± mile area. Therefore, the Project will not cause loss to scenic vistas along the corridor. No impacts to scenic vistas are expected to occur by the Project's implementation.

- b) **No Impact.** The state of California evaluates a corridor's scenic value based on three criteria: 1) extent to which the natural landscape can be observed, 2) scenic quality of the landscape, and 3) level of disturbance by neighboring development. If and when a corridor's scenic value is assessed and the study concludes with a determination of state importance, then the local jurisdiction must apply for formal classification to the California Department of Transportation. If approved, the corridor would move from being an "eligible" highway to an "official" State Scenic Highway.

In the City boundary, only Twentynine Palms Highway is designated as an "eligible" scenic highway.¹ There is no highway within the City boundary or in proximity to the Project site currently classified as an official State Scenic Highway. Additionally, there are no trees, rock outcroppings, historical buildings, or any other landmark that may be categorized as a scenic resource at or near the Project site. Construction of the Project would not cause adverse effects to state, regional, or local scenic resources. No impacts are anticipated.

- c) **No Impact.** The Project site is not designated a land use pursuant to the City General Plan Land Use map. Rather the City Circulation Plan designates the site, including Hatch Road and Sullivan Road, as a Secondary Street. In accordance with the permitted buildout, the Project proposes widening Hatch Road and Sullivan Road to a maximum width of 45 feet to include two 11 feet wide travel lanes, two 7 feet wide bike planes, two 2 foot buffer zones, and a 5-foot wide graded shoulder/pedestrian walkway on the south side only. Buildout of the Project's roadway improvements aligns with the use of transit corridor as a Secondary Street. No vertical construction will result from the proposed Project.

¹ California State Scenic Highway System Map, California Department of Transportation, <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>, accessed February 2025.

As such, no conflicts to the City General Plan or any other policy, plan, or ordinance code aimed at conserving scenic resources would occur. No impact would occur.

- d) **No Impact.** There are existing lamp posts along the 2.15± mile corridor that shield and direct the light downward to prevent spillage to adjacent property. The Project's design does not include the installation of new streetlights. Bicycles using the corridor may have headlights, but this lighting will be minimal. Therefore, the Project would not create a new source of substantial light or glare that would adversely affect day and nighttime views in the area. No impacts would occur.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
<p>II. AGRICULTURE AND FOREST 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:</p>				
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?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
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))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
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?				X

Sources: The City of Twentynine Palms General Plan, April 2012; Farmland Mapping and Monitoring Program, California Department of Conservation; William Act Enrollment Finder, California Department of Conservation; Google Earth Pro; Project Materials.

Environmental Setting

The City of Twentynine Palms is an arid desert environment, with summer highs reaching up to 118 degrees Fahrenheit and winter lows reaching 10 degrees Fahrenheit. The average annual precipitation is 4.5 inches.² According to the California Department of Conservation, Farmland Conservancy Program, there are no State designated “prime farmland”, “farmland of local importance”, or “farmland of statewide importance” in the City planning area.³ Twentynine Palms is categorized as a “nonagricultural or natural

² City of Twentynine Palms General Plan, April 2012.

³ Farmland Mapping and Monitoring Program, California Department of Conservation, <https://maps.conservation.ca.gov/DLRP/CIFF/>, accessed January 2025.

vegetation” area, generally associated with areas that consist of natural features such as rocky areas, riparian and wetlands areas, or grassland areas which do not provide agricultural opportunities.

The City General Plan excludes agricultural, and forestry land uses from its list of permitted uses. No land or parcel within Twentynine Palms is zoned for agricultural or forestry. Agriculture is allowed but only as part of residential development.

Discussion of Impacts

a-e) No Impact.

Farmland Land Use

The City of Twentynine Palms does not include lands recognized by the State Department of Conservation as “primary farmlands”, or “farmland of importance to the state”. There are no agricultural activities occurring or allowed to occur within the City boundaries beyond that allowed in conjunction with residential development.

Buildout of the Project involves grading and paving the south side of two existing streets to accommodate a Class II bike lane and a graded shoulder/pedestrian walkway. Development would not disrupt or change the existing use of the Project site, nor would it change or be incompatible with existing land uses within the Project’s vicinity. All land uses, pursuant to the City General Plan Land Use Element, are nonagricultural and will remain nonagricultural after the Project’s construction and operation. There is no existing farmland or agricultural production occurring at the site or in its proximity. Therefore, no impacts to farmland would occur as a result of the Project’s development.

Williamson Act

According to the California Department of Conservation database on Williamson Act Enrollments, neither the site nor any parcel within proximity are subject to a Williamson Act contract.⁴ No contract would be impacted as a result from the Project’s construction and thus, no impacts would occur. ‘

Forestry Land Use

The property is currently used as a local road and buildout is expected to improve the utility of the existing roadway. As such, the Project would not convert existing forestry to non-forestry use. Additionally, there are no land use designations or timberland production activities which would be adversely affected by the Project. No impacts would occur.

Mitigation Measures: None required.

Monitoring: None required.

⁴ Williamson Act Enrollment Finder, California Department of Conservation, <https://maps.conservation.ca.gov/dlrp/WilliamsonAct/App/index.html>, accessed January 2025.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management district 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?				X
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?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?				X

Sources: City of Twentynine Palms General Plan, April 2012; MDAQMD 2020 CEQA and Federal Conformity Guidelines; MDAQMD Rule Book; CalEEMod Version 2022.1; Project Material.

Environmental Setting

The City of Twentynine Palms, including the Project site, is located within the Mojave Desert Air Basin (MDAB), part of the Mojave Desert Air Quality Management District (MDAQMD) jurisdictional area which encompasses the desert portion of San Bernardino County and the eastern end of Riverside County. The MDAQMD is an air quality monitoring agency which enforces federal, and state attainment plans for air pollutants that have been identified as posing a health and environmental risk if emitted in excess of established thresholds into the atmosphere.

The federal (NAAQS) and State (CAAQS) ambient air quality standards, together identify a total of seven air pollutants with corresponding emission thresholds to reduce the possibility of adverse impact from emissions. The following section lists each established air pollutant and related impacts.

Nitrogen Dioxide (NO₂) is a pungent gas that is directly emitted from combustion sources including motor vehicles, power plants, and off-road equipment. Exposure can result in damage to the respiratory system and intensify allergic responses.

Sulfur Dioxide (SO₂) a colorless and pungent gas emitted from coal and oil power plants, refineries, and diesel engines. It can irritate eyes, nose, and airways and cause shortness of breath.

Carbon Monoxide (CO) is a colorless, odorless gas, emitted by a variety of combustion sources including motor vehicles, power plants, wildfires, and incinerators. It interrupts the delivery of oxygen to the brain and cause dizziness, headaches, and nausea.

Particulate Matter (PM₁₀ and PM_{2.5}) is not a single pollutant but rather a mixture of chemicals and materials that vary in size, shape, and chemical composition. Given their micron dimension of 10 and 2.5, PM can be inhaled and consequently cause damage to the respiratory system and aggravate respiratory illnesses.

Ozone (O₃) is a highly reactive and unstable gas, not emitted, but rather produced in the atmosphere through a complex reaction between chemicals directly emitted from vehicles, industrial plants, consumer products and other sources. If exposed, ozone can damage the respiratory system and aggravate existing respiratory illnesses, and it also damages vegetation.

Lead is emitted from metal processing facilities, combustion of leaded fuel, and manufacturing of lead-acid batteries. Lead can damage the nervous system, kidneys, and interfere with development and reproductive systems.

Reactive Organic Gas (ROG)/Volatile Organic Compounds (VOCs) are primary pollutants that form secondary pollutants, or photochemical smog, when they react with ultraviolet sunlight in the atmosphere.

In response to these national and state air quality guidelines, the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have evaluated emission sources and the amount of emissions being introduced into the atmosphere within the MDAB. The air basin has been designated as non-attainment for PM₁₀ and ozone as shown in Table 1.

Table 1	
MDAQMD's NAAQS and CAAQS Designation for Air Quality Attainment	
Ambient Air Quality Standard	MDAQMD
Eight-hour Ozone (Federal 84 ppb (1997))	Subpart 2 Nonattainment; classified Severe-15*
Eight-hour Ozone (Federal 75 ppb (2008))	Nonattainment; classified Severe-15*
Eight-hour Ozone (Federal 70 ppb (2015))	Expected nonattainment classified Severe-15*
Ozone (State)	Nonattainment; classified (Moderate)
PM ₁₀ 24-hour (Federal)	Nonattainment; classified (Moderate)
PM _{2.5} Annual (Federal)	Unclassified/attainment
PM _{2.5} 24-hour (Federal)	Unclassified/attainment
PM _{2.5} (State)	Nonattainment**
PM ₁₀ (State)	Nonattainment
Carbon Monoxide (Federal and State)	Unclassified/attainment
Nitrogen Dioxide (Federal and State)	Unclassified/attainment
Sulfur Dioxide (Federal and State)	Attainment/unclassified
Lead (Federal and State)	Unclassifiable/attainment

Table 1	
MDAQMD's NAAQS and CAAQS Designation for Air Quality Attainment	
Ambient Air Quality Standard	MDAQMD
Particulate Sulfate (State)	Attainment
Hydrogen Sulfide (State)	Unclassified
Visibility Reducing Particles (State)	Unclassified
(*) Note: Portion of MDAQMD outside Southeast Desert Modified AQMS is unclassified/attainment	
(**) Note: Portion of MDAQMD outside of Western Mojave Desert Ozone Nonattainment Area is unclassifiable/attainment	
Source: California Environmental Quality Act and Federal Conformity Guidelines, MDAQMD, February 2020.	

Compliant with the USEPA and the Clean Air Act, the MDAQMD has drafted and implemented two regulatory air quality plans including the Federal PM₁₀ Attainment Plan of 1995 and the Ozone Attainment Plan of 2004. Additionally, MDAQMD has implemented the California Environmental Quality Act (CEQA) and Federal Conformity Guidelines (2020) establishing the regulatory standards which all proposed development within the MDAB is subject to during construction and operation so as to ensure emissions do not violate federal and state attainment plans or expose the public and environment to adverse risk. Table 2 lists each monitored pollutant and corresponding daily and annual construction and operation emissions threshold.

Table 2		
MDAQMD Significant Emission Thresholds for Construction and Operation		
Criteria Pollutant	Daily Threshold (pounds)	Annual Thresholds (short tons)
Greenhouse Gases (CO ₂ e)	548,000	100,000
Carbon Monoxide (CO)	548	100
Oxide of Nitrogen (NO _x)	137	25
Volatile Organic Compounds (VOC)	137	25
Oxides of Sulfur (SO _x)	137	25
Particulate Matter (PM ₁₀)	82	15
Particulate Matter (PM _{2.5})	65	12
Hydrogen Sulfide (H ₂ S)	54	10
Lead (Pb)	3	0.6
Source: California Environmental Quality Act and Federal Conformity Guidelines, MDAQMD, February 2020.		

A Project-specific air quality report was prepared using CalEEMod Version 2022.1 (Appendix A). CalEEMod is an emission modeling system which evaluates and estimates air pollutant emissions based on land use, project square footage, construction duration and phasing, and operational uses. The following analysis is based on the estimates calculated by CalEEMod in relation to the emission thresholds established by MDAQMD.

Discussion of Impacts

- a) **No Impact.** According to the MDAQMD CEQA and Federal Guidelines, a project may be out of conformance with applicable attainment and maintenance plans if it is inconsistent with the existing land use plan.

The Project site is not formally designated under a specific land use by the City's General Plan Land Use Map (See Exhibit LU-3), due to the site's existing use as a public roadway, part of the City's collective circulation plan. Categorization of the site may appropriately be denoted as a transportation corridor. Under the City's Circulation Plan, Hatch Road and Sullivan Road are both labeled Secondary streets which at buildout may include two or four travel lanes as well as complementary amenities such as bike lanes, pedestrian sidewalks, street parking, and utility installation. Consistent with its intended use, the Project proposes roadway improvement along the south side of Hatch Road and Sullivan Road to provide multi-modal transportation opportunities, including bike lanes and pedestrian trail, along the 2.15± mile area. After buildout, the subject site will continue to function as a transportation corridor but with additional features promoting the use of alternative transportation.

These roadway improvements are consistent with the City's intended buildout for Secondary corridors, and the City's Community Trail Master Plan that identifies Hatch Road and Sullivan Road as a multipurpose corridor for pedestrian, equestrian, and bicycle use. Under these development guidelines, the Project's proposal would be consistent with the City's intended land use and thus, comply with applicable regulatory plans enforced by MDAQMD.

MDAQMD also mandates all projects comply with applicable standards pursuant to MDAQMD's Rule Book to avoid potential violations or impediments of the District's air quality plan. In conformance with the MDAQMD Rule Book, the Project is required to obtain a construction permit by the Air Pollution Control Office according to Rule 201. Additionally, a fugitive dust control plan must be drafted and implemented at the start of the construction phase in accordance with Rule 403. At no point during construction or operation should the Project "interfere with the attainment and maintenance of Ambient Air Quality Standards" as mandated by Rule 1300. Consistent with these rules and other applicable rules, adverse effects to the efficiency of the local air quality plan in relation to the Project's implementation would be avoided to the greatest extent practical.

The Project proposal for roadway improvements on Hatch Road and Sullivan Road is consistent with the City's development plans for a Secondary street and trail accessibility as proposed by the Community Trail Master Plan. Additionally, the Project, as mandated, would be constructed in accordance with applicable rules as established in the MDAQMD's Rule Book. Under these standards, the Project would not violate or conflict with MDAQMD's air quality plan or attainment plan in relation to the construction and operation of the proposed roadway improvements. Therefore, no impacts to the local air quality plan would occur as a result of the Project's implementation.

- b) **Less Than Significant Impact.** Cumulative impacts occur when a project is in non-attainment under federal and State ambient air quality standards. As shown in Table 2, MDAQMD is in nonattainment for PM₁₀ and ozone thresholds measured by both the NAAQS and CAAQS. To further manage criteria air pollutants at non-

attainment, as well as maintain those in attainment, MDAQMD has implemented total emission thresholds for construction and operation with the air basin on a daily and annual basis. Air pollutant emissions related to the Project’s construction and operation are compared to the MDAQMD thresholds in Table 2.

The Project is anticipated to emit air pollutants during construction. However, given the nature of the development as a non-motorized roadway improvement, there are no sources of emissions that would contribute to the Project’s operational emissions. The following section is a quantitative analysis of the Project’s emissions calculated by CalEEMod Version 2022.1 for the road widening. Emission calculations are based on the additional pavement area of 144,500 sf proposed along the site’s southern shoulder.

Construction Emissions

The Project construction is estimated to start in July 2026 and occur over a duration of 6 months. Phasing will include land clearing, grading and excavation, and paving. Emissions during this time would consist of construction vehicle trips moving across the site, delivery trucks transporting construction material to and from the site, hauling and vendor trips, and workers commuting to and from the site. Table 3 summarizes maximum daily construction emissions and determines whether MDAQMD construction emission thresholds would be exceeded. As shown, the Project would not exceed MDAQMD criteria air pollutants at any point during the 6 month construction period.

Table 3						
Maximum Daily Construction-Related Emission Summary						
Construction Emissions	CO	NO_x	ROG	SO₂	PM₁₀	PM_{2.5}
Daily Maximum* (pounds/day)	40.2	30.2	3.73	0.07	5.65	1.75
MDAQMD Threshold (pounds/day)	548	137	137	137	82	65
Exceeds?	No	No	No	No	No	No
(*) Note the highest emission values occur during summer time and thus are represented here, to analyze the worst case scenario. Source: CalEEMod Version 2022.1.						

Operational Emissions

Operational emissions refer to ongoing emissions over the Project’s lifespan. These emissions come from area source emission (dust, asphalt, surface), energy demand (electricity, natural gas), and mobile sources (vehicle emissions). However, given that the Project only proposes the widening of Hatch Road and Sullivan Road to implement non-motorized multi-modal transportation, there are no permanent emission sources on-site that would contribute to the Project’s operational emissions. During operation, the Project would not emit criteria air pollutants and as such, the Project’s operation will not exceed MDAQMD criteria air pollutant at any point during its lifetime.

Cumulative Impact

The Project's emissions will only occur during the 6 month construction phase. These construction activities will generate far below MDAQMD's significance thresholds, and any potential impact will be limited given the temporary duration and one-time emissions. Once operational in 2027, the Project will not be contribute an ongoing source of emissions. As such, the Project will only emit during construction and emissions will not exceed thresholds for non-attainment pollutants. The potential for cumulative impacts to occur as a result of the Project's implementation is very low. Less than significant to air quality cumulative impacts will occur.

c) **Less Than Significant Impact.** Sensitive receptors are vulnerable groups in the community with an increased risk of contracting health problems by extensive and repeated exposure to air pollutants. Residences, schools, daycare centers, playground and medical facilities are considered sensitive receptor land uses. In response to the need to protect sensitive receptors, MDAQMD lists the following type of projects as requiring a public health assessment to evaluate potential impact to sensitive receptors within proximity.

- Any industrial project within 1,000 feet
- A distribution center (40 or more trucks per day) within 1,000 feet
- A major transportation project (50,000 or more vehicles per day) within 1000 feet
- A dry cleaner using perchloroethylene within 500 feet
- A gasoline dispensing facility within 300 feet

Development proposed by the Project does not qualify as an industrial, distribution center, dry cleaner, or gasoline facility. Although the Project involves the improvement of an existing transportation corridor, it does not qualify as a major transportation corridor, considering the Project would not increase the number of lanes available along the corridor, or the number of vehicle trips per day which travel the corridor, which is currently substantially less than 50,000 trips per day. As such, the Project will not increase the number of vehicle trips that currently access and use the site. For these reasons, the Project is not expected to cause significant impacts to sensitive receptors that are located within immediately proximity to the Project along the 2.15± mile area. Additionally, as discussed in Question (b) of this section, the Project construction emissions will not exceed MDAQMD construction thresholds and there are no operational emissions in relation to the Project's long-term use. For these reasons, sensitive receptors will not be significantly impacted by the Project. Potential impacts will be less than significant.

d) **No Impact.** Odor detection is subjective and dependent on the individual's sensitivity to smells. Land uses generally associated with odor complains include agricultural use (livestock and farming), wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, and fiberglass molding facilities. The Project does not involve, nor does it propose

the operation of any of these land uses. Temporary odors from paving may occur during construction, but will be short-term and will dissipate with distance. Therefore, the potential for the Project to create objectionable odors affecting its surroundings is very low. No impacts would occur.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
IV. 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 Game or U.S. Fish and Wildlife Service?		X		
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 Game or US Fish and Wildlife Service?		X		
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
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? (General Plan)				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
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?				X

Sources: City of Twentynine Palms General Plan, April 2012; Biological Resources Assessment Report for Twentynine Palms Hatch Sullivan Bike Path Project in Twentynine Palms, San Bernardino County, CA prepared by WSP USA, Inc., February 2025 (Appendix B).

Environmental Setting

Twentynine Palms is located in the Morongo Basin which forms the southwestern corner of the Mojave Desert Province, bound by the Basin and Range Province to the north, the Colorado Desert Province to the south, and the Transverse Ranges including the San Bernardino Mountains to the east. Characteristic of the high desert region for its elevation between 2,500 and 4,000 feet above mean sea level, the City encompasses an arid environment consisting of alluvial fans, sandy sedimentary soil, sparse desert vegetation, and mountain ranges located outside the City boundary including Copper Mountain to the

northwest, Joshua Mountain to the south, and the Twentynine Palms Mountain to the southeast. The City is located within a relatively flat desert region where urbanization has occurred gradually and is dispersed throughout the City planning area with large undeveloped parcel remaining in their natural state.

A Project-specific biological resource assessment report was prepared by WSPA USA, Inc. in February 2025 (Appendix B). The purpose of the assessment was to evaluate the subject site's value and identify whether sensitive species protected by the U.S. Department of Fish and Wildlife (USDFW), and California Department of Fish and Wildlife (CDFW), occur or have a probability to occur within the Project area.

Methods used to evaluate the site included a literature review and a biological site reconnaissance. The literature review was conducted prior to the field survey to identify the potential occurrence of sensitive species in the vicinity of the Project based on previous records. The literature search included a review of the following documents:

- California Natural Diversity Database RareFind 5 (CDFW2025a)
- Special Animals List (CDFW 2025b)
- California Native Plant Society's Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2025)
- Soil Survey Staff, Natural Resources Conservation Service from the US Department of Agriculture Web Soil Survey
- USGS 7.5' Desert Hot Springs, Seven Palms Valley, Cathedral City, and Palms Springs, California quadrangles (USGS 2021)
- USFWS IPAC Report
- Pertinent documents from the WSP Library

The Project site was assessed by vehicle and on foot by two WSP biologists on January 28th, 2025. Surveys were conducted by visually inspecting all areas of the site and adjacent accessible areas within a 160 foot buffer zone for components of sensitive species habitat and potential sign of sensitive biological resources. All applicable guideline protocols were incorporated during the field survey. The following observations were gathered during the biological reconnaissance.

Plant Species

A total of 42 plant species were identified within the study area, of which the majority (81%) were native species and the remaining (19%) were non-native and primarily used for landscaping. Most of the plant species located within the Project's graded shoulder include but are not limited to creosote bush, cheesebush, allscale saltbush, smoke tree, catclaw, bladderpod, Mexican palo verde, and Thurber's sandpaper plant. Of these plant species, none are designated special status by USDFW or CDFW.

Wildlife Species

A total of 9 species, including 8 birds and 1 mammal, were detected on the Project site. No reptile species was observed. The report concludes that the low number of observed species is a direct reflection the site's disturbance from nearby development, as well as the site's proximity to Twentynine Palms "Downtown".

Discussion of Impacts

- a-b) Less Than Significant Impact with Mitigation.** Prior to the field assessment, a literature review was conducted in which 36 sensitive biological resources were identified with a potential to occur at or within the Project's vicinity (5-mile radius). Of these, the majority do not have a probability of occurring due to the absence of suitable habitat. There is no USFWS designated critical habitat for any special status species within the Project alignment. There is designated critical habitat for the Mojave Desert tortoise, approximately 1.8 miles southeast of the site's eastern portion. However, the Project is not expected to cause direct or indirect impacts through its implementation.

Plant Species

No sensitive plants were observed during the biological survey. Of the 16 identified special status plants, only 5 have a low occurrence potential.

Insects Species

No sensitive insect species were observed on or around the Project site during the assessment. The only insect with a probability of occurrence is the Robert's rhopaloemma bee. The species is fairly rare and there is no recorded occurrence of the species in the vicinity of the Project, as such the species has been determined as absent from the Project area.

Reptile Species

No sensitive reptile species was observed with the Project's vicinity. The only two sensitive reptiles known to occur in the City's region include the red diamond rattlesnake and the Mojave Desert tortoise. Due to the site's existing disturbance level and lack of suitable habitat, the red diamond rattlesnake is highly unlikely to appear within the Project area. No desert tortoise sign such as scat, burrows, carcasses, or tracks, or individual desert tortoises were observed at or immediately adjacent to the site during the biological survey. The existing corridor shoulder was determined to have low potential for viable habitat supporting desert tortoises. However, the probability cannot be completely ruled out considering the desert tortoise is a mobile species and no physical barriers between the adjacent habitat and the site currently exist. As a result, should a tortoise come into the Project area immediately prior to Project construction, impacts could be significant. In order to mitigate this potential impact, Mitigation Measure BIO-3 is provided below, which requires the completion of a pre-construction survey to assure that the species is not present at the time of construction. In addition, Mitigation Measure BIO-1 requires that all construction personnel attend an education program prior to construction, to assure that they are aware of the species should it move onto the site during construction. With implementation of these mitigation measures, impacts to desert tortoise will be reduced to less than significant levels.

Mammal Species

None of the 5 identified sensitive mammal species potentially occurring within the Project area were observed during the field survey. Therefore, none are likely to utilize the Project area, except for the pallid San Diego pocket mouse and various

sensitive bat-species with a low occurrence probability. The Project site is developed and surrounding land uses are semi-developed and thus the level of disturbance reduces the site's value as viable habitat, including its lack of roosting habitat for special status bat species.

Bird Species

No sensitive bird species identified in the literature review as potentially occurring in the Project site area were observed during the biological assessment. Although there is potentially suitable habitat for Bendire's thrasher, there were no documented occurrences of the species within the Project's vicinity and thus, the species is determined as absent. Additionally, no burrowing owl sign including whitewash, pellets, or features, nor individual burrowing owls were observed in the vicinity of the Project. Potentially suitable habitat does occur within the undeveloped open desert lands immediately adjacent to the subject corridor. However, the open nature of the Project site and biological resources within the open lands contain low potential for burrowing owls. Although the burrowing owl is unlikely to occur at the Project site, it cannot be completely ruled out. As a result, Mitigation Measure BIO-2 is provided below, requiring the completion of pre-construction surveys to assure that the species is not present on-site. With implementation of this mitigation measure, impacts to burrowing owl will be reduced to less than significant levels.

Migratory Bird Species

All native birds observed or with a probability to occur within the Project area are protected under the Migratory Birds Treaty Act (MBTA). As such, existing nesting birds and unhatched eggs or juvenile birds may be adversely impacted by any ground disturbance and vegetation removal during the Project's construction. This would represent a potential impact which requires mitigation. As a result, Mitigation Measure BIO-4 requires the completion of a pre-construction nesting bird survey prior to the initiation of construction. With implementation of this mitigation measure, impacts to migratory birds would be reduced to less than significant levels.

Summary

Although the Project is not anticipated to adversely harm any sensitive species, the potential for the Mojave Desert tortoise and the burrowing owl occurring on-site cannot be completely ruled out. The desert tortoise is a listed "threatened" species under the federal Endangered Species Act (USESA) and an eligible species for classification under the California Endangered Species Act (CESA). The burrowing owl is a protected species under the federal MBTA and a candidate species for listing under the CESA. Given the two species' sensitivity and respective protection status, Mitigation Measure BIO-1 must be implemented to ensure all construction workers operating equipment within the Project site adequately minimize potential impacts in the event either of the two species are observed. Additionally, clearance surveys will be performed prior to any construction activities to ensure no sensitive species is located within proximity to the site, pursuant to Mitigation Measure BIO-2 and BIO-3. Additionally, Mitigation

Measure BIO-4 address the probability for adverse impacts to migratory bird species in compliance with the MBTA.

- c) **No Impact.** No drainage features under the jurisdiction of the US Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), or California Department of Fish and Wildlife were observed during the Project-site field assessment. As such, the Project would not adversely affect a water feature subject to federal and state regulation. No impact from the Project's implementation would affect any jurisdictional waters.
- d) **No Impact.** Within the City planning area there are multiple wildlife linkage corridors, primarily encompassing the City's undeveloped western region. The Project site is located near the City's south-central region and is not identified as within or in proximity to a linkage corridor as shown by Exhibit CO-3 (Special Status Biological Resources) in the City Updated 2012 General Plan. In addition, the property lacks suitable ecological habitat as discussed in Question (a) and (b), as well as its level of disturbance from nearby development reduces the site's probability to operate as a linkage corridor. The Project is therefore not expected to disrupt migratory patterns for wildlife within Twentynine Palms. No impacts are anticipated.
- e-f) **No Impact.** The Project would be required to comply with all applicable conservation policies as outlined in the City General Plan, West Mojave Plan, and federal and state policies. No conflicts to regulatory policies and conservation plans would occur by the Project's implementation and thus, no impacts would occur.

Mitigation Measures:

- BIO-1** A Worker Environmental Awareness Program (WEAP) shall be completed and established prior to any construction activities. The purpose of this training is to inform the construction crews of the importance of avoiding sensitive natural resources and the penalties associated with direct impacts during construction. The training will provide a hand-out with photographs of the special status species, the key characteristics on how to identify them, and how to report any sightings.
- BIO-2** Two pre-construction burrowing owl surveys shall be performed in accordance with CDFW guidelines. The first survey shall take place 14 to 30 days prior to ground disturbance, and the second survey within 24-hours of any ground-breaking activities. The survey area shall include all suitable habitat within the Project route, plus the proposed construction staging site and a 500-foot buffer area where accessible. The second survey is typically completed the morning prior to completing the WEAP training as established in Mitigation Measure BIO-1.
- BIO-3** One pre-construction desert tortoise survey shall be required immediately prior to any ground disturbance or vegetation removal. The desert tortoise clearance survey can be completed in parallel with the burrowing owl pre-

construction surveys. Installation of a perimeter fence will also be required to identify the limits of construction to minimize the project impact footprint to the smallest extent feasible.

BIO-4 A nesting bird survey shall be required if vegetation removal or grading or other site disturbance is scheduled to occur between February 1 and August 31. A qualified biologist shall conduct at least one nesting bird survey and more if deemed necessary by the consulting biologist, ending no more than 3 days prior to grading. All vegetation and suitable nesting habitat including open ground on the project site, whether or not it will be removed or disturbed, shall be surveyed for nesting birds. If active nests are found on the site, they will be avoided until after the young have fledged. If there are no nests present, ground disturbance activities can move forward.

Monitoring: Project biologist and City Planning Department share monitoring responsibility.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?			X	

Source: Twentynine Palms General Plan, April 2012; Historical/Archeological Resource Survey Report for Hatch Road-Sullivan Road Bike Land and Side Path Project prepared by CRM TECH, March 2025 (Appendix C).

Environmental Setting

In March 2025, a historical and archeological resource survey report was prepared by CRM Tech to evaluate the historical and cultural sensitivity of the subject site (Appendix C). The assessment included a Sacred Lands File search with the State of California Native American Heritage Commission (NAHC), contact with pertinent local Native Americans representatives, historical background research, and a systematic field survey conducted by a CRM Tech qualified archeologist. The following discussion is based on the report's findings.

Prehistoric Context

Five (5) historical periods were identified as having cultural significance and prevalence in the area, which include:

1. Lake Mojave Period from 8000 to 5500 BC
2. Pinto Period from 5500 to 2500 BC
3. Newberry Period from 1500 BC to 500 AD
4. Saratoga Period from 500 to 1200 AD
5. Tecopa Period from 1200 to 1770s AD

Each period is defined by the type of artifacts used. The Lake Mojave Period saw the use of Great Basin stemmed points and flaked stone crescents for hunting and gathering. Further reliance on ground foods, small and large animals, and the collection of vegetal resources during the Pinto Period yielded tools including Pinto points and *Olivella* sp. spire-lopped beads. Typical artifacts from the Newberry Period included Elko and Gypsum stem point and split oval beads. The Saratoga Period saw the use of Rose Spring and Eastgate points, and Anasazi grayware pottery. Lastly, tools used during the Tecopa Period included desert side-notched and cottonwood triangular points, buffware and brownware pottery, and beads of the thin lipped, tiny saucer, cupped, cylinder steatite, and glass type.

Historical Context

Non-Native American settlement in Twentynine Palms started later than other regions due to its harsh and extreme environment. Settlement gradually began once prospectors seeking gold traveled to the region and occupied nearby areas, the most notable being the Dirty Sock Camp. Not much subsequent development occurred in the region until after 1918 (post-World War I) when Dr. James B. Luckie established a retreat for veterans suffering from long-term effects from exposure to mustard gas. In 1952, the U.S. Defense Department established a marine base north of the City for glider training, known today as the U.S. Marine Corps Air Ground Combat Center (MCAGCC) located towards the City’s northern most region.

The City of Twentynine Palms became an incorporated city in San Bernardino County on March 23rd, 1987.

Cultural and Historical Sensitivity

Historical and archeological research concluded that no cultural resource study had been previously conducted on the Project site. However, records show and identify 50 cultural resources within a 1-mile radius from the Project site, of which 42 resources are historical/archeological sites and 8 resources are isolates consisting of fewer than three artifacts. Additionally, a Phase I assessment prepared by CRM Tech on a 20-acre tract including the proposed staging area also identify 6 cultural sites and 2 isolates near the staging area. From these 48 sites and 10 isolates, 6 sites are pending official classification and 8 isolates date to prehistoric and protohistoric eras. The other 42 sites and the 2 isolates date to historical periods and mainly consist of commercial and residential buildings, as well as structural remains, refuse deposits, a road (Twentynine Palms Highway), and a Native American cemetery.

The only culturally significant resources occurring in proximity to the Project site include the Oasis of Mara habitation site and the segment of Twentynine Palms Highway, as shown in Table 4.

Table 4			
Previously Recorded Cultural Resources Adjacent to the Project Site			
Resource ID	Trinomial	Date Recorded	Description
36-002052	CA-SBR-2052	Various from 1938 to 2014	Oasis of Mara, dates to prehistoric and protohistoric habitation area for its use by local tribes including the Serrano and Chemehuevi.
36-010525	CA-SBR-10525	2015	Twentynine Palms Highway (State Route 62) known for the occurrence of 6 other historical and archeological resources.
Source: Historical/Archeological Resource Study Report for Hatch Road-Sullivan Road Bike Lane and Side Path Project prepared by CRM Tech, March 2025.			

The Oasis of Mara lies immediately to the east of the Project eastern boundary at Adobe Road. Some maps include the west side of Adobe Road and part of the Project eastern portion as part of the culturally significant region. Site 36-002052 is however centered on the Oasis of Mara as designated by California Department of Historical Interest (CDHI), and located 2,942± feet from the Project's nearest point. The site also encompasses six other culturally significant resources including a locally well-known Chemehuevi Cemetery. The cemetery identified as a culturally significant area by the CDHI (Site 36-004199) was reported to contain 12 Native American burials in 1974 and 1980, which increased to up to 50 burials in later studies and which includes unmarked sites extending beyond the cemetery site as indicated by the San Manual Band of Mission Indians. The culturally significant site is located less than 200 feet to the northeast from the Project's eastern boundary.

Twentynine Palms Highway lies adjacent to the Project site to the north. The regional corridor is culturally significant for its trajectory through the general course of a mid-19th century trail and, later wagon road. Differences in the degrees of improvement have occurred along Twentynine Palms Highway, with most appearing within proximity to the Project and the City's downtown area in 1970 with the widening of the corridor to accommodate five lanes, as well as curbs and sidewalks.

The following section addresses the Project's likelihood for cultural and historical impact based on results from CRM Tech historical background research and field survey.

Discussion of Impacts

a-b) Less Than Significant Impact with Mitigation. As codified in Title 14, Section 15064.5 of the State Code of Regulations, a "historical resource" is defined as a site or artifact which satisfies at least one of the following three criteria:

- (1) A resource listed in, or determined to eligible by the State of Historical Resource Commission for listing in the California Register of Historical Resources
- (2) A resource included in a local register of historical resources
- (3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California

Historic Resources

The historical background research discovered a land survey conducted by the U.S. government which noted a man-made trail running east-west through the City of Twentynine Palms and crossing the Project site route and near present-day intersections including Hatch Road, Datura Avenue, and Aspen Drive. Beyond this, no other man-made feature was detected within the Project area.

Research also noted the presence of two buildings in the proposed construction staging area in 1970. Between 1977 and 1983, these structures were demolished, and all other associated features were subsequently removed, apart from the building's concrete foundation (Site 3644-6H). Although the site was temporarily designated as a historical resource, the final determination deemed the site not eligible for listing in the California Register of Historical Resources. Therefore, under State regulatory code, Site 3644-6H does not constitute a historical resource.

Additionally, the segment of Twentynine Palms Highway that intersects Hatch Road and continues eastbound through the City's downtown area has undergone significant modifications/improvements since 1970 and its current physical character does not contribute to the historical significance attributed to Site 36-010525. In addition, the Project's development plan does not include the segment of Twentynine Palms Highway immediately adjacent to Hatch Road and thus, the Project would not further alter the corridor's characteristics. Under these conditions, Site 36-010525 will not be adversely impacted by the Project's implementation.

Archaeological Resources

The site's proximity to the Oasis of Mara (Site 36-002052), known to hold unique archeological value and thus eligible for listing in the California Register of Historical Resources, places the Project less than a mile from a potential cultural resource. Although no archeological features or artifacts associated with Site 36-002052 have been found within the Project's boundaries, past discoveries in similar settings (unpaved dirt shoulders) and input from local Native American tribes with ties to the area suggest the easternmost portion of the Project route is a highly sensitive area for cultural resources. Further information on potential historical resources within or in proximity to the Project eastern boundary was requested from local tribes, in particular the Chemehuevi Indian Tribe and the San Manual Band of Mission Indians. Their response expressed no concern with ground disturbance related to the Project's construction. The Twentynine Palms Band of Mission also responded to the request for further comment by pointing out that the Oasis of Mara was the creation area in tribal legends. Apart from this, no comment was provided in regard to potential archeological sites or artifacts within the Project site. As such, the Project's development is unlikely to damage or cause the loss of historical resources in connection to Site 36-002052.

Although potential impacts to historical and archeological resources within a 1-mile radius from the Project's route are marginal, the Project-specific historical and archeological resource study recommended that any earthwork performed on the site's eastern boundary be monitored. In addition, Tribal consultation resulted in a request from the Agua Caliente Band of Cahuilla Indians that, pursuant to Mitigation Measure CUL-1, monitoring be required of earth moving activities. In compliance with the mitigation measure, the Project would reduce the probability of causing any adverse effects to historical resources and archeological sites to below a significant level.

- c) **Less Than Significant Impact.** As clarified by Native American tribes local to the area now encompassed by the City of Twentynine Palms, the Project site is located within a highly sensitive area for cultural resources in connection to the Oasis of Mara, known to consist of six other historical resources including Site 36-004199, noted as a Chemehuevi Cemetery. A recent study in 2020 indicates a much larger number of burial sites, with up to 50 burials currently present in the area and numerous unmarked burials potentially located beyond the cemetery's perimeter. Although located within an area well documented for its use as a cemetery, none of the local tribes consulted for further information commented on potential burial sites within the property's boundaries. As such, the Project has a low probability of disturbing human remains.

Nonetheless, in the case that human remains are found, State law requires that all construction activities cease immediately and the County's Coroner be notified of the findings. The Coroner will make the final determination of the remains' significance and whether Native American tribes should be contacted. Pursuant to state requirements of law, potential impacts to human remains by the Project would be reduced to less than significant levels. No mitigation is therefore required.

Mitigation Measures:

- CUL-1** Any earth-moving operations shall be monitored by qualified archeologist(s) and Native American representatives from the local tribes. These monitoring agencies will be given power to immediately halt or divert construction activities if a potential resource is uncovered during construction. The archeologist will evaluate and adequately judge the nature and significance of the findings, and make recommendations for removal, curation or other measures as appropriate in the field

Monitoring: The Project archaeologist, City Planning Department, and local Tribes share monitoring responsibility.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
VI. 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?				X
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X

Source: Twentynine Palms General Plan, April 2012; About Us, Southern California Edison, accessed February 2025; 2022 Power Content Table, Southern California Edison, accessed February 2025; Gas Transmission Pipelines Map, Southern California Gas Company, accessed February 2025; The Carl Moyer Program Guidelines, California Environmental Protection Agency Air Resources Board, approved April 2017; CalEEMod 2022.1; Project Material.

Environmental Setting

Energy providers for the City of Twentynine Palms consist of Southern California Edison (SCE) which supplies electricity, and Southern California Gas Company (SCG) which supplies natural gas.

Southern California Edison is one of the largest energy providers in the State, encompassing 50,000± square miles of coastal, central, and southern California and providing services to 15 million people.⁵ Electricity produced and serviced by SCE originates from a variety of sources including non-renewables such as coal, natural gas, and nuclear, as well as renewables such as solar, wind, geothermal, biomass and biowaste, and hydroelectric.⁶ SCE’s energy mix is expected to include more renewable resources as required by Senate Bill 100 (SB 100) which mandates utility providers to incorporate renewable energy with the goal of supplying 100 percent of electrical retail services with zero-carbon emissions by the year 2045. As such, SCE adopted the Pathway to 2045 which is an action plan outlining the company’s transition to renewable energy in the most cost-effective and feasible manner.

Southern California Gas is the largest natural gas provider in the region, encompassing 24,000± square miles of central and southern California with a service population of 21.1 million people. Natural gas distributed by SCE is produced in Texas or New Mexico and transferred through a network of high pressure distribution and transmission lines. In Twentynine Palms, the SCG network consists of a high pressure distribution line that travels north-south from the City’s central portion to Twentynine Palms Highway, where it underlies the highway to the south side. A transmission line is located north of Twentynine Palms Highway.⁷ Consistent with SB 100, SCG implemented the ASPIRE

⁵ About Us, Southern California Edison, <https://www.sce.com/about-us>, accessed February 2025.

⁶ 2022 Power Content Table, Southern California Edison, accessed February 2025.

⁷ Gas Transmission Pipeline Map, San Bernardino County, Southern California Gas Company, <https://www.socalgas.com/sustainability/pipeline-and-storage-safety/natural-gas-pipeline-map>, accessed February 2025.

2045: Our Sustainability Strategy to outline methods and practices the company would be gradually incorporating so as to ensure they meet the zero-carbon emission goal by 2045.

The proposed Project is located within SCE and SCG service areas. However, considering the nature of the development as a non-motorized corridor improvement project for Hatch Road and Sullivan Road, energy usage by the Project is limited.

Discussion of Impacts

- a) **No Impact.** The Project proposes the addition of 144,500 sf of paved area along the south shoulder of Hatch Road and Sullivan Road to widen the existing roadway and allow for the use of two Class II bike lanes on both sides and a graded shoulder/pedestrian walkway on the south side only. Apart from these improvements, the Project does not propose new utility connections such as streetlighting. Therefore, energy usage by the Project will be limited to construction use. The following section analyses the energy consumption demand during construction and determines whether energy use would result in environmental impact due to wasteful, inefficient, or unnecessary consumption.

Construction Usage

The Project’s construction will include land clearing, grading and excavation, and paving. These construction phases are estimated to occur over a 6-month construction period. During which time, source of energy use would be attributed primarily to the use of heavy construction equipment and vehicles for commuting to and from work.

Table 5 lists the type of construction equipment likely to be used on-site during each phase of development and calculates the equipment’s fuel consumption based on multiple factors including construction duration, construction equipment schedule, equipment power rating, and load factors programmed in CalEEMod (Appendix A). The aggregate fuel consumption rate for all equipment is estimated at 18.5 horsepower hours per gallon, per the California Air Resources Board’s (CARB’s) Carl Moyer Program Guidelines, Table D-12 Fuel Consumption Rate Factor.⁸ CalEEMod assumes all equipment is diesel powered. The Project construction activities would consume an estimate 16,392 gallons of diesel fuel.

Table 5 Construction Equipment Diesel Fuel Consumption Demand								
Phase	Duration (days)	Equipment	HR Rating	Qty	Usage Hours	Load Factor	HP-hrs/day	Fuel Consumption
Grubbing & Land Clearing	15	Signal Boards	6	4	8	0.82	157	128
	15	Crawler Tractors	87	1	8	0.43	299	243
	15	Excavators	36	2	8	0.38	219	177

⁸ The Carl Moyer Program Guidelines, California Environmental Protection Agency Air Resources Board, https://ww2.arb.ca.gov/sites/default/files/2020-06/2017_cmpgl.pdf, approved April 2017.

Table 5 Construction Equipment Diesel Fuel Consumption Demand								
Phase	Duration (days)	Equipment	HR Rating	Qty	Usage Hours	Load Factor	HP-hrs/day	Fuel Consumption
Grading & Excavation	20	Excavators	36	3	8	0.38	328	355
	20	Crawler Tractors	87	1	8	0.43	299	324
	20	Graders	148	2	8	0.41	971	1,050
	20	Rollers	36	2	8	0.38	219	237
	20	Signal Boards	6	4	8	0.82	157	170
	20	Tractors/Loaders/Back Hoes	84	4	8	0.37	995	1,075
	20	Rubber Tired Loaders	150	1	8	0.36	432	467
	20	Scrapers	423	2	8	0.48	3,249	3,512
Paving	97	Rollers	36	2	8	0.38	219	1,148
	97	Paving Equipment	89	1	8	0.36	256	1,344
	97	Pavers	81	1	8	0.42	272.16	1,427
	97	Tractors/Loaders/Back Hoes	84	3	8	0.37	745.92	3,911
	97	Signal Boards	6	4	8	0.82	157.44	825
Total (gallons)								16,392

Source: CalEEMod Version 2022.1.

Table 6 provides an overview of fuel consumption as it relates to construction workers commute to and from the site. Estimates are based on trip type (worker, hauling, and vendor), construction duration, rate of daily worker trips, and trip length as modeled by CalEEMod. For purpose of this analysis, it may be assumed that worker trips are by car, hauling trips are by Class 8 truck, and vendor trips are delivery trucks. The average vehicle fuel economy estimate for each trip type was derived from the U.S. Department of Energy Alternatives Fuels Data Center. As shown, the total worker vehicle fuel consumption for the Project's buildout over a 6 month period is estimated to be 4,076 gallons of fuel.

Table 6 Construction Worker Diesel Fuel Consumption Demand							
Phase	Duration (days)	Trip Type	Worker Trips/Day	Trip Length (miles)	VMT	Avg. Fuel Economy (mpg)	Fuel Consumption (gallons)
Grubbing & Land Clearing	15	Worker	17.5	18.5	4,856.3	24.4	199
Grading & Excavation	20	Worker	47.5	18.5	17,575.0	24.4	720
	20	Vendor	1	10.2	204.0	7.7	26
Paving	97	Worker	27.5	18.5	49,348.8	24.4	2,022
	97	Vendor	8.62	10.2	8,528.6	7.7	1,108
Total (gallons)							4,076

Source: CalEEMod Version 2022.1.

In total, the Project construction phase would generate a fuel demand of 20,468 gallons during the 6 month construction period. This fuel consumption will occur once and stop when construction has been completed. Energy use would not

qualify as a source of excessive and wasteful energy use given the State's mandates requiring construction firms to phase out old and fuel intensive construction equipment with new, energy efficient equipment. Any energy use would be minimized by the Project's compliance with state Low Carbon Fuel Standards which are regulatory standards designed to improve transportation fuel efficiency and achieve environmental benefits such as lowering carbon fuel emissions and improving air quality. Compliance with these standards ensure fuel consumption during the Project's construction does not result in adverse effects to the environment. Any potential impacts will be limited and cease after the 6 month construction period has ended.

Operational Usage

At operation, the Project site will operate as a paved roadway with improvements including two Class II bike lanes and a southern pedestrian trail. None of these design features require a source of energy to operate. Also, the Project does not propose the installation of more street lighting beyond the existing lampposts that currently provide lighting along the corridor for safety and visibility. On a similar note, the Project's operation would not introduce a new source of natural gas consumption. Nor is there an existing source in relation to the Project's operation. Use of the site will not require any source of energy to operate as intended and thus, the Project will not contribute to any impacts related to the wasteful and unnecessary use of electricity or natural gas. No impacts would occur over the duration of the Project's operation.

Summary

The Project would have a minimal temporary impact on energy use during construction. Beyond the construction phase, the Project would not generate any energy consumption for electricity or natural gas. As such, Project impacts as it relates to energy use will be limited and cease after the 6 month construction period. No significant impacts to the environment by excessive energy use would occur in connection to the Project's implementation.

- b) **No Impact.** As discussed above, the Project is not an energy dependent type of development. Apart from its temporary energy use through diesel powered construction equipment, which will operate in conformance with the state energy efficient standards for construction equipment and fuel efficient rates, the operation of a roadway is not subject to renewable energy or energy efficiency standards. For this reason, the Project would not conflict with or violate the California Energy Efficiency Strategic Plan or Twentynine Palms Municipal Code on energy conservation. No impact would occur.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
VII. 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?				X
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
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?				X
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?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X

Sources: City of Twentynine Palms General Plan, April 2012; California Geological Survey Investigation Reports, California Department of Conservation, accessed February 2025; Southern California Earthquake Data Center, accessed February 2025; Google Earth Pro; Project Material.

Environmental Setting

Located in the central region of the Mojave Desert Province, the City of Twentynine Palms is characterized by loose sandy soil, sparse desert vegetation, dry washes, and extensive desert plains. The surrounding mountain ranges are part of Transverse Range, including Queen Mountain to southwest and Twentynine Palms Mountain to the southeast, and

Hidalgo Mountain to the north. The City planning area is primarily comprised of older alluvium sediment at depth, and young unconsolidated and semi-consolidated alluvium nearer the surface.⁹

Like most of southern California, Twentynine Palms is in an active fault zone, with two (2) fault lines transversing through the City planning area: the Pinto Mountain Fault Zone and the Mesquite Lake Fault Zone,¹⁰ and others located near the City boundary including Copper Mountain Fault, Hidalgo Fault, and the West and East Valley Mountain Fault.

Strong Ground Shaking

The Pinto Mountain Fault is a left-lateral strike-slip fault¹¹, meaning the two sedimentary rock plates are sliding at a vertical axis with the right sediment falling below the left. The Pinto Fault crosses the City from southwest to southeast, in proximity to the Twentynine Palms Downtown area.¹² The fault is considered as having a potential to cause significant adverse impact if it generates a 7.2 magnitude earthquake. At such a scale, the Pinto Mountain is ranked at a Class XI to Class X on the Modified Mercalli Intensity (MII) scale which measures seismic intensity based on twelve (12) damage levels. At a level of XI-X, the Pinto Mountain Fault is considered to produce an average peak acceleration above a 1.24 g (gravity), causing structural damage to wooden built structures, most masonry and frame structures, and damage to roads. Potential damage is categorized as very high.

The Mesquite Lake Fault is a right-lateral strike-slip fault¹³ which indicates the fault is shifting horizontally causing a misalignment between the two plates. The Mesquite Lake Fault crosses the City from the northeast to the southeast, crossing largely undeveloped open desert land.¹⁴ Although not located within immediate proximity to development, the Mesquite Lake Fault can cause the greatest damage from seismically induced ground shaking. If generating a maximum 7.3 magnitude earthquake, then the fault would cause infrastructure damage to utility connections, roadways and cause soil slips and thus be classified a Class IX to XI MII.

In regard to the San Andres Fault, Twentynine Palms is located at a distance where earthquakes from the fault zone would not cause substantial damage. Other regional faults located in proximity to the planning area include those listed in Table 7.

⁹ Geologic Map of California Map, California Department of Conservation, <https://maps.conservation.ca.gov/cgs/gmc/>, accessed February 2025.

¹⁰ California Geological Survey Investigation Reports, California Department of Conservation, <https://maps.conservation.ca.gov/cgs/informationwarehouse/apereports/>, accessed February 2025.

¹¹ Pinto Mountain Fault, Southern California Earthquake Data Center, <https://scedc.caltech.edu/earthquake/pintomountain.html>, accessed February 2025.

¹² Exhibit SF-1: Seismic Hazards in Twentynine Palms, City of Twentynine Palms General Plan, updated April 2012.

¹³ Mesquite Lake Fault, Southern California Earthquake Data Center, <https://scedc.caltech.edu/earthquake/mesquitelake.html>, accessed February 2025.

¹⁴ Exhibit SF-1: Seismic Hazards in Twentynine Palms, City of Twentynine Palms General Plan, updated April 2012.

Fault Name	Distance from Twentynine Palms (miles)
Copper Mountain Fault	2.5-12.5
West Calico Fault	16-25
West Bullion Mountain Fault	12.8-23.9

Source: City of Twentynine Palms General Plan, Safety Element, updated April 2012.

Liquefaction Susceptibility

There are two (2) identified liquefaction zones within the City planning area. One is located at the City’s northern portion, incorporating part of and extending south of the Marine Base. The second zone is located southeast of the City Downtown area. Liquefaction zones are generally observed in areas underlain by young, unconsolidated sediment and where shallow groundwater is located at a depth no greater than 50 feet from the ground surface.

Slope Instability

The City of Twentynine Palms is located within a relative flat area with surrounding mountainsides located outside the City boundary to the south and north. As such, the hazard of seismically induced slope failure is low. However, there are natural hillsides in Twentynine Palms that are vulnerable to landslide in response to earthquake-induced ground shaking. These susceptible hillsides include the mountain range located south of the City southern boundary and Campbell Hill, Donnell Hill, and other low, unnamed hills.

Compressible Soil

Compressible soil is generally young unconsolidated sediment (Holocene age) of low density that may be compressed under the weight of structures. In Twentynine Palms, geologic units including young alluvium, and the upper, weathered part of older alluvium are vulnerable to compression.

Soil Collapse

Soil Collapse is the loss of cementation by the rearrangement of saturated and unconsolidated loose soil. The rearrangement causes the soil to settle rapidly and thus cause foundational damage to buildings built on them. In Twentynine Palms, there are areas that are locally susceptible due to their granular nature, dry conditions in the upper layers, and result from having been rapidly deposited by either wind or flash flood.

Expansive Soil

Expansive soil is characterized by its content of clay minerals which drops in the soil column if saturated. Structures and surface improvements built on top of expansive soil can have significant damage due to instability. Most of Twentynine Palm is underlain primarily by silty sand, sand and gravel. These soil type typically have a low expansion potential and thus, probability for expansive soil within the City planning area is generally considered low.

Subsidence

Subsidence occurs as a byproduct to excessive groundwater extraction from the local aquifer, causing the surface to gradually settle or sink. The local water district manages artificial recharge to replenish groundwater supply so as to minimize geological impacts from declining water levels. As such, Twentynine Palms does not currently have significant subsidence issues.

Soil Erosion

Erosion is the gradual wearing away of landmasses through wind, water, gravity, and other geologic processes. Parts of the City are underlain by young unconsolidated soil that given its loose nature can erode by natural processes, as well as human activities. As such, soil erosion is an issue in Twentynine Palms.

The City of Twentynine Palms Local Hazard Mitigation Plan confirms the most significant geological hazard to the City is seismically induced strong ground shaking.

Discussion of Impacts

- a. i) **No Impact.** According to the California Geological Survey Site Investigation Reports prepared by the Alquist-Priolo Earthquake Fault Evaluation and Zoning Program, the proposed Project site is not located on or in proximity to an identified active fault zone. Therefore, ground rupture at the site is not expected to occur in the event of strong ground shaking by any regional active fault line. No impacts would occur.
- a. ii) **Less Than Significant Impact.** Like most of Twentynine Palms, the Project area is subject to strong ground shaking from an earthquake on the Mesquite Lake Fault and the Pinto Mountain Fault, and other regional faults to a lesser extent.

The nearest fault to the Project is the Pinto Mountain Fault, located 896± feet north from Sullivan Road, near Donnell Hill. Assuming that the Pinto Fountain Fault generates a maximum earthquake magnitude of 7.2, impacts to the Project may include infrastructure damage to the surface and other hardscape improvements. However, the Project would not expose life or property to adverse risk considered the Project only proposes roadway improvements along the 2.15± mile length of Hatch Road and Sullivan Road. No structures for public or private use are proposed in connection to the Project buildout. Nonetheless, the site will be built in accordance with the seismic requirements of the City Municipal Code so as to avoid or minimize the potential for damage from seismically induced strong ground shaking. In accordance with regulatory standards, the Project will cause less than significant impacts related to ground shaking.

- a.iii) **No Impact.** The Project site is not located within an area designated as a liquefaction zone, per the City General Plan Exhibit SF-1 (Seismic Hazards in Twentynine Palms), apart from the southeast end, where the Project intersects the liquefaction zone of the City's central region in proximity to the downtown area. However, the Project is not regarded as within a liquefaction area given that it is largely underlain by groundwater greater than 50 feet below grade, and the City

does not identify the area as within a Safety-Geology (S-G) Overlay District which designates area with a potential for geological hazards, including areas located on or adjacent to earthquake fault traces, landslide or subsidence, and liquefaction, pursuant to the City Municipal Code Section 19.26.040. Considering the Project site is not a S-G overlay district because the area does not meet any of the criteria previously mentioned, no impacts from liquefaction are expected to affect the Project.

- a. iv) **No Impact.** There are no mountainsides or hillsides within proximity to the Project site. The nearest is Donnell Hill, located northeast of Mesquite Springs Road and south of Twentynine Palms Highway. The hillsides of Donnell Hill are moderate and located at a distance of 1,344 feet north from Sullivan Road, where the risk of landslide is very low. As such, no impacts would occur.
- b) **Less Than Significant Impact.** Soil erosion is the geological process of transporting sediment comprising the topsoil through natural processes including wind and water. Human activities also influence the propensity of soil erosion, primarily by land disturbance including land clearing, removal of vegetation, and movement of heavy construction vehicles. These activities leave soil vulnerable to erosion.

The Project construction may increase the site's risk for soil erosion, considering that construction activities will involve excavation, grading, and site preparation, which all disturb the natural ground cover, loosening the soil and increasing the likelihood for erosion to occur during strong winds, heavy rainfall, and flash floods. To minimize potential impacts related to soil erosion, the Project will be required to comply with the California Code of Regulation (CCR) Title 27, Division 3, Chapter 4 "Storm Water Management" where all construction sites are mandated to submit an erosion control plan detailing feasible measures for preventing soil erosion during construction. The plan must also incorporate Best Management Practices (BMPs) as listed in the California State Water Best Management Handbook or the current, San Bernardino County Storm Water Program's Report of Water Discharge, for erosion and sediment control. Finally, the Project will be required to comply with MDAQMD Rule 403, which mandates the preparation and implementation of a dust control plan, to control erosion due to wind. With implementation of these standard requirements, impacts will be less than significant.

- c), d) **No Impact.** The Project is not located within a landslide or liquefaction prone area. Additionally, lateral spreading occurs in relation to an area's probability for liquefaction. As discussed, the Project is not a liquefaction zone and therefore, the likelihood for lateral spreading is negligible.

Subsidence is not a prevalent issue in Twentynine Palms given water recharge efforts by Twentynine Palms Water District to maintain constant water levels.

Soil collapse often occurs with clay containing soil. The Project and surrounding soil likely consist of a mix of older and younger alluvium contain clay but at a

percentage where no significant impacts would be caused. In addition, older alluvium consists of medium dense to very dense silty fine sand which generally possesses high strength and thus has a much lower risk for collapse. Potential impacts from soil collapse are regarded as negligible. No impacts would occur.

- e) **No Impact.** No septic tank system is proposed in connection to the Project buildout. The roadway improvements will not include restroom structures. As such, soil instability by the use of an on-site septic tank will not occur. No impacts would occur.

- f) **No Impact.** The site has been previously disturbed by the initial development of Hatch Road and Sullivan Road, as well as construction and operation activities by residential, public, and commercial development within proximity. There are no records of paleontological resources being uncovered on-site during construction or in proximity. The site consists of young alluvial sands, which does not contain paleontological resources. As such, the Project's development is not expected to damage or destroy paleontological resources within Twentynine Palms. No impacts are anticipated.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS -- Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Sources: City of Twentynine Palm General Plan, April 2012; San Bernardino County Regional Greenhouse Gas Reduction Plan, March 2021; MDAQMD CEQA and Federal Conformity Guidelines, February 2020; CalEEMod Version 2022.1; Project Material.

Environmental Setting

Greenhouse gases (GHGs) are gases emitted through natural processes into the atmosphere which work by trapping heat within the lowest atmospheric layer which contributes to the greenhouse gas effect. With the start of industrialization and greater ground disturbance involving the loss of vegetation, greater GHG emissions are being released into the atmosphere as a direct result of human activities. The atmospheric imbalance from the presence of GHG at a high concentration has had global consequences in climate patterns with severe storms, drought, and temperatures. Collectively, this phenomenon is called climate change or climate warming.

In response to the global impacts from climate change, California adopted Assembly Bill 32 (AB 32) which required the reduction of statewide GHG emissions to 1990 levels by 2020. The goal was updated by the passing of Senate Bill 32 (SB 32) which required statewide emissions to be reduced by 40 percent below the 1990 level by 2030.

GHG reduction goals under AB 32 and SB 32 prompted San Bernardino County to adopt a Regional Greenhouse Gas Reduction Plan in March 2021. The plan documents the County’s GHG inventory, assesses the effectiveness of statewide policies regarding GHG reduction measures, and incorporates local GHG reduction strategies to reduce the amount of emissions. Under the plan, Twentynine Palms set a GHG reduction goal of 46% below its 2008 GHG emissions level by 2030.

GHG Thresholds

In accordance with these state guidelines, the MDAQMD has adopted GHG emission thresholds for \ construction and operational activities in relation to new development so as to ensure that cities and communities within its jurisdiction do not cumulatively contribute to the effects of climate change nor conflict or delay the State’s GHG reduction goal. Thresholds for greenhouse gases are measured in carbon dioxide equivalent (CO₂e) to standardize the climate effects from various gases. These gases include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

Under CEQA and Federal Guidelines, MDAQMD established emission thresholds for air pollutants and greenhouse gases that all development projects located within the Mojave Desert Air Basin are required to conform with so as to ensure impacts from construction and operation emissions do not significantly contribute to the current climate imbalance. MDAQMD provides a daily and annual emission threshold for multi-phase projects (projects with a construction and a separate operational phase) so that phases shorter to one year can be compared to the daily value(s). GHG emission thresholds are 548,000 pounds per day and 100,000 short tons per year.

A Project-specific air quality report was prepared using the air modeling software, CalEEMod Version 2022.1, on February 6, 2025 (Appendix A). The following discussion is based on the calculations of potential sources of GHG during both phases of development including construction and operation of roadway improvements providing 5 feet of pedestrian sidewalk on the south side only, 7 foot bike lanes, 2 feet of painted buffers, and 11 foot travel lanes.

Discussion of Impacts

- a) **Less Than Significant Impact.** Located in the Mojave Desert Air Basin and subject to emission thresholds by the MDAQMD, the Project’s development phases, including construction and operation, are required to adhere to regulatory mandates as stated in the MDAQMD’s California Environmental Quality Act and Federal Guidelines which include a construction and operational emission thresholds regulating the amount of GHG emitted by a single project.

Construction Emissions

Construction of the Project is expected to last 6 months and would result in temporary GHG emissions related to construction equipment, energy use, and vehicles trips. CalEEMod estimates a project’s GHG emissions based on the designated land use and associated utility connections and use of equipment. However, under the Project’s categorization in CalEEMod as “Road Widening”, GHG emission sources are limited to the construction work performed on-site, off-site equipment, and their respective durations.

Given the Project construction is limited and will end after the 6 month construction period, the Project’s GHG emissions fall well below the MDAQMD’s threshold of 548,000 pounds of CO₂e, as shown in Table 8.

Table 8	
Maximum Daily Construction-Related GHG Emissions	
Construction	CO₂e pounds/day
Construction GHG Emission*	8,393
MDAQMD Daily GHG Thresholds	548,000
Exceeds?	No
(*) Note the highest GHG emission occurs during the summer and thus is reflected here to analyze the worst-case scenario. Source: CalEEMod Version 2022.1.	

Operational Emissions

There will be no sources of GHG emissions in relation to the Project's long term operation because the site will operate as a local non-motorized corridor, without the use of utility connections such as electricity, natural gas, or domestic water, nor would the Project generate vehicle trips, solid waste or use air conditioners and/or refrigeration equipment. The Project will operate without these uses typically associated with ongoing GHG emission during operation. Therefore, the Project will not emit GHG emissions for the duration of its use and thus, MDAQMD thresholds for GHG emissions at operation will not be exceeded by the Project.

Summary

The Project will generate GHGs emissions during construction only. Construction emission sources include construction work performed on-site, use of off-site equipment, and the duration of each construction phase. The MDAQMD GHG emission thresholds for construction is not exceeded at any point during the Project's 6 month construction phase. Operational emissions are negligible considering that the Project site is a street and thus, typical sources of emissions during operation are not applicable to the operation or use of a roadway. Impacts from GHG emissions will be temporary and limited to the Project's construction phase. In all, the Project is anticipated to cause less than significant impacts to the environment by the emission of greenhouse gases, and will provide a safe opportunity for the use of non-motorized transportation methods through the City, in compliance with the General Plan's goals of reducing GHG emissions.

- b) **Less Than Significant Impact.** As discussed in Question (a) of this section, the proposed Project would generate GHG emissions during its construction phase only. Although impacts from GHG emissions demonstrate less than significant impacts, the Project will be required to comply with applicable GHG reduction policies as stated in the San Bernardino County Regional Greenhouse Gas Reduction Plan, and the State Building Code, Title 24.

Buildout of the Project would introduce alternative modes of transportation along the 2.15± mile area, encompassing Hatch Road and Sullivan Road. Specifically, the site would provide additional pavement to include a 7-foot wide Class II bike lane on both sides of the existing corridor and a 5-foot wide graded shoulder/pedestrian walkway along the south side only. Buildout of a multi-modal transportation system is consistent with the City's General Plan policies aimed at supporting sustainability by encouraging the development of trails and other pedestrian pathways. The following City General Plan policies are implemented by the Project's development:

Policy RE-2.1: Implement the bikeways and off-street trails as proposed in the Trails Plan.

Policy RE-2.6: Where routes use existing streets, design pathways to minimize potential conflict between motorists and trail users.

These policies along with other regulatory standards are included in the County's Regional Greenhouse Gas Reduction Plan as a framework aimed at assisting Twentynine Palms in achieving its 2030 GHG reduction goal. In compliance with the City's General Plan policies, as well as applicable standards established in the City Municipal Code and the California Building Code, the potential for the Project to cause significant impacts to a state, regional, or local climate action plan are avoided. These conditions ensure the Project's potential impacts fall below a significant level.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
IX. 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?				X
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?				X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
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?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

Source: City of Twentynine Palms General Plan, April 2012; Department of Toxic Substances Control, EnviroStor; Cortese List, accessed January 2025; Fire Hazard Severity Zone Map, California Department of Forestry and Fire Protection, accessed January 2025.

Environmental Setting

Hazardous materials include chemicals, oils, and other substances which have the potential to be toxic and may cause harm to the public or environment if improperly stored, used, transported, resulting in release into the air, soil, or water.

Based on records from 2009, there were eleven small-quantity generators of hazardous waste, one large-quantity generator, and two unspecified small or large generators of hazardous waste in Twentynine Palms. Small generators are defined by the US Environmental Protection Agency (USEPA) as facilities that produce 220.64 pounds of

hazardous waste per month and large generators are facilities that produce 2,204.6 pounds per month or more.

According to the EPA database, there are 6 small-quantity generators and 3 large quantity generators, which are businesses who have registered as required by law because they handle materials ranging from cleaning supplies to gasoline. The closest registered facility is Rite Aid #5685, located at 72253 Twentynine Palms Highway approximately 165 feet north of the west end of Hatch Road at Cactus Drive.

Discussion of Impacts

a,b) No Impact. Hazardous material on-site will strictly occur during construction which will be temporary and not pose a significant environmental or health risk. During construction, all hazardous material will be stored at the proposed staging area encompassing the Twentynine Theater parking lot and a portion of the desert land immediately west. To avoid the potential for soil contamination, a fuel station will be located on the paved area of the staging lot and comply with applicable State and local safety measures to reduce the probability for hazardous impacts. Most equipment and hazardous material will be stored within the paved area, and if required, some storage will occur on the unpaved portion.

Once operational, the Project site will not require the transport, use, storage, or disposal of any hazardous material. Therefore, the Project does not pose a permanent risk nor is there a possibility for a foreseeable upset in regard to the use of hazardous material. Potential impacts are negligible.

c) No Impact. The nearest school to the Project site is Monument High School, located adjacent to Hatch Road to the north, across the intersection between Hatch Road and Stardune Avenue.

Buildout of the Project would include a construction phase lasting 6-months and include land clearing, grading and excavation, and paving. During this time, construction materials, including but not limited to diesel fuel, oil, lubricants and solvents will be located at the Project staging location, immediately west of the Twentynine Theater facility and approximately 1.07± miles west of the Monument High School, as well as used throughout the proposed site. As discussed in question (a) and (b) of this section, the occurrence of hazardous material at the site will be limited and properly located at the construction staging area. These potentially toxic materials will only occur when needed during construction and cease once the construction phase has been completed. Over the life of the Project, no hazardous material will be transported, use, stored, or disposed of as a result of the Project.

Given the limited inventory of hazardous material and temporary duration of their use, the Project would not adversely affect nor expose sensitive receptors such as students, to significant health risk by exposure to toxic chemicals. All regulatory standards governing the use of hazardous material on construction sites will be

implemented at the Project site so as to ensure compliance with stringent safety measures. After the construction phase, no school or any other sensitive receptor land use would be exposed to hazardous material by the Project. As such, no permanent impacts would occur.

- d) **No Impact.** Government Code Section 65962.5 is in reference to the Cortese List, prepared and regularly updated by the California Department of Toxic Substances Control to include sites identified as hazardous waste properties. The Project site is not listed in the Cortese List nor is any land in proximity to the proposed area.¹⁵ As such, development of the Project would not contribute to the hazardous conditions of a site. No individual or cumulative impacts would occur.
- e) **No Impact.** The nearest airport is the Twentynine Palms Municipal Airport, located at 78569 Twentynine Palms Highway, and approximately 1.5 miles east of the City's eastern boundary within the City's Sphere of Influence. In relation to the Project, the City's Municipal Airport is located 5.78± miles to the northeast of the Project nearest area. At a distance greater than 2 miles, the Project is located outside the range of significant impact associated with the operation of an airport in regard to hazardous materials, hazards or noise. Therefore, the Project would not be in close contact to hazardous material by the operation of the Twentynine Palms Municipal Airport and thus, no impacts would occur.
- f) **No Impact.** The proposed Project would be governed by the regulatory standards and procedures established in the Twentynine Palms Local Hazard Mitigation plan (LHMP) and the City Emergency Operations Plan (EOP). The City LHMP assesses vulnerabilities including earthquake, flooding, wildfire and hazardous sites. The EOP outlines a framework for emergency organization, specifies policies and general procedures, and facilitates cooperation between agencies and jurisdictions, consistent with the California Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS). In accordance with the aforementioned emergency plans, all new development including the Project are required to implement applicable standards and procedures by law. As such, no violations to these plans would occur by the Project and therefore, no impacts are anticipated.
- g) **No Impact.** According to the California Department of Forestry and Fire Protection (CalFire), the City of Twentynine Palms is located within a non-hazards fire zone and a local responsibility area. Similarly, the Project site is not within or in proximity to an identified fire hazard zone including a Very High Fire Hazard Severity Zone (HFHSZ).¹⁶ The Project is located within a local responsibility area. As such, the proposed roadway improvements would not expose users to a risk of loss, injury or death by wildland fires. No impacts are anticipated.

¹⁵ Cortese List: Twentynine Palms, California Department of Toxic Substances Control, <https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=twentynine+palms>, accessed January 2025.

¹⁶ Fire Hazard Severity Zone Map, California Department of Forestry and Fire Protection, <https://experience.arcgis.com/experience/03beab8511814e79a0e4eabf0d3e7247/>, accessed January 2025.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
X. 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?				X
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				X
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 substantial erosion or siltation on- or off-site;				X
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;				X
(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				X
(iv) impede or redirect flood flows?				X
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X

Sources: City of Twentynine Palms General Plan, April 2012; FEMA Flood Map Service Center: Hatch Road and Sullivan Road, Twentynine Palms, CA, FEMA, accessed February 2025.

Environmental Setting

Flood hazard in Twentynine Palms generally consists of flash floods down natural and man-made channels, and sheet flows across alluvial fans as a result of rainfall in local dry rocky canyons of the adjacent mountains that direct runoff to the City planning area. The southern part of the City receives runoff from both small and large canyons from the Joshua Tree National Park and from Pinto Mountain to the east. Local flood channels that pose a significant flood risk to existing development are Forty-nine Palms Canyon and canyons to the east, as well as Twentynine Palms Wash, Indian Cove, and Dog Wash.

According to the City General Plan SF-2 (Moderate Fire Hazard Area, Flood Zones, and Significant Hazardous Material Sites) the low-lying desert region of the City planning area, where most development is located, is highly susceptible to flooding in accordance with the FEMA AO Zone designation, generally associated with areas where 100-year shallow floods average a depth of 1 to 3 feet. In response to these risks to property damage, the Twentynine Palms Channel was constructed near the intersection of Hatch Road and Twentynine Palms Highway to release runoff into a natural wash near Bagdad Highway, north of Amboy Road. Other flood control infrastructure includes tributary channels along the southside of Campbell Hill, the Forty-nine Palms Spreading Grounds that drains water into groundwater basins, and Twentynine Palms Channel, and Donnell Basin and other basins located adjacent to drainage channels to retain runoff. These existing flood control measures are implemented and managed by the San Bernardino County Flood Control District. The City manages local drainage facilities.

Discussion of Impacts

- a-b) No Impact.** The Project site is developed and used as a Secondary street encompassing Hatch Road and Sullivan Road near the central region of Twentynine Palms. Along the roadway there is no existing curb-gutter system to manage stormwater runoff at most locations. Rather, the street shoulder is graded at a slight decline and a soil barrier is located adjacent to prevent water from reaching adjacent property. All existing flood control designs and natural drainage patterns will continue to function after the Project's implementation. However, the Project is required to comply with the National Pollutant Discharge Elimination System (NPDES) to prevent contaminated runoff from polluting local groundwater aquifers. This will include BMPs designed to control siltation and pollution so as to prevent surface water pollution. In accordance with the state and applicable local standards regarding flood control and water quality, as mandated by law, the Project would not result in degradation of surface or groundwater quality during or after construction. No impacts to water quality by the proposed roadway improvements would occur.
- b) No Impacts.** No new direct groundwater supply system or recharge activity is proposed on-site. The Project development is limited to roadway improvements, none of which pose a significant risk of decreasing or interfering with domestic water services. Therefore, the Project would not diminish access to domestic or potential access to recycled water in the City of Twentynine Palms. No impacts would occur.
- c.i) No Impacts.** Construction activities at the site will be limited within the property's southern right-of-way where grading has previously occurred, and flood control features are implemented so as to direct stormwater away from nearby development. Existing drainage patterns will continue after the Project's construction. Additionally, none of the proposed improvements would occur within a stream or river which would cause greater soil erosion by a modification or alteration of natural drainage patterns. The Project will not affect existing drainage patterns nor alter any patterns to cause greater flood hazards. No impacts are anticipated.

- c.ii) No Impact.** Proposed improvements are limited within the street right-of-way where there is no natural drainage that would otherwise be impacted by buildout of the proposed multi-modal transportation system. After implementation, existing drainage features will continue to manage flood water on-site. As such, the Project will not result in flooding on- or off-site. Natural drainage patterns within the area will continue to operate as they currently do. No impacts would occur.
- c.iii) No Impact.** As described above, the Project will not affect the existing drainage system or groundwater retention system within nearby infrastructure. No impacts from excessive runoff or additional sources of pollutants runoff would be contributed by the Project.
- c.iv) No Impact.** As discussed in Question c(i) through c(iii), the Project does not propose the alteration of the site's existing drainage system. The street shoulder will be graded, and a soil barrier will line the edge to prevent water from flowing into adjacent property. Existing asphalt barriers and curbs will remain where they currently occur. The Project is designed to minimize disturbance on-site and thus, the probability for the Project to impede or redirect water flow is negligible.
- d) No Impact.** The Project site is not located within a large body of water with a potential to cause a tsunami to seiche. However, the Project is located within a flood hazard zone, pursuant to the FEMA Service Map, which designates the site a Zone AO¹⁷ which is associated with areas with a chance of flooding every 100 years at an average depth of 1 to 3 feet. Inundation on-site has a probability of occurring. However, considering the site land use as a Secondary II street, the Project would not expose property to adverse damage by its relative flood hazard, since no vertical construction will occur. Therefore, given the site's nonresidential land use, no impacts from flood would significantly affect property and thus, no impacts are anticipated.
- e) No Impact.** The Project proposes the construction of multi-modal transportation system along Hatch Road and Sullivan Road. Water use on-site will occur temporarily for dust control, which will infiltrate into the ground and cease once construction activities have been completed. Any water use at this phase of development will be transported by truck. Beyond the construction phase, the Project will not generate water consumption and thus, there is no probability for the development to conflict or violate the Twentynine Palms Water District Regional Urban Water Management Plan regarding water quality or groundwater reclamation plans. As such, impacts to water management plans are negligible.

Mitigation Measures: None required.

Monitoring: None required.

¹⁷ FEMA Flood Map Service Center: Hatch Road and Sullivan Road, Twentynine Palms, CA, FEMA, <https://msc.fema.gov/portal/home>, accessed February 2025.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XI. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X

Sources: City of Twentynine Palms General Plan, April 2012; Google Earth Pro; Project Material.

Environmental Setting

The City of Twentynine Palms is a rural urbanized city with land use designations including residential, commercial, industrial, and public and quasi-public. In proximity to the Project's 2.15± mile route, the surrounding parcels are designated for residential (RS-4 and RS-1), general commercial (CG), and public (P) use.

Discussion of Impacts

- a) **No Impact.** The proposed Project site is an existing paved, two (2) lane roadway which is part of the City's circulation network. All existing residential development within proximity to the Project, operates independently and separate from the roadways. The Project will accommodate existing driveways and make no change to access points along the route. As such, no residential development nor an established community would be divided or displaced by the Project's implementation. No impact would occur.

- b) **No Impact.** Under the City's Circulation Plan, Hatch Road and Sullivan Road are designated Secondary streets which at full buildout have a width of eighty feet, include curb, gutter, and sidewalks, and allow for on-street parking if permitted by the space allotted. Development of the Project would result in the widening of the existing roadway to total forty-five feet, including two travel lanes, two Class II bike lanes on either side and a pedestrian shoulder located on the south side of Hatch Road and Sullivan road only.

Consistent with the existing use and designation as a Secondary roadway, the Project will implement policies and goals as established by the City 2012 General Plan, as follows.

Policy CO-4.11: Develop a system of trails, paths, and other right-of-way for the use of non-motorized transportation, including bicycles and walking.

Policy CI-2.5: Develop bicycle systems to enhance tourism and recreational opportunities.

Implementation of the Project would be required to comply with all applicable standards as established in the City General Plan and the City Municipal Code. In accordance with these governing frameworks, the Project would not cause adverse effects in relation to the violation of applicable plans, policies, and standards. For this reason, the Project's buildout would have no impact on the City's planning documents.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XII. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
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?				X

Sources: City of Twentynine Palms General Plan, April 2012; San Bernardino Countywide General Plan DEIR, June 2019; Mine and Mineral Resources; California Department of Conservation, accessed January 2025; Google Earth Pro; Project Material.

Environmental Setting

The area of the Mojave Desert in which the City of Twentynine Palm is located is regarded as a valuable source of sand, gravel, and crushed stone, collectively known as aggregate. Although a key component to construction material including concrete and asphalt, aggregate is not identified as a valuable mineral resource given for its abundance.

The California Department of Conservation, Division of Mines and Geology survey and publish reports/maps detailing the potential mineral deposits in a given area. The classification is divided into three categories for potential for mineral resources:

MRZ-1: Area where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

MRZ-2: Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists.

MRZ-3: Area containing mineral deposits, the significance of which cannot be evaluated from available data.

Neither the State nor San Bernardino County has officially identified Twentynine Palms as a mineral resource area of significance. There are no known significant mineral resources within the City or its Sphere of Influence.

Discussion of Impacts

a), b) **No Impact.** The Project site, like all Twentynine Palms, has not been studied for its potential to produce significant mineral resources. However, given the site’s developed state, repeated use by vehicles, and extended disturbance by urban uses, the likelihood for valuable minerals to be found on-site is negligible. Additionally, the San Bernardino Countywide General Plan identifies Twentynine

Palms, including the Project site, as far from a mineral resource sensitive area.¹⁸ Therefore, the Project's implementation would have no effect on the City's accessibility to mineral resources.

The Project site currently operates as a two lane roadway to provide accessibility and connectivity to residential, public, and commercial users to the surrounding area including Twentynine Palms Downtown area, located approximately 0.50 miles north of the Project site. The property does not support mining activities, nor would it replace zoning designated for mining activities. As such, the Project would not reduce the accessibility of mineral resources at a local scale. Buildout of roadway improvements for a bicycle and pedestrian trail would not affect the mineral resources in Twentynine Palms. No impacts are anticipated.

Mitigation Measures: None required.

Monitoring: None required.

¹⁸ Figure 5.11, Mineral Resources Zone 2 & 3 in the Southwest Quadrant of County, San Bernardino Countywide General Plan DEIR, June 2019.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XIII. NOISE - Would the project result in:				
a) Generation of 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?				X
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
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?				X

Sources: City of Twentynine Palms General Plan, April 2012; Transportation and Construction Vibration Guidance Manual, April 2020; Google Earth Pro; Project Material.

Environmental Setting

Noise is defined as an unpleasant and unwanted sound that, if prolonged, can result in adverse effects including hearing loss. In response, thresholds have been established to protect the public health and safety. These thresholds include the protection of sensitive receptors, those being vulnerable groups typically found in residential areas, senior living centers, schools, libraries, and hospitals.

Sources of excessive ambient noise within Twentynine Palms are primarily associated with motor vehicle traffic along main corridors including Twentynine Palms Highway, Adobe Road, and Two Mile Road.¹⁹ Other sources of noise include aircraft, as well as industrial and commercial users to a lesser extent.

Discussion of Impacts

- a) **No Impact.** Although the Project’s construction would cause noise by using heavy construction equipment, noise disturbance would be temporary and mobile, gradually dissipating as it continues through the 2.15± mile area, and cease entirely after the 6 month construction duration. All construction activity would be required to comply with City Municipal Code Section 19.80.020, which limits construction to nonsensitive daytime hours between 7 am and 7 pm (October through April), and 6 am to 7 pm from May through September. All construction work is prohibited on Sundays and federal holidays.

¹⁹ Exhibit NS-7, City of Twentynine Palms General Plan, April 2012.

During operation, the Project would not generate excessive noise considering that at buildout, Hatch Road and Sullivan Road will provide multi-modal transportation through a new pedestrian trail and two Class II bike lanes. These improvements would generate noise through pedestrian activities but would not conflict or exceed the City’ permitted noise threshold for residential use which places a maximum of 65 dBA for exterior ambient noise, as stated in Section 19.80.070 (Noise Standards) of the City Municipal Code. Additionally, these improvements will not increase vehicle travel along the roadway, but rather may offset noise levels by reducing the use of vehicles and promote alternative forms of transportation and thus, marginally contribute to a reduction in traffic noise in the surrounding area.

In all, the Project construction would not cause excessive noise, and impacts of construction noise will be temporary, will not be concentrated or prolonged in one area, and will cease immediately after construction. Operational noise would not exceed the City’s residential land use exterior noise threshold of 65 dBA and thus, no adverse impacts to the surrounding area’s existing ambient noise or incompatibility by excessive noise would occur with the Project’s implementation. No impacts are anticipated.

- b) **Less Than Significant Impact.** Groundborne vibration are oscillatory waves that travel from the source through the ground and to adjacent buildings. Construction sites are typically associated with groundborne vibration by their use of heavy construction equipment that drill and compact the soil column, generating a source of vibration. In response, the Twentynine Palms Ordinance Code Section 19.80.100(a) (Vibration) establishes a threshold prohibiting sources from generating ground vibration above 0.20 inches per second (PPV) beyond the property line.

Project Construction

The Project construction is likely to generate groundborne vibration for the 6 month construction duration. Construction equipment typically observed in roadway improvement projects include excavators, rollers, tractors, and paving equipment. Construction equipment has been analyzed by the California Department of Transportation (Caltrans) for its potential to generate ground vibration. Table 10 lists representative equipment its associated amplitude of groundborne vibration in relation to a receptor’s distance of 25 feet from the source.

Table 10 Vibration Source Amplitude for Construction Equipment	
Equipment	Reference PPV at 25 ft (in/sec)
Vibratory roller	0.210
Loaded trucks	0.076
Large bulldozer	0.089
Caisson drilling	0.089
Jackhammer	0.035
Source: Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020.	

As shown in the Table, most equipment generates vibration at levels that are below the City's threshold. In addition, construction will occur in the right-of-way, and at distances of more than 25 feet from private structures. Under the City Municipal Code Section 19.80.100(c)(2), all construction activities are exempt from the ground vibration threshold due to its temporary condition that ceases after construction has been complete. All construction activities including those generating groundborne vibration will be restricted within nonsensitive daytime hours to avoid the potential of causing annoyance and adverse impacts to receptors within proximity to the subject site. Impacts are therefore expected to be less than significant.

Project Operation

Once operational, the Project would not consist of any source of groundborne vibration. Neither bicyclists nor pedestrians will generate any perceptible vibration, and no impact will occur.

- c) No Impact.** The Project site is not located within two miles from an airport facility. The nearest is the Twentynine Palms Municipal Airport, located approximately 5.78 miles northeast to the nearest Project area. At such a distance, noise impacts related to airport operation is unlikely to affect users of the proposed roadway improvements. As such, impacts from the operation of the Twentynine Palms Municipal Airport would not interfere or cause excessive noise at the Project site and thus, no impacts are anticipated.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XIV. POPULATION AND HOUSING – Would the project:				
a) Induce substantial 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)?				X
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Sources: City of Twentynine Palms General Plan, April 2012; State’s Population Increase While Housing Grows Per New State Demographics Report, California Department of Finance, April 2024; City of Twentynine Palms, US Census Bureau, accessed February 2025; Demographic and Growth Forecast Technical Report, Southern California Governance Association, September 2020.

Environmental Setting

In 2010, Twentynine Palms’ population was estimated at 30,649 people. Based on new estimates from the California Department of Finance, indicate growth rates are occurring at a much slower rate with 2023 population estimates being 25,787 people and 2024 estimates totaling to a population of 25,346 people, a 1.7 percent drop from the previous year.²⁰ Based on estimated from the 2020 Census, Twentynine Palms average household size consists of 2.56 individuals with a medium household income of \$56,000.²¹

The Southern California Governance Association (SCGA), estimates the City’s population size to reach 33,300 people in 2045.²²

Discussion of Impacts

a), b) No Impact. The Project proposes the improvement of two existing roadways including Hatch Road, and Sullivan Road. The construction would introduce multi-modal forms of transportation through two Class II bike lanes on either side of the corridor and a pedestrian trail on the south side. There are no plans to build residential development as part of the proposed Project. As such, the Project would not contribute directly to the City’s population growth. However, infrastructure improvements are generally regarded as promoting development

²⁰ State’s Population Increases While Housing Grows Per New State Demographic Report, California Department of Finance, April 2024.

²¹ QuickFacts: City of Twentynine Palms, California, US Census Bureau, <https://www.census.gov/quickfacts/fact/table/twentyninepalmscitycalifornia/PST045223>, accessed February 2025.

²² Demographic and Growth Forecast Technical Report, Southern California Governance Association, September 2020.

and thus indirectly contributing to growth. However, the Project is also unlikely to contribute to the City population through infrastructure improvements given that most of the Project's surrounding area is designated for residential use, and any new development in proximity would be consistent with the City General Plan buildout and thus would not be considered unplanned population growth.

As discussed in Question (a) of Section XI (Land Use), there are no residential developments or established communities within the roadways' path which would be impacted by the Project's construction or operation. No residential units would be displaced and no new residential construction required. No impacts would occur.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES				
a) Would the project 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:				
Fire protection?				X
Police protection?				X
Schools?				X
Parks?				X
Other public facilities?				X

Sources: City of Twentynine Palms General Plan, April 2012; Annual Report for 2021-22, County of San Bernardino Fire Protection District, accessed February 2025; Google Earth Pro; Project Materials.

Environmental Setting

Fire Protection

The San Bernardino County Fire Department provides fire prevention and fire suppression services to the City of Twentynine Palms. The County Fire Department is staffed with a total of 1,064 personnel of which, 249 are Firefighters, 14 Fire Suppression Aide, 102 are Ambulance Operator, 175 are Captain, 2 are Deputy Fire Marshal, and 1 is a Fire Chief.²³ The Department is also equipped with 97 fire engines, 8 rescue vehicles, 40 ambulances, and 4 hazardous materials rigs.²⁴ In Twentynine Palms, the County Fire Department currently operates one (1) fire station, Fire Station 44 located at 6560 Adobe Road.

Police Protection

Under contract, the San Bernardino County Sheriff's Department provides police protection, traffic control, and other related services to the City. Services are provided from the Morongo Valley station located at 6527 White Feather Road in the community of Joshua Tree and by a satellite office at Twentynine Palms City Hall located at 6136 Adobe Road. At the time of the City General Plan update, there were approximately 10 patrol officers assigned to the City from the Morongo Basin Sheriff's Station to provide community-based policing. The station is equipped with 12 police vehicles, which include five marked vehicles, one unmarked vehicle, two off-highway motorcycles, three citizen patrol units, and one radar trailer.

Schools

The Morongo Unified School District (MUSD) is the public education district that provides services to Twentynine Palms. Currently, MUSD has a total of 6 schools in the City, of

²³ Annual Report for 2021-22: Personnel, County of San Bernardino Fire Protection District, <https://sbcfire.org/annualreports/fy-21-22/personnel/>, accessed February 2025.

²⁴ Annual Report for 2021-22: Equipment, County of San Bernardino Fire Protection District, <https://sbcfire.org/annualreports/fy-21-22/equipment/>, accessed February 2025.

which 4 are elementary schools, 1 is a junior high school, and 1 is a high school. At the time of the City General Plan update, all schools had available capacity for new enrolled students.

Parks

The City's Community Service Department manages the development, improvement, and maintenance of park and recreational facilities in the City. Currently, the Department oversees a total of five parks which include 1) Bucklin Park, 2) Luckie Park, 3) Knott's Sky Park, 4) Pioneer Park (undeveloped), and 5) Veteran's Park. Most are located within proximity to the City Downtown area, except for Knott's Sky Park further southwest and Luckie Park further northeast.

Discussion of Impacts

- a) **No Impact.** The Project proposes the construction of roadway improvements along Hatch Road and Sullivan Road, located south of Twentynine Palms Highway and west of Adobe Road. These improvements would provide new bike lanes along the north and south side, and a pedestrian trail on the south side. The increased accessibility to multi-modal forms of transportation would lessen the dependency on motor vehicles and provide a new source of recreational facility within the City's Downtown area.

Fire Protection

Impacts to fire protection are directly correlated with an increase in residential land use. No residential development is proposed by the Project. Therefore, the Project would not contribute to an increase in fire protection in the area. No impacts would occur.

Police Protection

The Project does not include development that would substantially increase the use of the existing roadways. No residential, commercial, or other type of urban uses are proposed, apart from land used for roadway infrastructure. The design includes a striped buffer between vehicles and bikes, to improve public safety. As such, the Project's buildout is not expected to cause stress on the Police Department's capacity to service the City.

Schools

As discussed in Section XIV (Population and Housing), roadway improvements would not increase the local population size, directly or indirectly. Therefore, buildout would not result in an increase in student enrollment at local schools serviced by the MUSD. As such, the Project will have no impact on schools' ability to provide educational services to the existing student population.

Parks and Other Public Facilities

As discussed in Section XVI (Recreation), the Project will not result in accelerated damage or deterioration of parkland or recreational facilities in the City because roadway improvements such as this provide a new source of recreational space for the existing residential population and potential tourist population, as intended

by the Twentynine Palms Trail Master Plan. Additionally, the Project does not propose residential development which would increase demand for parks and public facilities. As such, no impacts will occur.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XVI. 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?				X
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?				X

Sources: City of Twentynine Palms General Plan, April 2012; Google Earth Pro; Project Material.

Environmental Setting

The City of Twentynine Palms includes of 175 acres of recreational opportunities including parks, golf course, and community facilities, owned and managed by the City’s Park and Recreation Administration. Within proximity to the Project site which includes development within a three mile radius, there are a range of recreational facilities.

Park

There are two (2) developed parks within proximity to the Project site including Knott Sky and Pioneer Park. Knott Sky Park is the second largest developed park land with 19.5 acres providing recreational amenities including a baseball field, playground area, picnic area with overhead structures located at 6897 El Sol Avenue. Pioneer Park is an undeveloped parkland but mainly functions as a community facility with the local community theater, Theater Twentynine. Pioneer Park located at 73637 Sullivan Road, immediately adjacent to the Project site to the far east end.

Trails

The Center City trail is a pedestrian, equestrian, and bicycle accessible pathway that runs parallel with the City’s drainage channel that crosses parts of the City’s developed downtown area to reach the floodplain to the southwest. The Foothill Connection is an additional pedestrian, equestrian, and bicycle accessible pathway that starts at Sullivan Road at the far west end of the City to connect with the section of Sullivan Road encompassed by the Project area.

Community Facilities

Theater Twentynine is the only recreational facility that operates within proximity to the Project site. The theater is operated by the local community theater group that stages performances throughout the year.

Discussion of Impacts

a, b) No Impact. The Project proposes roadway improvements to include bike lanes and a graded pedestrian trail on the south side of Hatch Road and Sullivan Road. These roadway improvements are intended to provide multi-modal transportation that is less reliant on motor vehicles so as to promote recreational activities within the surrounding area. The Project would operate as an additional recreational source in Twentynine Palms as intended by the City Trail Master Plan which identifies the Project as a planned improvement. Additionally, the Project is compliant with policies established by the City General Plan Recreational Element, which are listed below.

Policy RE-2.1: Implement the bikeways and off-street trailed proposed by the Trails Plan.

Policy RE-2.6: Where routes use existing streets, design pathways to minimize potential conflict between motorists and trail users.

The Project does not include the construction of residential development which would otherwise contribute to local population growth or an increased local demand for recreational facilities. Given that the existing residential population is likely to frequent the Project site the Project will not increase the demand for other recreation facilities beyond the City's objective to provide a level of service of at least 4.2 acres of park land per every 1,000 residents. As such, the Project will not result in the excessive use of recreational facilities within Twentynine Palms, nor would it require the construction of new facilities so as to accommodate new demand. No impact would occur.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XVII. TRIBAL CULTURAL RESOURCES-- Would the project 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				
a) 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		X		
b) 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe		X		

Source: Twentynine Palms General Plan, April 2012; Historical/Archaeological Resources Survey Report for Hatch Road-Sullivan Road Bike Lane and Side Path Project prepared by CRM TECH, March 2025 (Appendix C).

Environmental Setting

The City of Twentynine Palms, including the Project site, are part of a rich history of the Serrano and the Chemehuevi Native American tribe.

The Serrano occupied the area in and around the San Bernardino Mountains and extended beyond to the west into the Cajon Pass, east including areas beyond where Twentynine Palms, north past Victorville, and south to the Yucaipa Valley. Most of their settlement sites are located on the desert flood near sources of water which largely constitute areas at the base of the mountains, and up into the foothills. Settlement in the area would last for extended durations as the tribe would build permanent homes and additional structures in connection to their religion or lineage. Additionally, the Serrano's subsistence practices included the cultivation and gathering of wild food and hunting.

The Chemehuevi settled in Twentynine Palms and surrounding areas at the Oasis of Mara, around 1870. Their territory extended with fewer people over a much wider area from the lower Colorado towards to the west. The Chemehuevi's subsistence practices also consisted of cultivating, gathering, and hunting, and they were also known for their agricultural practices, in particular the cultivation of corn, beans, squash, and melons.

The two tribes shared social customs which brought them together at important base camps or villages for annual ceremonies and tribal interactions with neighboring groups.

The Morongo Band of Mission Indians of the Morongo Reservation was established by executive orders in 1877 and 1889. Since then, most of the Serrano and Chemehuevi population have been incorporated into the reservation system. Nowadays, most Serrano

descendants are found on the San Manuel and the Morongo Indian Reservation, while the Chemehuevi are divided among the Chemehuevi, the Colorado River, and the Morongo Reservation.

A historical and archeological resource study report was prepared by CRM TECH for the proposed Project (Appendix C). The report identifies and assesses the probability for historical resources with connections to local tribes to be damaged or lost by the Project's implementation along unpaved roadway shoulder. CRM TECH contacted Native American tribes with ties to the Project area for supplementary information on potential Native American cultural resources in vicinity and to arrange tribal participation in the archeological field work.

The discussion section below incorporates information provided by these Native American tribes to determine the probability for the Project to adversely affect tribal cultural resources.

Discussion of Impacts

a-b) Less Than Significant Impact with Mitigation. The Project site consists of asphalt paved roads including Hatch Road and Sullivan Road. Loose sedimentary soil, currently graded to function as the corridor's shoulder, is also part of the Project site and subject to development for the accommodation of the two bike lanes and a graded pedestrian trail.

CRM Tech's consultation efforts included multiple tribal contacts. Responses from tribal consultation yielded no response from the Morongo Band and the San Manuel Band of Mission Indians. On January 31st, 2025, the Chairman of the Chemehuevi Indian Tribe, responded by electronic email and stated that the tribe had no cultural concerns with the proposed project. On February 3rd, 2025, the Cultural Resources Specialist with the Twentynine Palms Band responded by telephone and reaffirmed that the Oasis of Mara was the creation area in tribal legend. Beyond this, the tribe did not provide further comments regarding potential cultural resources within or adjacent to the Project site.

In addition to this consultation, the City conducted Tribal Consultation under the requirements of AB 52. The City received a request for consultation from the Agua Caliente Band of Cahuilla Indians. The City met with the Tribe on January 28, 2025. At that meeting, the Tribe requested that Project activities be monitored by a Tribal monitor. As required by Mitigation Measure CUL-1, above, Tribal monitors will be present during project excavation and grading, to ensure that no impacts to tribal cultural resources occur, thereby reducing impacts to less than significant levels.

See Section V (Cultural Resource) for further analysis.

Mitigation Measures: See Section V., Cultural Resources

Monitoring: See Section V., Cultural Resources

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XVIII. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?				X
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?				X
c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
d) Result in inadequate emergency access?				X

Sources: City of Twentynine Palms General Plan, April 2012; Google Earth; Project Material.

Environmental Setting

Twentynine Palms’ circulation system includes east/west corridors and north-south corridors. The east-west corridors provide the City with linkages with regional cities and communities located beyond the City boundary. These east/west corridors include Twentynine Palms Highway, Two Mile Road, and Amboy Road. North/south corridors provide regional connectivity that distribute traffic throughout the City’s network of local streets. The City’s primary north/south corridors include Adobe Road, Utah Trail, Lear Avenue, and Mesquite Springs Road.

Roadways in Twentynine Palms vary in improvement and condition. Most of the City’s primary streets are two-lane paved streets. Twentynine Palms Highway and Adobe Road are four-lane paved streets.

The Project site includes the existing roadway and adjacent unpaved shoulder of Hatch Road and Sullivan Road located to the south of Twentynine Palms Highway and west of Adobe Road.

Discussion of Impacts

a) **No Impact.** By nature of the roadway improvement project, all local plans, standards, and ordinance codes addressing the City’s circulation system are applicable. Therefore, the Project must comply with the City’s Circulation Plan buildout for Secondary streets, which is the roadway designation for both Hatch Road and Sullivan Road. Under the City circulation plan, Secondary roads may be built within the following limitations:

- Maximum width is eighty feet
- Provide a total of four travel lanes or two travel lanes with a continuous left turn pocket

- Curbs, gutters, and sidewalks
- On-street parking if the space is not needed for travel lanes

Currently, Hatch Road and Sullivan Road are 26 feet wide and provide a total of two paved travel lanes, dirt shoulder, and curb and gutter at limited locations (see Project Description). Buildout of the Project would result in widening the streets to include 14 feet of additional pavement. The changes reduce the size of the two travel lanes to be 22 feet wide, but would add 7 foot wide bike lanes, 2 foot wide buffers between the road and bike lane, and a 5 foot shoulder/walking path along the south side. The Project conforms with the City's development standard, and complies with policies as stated in the City General Plan including CI-2.5 which requires the development of bicycle systems where feasible to enhance tourism and recreational opportunities. Given that the Project is located adjacent to single-family residential units and residential zoned land (RS-4 and RS-1), as well as in proximity to the City's central core, the Project would assist in attracting tourists to the area and promoting new outdoor recreational opportunities.

The proposed Project would not change the number of cars traveling through Hatch and Sullivan Road and would not reduce its level of service below a LOS C, consistent with City General Plan Policy CI-1.1.

The Project will comply with all applicable plans, policies, and regulations regarding the City circulation system and thus, construction and operation of the Project will not conflict with Twentynine Palms' circulation network. As such, no impacts are anticipated.

- b) No Impact.** CEQA Guideline Section 15064.3, subdivision (b) requires traffic impacts to be analyzed by the project's generation of vehicles miles traveled (VMT) as a more holistic approach on assessing the environmental impact new development could have through the increase travel to and from the site.

Considering the site is an existing roadway and proposed improvements are focused on proving multi-modal transportation that does not rely on motor vehicles, the Project is not expected to generate any increase in daily trips or vehicle miles traveled beyond what currently exists on these roadways. Rather, the Project may have the effect of reducing vehicle trips by providing local residential, public, and commercial users a safe corridor for bicycle and pedestrian use. VMTs may be reduced in relation to surrounding development. For these reasons, the Project would not conflict with CEQA's VMT analysis requirement nor any City thresholds regarding VMTs. No impact would occur.

- c) No Impact.** The Project will be built in accordance with development standards as outlined in the City Municipal Code. As such, buildout would not increase the likelihood for safety hazards through design features, particularly since it includes a buffer between the vehicle and bicycle lane. Under current conditions, there is no separation between bike and pedestrian traffic and the vehicles on these roadways. No impacts are anticipated.

- d) **No Impact.** After construction of the proposed Project, Hatch Road and Sullivan Road will continue to provide adequate connection and access to local emergency routes including Mesquite Springs Street, Adobe Road, and Twentynine Palms Highway. The Project is therefore not expected to block or obstruct access to emergency routes or change evacuation patterns. No impacts are expected.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XIX. 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?				X
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				X
c) Result in a determination by the wastewater treatment provider that 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?				X
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?				X
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				X

Source: City of Twentynine Palms General Plan, April 2012.

Environmental Setting

The City of Twentynine Palms is served by the following utility providers:

Utility	Service Provider(s)
Domestic Water	Twentynine Palms Water District
Wastewater Collection	Private septic systems
Solid Waste Collection	Burrtec Waste Industries, Inc.
Flood Control	San Bernardino County Flood Control District
Electricity	Southern California Edison
Natural Gas	Southern California Gas Company
Telecommunication	Verizon
Capable	Spectrum

The Project site is located within the service area of these utility providers.

Discussion of Impacts

- a-e) No Impact.** The proposed development includes the widening of Hatch Road and Sullivan Road to allow for the addition of 7 foot wide Class II bike lanes, 2 foot wide painted buffers, and a 5 foot wide shoulder/pedestrian trail on the south side.

The Project will not require utility connections. No domestic water system is required given that the Project does not propose landscaping along the 2.15± mile area. Other utility connections not applicable to the Project include wastewater collection, solid waste collection, natural gas, telecommunication, and cable. The Project will cause no adverse effects to the service capacity of utility providers servicing the City of Twentynine Palms.

In regard to flood control, the roads direct stormwater to the shoulder, and will continue to do so with Project improvements. Drainage patterns are expected to be maintained and as such, the Project would not change the capacity of local flood control features built and managed by the County of San Bernardino Flood Control District or the City. No impacts to flood control infrastructure will occur as a result from the Project's construction and operation.

Currently, there are several streetlights along Hatch Road and Sullivan Road. No additional lights are proposed as part of the Project buildout. As such, the Project would not increase energy use in relation to the operation of streetlights. No energy usage will be required for the Project's operation. No impacts will occur.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
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?				X
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?				X
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?			X	

Sources: City of Twentynine Palms General Plan, April 2012; Fire and Resources Assessment Program (FRAP) maps, California Department of Forestry and Fire Protection, accessed February 2025; Flood Map Service Center, Federal Emergency Management Agency, accessed February 2025; Google Earth Pro; Project Material.

Environmental Setting

Wildfires are most dangerous in the wildland-urban interface (WUI), which is generally described as an area of transition between unoccupied land and human development, where dense vegetation is found abutting structures that if exposed to fire, can ignite quickly and move across the urban land use.

The City of Twentynine Palms is not identified as a high hazard severity zone according to the California Department of Forestry and Fire Protection (CalFire) published Fire Hazard Severity Zone Map.²⁵ There are no areas within the City planning area designated with a moderate, high, or very high fire hazard severity zone. The City is located within a local responsibility area and the surrounding mountains to the south including Queen Mountain and Twentynine Palms Mountains, as well as the northern mountains such as Hidalgo Mountain are within a federal responsibility area without a fire hazard severity designation. The nearest very high fire hazard severity zone is in Yucca Valley, located approximately 17.83± miles west from the City western boundary.

²⁵ Fire Hazard Severity Zone Map, California Department of Forestry and Fire Protection, <https://experience.arcgis.com/experience/03beab8511814e79a0e4eabf0d3e7247/>, accessed February 2025.

Historically, fires in Twentynine Palms have occurred outside the City boundaries in the mountains and foothills to the south, in and adjacent to Joshua Tree National Park. Fires within the City are generally small in size with limited impact due to scattered vegetation that does not provide sufficient fuel to start a wildfire, as well as the quick response from the Fire Department.

Discussion of Impact

- a) **No Impact.** All developments, including the proposed Project, are required to comply with the City's Local Hazard Mitigation Plan (LHMP) and Emergency Operations Plan (EOP). These plans assess potential impacts in relation to natural hazards including flood, earthquake, and wildfire, and set a response plan on how to divert impact and ensure security. Development of the Project would be mandated to comply with strategies and guidelines as required in the LHMP and EOP. As such, the Project will not conflict or reduce the efficiency of these emergency response times during construction or operation. No impacts are anticipated.
- b) **No Impact.** The Project site is relatively flat and located at an elevation between 2,123 feet above sea level at the northwest end and 2,014 feet above sea level at the southeast end. There are no hillsides or mountainsides in proximity to the subject site. The nearest hillside is Donnell Hill located northeast of Mesquite Springs Road and south of Twentynine Palms Highway, approximately 1,344 feet north from Sullivan Road. There is a limited risk for fire risks by the Project's development considering there are no fire hazards within proximity to the Project, and the Project's proposal for roadway improvements would not expose users to adverse risk to health or life. Therefore, no impacts are expected.
- c) **No Impact.** Development includes roadway improvements along the 2.15± mile area that extends from Hatch Road and Twentynine Palms Highway to Sullivan Road and Adobe Road. Apart from proposed paving and stripping, no other utility infrastructure is proposed as part of the Project buildout. Proposed improvements will be built in accordance with the City Municipal Code. All proposed infrastructure improvements would neither change nor increase the area's low fire hazard risk, since roadway improvements will not introduce new sources of flammable materials. As such, buildout of the Project would not exacerbate fire risks or cause significant environmental impact and thus, no impacts are anticipated.
- d) **Less Than Significant Impact.** According to flood maps by FEMA, the Project site is largely located within a designated Zone AO which is associated with flood areas with a 1 percent or greater chance of shallow flooding with an average depth ranging from 1 to 3 feet.²⁶

²⁶ FEMA Flood Map Service Center: Hatch Road and Sullivan Road, Twentynine Palms, CA, FEMA, <https://msc.fema.gov/portal/home>, accessed February 2025.

Flood control measures will be included in Project design so as to manage stormwater runoff. These infrastructure improvements will include a street shoulder graded at a slight decline and a soil barrier located adjacent to direct water away from existing developed facilities. Implementation of these flood control features would manage runoff at the site and thus, would not contribute to an increase of runoff to adjacent properties.

There are no slopes or mountainsides in proximity to the Project site which could pose a significant risk from downstream flooding.

Under these conditions, less than significant impacts from structural damage and public safety from runoff would occur as a result of the Project's implementation.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XXI 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?		X		
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)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

Discussion of Impacts

- a) **Less Than Significant Impact with Mitigation.** As discussed in Section IV (Biological Resources), buildout of the proposed Project would not result in the reduction of suitable ecological habitat for common or special status species because the property is paved and highly disturbed by motor vehicles and adjacent urban land uses. Surrounding development consists of residential units as well as public and commercial facilities, which are widely spaced throughout the corridor's 2.15± mile area with parcels physically dividing nearby development. These parcels are undeveloped yet disturbed to varying extents by urbanization in the area. Due to the presence of these parcels providing open desert terrain and native habitat to common and special status species, as well as the site's location immediately adjacent these parcels, it is possible for Mojave Desert Tortoise and burrowing owl to occur in the vicinity of the Project site. To minimize the potential for adverse impact to these federally and state protected species, implementation of Mitigation Measure BIO-1, BIO-2, and BIO-3 would be required. Additionally, any construction work scheduled during bird nesting season (February to August) must adhere to preventative actions outlined in Mitigation Measure BIO-4. Consistent with these mitigation measures, any adverse impact by the Project's development would be reduced to less than significant levels.

Section V (Cultural Resources) discusses the probability for historical and archeological resources to be uncovered at the proposed Project site. As determined by the cultural resources report, the site's easternmost portion is located near a historically significant site known as the Oasis of Mara. Although less than significant impact is expected to occur, the Project would be required to implement Mitigation Measure CUL-1. The measure mandates that a qualified archeologist and tribal representative be present on-site during all Project construction activity within 1,000 feet from the eastern boundary to monitor and ensure no potential damage or loss occurs in the event a cultural resource is uncovered during ground disturbance activities. With implementation of this mitigation measure, less than significant impacts would occur within mitigation.

b) Less Than Significant Impact. Significant impacts to air quality, hazardous material, and transportation generally result in cumulative effects.

As discussed in Section III (Air Quality), cumulative impacts occur when a project exceeds federal and state non-attainment air quality standards. The Project is located in the MDAB, in an area designated for non-attainment for PM₁₀ and ozone. CalEEMod was used to estimate the Project's emission of criteria pollutants including CO, NO_x, VOC, SO_x, PM₁₀, and PM_{2.5} during the 6 month construction period and long-term operation. The results identify the Project's construction as the only source of emissions, and also determined that maximum emissions fall well below the MDAQMD emission thresholds. No emissions will occur during operation given the proposed Project is a roadway improvement project which does not include emission sources such as utility consumption (energy, natural gas, water) or trip generation in its long-term use. Although the Project would result in an incremental increase of air pollutants, it would not result in a considerable cumulative impact. Any potential impacts would be minimized by the Project's compliance with applicable regulatory standards established by the MAQMD Rule Book, PM₁₀ Attainment Plan, Ozone Attainment Plan, and MDAQMD CEQA and Federal Conformity Guidelines. With implementation of local and regional air quality plans, no cumulative impacts would occur.

The mishandling of hazardous material within a property previously designated as a hazardous site would result in cumulative impacts. As stated in Section IX (Hazard and Hazardous Materials), there are no identified hazardous sites in or near the Project site. Apart from the use of hazardous materials during the Project's construction which will occur temporarily and be stored primarily within the paved section of the proposed construction staging area, no transport, use, storage, or disposal of hazardous material will occur during the Project's operation. To address potential environmental effects and safety concerns, all applicable state and local standards will be implemented and adhered to, as required by law. No cumulative impacts would occur by the Project's implementation.

Cumulative impacts from transportation occur when project-generated traffic as well as current or future development projects collectively account for a growth in VMTs. By nature of the development as a non-motorized vehicle improvement project, as analyzed in Section XVIII (Transportation and Traffic), the Project would

not inherently increase the number of vehicle-trips through the corridor but rather, the Project's proposal to add bike lanes and a graded pedestrian trail along the 2.15± mile route would promote the use of non-motorized transportation and thus, potentially off-set vehicle use and marginally reduce VMTs in the local area. Therefore, potential for the Project to contribute to a cumulatively considerable impact by an increase in VMTs is negligible. No impact would occur.

- c) **Less Than Significant Impact.** As discussed in Section VII (Geology and Soils), the Project site is not located in an area designated as an active fault zone, or susceptible to liquefaction, landslides, subsidence, soil collapse, or lateral spreading. Additionally, buildout of the Project does not include residential or public uses which would involve human occupancy on the site. Therefore, the Project's development would not expose humans to adverse risk related to geological hazards.

Section XIII (Noise) evaluates the Project's potential to cause excessive noise and disrupt the existing ambient environment. Sources of noise by the Project would include construction-related noise only. After the 6 month construction period has ended, related noises would immediately end. During operation, the Project would not generate a source of noise but rather has the potential to reduce traffic-related noise in the local area by providing a source of non-motorized transportation in relative proximity to the City's Downtown and other local commercial and public facilities. Overall, the Project would not severely impact the local ambient noise environment to the extent of causing physiological impacts to nearby sensitive receptors.

Lastly, Section XX (Wildfire) identifies the Project site and surrounding area outside a CalFire designated high hazard severity zone and outside of any other fire-induced hazard areas including landslides. The site would also pose a low risk for flood-related impacts because existing flood control measures would be reintroduced along the corridor's right-of-way to direct storm runoff away from nearby development. As such, the Project would not increase the probability for fire or flood hazards in the area. No impacts would occur.

Mitigation Measures: See Section IV., Biological Resources and Section V., Cultural Resources

Monitoring: See Section IV., Biological Resources and Section V., Cultural Resources

APPENDICES

APPENDIX A: Air Quality Report

APPENDIX B: Biological Resources Assessment Report

APPENDIX C: Historical/Archeological Resource Assessment Report
(Available upon request to Qualified Professionals)

Available on the City of Twentynine Palms Website:

www.ci.twentynine-palms.ca.us