TOWN OF TRUCKEE

PUBLIC DRAFT
INITIAL STUDY / MITIGATED NEGATIVE DECLARATION

BACKGROUND

Application No.: 2020-000000084

Project Name: Rocker Memorial Skate Park

Project Proponent: Rocker Memorial Skate Park 501c3 Charity Smith Fiscal Sponsor

Lead Agency: Town of Truckee Planning Commission
c/o Truckee Community Development Department
10183 Truckee Airport Road
Truckee, CA 96161
(530) 582-7820

(Documents and other material upon which the decision for the adoption of the Negative Declaration is based may be found at the above location.)

Contact Person: Laura Dabe
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(530) 582-2937

Other agencies whose approval may be required (e.g., permits, financing approval, or participation agreement):

- Truckee Donner Public Utility District
- Regional Water Quality Control Board, Lahontan Region
- Department of Fish and Wildlife, State of California
- Nevada County Department of Environmental Health
- Truckee Fire Protection District
- Truckee Sanitary District
- Tahoe-Truckee Sanitary Agency
- United States Army Corps of Engineers

PROJECT DESCRIPTION AND LOCATION

Project Description: The applicant is proposing a new outdoor skateboarding park within the Truckee River Regional Park in Truckee. The project site includes a portion of an 11.29-acre parcel located at 10695 Brockway Road (APN 019-450-054-000) within the PUB (Public) land use designation of the Town of Truckee 2025 General Plan and the PF (Public Facilities) zoning district. The project area is approximately two acres in size and is located directly to the south and east of Estates Drive, which bisects the parcel, on an existing undeveloped dirt lot.

The proposed skateboarding facility includes a 24,686 square foot outdoor skateboarding park along with a 28-space parking area. The total project site is 81,850 square feet, which includes 24,686 square feet of concrete skateboarding park, 10,468 square feet of asphalt parking, 2,317 square feet of asphalt trails, 1,304 square feet of concrete walkways, 17,974 square feet of landscaping, and 25,101 square feet of open space. A total impervious area of 38,925 square feet is proposed (47 percent of the total project area).

The following land use entitlements are required for the proposed project: **1) Development Permit** for projects that involve new non-residential structure(s) with 7,500 square feet or more of total gross floor area and/or 26,000 square feet of site disturbance; **2) Minor Use Permit** for disturbance within 200 feet of a wetland; and **3) Zoning Clearance** for a "Parks and Playgrounds" use, which is a permitted use in in the PF zoning district when operated by a public agency.

The project site is located in the southeast corner of the Truckee River Regional Park, to the south and east of Estates Drive, on an undeveloped dirt lot that is currently used as informal parking for the rodeo grounds and for seasonal events. A skateboarding park addition in this location was identified as a preferred facility in the Truckee River Regional Park Master Plan adopted by the Truckee Donner Recreation and Parks District (TDRPD) in January 2020. The project proposes to replace the existing dirt lot with the skate park facility and landscaping (trees, shrubs and perennials).

The site is located in the vicinity of the Truckee Meadows Restoration Project. The applicant has identified that that grading and drainage are important aspects of the site due to its proximity to the Truckee Meadows Restoration Project. A central outflow pipe is proposed to collect all stormwater within the skate park, rain gardens are proposed to capture all parking lot runoff, and a swale located on the southern portion of the plan is proposed to ensure that no runoff enters the adjacent restoration project. Additionally, all plant species are proposed to be drought tolerant, site appropriate, and noninvasive.

The project site is located within the Public land use designation of the 2025 General Plan, which is applied to areas under public ownership by local, regional, State and federal government agencies. Allowed land uses include public parks and public facilities, including recreational facilities at an average Floor Area Ratio (FAR) of 0.20. The zoning for the parcel is PF (Public Facilities), which is applied to areas appropriate for public, institutional and auxiliary uses that are established in response to the recreational, safety, cultural and welfare needs of the Town. "Parks and Playgrounds" is identified as a permitted use in the PF zoning district when operated by a public agency.

The project construction is proposed in three phases, as described below. However, the required parking, ADA accessibility features, and stormwater treatment will be required during each phase based on the intensity of the proposed development within the phase at the time:

- Phase 1 focuses on site grading and the construction of the two skate bowls.
- Phase 2 includes the street section of the park and the surrounding landscape.
- Phase 3 focuses on the proposed parking and associated rain gardens.

Figure 1 below depicts the project location, Figure 2 depicts the project site, Figure 3 depicts the existing site conditions, Figure 4 depicts the proposed site plan, and Figure 5 provides a rendering of the proposed project.

Figure 1: Project Location

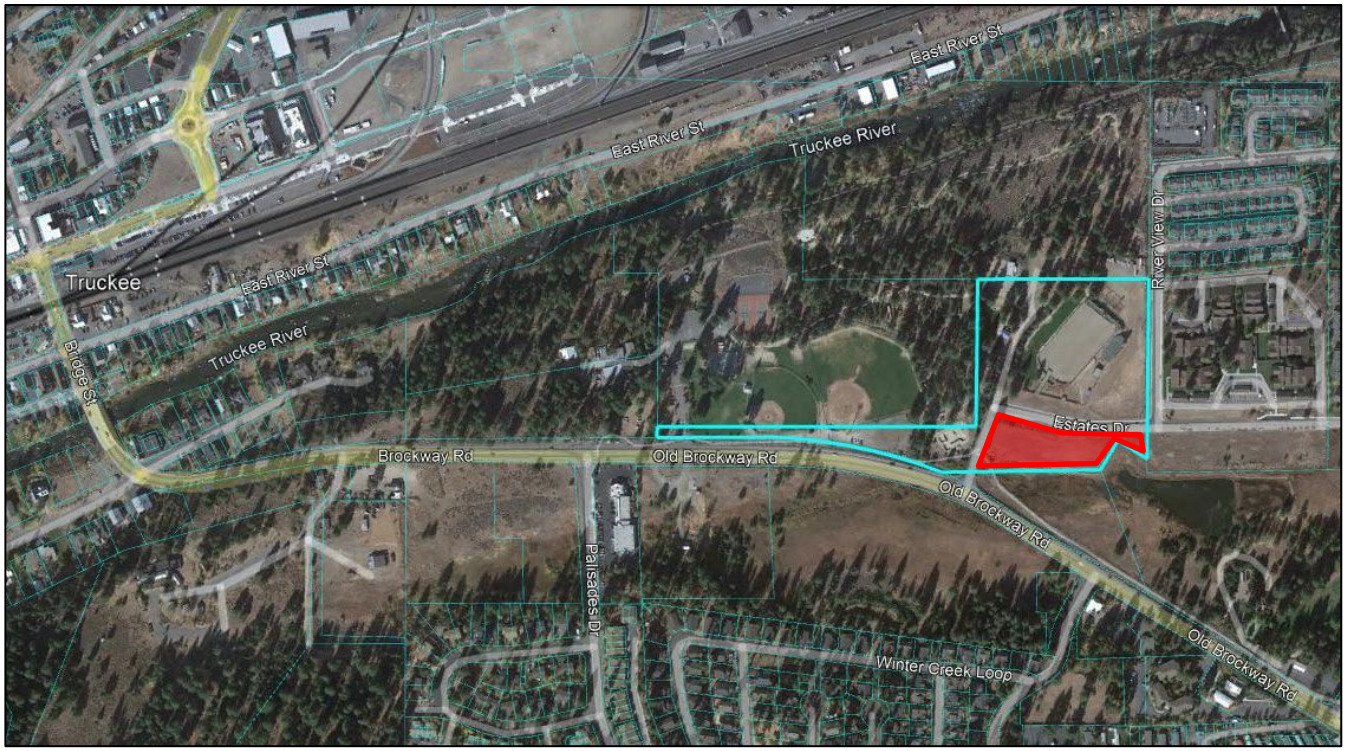


Figure 2: Overview of Project Site

Figure 3: Existing Site Conditions

Figure 4: Proposed Site Plan

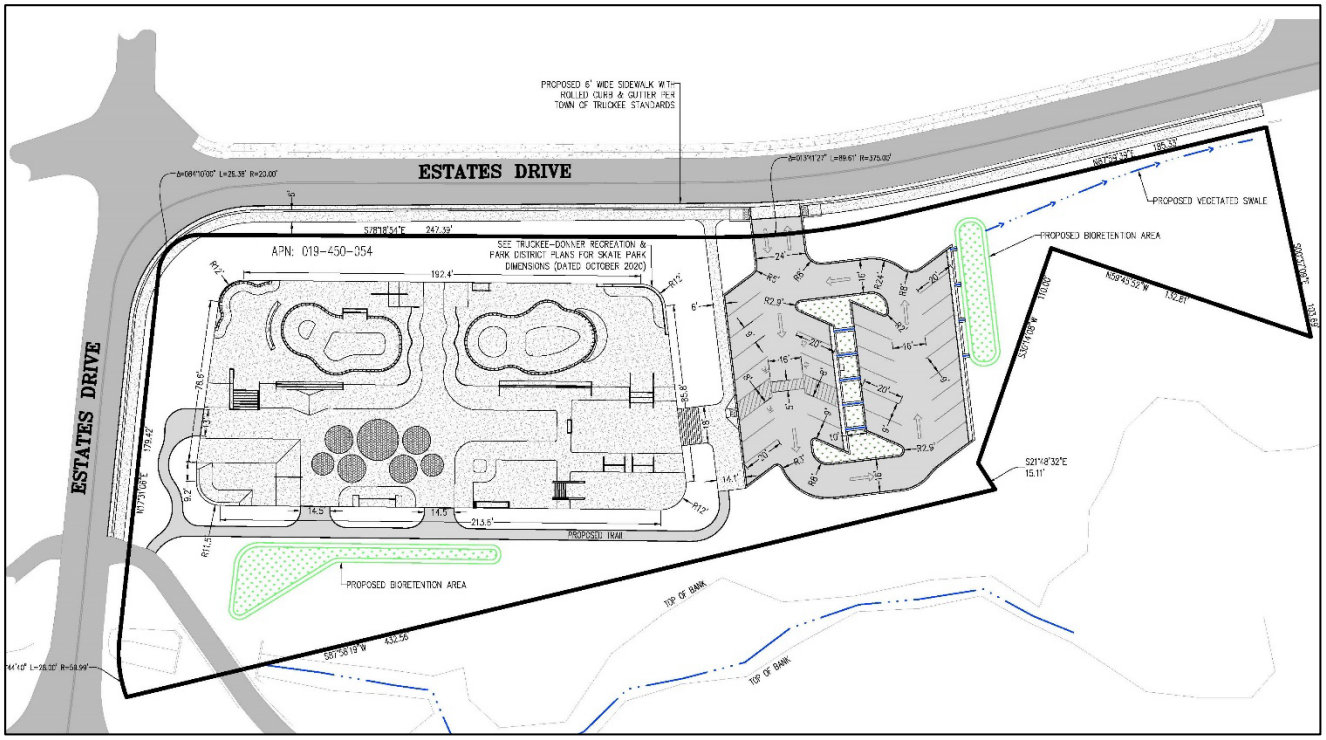


Figure 5: Rendering of Proposed Project

Project Location and Environmental Setting: The project site is located at the southeast corner of the Truckee River Regional Park in Truckee, near the intersection of Brockway Road and Estates Drive (10695 Brockway Road, APN 019-450-054-000). The primary access to the site is via Estates Drive to the north, a publicly owned and maintained street.

The site is relatively flat and is located at an elevation of approximately 5,850 feet above mean sea level. The site is located within Zone D of the Truckee Tahoe Airport Land Use Compatibility Plan area. The site is an undeveloped parcel disturbed by past grading and previously used as an informal dirt parking lot. The site is located within the Truckee River Regional Park, across Estates Drive to the south of the rodeo grounds and to the east of the existing skate park. Surrounding existing land uses include the Truckee River Regional Park to the north and west, multi-family residences to the northeast, and a pond and the Ponderosa Golf Course to the southeast. To the south and southwest, the site abuts undeveloped land, some of which supports fairly extensive wet meadows.

A total wetland area of 0.06 acre is located within the parcel but outside the proposed development area. The project proposes to avoid direct fills of any wetland areas; however, some construction areas approach close to the wetland boundaries. The southeast corner of the asphalt perimeter path lies within approximately 10 or 20 feet of the wetland polygon identified as FEW-2. There is no surface flow connection between the wetlands and the Truckee River.

Evidence exists that the site was graded and/or otherwise modified in the past. In addition to earthen berms just off site, a berm constructed of boulders exists around two sides of the site. Most of the site is a filled, graded, gravel covered area that is nearly devoid of vegetation over most of its area, with a small area of ruderal non-native vegetation in the northeast corner. Land cover to the east of the gravel area is a mostly grassy upland to mesic meadow of variable species dominance. North and west of the gravel area is a narrow band of Jeffrey pine and bitterbrush-sagebrush shrubland. The southern side of the fill slope of the gravel area was revegetated with native forbs at the time that some wetland restoration work was completed.

Project History: In January 2020, the Truckee Donner Recreation and Park District (TDRDP) adopted a Truckee River Regional Park Master Plan. The Plan identified a skateboarding park addition in this location as a preferred facility. An environmental document was not prepared as part of the Master Plan

adoption. The Plan identified that a "critical path item" was to complete CEQA review for the Master Plan and/or for various plan facilities as needed for implementation.

Project Baseline: The site is currently undeveloped and has been previously disturbed by past grading and use as an informal dirt parking lot and for seasonal events such as the annual carnival.

The site is proposed to be served by public water and electrical services from Truckee Donner Public Utility District and public sewer by Truckee Sanitary District.

Status of Native American Consultation Pursuant to Public Resources Code Section 21080.3.1: In compliance with Assembly Bill (AB) 52 (Public Resources Code Section 21080.3.1), project notification letters were distributed to the T'si Akim Maidu, the United Auburn Indian Community of the Auburn Rancheria, and the Washoe Tribe. The letters were distributed on February 12, 2021, and no requests to consult have been received to date.

BACKGROUND REPORTS, SUPPORTING DOCUMENTATION AND REFERENCES

The following documents have been used to support the analysis of potential environmental impacts from the proposed project, and are incorporated herein by reference for this Initial Study:

1. Town of Truckee 2025 General Plan, Amended October 23, 2018. http://www.townoftruckee.com/government/community-development/planning-division/plans-and-regulations/2025-general-plan
2. Town of Truckee Development Code, Amended December 14, 2021. http://www.townoftruckee.com/government/community-development/planning-division/plans-and-regulations/development-code/title-18-development-code

For a full bibliography, see the "Sources" list attached to this IS/MND.

APPENDICES

Appendix A – Air Quality Analysis
Appendix B – Biological Resources Study
Appendix C – Aquatic Resources Delineation
Appendix D – Cultural Resources Inventory
Appendix E – Geotechnical Engineering Report
Appendix F – Post-Construction Storm Water Quality Plan
Appendix G – Environmental Noise Assessment
Appendix H – VMT and Transportation Analysis

EVALUATION OF ENVIRONMENTAL IMPACTS

1. AESTHETICS.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?			✓	
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			✓	
c. In nonurbanized areas, substantially degrade the existing visual character or quality of the site and its surroundings?			✓	
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			✓	

Setting

The project site is located adjacent to existing recreational and residential development. The site is located within the Truckee River Regional Park, to the south of the rodeo grounds and to the east of the existing skate park. Surrounding existing land uses include the Truckee River Regional Park to the north and west, multi-family residences to the northeast, and a pond and the Ponderosa Golf Course to the southeast. Undeveloped land abuts the site to the south and southwest.

The property is not identified by the Truckee 2025 General Plan Community Character Element Figure CC-1 as a scenic corridor or scenic vista, and does not contain any prominent slope exposure, ridgelines or major streams/drainages. No slopes in excess of 20 percent are located on the property.

The General Plan Land Use Element Figure LU-2 indicates that the project site is located within a Neighborhood Overlay Area. Overlay designations are for areas of town that have unique conditions that call for additional policy guidance to supplement that provided by the underlying land use designation. (See Section 8, *Land Use, Planning, Population and Housing*, for information on land use designations.) This project site is specifically within the "Brockway Road Neighborhood Area" overlay designation. The purpose of this overlay area is to recognize the importance of the Brockway Road thoroughfare as a key gateway to Truckee from the south, and to recognize the potential significant change in this area following the completion of the Highway 267 Bypass. Allowed land uses include residential uses, predominantly in the medium- and high-density ranges; commercial and lodging uses; open space for recreational uses and scenic and habitat value; and uses approved under an approved PC-3 specific plan. Allowed residential densities range from three to 12 units per acre; commercial and industrial uses are allowed at an average FAR of 0.2.

Impact Discussion

a) In general, a project's impact to a scenic vista would occur if development of the project would substantially change or remove a scenic vista. Examples of typical scenic vistas include mountain ranges, ridgelines, or bodies of water as viewed from a highway, public space, or other area designated for the express purpose of viewing and sightseeing. The Town of Truckee 2025 General Plan does not identify any scenic vistas located near the project site. Development of the proposed project would not have a substantial adverse effect on a scenic vista; therefore, a ***less than significant impact*** would occur.

b) The current California State Scenic Highway Map indicates that there are no officially designated state scenic highways with the Town of Truckee. Interstate 80 and State Highway 89 (north of Interstate 80) are eligible to become state scenic highways but are not officially designated. The

Truckee Development Code designates Interstate 80 as a Scenic Corridor, and Section 18.46.080 (Scenic Corridor Standards) identifies areas that are subject to the Town's Scenic Corridor Development Standards as being those areas that extend 300 feet on each side of the Interstate 80 right-of-way (except those areas located within the Downtown Study Area as shown on the General Plan Land Use Diagram). The project site is located approximately one mile east of I-80, well outside of the 300-foot corridor range. Further, the project area does not have any scenic resources on site. Development of the proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway. Therefore, a ***less-than-significant*** impact would occur.

c) The project site is on an undeveloped portion of the subject parcel, which was disturbed by past grading and previously used as an informal dirt parking lot. Most of the site is a filled, graded, gravel covered area that is nearly devoid of vegetation over most of its area, with a narrow band of Jeffrey pine and bitterbrush-sagebrush shrubland to the north and west of the gravel area. The project site is located in an area that can be seen from the Brockway Road Corridor, which is located to the south of the project site. The Brockway Road Corridor is identified by the Town's General Plan a suitable area for future development.

   The immediate visual character of the area surrounding the proposed project site consists of the Truckee River Regional Park to the north and west; multi-family residential development to the northeast; a pond and the Ponderosa Golf Course to the southeast; and undeveloped land to the south and southwest. The project site is located in the southeast corner of the Regional Park, to the south and east of Estates Drive. A skateboarding park addition in this location was identified as a preferred facility in the Truckee River Regional Park Master Plan adopted by Truckee Donner Recreation and Parks District in January 2020. Currently, the neighborhood surrounding the project site consists of previously constructed residential and recreational uses. The proposed skateboarding park is consistent with the existing outdoor recreational facilities that are located directly adjacent to the project site.

   General Plan Conservation and Open Space Policy 7.1 states that discretionary development shall be clustered away from slopes in excess of 30 percent and that discretionary development on all slopes in excess of 20 percent shall have a site-specific review of soil type, vegetation, drainage, slope and building placement to determine proper site design. No disturbance of slopes in excess of 20 percent is proposed. The project proposes landscape screening around the perimeter of the project area and all of the existing trees on the site are proposed to be retained, including eight existing pine trees (ranging in size from 4" to 33") located in the northwest corner of the site and along the western boundary of the project area.

   The proposed project would be required to comply with Development Code Section 18.24 (Design Guidelines), which sets forth design standards and guidelines governing scenic quality. Compliance with the applicable goals, policies, and actions of the Town's General Plan, as well as Development Code Section 18.24, would ensure the proposed project would not conflict with applicable zoning or other regulations governing scenic quality. Based on the above, a ***less-than-significant*** impact on the visual character of the site and its surroundings would occur.

d) No lighting is proposed as part of the project. Development of the proposed uses would involve no new sources of light and glare associated with lighting fixtures within the proposed skateboarding park and parking area. Due to the fact that the facility would be used only during the daylight hours, headlights from vehicles driving within the project site would not result in substantial sources of light and glare. Such sources of light and glare would not be substantially more intensive than what currently occurs within the surrounding area, including light and glare generated by vehicles traveling on Estates Drive in the project vicinity. The proposed project would result in a ***less-than-significant*** impact related to creating a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Mitigation Measures

None required.

References

California Department of Transportation. *California Scenic Highway Mapping System.* Available at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed March 2022.

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

Impact Discussion

a) The project site is an undeveloped parcel disturbed by past grading and previously used as an informal dirt parking lot. Most of the site is a filled, graded, gravel-covered area that is nearly devoid of vegetation over most of its area, with a narrow band of a narrow band of Jeffrey pine and bitterbrush-sagebrush shrubland to the north and west of the gravel area. Eastern Nevada County contains no prime agricultural land based on farmland soil mapping. Per the California Department of Conservation Farmland Mapping and Monitoring Program, the project site is located in an area which has not been mapped for agricultural resources, and the Town of Truckee's General Plan Land Use map does not currently include any areas designated for agricultural uses. Due to the lack of farmland mapping or designated agricultural areas, as well as the developed nature of the area, the project site is not considered Farmland. Therefore, the proposed project would not convert Prime Farmland, Unique Farmland or Farmland of Statewide importance to a non-agricultural use (California Department of Conservation, 2022). Therefore, there will be ***no impact***.

b) The project is located on lands zoned for Public Facilities (PF) uses within the Town of Truckee. Agricultural production is not a permitted or conditionally allowed use in the PF zoning district. The project site consists of a portion of one property which is not under the provisions of an active Williamson Act Contract. The proposed project would not conflict with existing zoning for agricultural use, nor with a Williamson Act contract. Therefore, there is ***no impact***.

c) The project is located on lands zoned for Public Facilities uses under the Town of Truckee Development Code, which allows a variety of recreation uses by-right. There is no conflict with existing zoning for, or cause rezoning of, forest land, timberland or timberland zoned Timberland Production. Therefore, there is ***no impact***.

d) The project site is not considered forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526) and is not zoned Timberland Production (as defined by Government Code Section 51104[g]). Due to the lack of forest on-site, the project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, the proposed project would have ***no impact***.

e) There will be no changes to the existing environment that would result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. There is ***no impact***.

Mitigation Measures

None required.

References

California Department of Conservation. California Important Farmland Finder. Available at: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed March 2022.

3. AIR QUALITY.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?			✓	
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			✓	
c. Expose sensitive receptors to substantial pollutant concentrations?			✓	
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			✓	

Setting

The Town of Truckee is located in the Mountain Counties Air Basin (MCAB) and is under the jurisdiction of the Northern Sierra Air Quality Management District (NSAQMD). In addition to the Truckee area, the NSAQMD has jurisdiction over an area encompassing Nevada, Plumas, and Sierra counties. Topography and meteorological conditions vary widely in the areas under the NSAQMD's jurisdiction and air quality conditions can be heavily influenced by local factors. Consequently, air quality conditions within the MCAB vary, resulting in differing attainment status designations for State and federal ambient air quality standards (AAQS) within various portions of the MCAB.

The attainment status for ozone, fine particulate matter 2.5 microns in diameter ($PM_{2.5}$), respirable particulate matter 10 microns in diameter (PM_{10}), and carbon monoxide (CO) AAQS are presented below:

NSAQMD Attainment Status of State and Federal Air Quality Standards		
Pollutant	**State Standard**	**Federal Standard**
Ozone (O3)	Nevada County: Non-attainment (due to overwhelming transport) Sierra and Plumas Counties: Unclassified	**2008 Standard (75 ppb)** • Western Nevada County: Serious Nonattainment • Sierra, Plumas, and Eastern Nevada County: Unclassifiable **2015 Standard (70 ppb)** • Western Nevada County: Serious Nonattainment • Sierra, Plumas, Eastern Nevada County: Unclassifiable
PM10	Nevada, Sierra and Plumas Counties: Non-attainment	Unclassified
PM2.5	Portola Valley in Plumas County: Non-attainment Nevada, Sierra and Remainder of Plumas County: Unclassified	**2012 Annual Standard (12µg/m^3)** • Portola area in Plumas County: Moderate Nonattainment • Nevada, Sierra, and Remainder of Plumas County: Unclassifiable/Attainment **2012 24-hour Standard (35µg/m^3)** • Unclassifiable/Attainment
CO	Plumas County: Attainment Nevada, Sierra County: Unclassified	Unclassifiable/Attainment
Source: NSAQMD. Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects. March 15, 2021.		

Ozone: Ozone is a secondary pollutant generated from ozone precursor gases, primarily oxides of nitrogen (NO_X) and reactive organic gases (ROG), which react with sunlight to create ozone. Reductions in ozone are accomplished through reducing precursor emissions. Western Nevada County is designated as nonattainment for the federal 8-hour ozone standard and all of Nevada County is designated as being in nonattainment for the State 1-hour ozone standard. Ozone exceedances in Nevada County are primarily due to transport of emissions from the broader Sacramento area and San Francisco Bay Area. As a federal non-attainment area, the NSAQMD is preparing a federally enforceable State Implementation Plan (SIP) for western Nevada County in accordance with the Clean Air Act.

The SIP is an air quality attainment plan designed to reduce emissions of ozone precursors enough to re-attain the federal ozone standard by the earliest practicable date. This will include various pollution control strategies. Overall emissions of ozone precursors must be reduced in western Nevada County (consistent with Reasonable Further Progress requirements specified in the Clean Air Act) until attainment is reached. Most of the reductions are expected to come from motor vehicles becoming cleaner and from State regulations. Failure to submit and implement the SIP in a timely manner could result in federal sanctions, including the loss of federal highway funds, greater emission offset ratios for new sources, and other requirements that the U.S. Environmental Protection Agency (EPA) may deem necessary. As western Nevada County's population, industry and motor vehicle travel grow, the pollution transport fraction will decrease if local emissions are insufficiently mitigated. Plumas and Sierra Counties and eastern Nevada County have not exceeded the NAAQS for ozone. Plumas and Sierra Counties are Unclassified for the CAAQS.

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. These regulated air pollutants are known as "criteria air pollutants" and are categorized

into primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources.

Carbon monoxide (CO) is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation.

Reactive organic gases (ROG) are compounds comprising primarily atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of ROG include evaporative emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROG, but rather by reactions of ROG to form secondary pollutants such as ozone.

Nitrogen oxides (NOX) serve as integral participants in the process of photochemical smog production. The two major forms of NOX are nitric oxide (NO) and nitrogen dioxide (NO2). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO2 is a reddish-brown irritating gas formed by the combination of NO and oxygen, a byproduct of fuel combustion. NO2 also contributes to the formation of PM10 (particulates having an aerodynamic diameter of 10 microns—or 0.0004 inch—or less in diameter) and ozone. NOX acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.

Particulate matter consists of solid and liquid particles of dust, soot, aerosols, and other matter, which are small enough to remain suspended in the air for a long period of time. Particulate matter can be divided into several size fractions. Coarse particles (PM10) are between 2.5 and 10 microns in diameter and arise primarily from natural processes, such as wind-blown dust or soil. Fine particles (PM2.5) are less than 2.5 microns in diameter and are produced mostly from combustion or burning activities. A portion of the particulate matter in the air is due to natural sources such as wind-blown dust and pollen, which are associated with the aggravation of respiratory conditions. Man-made sources include combustion, automobiles, field burning, factories, and road dust. Primary sources of PM10 emissions are road traffic, construction, open burning, and wildfires. The amount of particulate matter and PM10 generated is dependent on the soil type and the soil moisture content. Traffic also generates particulate matter emissions through entrainment of dust and dirt particles that settle onto roadways and parking lots.

The NSAQMD has established significance thresholds associated with development projects for emissions of the ozone precursors ROG and NO_x, as well as for PM_{10}. Adopted NSAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment. The thresholds, expressed in pounds per day (lbs/day), are listed below:

NSAQMD THRESHOLDS OF SIGNIFICANCE			
Significance Level	**Project-Generated Emissions (lbs/day)**		
	NO_X	**ROG**	**PM_{10}**
Level A	*<24*	*<24*	*<79*
Level B	*24–136*	*24–136*	*79–136*
Level C	*>136*	*>136*	*>136*
Source: NSAQMD Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects. (March 15, 2021)			

NSAQMD has developed a tiered approach to determine significance levels based on a range of emissions levels. All projects, Level A or greater, are required to implement the following basic measures recommended by NSAQMD:

- Alternatives to open burning of vegetative material will be used unless otherwise deemed infeasible by the NSAQMD. Among suitable alternatives are chipping, mulching, or conversion to biomass fuel; and
- Grid power shall be used (as opposed to diesel generators) for job site power needs where feasible during construction.

Projects that fall within the Level B emissions level thresholds require implementation of additional measures recommended by NSAQMD for consideration in order to result in a less-than-significant impact. Projects that exceed Level C emission level thresholds are required to implement further additional measures sufficient to reduce emissions to a level below significant. If, even after implementation of all such mitigation measures, a project would result in emissions in excess of the Level C thresholds, impacts would be considered significant and unavoidable.

California Emissions Estimator Model (CalEEMod) version 2020.4.0 was used to quantify emissions for the proposed project and identify mitigation measures to reduce pollutants. CalEEMod is a statewide land use emissions computer model accepted by the air districts of California to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations. The model quantifies direct emissions from construction and operations (including vehicle and off-road equipment use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Construction emissions are typically short-term impacts and operational emissions are considered long-term based on day-to-day operations. The model also identifies mitigation measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from measures chosen by the user. These mitigation measures were developed and adopted by the California Air Pollution Control Officers Association (CAPCOA) in collaboration with various air districts. Default data (e.g., emission factors, trip lengths, source inventory, etc.) have been provided by individual air districts to account for local conditions and requirements. Where specific data is known to be more accurate than default data, it is added to the model and a brief explanation is given for each instance.

To assess the significance of the air quality impacts, the daily emission rates of the various air pollutants were compared to the NSAQMD's threshold of significance. The following project details were used to calculate daily emission rates of the above-referenced air pollutants:

- 24,686 SF Skate Park Area
- 17,974 SF Landscape Area
- 10,468 SF Parking Lot (AC)
- 3,621 SF Sidewalk Areas (Concrete)
- 25,101 SF Open Space

The proposed project's estimated emissions associated with construction and operations are discussed below, as well as the proposed project's contribution to cumulative air quality conditions. All emissions modeling results are included in Appendix A to this IS/MND.

Construction Emissions

The results of the analysis indicate that air quality impacts would be less-than-significant for all air pollutants for the construction phase. Based on the results of the CalEEMod computer model in Table

1 of Appendix A (shown below), the unmitigated projected construction emissions fall in the Level A thresholds for ROG, NOX and PM10:

TABLE 1

Construction Criteria Pollutants Emissions Summary

Criteria Pollutants	Daily Emissions Unmitigated (lbs/day)	Threshold Level	Significance
ROG	1.77	A	Less than significant
NO_X	6.50	A	Less than significant
CO	6.98	N/A	Less than significant
SO2	0.01	N/A	Less than significant
PM_{10}	0.51	A	Less than significant
$PM_{2.5}$	0.35	N/A	Less than significant

Source: NSAQMD Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects dated March 15, 2021; and CalEEMod version 2020.4.0

As shown in the table, the proposed project's construction emissions would be within threshold Level A. Consequently, the proposed project would be considered to result in a less-than-significant impact related to construction emissions.

All projects are required to comply with the basic measures recommended by NSAQMD, which would help to reduce the construction emissions from the levels presented in Table 3. In addition, all development projects under the jurisdiction of the NSAQMD are required to prepare a Dust Control Plan pursuant to Rule 226 (Dust Control). The proposed project's required implementation of the Dust Control Plan would help to further minimize construction-related emissions of fugitive dust, which is a component of PM_{10}, from the levels presented in Table 3. With implementation of the Dust Control Plan, the actual emissions of PM_{10} would be lower than the levels presented in Table 3.

Operational Emissions

The results of the analysis indicate that air quality impacts would be less-than-significant for all air pollutants for the operational phase. Based on the results of the CalEEMod computer model in Table 1 of Appendix A (shown below), the unmitigated projected construction emissions fall in the Level A thresholds for ROG, NOX and PM10:

TABLE 2 Operational Criteria Pollutants Emissions Summary			
Criteria Pollutants	**Daily Emissions Unmitigated (lbs/day)**	**Threshold Level**	**Significance**
ROG	1.20	A	Less than significant
NO_X	0.49	A	Less than significant
CO	2.92	N/A	Less than significant
SO2	0.004	N/A	Less than significant
PM_{10}	0.32	A	Less than significant
$PM_{2.5}$	0.09	N/A	Less than significant
Source: NSAQMD Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects dated March 15, 2021; and CalEEMod version 2020.4.0			

Based on the above, a less-than-significant impact related to operational emissions of criteria pollutants would occur.

All projects are required to comply with the basic measures recommended by NSAQMD, which would help to reduce the construction and operational emissions from the levels presented in Tables 1 and 2. Based on the project design and Town of Truckee Development Code requirements, each of the criteria pollutants listed in the tables will be reduced during the construction and/or operational phase with implementation of the following:

1. Prepare a Dust Control Plan in compliance with Air District/State/Town of Truckee rules and regulations;
2. Use water efficient irrigation system; and
3. Improve accessibility to the site w/ improvements to pedestrian network and road crossing.

Cumulative Emissions

A cumulative impact analysis considers a project over time in conjunction with other past, present, and reasonably foreseeable future projects whose impacts might compound those of the project being assessed. Due to the dispersive nature and regional sourcing of air pollutants, air pollution is already largely a cumulative impact. The nonattainment status of regional pollutants, including ozone and PM, is a result of past and present development, and, thus, cumulative impacts related to these pollutants could be considered cumulatively significant.

To improve air quality and attain the health-based standards, reductions in emissions are necessary within nonattainment areas. Adopted NSAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. As future attainment of AAQS is a function of successful implementation of NSAQMD's planning efforts, by exceeding the NSAQMD's Level C thresholds for construction or operational emissions, a project could contribute to the region's nonattainment status for ozone and PM

emissions and could be considered to conflict with or obstruct implementation of the NSAQMD's air quality planning efforts.

As discussed above, the proposed project would result in construction and operational emissions that would be within the Level A threshold. Therefore, the proposed project would not be considered to result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment, and the project's incremental contribution to cumulative emissions would be considered less than significant.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Sensitive receptors are typically defined as facilities where sensitive receptor population groups (i.e., children, the elderly, the acutely ill, and the chronically ill) are likely to be located. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. The area to the north and west of the project site consists of the Truckee River Regional Park, including the existing skate park and rodeo grounds. The area to the northeast of the project site contains the Truckee Donner Senior Apartments, the Truckee Pines Apartments, and a neighborhood of single-family homes, known as the Ponderosa Fairway Estates. The nearest existing sensitive receptors to the project site would be the recreational facilities at the Regional Park (located approximately 50 feet from the project site, across Estates Drive to the north and west) and the Truckee Donner Senior Apartments (located approximately 200 feet north of the project site, across Estates Drive to the northeast).

The major pollutant concentrations of concern are localized CO emissions, toxic air contaminant (TAC) emissions, and criteria pollutant emissions, which are addressed in further detail below.

Localized CO Emissions

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. Emissions of CO are of potential concern, as the pollutant is a toxic gas that results from the incomplete combustion of carbon-containing fuels such as gasoline or wood.

Although NSAQMD does not have an established threshold for CO emissions, daily maximum CO emissions are provided in order to inform the public. Maximum unmitigated daily construction and operational emissions of CO as identified in Tables 1 and 2 are summarized below:

Project Phase	CO Emissions
Construction	6.98
Operations	2.92
Source: NSAQMD Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects dated March 15, 2019; CalEEMod version 2020.4 (see Appendix A)	

TAC Emissions

Another category of environmental concern is TACs. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommended setback distances for sensitive

land uses from major sources of TACs, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. The California Air Resources Board (CARB) has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to pollutant concentrations would correlate to a higher health risk.

The proposed project does not include any operational activities that would be considered a substantial source of TACs. Accordingly, operations of the proposed project would not expose sensitive receptors to excess concentrations of TACs.

Short-term, construction-related activities could result in the generation of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. Construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. Health risks are typically associated with exposure to high concentrations of TACs over extended periods of time (e.g., 30 years or greater), whereas the construction period associated with the proposed project would likely be limited to approximately two years. All construction equipment and operation thereof would be regulated per the In-Use Off-Road Diesel Vehicle Regulation, which is intended to help reduce emissions associated with off-road diesel vehicles and equipment, including DPM. Because construction equipment on-site would not operate for long periods of time and would be used at varying locations within each site, associated emissions of DPM would not occur at the same location (or be evenly spread throughout the entire project site) for long periods of time. Furthermore, the prevailing wind direction in the Town of Truckee is from the west. As a result, during the construction period, the wind would primarily blow construction exhaust and DPM in the eastward direction and not directly towards the nearby sensitive receptors, which are located to the north.

Due to the temporary nature of construction and the relatively short duration of potential exposure to associated emissions, the potential for any one sensitive receptor in the area to be exposed to concentrations of pollutants for a substantially extended period of time would be low. Thus, construction of the proposed project would not be expected to expose any nearby sensitive receptors to substantial pollutant concentrations.

Criteria Pollutants

The NSAQMD thresholds of significance were established with consideration given to the health-based air quality standards established by the Federal and State AAQS, and are designed to aid the district in achieving attainment of such AAQS. Although the NSAQMD's thresholds of significance are intended to aid achievement of the AAQS for which the MCAB is in nonattainment, the thresholds of significance do not represent a level above which individual project-level emissions would directly result in public health impacts. Nevertheless, a project's compliance with the NSAQMD's thresholds of significance provides an indication that criteria pollutants released as a result of project implementation would not inhibit attainment of the health-based AAQS. Because project-related emissions would not exceed the NSAQMD thresholds for criteria pollutant emissions and, thus, would not inhibit attainment of the federal and State AAQS, the criteria pollutants emitted during project implementation would not be anticipated to result in measurable health impacts to sensitive receptors. Accordingly, the proposed project would not expose sensitive receptors to excess concentrations of criteria pollutants.

Dust and Odors

Emissions such as those leading to odor have the potential to adversely affect people. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor

impact, and the variety of odor sources, quantitative analysis to determine the presence of a significant odor impact is difficult. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. The proposed project would not introduce any such land uses.

Construction activities often include diesel-fueled equipment and heavy-duty trucks, which could create odors associated with diesel fumes that may be considered objectionable. However, construction is temporary and construction equipment would operate intermittently throughout the course of a day, and would likely only occur over portions of the site at a time. In addition, all construction equipment and operation thereof would be regulated per the In-Use Off-Road Diesel Vehicle Regulation. Project construction would also be required to comply with all applicable NSAQMD rules and regulations, particularly associated with permitting of air pollutant sources. The aforementioned regulations would help to minimize air pollutant emissions, as well as any associated odors related to operation of construction equipment. Considering the short-term nature of construction activities, as well as the regulated and intermittent nature of the operation of construction equipment, the proposed project would not be expected to create objectionable odors affecting a substantial number of people.

Furthermore, the NSAQMD regulates objectionable odors through Rule 205 (Nuisance), which prohibits any person or source from emitting air contaminants or other material that result in any of the following: cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; endanger the comfort, repose, health, or safety of any such persons or the public; or have a natural tendency to cause injury or damage to business or property. Rule 205 is enforced based on complaints. If complaints are received, the NSAQMD is required to investigate the complaint, as well as determine and ensure a solution for the source of the complaint, which could include operational modifications. Thus, although not anticipated, if odor complaints are made during construction or operation of the project, the NSAQMD would ensure that such odors are addressed and any potential odor effects eliminated.

With respect to dust, the proposed project would be required to comply with all applicable NSAQMD rules and regulations. Specifically, implementation of a Dust Control Plan pursuant to Rule 906 would be sufficient to reduce potential emissions of dust during construction. Following project construction, vehicles operating within the project site would be limited to paved areas of the site, and non-paved areas would be landscaped. Thus, project operations would not include sources of dust that could adversely affect a substantial number of people.

Construction and operation of the proposed project would not result in emissions (such as those leading to odors) adversely affecting a substantial number of people.

Conclusion

The proposed project would result in emissions (both construction and operational) that would be below the thresholds stated by the NSAQMD. Therefore, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutants, and the project's incremental contribution to the cumulative emissions would be considered less than significant.

Based on the project design and compliance with NSAQMD and the Town of Truckee Development Code, the project does not pose a significant effect on the environment or sensitive receptors, and does not conflict with any applicable plans, policies or regulations related to air quality.

Impact Discussion

a) By assessing air pollution and emissions associated with the proposed project based on Thresholds of Significance established by NSAQMD, the project complies with both NSAQMD

regulations and the Particulate Matter Air Quality Management Plan adopted by the Town of Truckee on July 15, 1999. Both construction and operation of the proposed project would result in Level A emissions of all criteria pollutants, pursuant to NSAQMD guidelines; therefore, the proposed project would result in emissions that would not conflict with or obstruct implementation of the applicable regional air quality plans. Thus, a ***less-than-significant*** impact would occur during construction of the proposed project.

b) The accepted software program to determine air quality impacts (CalEEMod, Version 2020.4) was used to estimate overall emissions for both construction and operational phases associated with this Project. A detailed report of the results is contained in Appendix A. Based on the results of the model, the proposed project does not violate any air quality standard nor does the project contribute substantially to an air quality violation. CEQA defines cumulative impacts as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The proposed project will not result in a significant increase in particulate matter or other ozone precursors (above the Level A threshold established by NSAQMD). The project will not 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. Therefore, this impact is **less-than-significant**.

c) Sensitive receptors are people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, daycare centers, nursing homes, hospitals and residential dwelling unit(s). Although several outdoor recreational facilities and residential uses are located in the vicinity of the project site, based on CalEEMod Air Quality Analysis, the proposed project would not expose any sensitive receptors to excess concentrations of localized CO, TACs, or criteria pollutants during operations of the project. Consequently, the proposed project would result in a ***less-than-significant*** impact related to the exposure of sensitive receptors to substantial pollutant concentrations.

d) The occurrence and severity of odor impacts depends on numerous factors, including the nature, frequency and intensity of the source, wind speed and direction, and the sensitivity of the receptors. Land uses commonly considered to be potential sources of odorous emissions include wastewater treatment plants, sanitary landfills, food processing facilities, chemical manufacturing plants, rendering plants, paint/coating operations, and agricultural feedlots and dairies. This project does not propose any uses typical of creating objectionable odors. Construction and operation of the proposed project would not result in emissions (such as those leading to odors) adversely affecting a substantial number of people, and a ***less-than-significant*** impact would result.

Mitigation Measures

None required.

References

Millennium Planning & Engineering. *Summary of Air Quality Analysis.* March 21, 2022.

Northern Sierra Air Quality Management District. *Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects.* March 15, 2021.

Town of Truckee. *Particulate Matter Air Quality Management Plan.* July 15, 1999.

4. BIOLOGICAL RESOURCES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		✓		
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		✓		
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		✓		
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			✓	
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		✓		
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

Ecological Setting

A Biological Resources Study was prepared for the proposed project by EcoSynthesis, Inc. on October 1, 2021 (see Appendix B). This study included a field survey of the site to identify any notable habitat types or elements that had not drawn attention at the time of the wetland delineation in 2019 and to develop a floristic plant list. Field assessments of the project site were conducted on June 23, July 20, and August 6, 2021. Plant species observed were identified by sight or by reference to Baldwin et al. (2012) and were noted on a proprietary checklist of the local flora. Mapping of the site utilized wetland polygons derived from a formal three-parameter wetland delineation. Remaining site land cover types were mapped from satellite imagery informed by the field work.

Five types of land cover were identified on the project site, as summarized below:

1. **Gravel Area** – The largest single type of land cover is an area of about one acre where a substantial volume of fill material of unknown origin was deposited, then graded to the gentle slope that drains to the northeast, and finally covered with a variable thickness of crushed (angular) commercial gravel. Most of the gravel supports only sparse or zero vegetation, but small patches of almost entirely non-native ruderal (weedy) vegetation are present, in particular at the extreme northeast end (prostrate knotweed, tumble mustard, and Sierra tarweed).
2. **Dry Montane Meadow** – This land cover type is a mosaic of non-wetland grass-dominated vegetation including, but not entirely limited to, the following MCV2 alliances: *Hordeum brachyantherum* alliance (meadow barley) and *Poa secunda* alliance (one-sided bluegrass). Where meadow barley is present, it is sometimes a codominant species, but with other upland or facultative-upland codominants and lacking indicators of hydric soils and wetland hydrology. The dominance of species not native to the Truckee area is indicative of a site that has been substantially altered from its original native condition.
3. **Eastside Pine/Shrubland** – This small area may conform to either of the following MCV2 alliances: *Pinus jeffreyi* alliance (Jeffrey pine woodland) and *Purshia tridentata* alliance (antelope bitterbrush shrubland). This land cover type may represent residual original vegetation, or vegetation that recolonized disturbed areas where the soil profile remained largely intact. The dominant plant in terms of size is Jeffrey pine, one of which (located just within the

northwest corner of the site) is approximately 36 inches in diameter at 4.5 feet above the ground. However, pine trees are just scattered individuals within this cover type. The shrub stratum is dominated mostly by antelope bitterbrush and rubber rabbitbrush, with other locally common species also present (e.g., mountain sagebrush).

4. **Berm** – Most of the area mapped as this land cover type is the fill slope between the Gravel Area and the large off-site wetland and pond. The vegetation is largely from an upland seed mix applied during restoration work carried out in that wetland and is dominated by perennial forbs and subshrubs ("wildflowers") such as sulfur buckwheat, showy penstemon (beardtongue), and Gray's lupine.
5. **Freshwater Emergent Wetland** – Wetland is present within the study area in one patch at the far eastern end, four very small areas along the southern boundary, and a final patch of wetland between two culverts, just within the southwest corner of the site but separated from the project development area by the paved multi-use Brockway Trail. All of these separate polygons are contiguous off site, being the ends of a large wetland and pond system referred to as Truckee Meadow. The in-site wetland area totals 0.06 acre. The main, off-site portion of the wetland is sustained by perennial surface water, but the small extensions within the study area are sustained only by near-surface saturation and possibly occasional brief inundation. The vegetation of the extensions within the site is dominated by Nebraska sedge. Previous studies in the Estates Drive area examined all of the limits and downslope flow directions from this large wetland system, beginning with the culvert under Estates Drive through which all of the wetlands surface water flows northward to the undeveloped area between Martis Drive and Crestview Drive, finally entering fenced Tahoe Truckee Sanitation Agency property. Based on field observation and available lidar topography, there is no surface flow connection between the wetlands and the Truckee River. This connection appears to be interrupted by higher topography within the fenced TTSA area containing what appears to be an overflow basin intended only to impound water under exceptional surface water circumstances.

The locations of the land cover types are shown on the land cover map provided in the Biological Resources Study (Figure 2 of Appendix B), as shown below:

The study notes that the site has been substantially altered by human actions, likely since early in Truckee's history. Anthropogenic alterations have included grading, ditching for drainage, and, in the more distant past, grazing and cultivation of native and non-native pasture species. Nearly all of the construction areas (including stormwater management) are located within the already urbanized Gravel Area, and no direct fills of wetlands are proposed.

Special Status Species

For the study, the CNDDB BIOS system was consulted for relevant occurrences, mostly those within about five miles of the site. The greater project region includes many habitat resources such as conifer woodlands and rivers that are not represented within the site. Many of the special-status species, both plants and wildlife, which resulted from the CNDDB query are found in wetland and aquatic habitats, which the proposed development proposes to avoid. Table 1 of the Biological Resources Study includes these species (see Appendix B) but indicates that their habitat is not found within the development footprint, though it may occur within the study site.

Site surveys sufficient to provide a floristic botanical survey of the proposed development footprint were conducted, and no special status species of plants were observed. Surveys for special status wildlife species were not deemed to be necessary to evaluate impacts due to the fact that it is unlikely that any wildlife make anything more than occasional use of the project development area, which is almost entirely a graded, graveled urbanized area.

Special Species Plants

Special-status plants generally occur in relatively undisturbed areas within vegetation communities such as vernal pools, marshes and swamps, chenopod scrub, seasonal wetlands, riparian scrub, chaparral, alkali playa, dunes, and areas with unusual soil characteristics.

According to the Biological Resources Study, suitable habitat for three special status plant species exists within the development footprint. These species include Three-tip sagebrush, Donner Pass buckwheat and Plumas ivesia. However, none of those species were found during floristic botanical survey of the site, as discussed below.

Special Status Plant Species	
Species	**Suitable Habitat in Development Footprint?**
Three-tip sagebrush (*Artemisia tripartite)*	Yes – Potentially suitable habitat was surveyed; species was not found.
Donner Pass buckwheat (*Eriogonum umbellatum* var. *torreyanum*	Marginal or no – Potentially suitable habitat was surveyed; species was not found.
Plumas ivesia (*Ivesia sericoleuca)*	Yes – Potentially suitable habitat was surveyed during appropriate season; species was not found.

Additional discussion on special status plant species was provided in the study (see Appendix B), as summarized below:

- **Three-tip Sagebrush** – This species is identified by its leaves, not flower or fruits, so the plant is definitively identifiable at any time from approximately April through October or even November. Nearly all of the regional records are on high, exposed rocky ridges and slopes, however, there is one record in the Lake Van Norden area just outside the edge of a meadow. No three-tip sagebrush was found at the study area.
- **Donner Pass Buckwheat** – Plant grows on specific type of volcanic-derived soil, though its exact characteristics are not yet precisely known. Most occurrences are on steep slopes or open ridges, but there are records in western Truckee in a site that may be sufficiently similar to the Estate Drive to consider that it is potentially suitable habitat. Donner Pass buckwheat is formally keyed out using inflorescences, which are relatively persistent after the July to September flowering dates (later ones at higher elevations). It is also just as definitively identifiable from leaves alone. No Donner Pass buckwheat was found at the study site.
- **Plumas Ivesia** – Species is found in several locations around Truckee, in modest to major occurrences (>10,000 plants) in Martis Valley and on the Waddle Ranch open space area, and in an even more extensive and populous occurrence at Sardine Meadow, north of Stampede Reservoir (many thousands of plants over hundreds of acres). Scattered occurrences of Plumas ivesia are found throughout parts of Truckee, even in partially disturbed sites within otherwise urbanized areas. It occurs most often on volcanic soils in meadows that are not quite wetlands, similar to portions of the study site. However, no plants of Plumas ivesia were found.

As noted, potentially suitable habitat for the three above plant species was identified within the development footprint. However, none of these species were found during the floristic botanical survey of the project site.

Special Status Wildlife Species

Wildlife surveys were not carried out for the study due to the fact that it is unlikely that any wildlife make anything more than occasional use of the project development area, which is almost entirely a graded,

graveled urbanized area. No deer sign was observed, and the site's habitats, location, and mostly urbanized surroundings make it unsuitable for use as a deer migratory corridor or fawning area.

According to the Biological Resources Study, the project site does not contain suitable habitat for a majority of special-status wildlife species known to occur in the vicinity. However, two species have a marginal potential to occur on the project site: Southern long-toed salamander and Morrison's and Western Bumble Bees.

Special Status Wildlife Species	
Species	**Suitable Habitat in Development Footprint?**
Southern long-toed salamander (*Ambystoma macrodactylum sigillatum)*	Marginal – Nearby pond is surrounded by urban development; terrestrial use likeliest under the two or three boulders immediately adjacent to wetland FEW-1. Sites of other boulders are too dry.
Western bumblebee (*Bombus occidentalis)*	Marginal or no – Most of known food plants absent from site. 1958 record at Boca.

Additional discussion on special status wildlife species was provided in the study (see Appendix B), including discussion of additional species that were not found to have suitable habitat within the development footprint. This information is summarized below:

Willow Flycatcher – Willow flycatcher is a candidate for state listing as endangered, which nests in willow or similar riparian shrublands with surface water (ponds or very wet marshes; not merely mesic grass or sedge meadows) present throughout the breeding season. Most records in the greater Truckee region are in relatively extensive riparian habitat. Birds of this species in migration use generally similar habitats as they do for nesting (Sedgwick, 2020). Truckee River Watershed Council staff state that a visual observation of willow flycatcher (*Empidonax traillii*) was reported on the adjoining wetland restoration site southeast of the study site. Further communications about this observation suggest that it is not a definitive record. However, in any case, the nearest potentially suitable nesting habitat for willow flycatcher is located over 200 feet away from the limits of proposed development. Given that a seasonal avoidance distances that are commonly used to ensure non-disturbance of nesting birds are 50 or 100 feet for small passerine birds, this habitat would not be expected to be adversely affected by construction or operational disturbance. Excellent foraging habitat for willow flycatcher (and other related non-special status species) exists throughout the wetland, particularly in the areas of summertime surface water; however, in the context of the urbanized setting of the site, no significant impact on foraging use would reasonably be anticipated.

Sierra Nevada Yellow-legged Frog – This species breeds in perennial ponds or generally slow-moving flowing water, and is highly aquatic, rarely straying more than a few feet from water except in special cases such as very wet marshes around or intervening between breeding ponds. There is a suitable breeding pond immediately off site.

- **Southern Long-toed Salamander** – This is a species whose range includes a wide variety of habitats from forest to semi-arid shrubland or grassland. Breeds in perennial or, at least, very long-seasonal water bodies, and the larvae are aquatic. Does not remain in or immediately adjacent to the pond as an adult; instead, it exits and lives in moist underground sites such as under logs or boulders with moist soil. Surface features are necessary for the upland phase of adult southern long-toed salamander. The only such features present within the Rocker Memorial Skate Park site are the boulders at the furthest eastern wetland patch and around the Gravel Area which is the project development area. The boulders in and next to the wetland patch seem to afford perfect upland habitat as described above, but the setting of the perimeter

boulders is very dry at nearly all times of year, making them unsuitable or at best only marginally suitable for southern long-toed salamander use or daytime refuge.

- **Morrison's and Western Bumble Bees** – These species nest underground, or in or under organic material on the ground; thus, theoretically suitable nesting habitat exists almost everywhere that is not paved. However, the essential habitat characteristic for these bees is the presence of abundant flower resources of reasonably high species diversity, so that there are nearby foraging opportunities throughout the entire season of activity (Goulson, 2010). The study site has a very limited number of such forb or shrub species, and almost none of the highly preferred genera used by these species. Bumble bees are known to be declining steeply in numbers, and the western bumble bee is a candidate for state endangered status. Reasons for their decline include loss of diverse herbaceous and shrub habitat, use of certain pesticides, and, perhaps above all, a non-native parasite.
- **Nesting Raptors and Migratory Birds –** The study did not identify existing trees and brush on the project site that are likely be used by migratory birds protected by the Migratory Bird Treaty Act (MBTA). The large Jeffrey pine tree at the northwest corner of the site is theoretically suitable to support raptor or owl nesting, or day roosting sites for bat species (between or under bark plates). However, given the extensive availability of similar or superior nesting trees in non-urbanized settings including the entire Truckee River corridor less than 0.25 mile away, it is extremely unlikely that any predatory bird species would select this location in which to nest.

Conclusions

Suitable habitat for most of the regional special status wildlife species was not found within the study site or was found only within areas of the site that are proposed to be avoided by development. An observation of willow flycatcher is reported from the restoration parcel to the south; however, the most plausible nesting area is sufficiently far from the present study site that disturbance from construction and occupation of the project would be unlikely to have a significant adverse effect. Suitable habitat for three special status plant species is present within the development footprint, but none of those species were found during floristic botanical survey of the site.

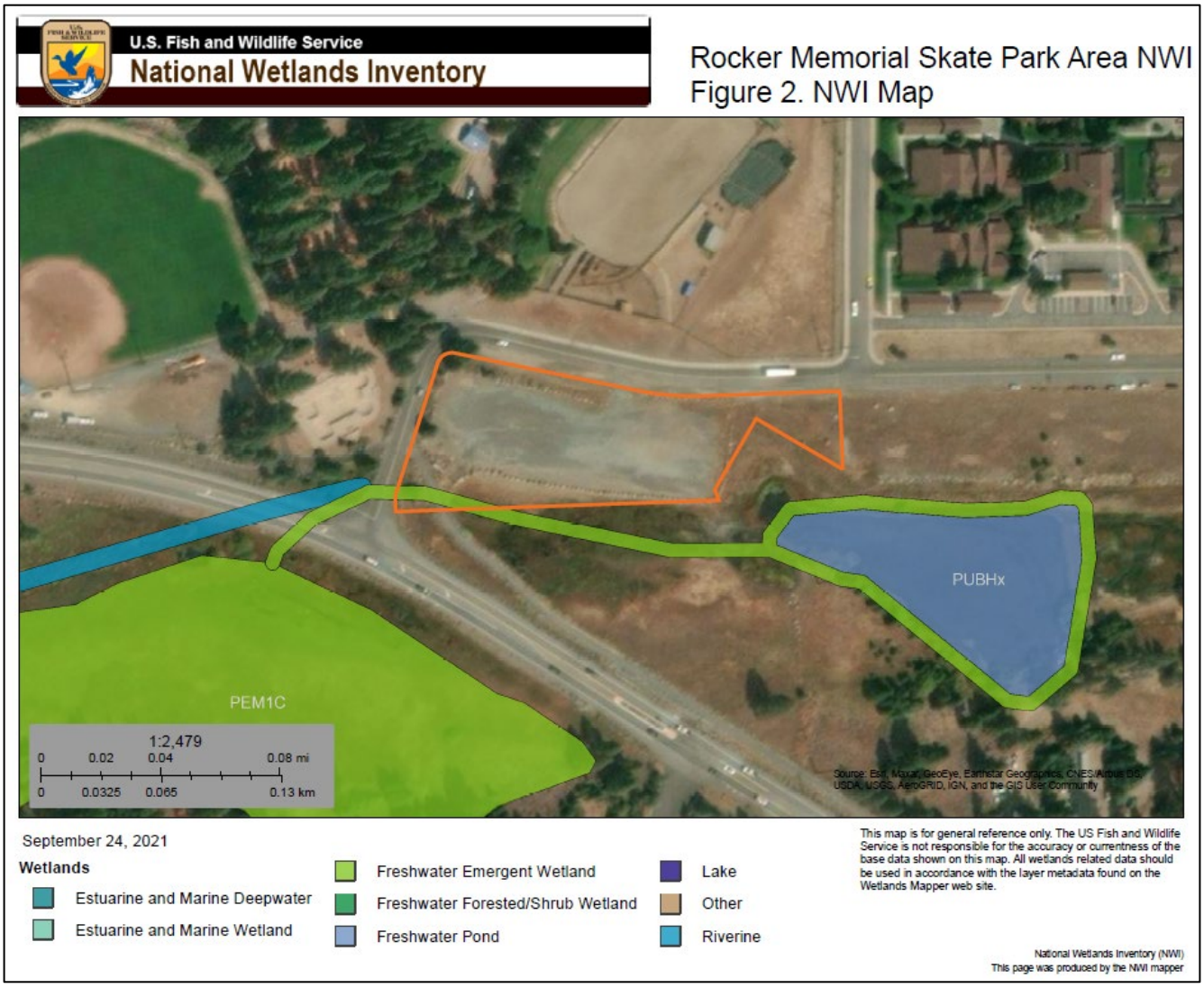
Ground surface disturbance during construction activities could adversely affect the nesting success of migratory birds (i.e., lead to the abandonment of active nests) or result in mortality of individual birds, which would constitute a violation of State and federal laws. According to the Biological Resources Study, no trees suitable for raptor or owl nesting were identified on-site, nor are there suitable day roosting sites for special-status or other bat species present within the project site. However, the potential occurs for migratory birds protected under the MBTA to nest in the trees located within the project site. Therefore, in the event that such species occur on the project site during the breeding season, project construction activities could result in a substantial adverse effect to species protected under the MBTA.

Wetlands

An Aquatic Resources Delineation of the project site was completed by EcoSynthesis, Inc. on September 18, 2021 (see Appendix C). Preliminary wetland mapping for the site was obtained from the U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) via the on-line Wetlands Mapper application (USFWS, 2019). Information on soils was obtained from the Web Soil Survey on-line application (NRCS, 2019). Climatic information was obtained from the Western Regional Climate Center (WRCC, 2019) and from the National Oceanic and Atmospheric Administration (NOAA, 2020). Field work was carried out during several site visits during the summer of 2021. Wetland determination data points were studied on August 6, 2019.

The study site is in hydrologic unit 16050102 (Truckee). Total topographic relief of the site is about six feet, from a low of 5,850 at the northeast corner to about 5,856 in the western part of the graded gravel parking area that dominates the site in area. The study identified 25 plant species observed at and near wetland determination data points (see Appendix A). The study did not include wetland species from the large wetland south of the site, a small portion of which extends into the site at the southwest corner. The study also identified two soil types within the project site (Kyburz-Trojan complex, 1.2 acres; Aquolls and Borolls, 0.8 acres). Aquolls and Borolls are listed as hydric soils.

To the south and southwest of the project, the site abuts undeveloped land, some of which supports fairly extensive wet meadows, as shown on the National Wetlands Inventory Map provided as part of the Aquatic Resources Delineation (Figure 2 of Appendix C), as shown below:



The study identifies that the nearest blue line water body on the USGS map is the Truckee River, approximately 0.23 mile to the north of the site along the pathway of flow from the excavated roadside ditch within and right on the boundary of the Estates Drive right of way. Most of the site, including the majority of the project elements, slopes so that flow would ultimately enter this ditch and flow to the Truckee River via the municipal storm drainage system. However, the wetlands that extend to just within the eastern and southern boundaries of the study area drain in a generally easterly, then northerly, direction through a neighborhood and a detention basin, then the flow (if any) ultimately infiltrates into the soil before arriving at the exterior berm of another, much larger, constructed basin. Available information indicates that, in order

for any outflow from the first detention/infiltration basin to flow around the berm creating this second basin, it would need to flow uphill. Therefore, there is no surface connection between the wetlands on site and the Truckee River. The entire wetland complex from the south side of Brockway Road all the way past River View Drive is apparently isolated from any navigable or interstate surface waters.

A total wetland area of 0.06 acre is located on the parcel but outside the proposed development area. The project proposes to avoid direct fills of any wetland areas; however, some construction areas approach close to the wetland boundaries. The southeast corner of the asphalt perimeter path lies within approximately 10 or 20 feet of the wetland polygon identified as FEW-2. The on-site wetlands are shown on the Aquatic Resource Map provided as part of the Aquatic Resources Delineation (Figure 4 of Appendix C), as shown below:

A summary of delineated wetlands observed on the project site, with the applicable FGDC (2013) categories of wetlands and deepwater habitats of the U.S., is provided in the Aquatic Resources Delineation (see Table 2 of Appendix C), as shown below:

DESCRIPTION	MAP IDENTIFIER	AREA (acres)	FGDC (COWARDIN) CATEGORY AND DOMINANT SUBSTRATE
Palustrine			
Intermittently exposed	FEW-1	0.0441	Palustrine emergent wetland persistent
Intermittently exposed	FEW-2	0.0008	Palustrine emergent wetland persistent
Intermittently exposed	FEW-3	0.0014	Palustrine emergent wetland persistent
Intermittently exposed	FEW-4	0.0003	Palustrine emergent wetland persistent
Intermittently exposed	FEW-5	0.0054	Palustrine emergent wetland persistent
Intermittently exposed	FEW-6	0.0074	Palustrine emergent wetland persistent
Total:	**Freshwater Emergent Wetland**	**0.0594 acre**	**Palustrine emergent wetland persistent**

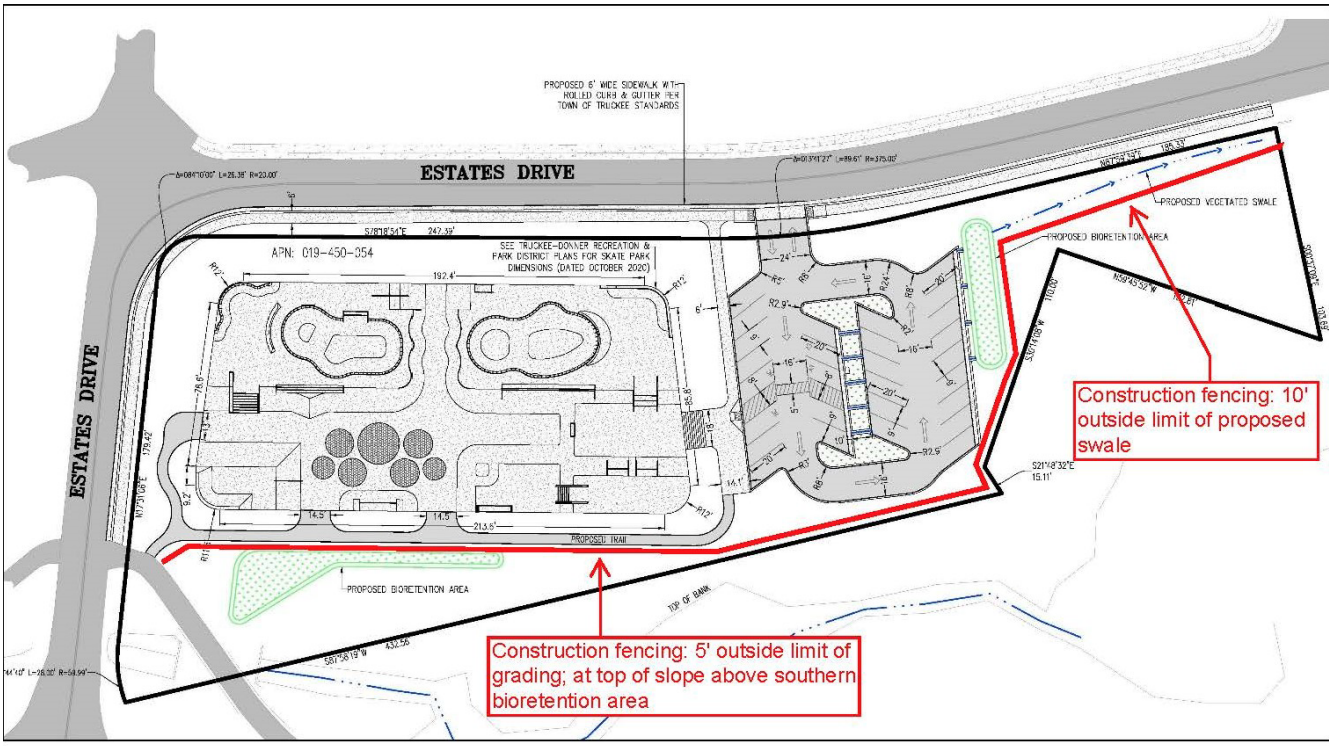
The large off-site wetland to the south, of which the small mapped wetland patches within the southern site boundary are the tips, exhibits a pronounced topographic and vegetation boundary at the limit of FACW/OBL dominated vegetation. Indicators of ponding were observed, including perennial surface water in its interior, suggesting that the most correct terminology for this wetland would be Freshwater Emergent Wetlands rather than Wet Meadow (largely saturation supported).

Conclusions

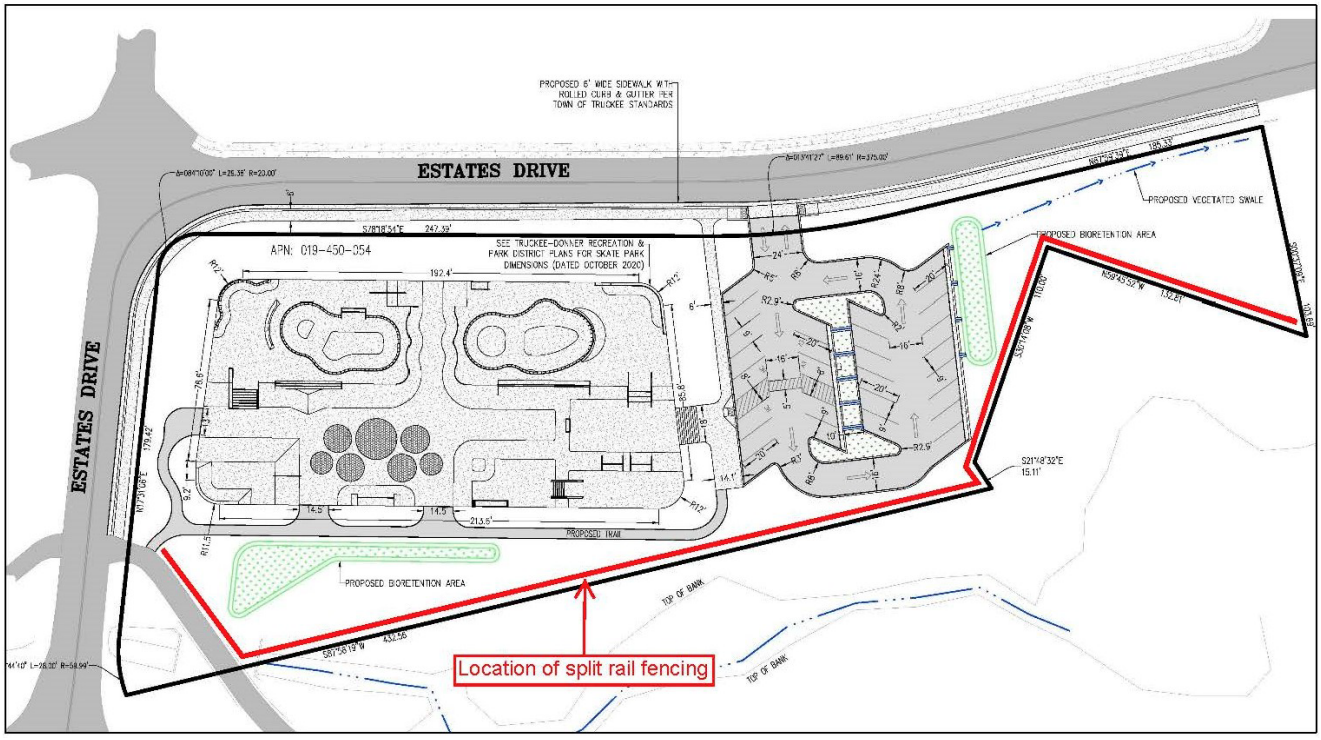
The project proposes to avoid direct fills of any wetland areas; however, some construction areas approach close to the wetland boundaries. The southeast corner of the asphalt perimeter path lies within approximately 10 or 20 feet of the wetland polygon identified as FEW-2. All other construction areas, including those related to stormwater management, are further from wetlands.

There is no surface connection between the wetlands on the project site and the Truckee River. All construction projects in the area are subject to during-construction stormwater requirements with respect to control of sediment within the construction area, so that it cannot enter local waters, whether tributary to the Truckee River or not.

In addition to normal sediment controls pursuant to the general permit, either the entire line of boulders along the southern side of the Gravel Area should be left in place throughout construction, or exclusion fencing should be installed no more than five feet away from (south of) the limit of the improvements as shown in the Preliminary Grading and Drainage Plan, then running northeastward along the parcel boundary to inside right-angle corner where the parcel is narrowest. In addition, from that corner to the east, similar fencing or other physical exclusion measure should be installed ten feet away from the limit of the proposed swale and return to the existing excavated roadside drainage.



Due to the location of the Brockway Trail on one side of the wetland and the proposed skate park on the opposite side of the wetland, potential exists for pedestrian activity to cross the wetland area during times of the year when the area is not wet enough to discourage use of the area as a shortcut. To address potential impacts from such pedestrian activity, including the compaction of wetland soils due to the creation of volunteer trails through the wetland, fencing should be installed along the border of the project site to discourage to this type of encroachment.



Regulatory Setting

The following discussion identifies federal and State environmental regulations that serve to protect sensitive biological resources relevant to the proposed project and CEQA review process.

Special-Status Species

Special-status plants and animals are species that are legally protected under the State and Federal Endangered Species Acts, and other regulations, and species that are considered rare by the scientific community. They are defined as:

- Plants and animals that are listed or proposed for listing as Threatened or Endangered under the California Endangered Species Act (Fish and Game Code 1995 §2050 et seq., 14 CCR §670.1 et seq.) and/or the Federal Endangered Species Act (50 CFR 17.12 for plants, 50 CFR 17.11 for animals; and various notices in the Federal Register for proposed species).
- Plants and animals that are Candidates for possible future listing as Threatened or Endangered under the Federal Endangered Species Act (50 CFR 17.12 for plants, 59 FR 58982 November 15, 1994 for animals).
- Plants and animals that are considered Federal Species of Concern (formerly C2 candidate species).
- Plants and animals that meet the definition of rare or endangered under CEQA (14 CCR §15380), which includes species not found on State or Federal Endangered Species lists.
- Animals that are designated as "Species of Special Concern" by CDFW (1999).
- Animal species that are "fully protected" in California (Fish and Game Code, §3511, §4700, §5050 and §5515).

Special-status plant species also include species on CNPS Inventory List 1A (presumed extinct in California), List 1B (plants rare, threatened, or endangered in California and elsewhere), or List 2 (plants rare, threatened, or endangered in California, but more common elsewhere). These species fall within state regulatory authority under the provisions of the California Environmental Quality Act (CEQA) Guidelines. CNPS Inventory List 3 (plants about which more information is needed, a review list) and List 4 (plants of limited distribution, a watch list) are considered to be of lower sensitivity, and generally do not fall under specific state or federal regulatory authority. Specific mitigation considerations are generally required for species with federal or state protection or that are in List 1 and 2 categories.

Sensitive plant communities include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife (CDFW). CDFW ranks sensitive communities as “threatened” or “very threatened” and keeps records of their occurrences in its Natural Diversity Database. Also, CNDDB vegetation alliances are ranked 1 through 5. Alliances ranked globally (G) or statewide (S) as 1 through 3 are considered sensitive (Sawyer, et.al. 2009). Impacts to sensitive natural communities identified in local or regional plans, policies, regulations, or by CDFW or U.S. Fish and Wildlife Service (USFW) must be considered and evaluated under CEQA.

Sensitive habitats may include areas that fulfill special functions or have special values, such as wetlands, streams, and riparian habitat. These habitats may be regulated under federal regulations (i.e., the Clean Water Act), state regulations (such as the Porter-Cologne Act, California Department of Fish and Wildlife’s Streambed Alteration Program), and local ordinances or policies.

Wetlands and Waters of the U.S.

The U.S. Army Corps of Engineers (Corps) regulates "Waters of the United States" pursuant to Section 404 of the Clean Water Act (CWA). "Waters of the US" are defined broadly as waters potentially used in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Potential wetland areas are determined by the three criteria stated in the *Corps of Engineers Wetlands Delineation Manual* ("Manual") (1987) and the *Western Mountains, Valleys, and Coast Regional Supplement* ("Supplement") (2010). Those criteria are hydrophytic vegetation, hydric soils, and wetland hydrology. Areas that are inundated for sufficient duration and depth to exclude growth of upland and hydrophytic vegetation are subject to Section 404 of the CWA jurisdiction as "other waters" and are often characterized by an ordinary high water line. "Other waters" generally include lakes, rivers, streams, and their tributaries. The placement of fill material into Waters of the US (including wetlands) generally requires authorization from the Corps under Section 404.

Waters of the State

Waters of the State are regulated by the Regional Water Quality Control Board (RWQCB) pursuant to the State Water Quality Certification Program, which regulates discharges of fill and dredged material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. "Waters of the State" are defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The Porter-Cologne Act also creates jurisdiction over isolated wetlands, which are considered Waters of the State. RWQCB protects all waters in its regulatory scope, but has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes wetlands and waters that may not be regulated by the Corps pursuant to Section 404.

Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State, are required to comply with the terms of the Water Quality Certification determination. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to Waters of the State, the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements.

Migratory Bird Treaty Act

This treaty with Canada, Mexico and Japan makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season. California Fish and Game Code (Sec 3500) also prohibits the destruction of any nest, egg, or nestling.

Town of Truckee Development Code

Development Code Section 18.30.050 (Drainage and Stormwater Runoff) requires Minor Use Permit approval for any disturbance within 200 feet of a wetland. Development Code Section 18.30.050.B.3 also requires that runoff into wetland areas shall not be increased above or decreased below pre-project levels and that runoff into wetland areas shall be treated prior to release into the wetland. The purpose of these requirements is to ensure that there will be no indirect impact to wetlands due to project proximity or operations.

Development Code Section 18.46.040 (Wetlands) provides standards intended to preserve wetland areas. Development projects resulting in the disturbance of wetlands require approval of a Minor Use Permit. The Minor Use Permit may only be approved by the review authority if the following findings can be made: 1) The wetlands cannot be avoided and there are no feasible alternatives or mitigation to disturbance of the wetlands; 2) Any wetlands removed or destroyed as part of the project are mitigated by the restoration or creation of wetland habitat at a rate of 1.5 to 1 (1.5 units of restored habitat for

each unit of habitat removed or destroyed); and 3) The disturbance and/or removal of the wetlands complies with all applicable Federal and State regulations.

Impact Discussion

a) Suitable habitat for three special status plant species is present within the development footprint; however, none of these species were found during the floristic botanical survey of the site. Suitable habitat for most of the regional special status wildlife species was not found within the study site or was found only within areas of the site that are proposed to be avoided by development. Although an observation of willow flycatcher is reported from the restoration parcel to the south, the most plausible nesting area is sufficiently far from the present study site that disturbance from construction and occupation of the project would be unlikely to have a significant adverse effect. **Mitigation Measure 4a** requires a survey of biological resources on the site, including both plant and wildlife species, 15 days prior to ground disturbance, and requires mitigation measures if any special-study species are identified on the site or may be disturbed by project activities.

Ground surface disturbance during construction activities could adversely affect the nesting success of migratory birds (i.e., lead to the abandonment of active nests) or result in mortality of individual birds, which would constitute a violation of State and federal laws. No trees suitable for raptor or owl nesting were identified on-site, nor were suitable day roosting sites for special-status or other bat species identified. However, the potential exists for migratory birds protected under the Migratory Bird Treaty Act (MBTA) to nest in the trees located within the project site. Therefore, in the event that such species occur on the project site during the breeding season, project construction activities could result in a substantial adverse effect to species protected under the MBTA. Compliance with the nesting bird protections of both the federal and state acts requires that no grading, brush clearing (mechanized or otherwise), or tree removal occur during the nesting season without a nesting bird survey that confirms that no occupied nests are present, or contingent mitigation actions if nests are present. **Mitigation Measure 4b** requires that if vegetation removal or ground surface disturbance (any form of grading) are to occur between May 1 and August 15, nesting bird surveys are required.

The proposed project could have an adverse effect, either directly or through habitat modifications, on migratory birds which could be considered species identified as special-status species in local or regional plans, policies, or regulations, or by the CDFW or the U.S. Fish and Wildlife Service (USFWS). Implementation of **Mitigation Measures 4a through 4b** will reduce potential impacts to ***less-than-significant*.**

b-c) Onsite wetland areas comprise 0.06 acre of the project site (approximately three percent of the proposed development area). No Waters of the United States have been identified within the project site. The Porter-Cologne Act creates jurisdiction over isolated wetlands; therefore, the wetlands within the project site are considered Waters of the State and any impacts should be avoided or mitigated to less than significant levels. The project proposes to avoid direct fills of any wetland areas; however, some construction areas approach close to the wetland boundaries. The southeast corner of the asphalt perimeter path lies within approximately 10 or 20 feet of the wetland polygon identified as FEW-2. All other construction areas, including those related to stormwater management, are further from wetlands.

There is no surface connection between the wetlands on the project site and the Truckee River. All construction projects in the area are subject to during-construction stormwater requirements with respect to control of sediment within the construction area, so that it cannot enter local waters, whether tributary to the Truckee River or not.

Mitigation Measure 4c requires the applicant to identify the wetland areas in the grading and drainage plans for the project and comply with all U.S. Army Corps of Engineers requirements.

Mitigation Measure 4d requires indirect wetland impacts to be avoided during construction. In addition to normal sediment controls pursuant to the general permit, either the entire line of boulders along the southern side of the Gravel Area is required be left in place throughout construction or exclusion fencing is required be installed, as shown on the construction fencing diagram.

Mitigation Measure 4e requires the applicant to address Development Code Section 18.30.050.B.3 as part of the required drainage report. The Town Engineer shall verify compliance with this mitigation prior to grading, demolition, or building permit issuance. Section 18.30.050.B.3 requires that wetlands be protected from stormwater runoff such that runoff does not adversely affect the health, function and values of the wetland.

Mitigation Measure 4f requires installation of temporary construction fencing, as shown on the construction fencing diagram, and permanent fencing or equivalent permanent barrier between all developed areas and adjacent wetlands, as shown on the split rail fencing diagram. Prior to issuance of any grading, demolition, or building permits, the applicant is required to provide a wetland fencing plan to the Community Development Director for review and approval. The Director shall verify that the intent of this mitigation—to protect the wetlands from accidental disturbance—is met. Implementation of this mitigation measure will ensure that all wetlands are permanently protected from accidental disturbance such as but not limited to disturbance snow removal equipment, walking paths, pet waste, etc. Final location of the permanent fencing shall be approved by the Community Development Director as part of the wetland fencing plan.

Mitigation Measure 4g requires the placement of informational signs stating “Protected Wetland Area, Do Not Disturb” every fifty feet along the permanent wetland barrier. These signs shall be maintained by the property owner in perpetuity. This mitigation further protects wetlands from human disturbance.

Implementation of **Mitigation Measures 4c through 4g** will reduce potential impacts to ***less-than-significant***.

d) Wildlife movement corridors are routes that animals regularly use and follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation. The proposed project is located near other existing development, and vehicle traffic along Estates Drive would be expected to discourage wildlife movements to and from the site. As such, the existing setting of the surrounding area limits the potential for use of the project site as a wildlife movement corridor. In addition, the project site does not contain streams or other waterways that could be used by migratory fish or as a wildlife corridor for other wildlife species. On-site wetlands would remain with the proposed development and wildlife would be able to move through the site after development of the of the proposed project. Based on the above, the proposed project would not interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites. Therefore, a ***less-than-significant*** impact would occur.

e) According to the landscape plan submitted on January 21, 2021, the project site includes a total of eight existing trees. Seven trees are located in the northwest corner of the project area (five 4” pines, one 16” pine and one 33” pine) and one tree is located on the west side of the project area (a 23” pine). All eight existing trees are proposed to be retained. A total of 47 new trees are proposed to be planted on the project site (17 Jeffrey Pine, 16 Hedge Maple and 14 Red Maple).

The Town of Truckee recognizes the importance of trees and regulates the removal of trees through Development Code Section 18.30.155 (Tree Preservation). While tree removal is not specifically prohibited within the Development Code, requirements are in place to ensure that trees designated for preservation in the site plans are able to survive following construction.

Mitigation Measure 4h requires approval of a tree preservation and protection plan prior to issuance of grading or building permits in compliance with the Development Code Section 18.30.155. This mitigation will reduce potential impacts to ***less-than-significant***.

f) The project site is not located within an area that is subject to an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan, and would create no potential conflict with any such plan. Therefore, the proposed project would have ***no impact***.

Mitigation Measures

4a) Preconstruction surveys shall be conducted by a qualified biologist prior to any ground disturbance, including both plant and wildlife species. If special-status species are identified on the project site or will be disturbed by project activities, the applicant shall develop appropriate minimization measures to avoid potential impacts to the plant and wildlife species. Riparian habitat destruction should be avoided to the maximum extent practicable. Measures may include avoiding suitable habitat and conducting biological monitoring.

If special-study plant species are found on the site, the plants will be hand excavated and immediately relocated to a pre-determined replanting site. The replanting site will contain similar suitable habitat conditions, within the study area or general vicinity, and will be located a minimum of 50 feet from proposed construction activities. The exaction and replanting will be performed by a qualified botanist with previous experience with the special species plant. The replanting area will be fenced to prevent undesirable entry into the replanting area. To ensure long-term protection, signage will be installed on the fence that designates this area as a sensitive restoration site and will provide standard no trespassing language.

A report summarizing the findings of excavation and replanting efforts will be prepared and submitted to the Town of Truckee and CDFW. The replanting area will be monitored for three years to determine the success of replanting efforts. Success is determined by the number of relocated plants that survive and transplantation. If the success rate after three years is below 75 percent, consultation with CDFW will be required to develop appropriate remediation plans.

4b) If vegetation removal or ground surface disturbance (any form of grading) are to occur between May 1 and August 15, nesting bird surveys should occur between 7 and 14 days prior to initiation of construction. Nesting surveys for small birds are only fully effective if carried out between dawn and 11 AM; many species become inactive during mid-day. Survey work should cover all habitat within 100 feet of vegetation removal or ground disturbance, or a greater distance in the case of raptor/owl survey, a distance of 500 feet from the limit of disturbance. In the event that nests are identified, temporary non-disturbance zones should be the same width as the survey buffer (100-500 feet, depending on the species found to be nesting), and a revisit by the biologist, with confirmed observations of fledglings in the nest vicinity, would be required prior to vegetation removal or soil disturbance, unless this were to be delayed past August 15.

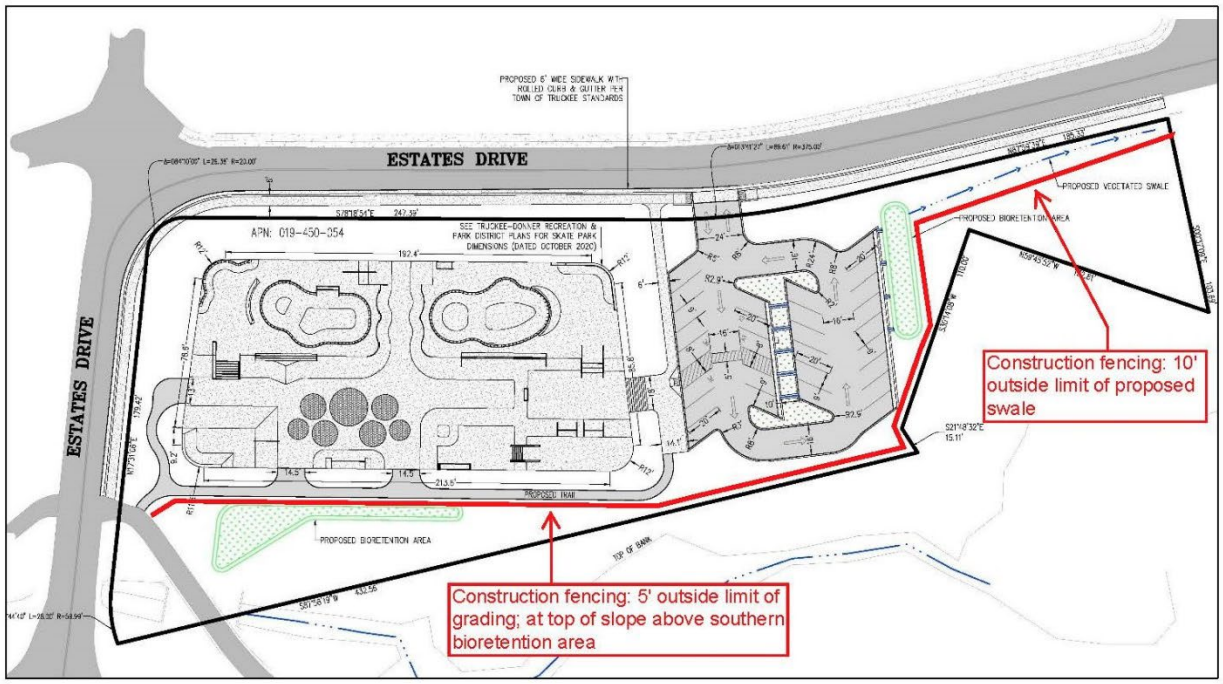
4c) Prior to improvement plans, the applicant shall identify the wetland areas in the grading and drainage plan for the project. Impacts to the potential wetland areas should be avoided. Prior to approval of Improvement Plans, a preliminary delineation of Waters of the United States should be submitted to the Corps for verification. If avoidance is not feasible, then impacts should be minimized. If the Corps determines that the wetlands are not in their jurisdiction, then no further actions by the Corps are required. If the Corps determines the areas are within their jurisdiction, then Corps authorization should be obtained before construction near the wetlands.

If the Corps does not take jurisdiction over the wetlands, these areas would still be considered Waters of the State. If avoidance is not feasible, then impacts should be minimized and a permit obtained from the RWQCB in accordance with Porter Cologne Act. As part of either the federal

or state permit process, compensatory mitigation typically involves one or more of the following, wetland enhancement, restoration, creation, or preservation. The mitigation goal should be to implement it within the same regional watershed. If that is not feasible, in a nearby watershed or fee-based mitigation may be considered. Work should comply with all agency permit requirements.

Prior to improvement plans, the applicant shall identify the wetland areas in the grading and drainage plan for the project. If the U.S. Army Corps of Engineers and/or the Lahontan Regional Water Quality Control Board (LRWQCB) determines that the wetlands are in their jurisdiction, then Corps and/or LRWQCB authorization is required before construction near the wetlands.

4d) Indirect wetland impacts shall be avoided during construction. In addition to normal sediment controls pursuant to the general permit, either the entire line of boulders along the southern side of the Gravel Area shall be left in place throughout construction, or exclusion fencing should be installed no more than five feet away from (south of) the limit of the improvements as shown in the Preliminary Grading and Drainage Plan, then running northeastward along the parcel boundary to inside right-angle corner where the parcel is narrowest, as shown on the construction fencing diagram. In addition, from that corner to the east, similar fencing or other physical exclusion measure should be installed 10 feet away from the limit of the proposed swale and return to the existing excavated roadside drainage.

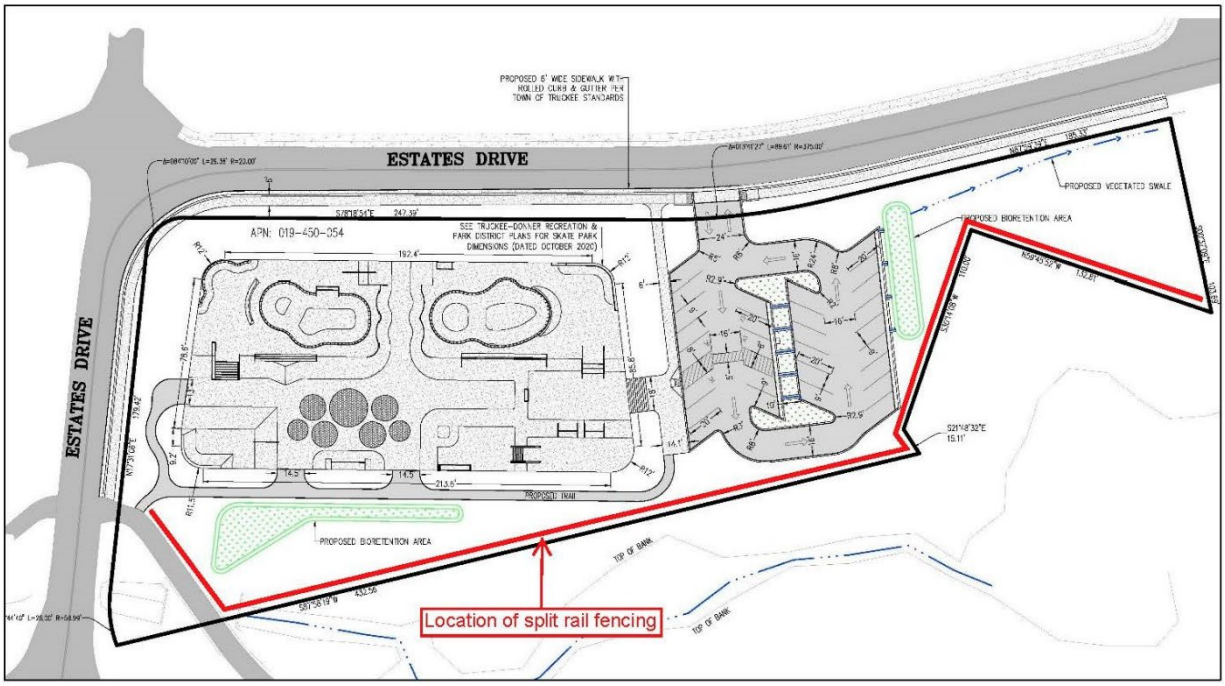


4e) The applicant shall address Development Code Section 18.30.050.B.3 which requires no net increase in runoff into a wetland as documented in the required drainage report. Best Management Practices shall be implemented during construction to ensure no discharge into the wetland drainage channel occurs, and a Stormwater Management Plan shall be developed and fully implemented for the project. The Town Engineer shall verify compliance with this mitigation prior to grading, demolition, or building permit issuance.

4f) Prior to any ground disturbance, temporary construction fencing is required to be installed between all development and adjacent wetlands, such as placing orange exclusion fencing. Permanent fencing or equivalent permanent barrier is required to be installed between the project site and adjacent wetlands, as shown on the permanent fencing diagram. Prior to issuance of any grading, demolition, or building permits, the applicant shall provide a wetland

fencing plan to the Community Development Director for review and approval, including final location of the permanent fencing. The Director shall verify that the intent of this mitigation—to protect the wetlands from accidental disturbance—is met. The following performance measures are required to be included in the wetland fencing plan:

- All fencing or barriers shall be installed outside the limits of the delineated wetlands.
- All fencing material shall be a split board or rail fence not exceeding three boards or three rails high. Fencing materials shall be constructed with earth-toned materials.
- Incorporation of pet waste stations into the wetland fencing plan.



Installation of the permanent fencing is required prior to issuance of Temporary or Final Certificate of Occupancy.

4g) Prior to issuance of Temporary or Final Certificate of Occupancy, informational signs shall be installed every fifty feet along the permanent wetland barrier. These signs shall be maintained by the property owner in perpetuity. This mitigation further protects wetlands from human disturbance stating “Protected Wetland Area, Do Not Disturb.”

4h) Approval of a tree protection plan is required prior to issuance of grading or building permits for the project. The plan shall include all requirements of Development Code Section 18.30.155 (Tree Preservation), including fencing at the dripline of all trees, no grade cuts or fill within six feet of the trunk of a tree to be retained or within the dripline, paving within the dripline shall be stringently minimized with no paving within six feet of the trunk.

References

EcoSynthesis, Inc. *Rocker Memorial Skate Park Biological Resources Study.* October 1, 2021.

EcoSynthesis, Inc. *Rocker Memorial Skate Park Aquatic Resources Delineation.* September 18, 2021.

5. CULTURAL RESOURCES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historic resource as defined in Section 15064.5 of the CEQA Guidelines?			✓	
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines?		✓		
c. Disturb any human remains, including those interred outside of formal cemeteries?		✓		

Background Setting

A Cultural Resource Inventory was prepared for the project by Susan Lindström, Consulting Archaeologist, in August 2021 (see Appendix D). The study included a records search and literature review as well as an archaeological reconnaissance of the project area.

Pre-Field Research

Pre-field research entailed a literature review of prehistoric and historic themes for the project area and included a review of prior archaeological research and of pertinent published and unpublished literature. To identify any properties listed on the National Register, state registers and other listings, including the files of the State Historic Preservation Office (SHPO), the required records search at the California Historical Resources Information System, North Central Information Center (NCIC) at California State University Sacramento (CSUS) was completed on June 23, 2021. References checked include archaeological sites and surveys in Nevada County and other official inventories, as summarized in the Cultural Resources Inventory (see Appendix D).

The NCIC records search results identified review of the 1/8-mile radius search area disclosed that two archaeological studies have been conducted within the project area and 13 others have been completed outside the project area (but within the 1/8-mile search radius). No known cultural resources occur within the project area, and five resources have been inventoried outside the project area (but within a 1/8-mile radius). The NCIC search results are summarized in Tables 1 and 2 of Appendix D.

Correspondence regarding the proposed project was sent by Dr. Lindström to the Native American Heritage Commission (NAHC), the Washoe Tribe, and the Colfax-Todds Valley Consolidated Tribe. This informal Tribal outreach is separate from the Tribal notification conducted by the Town under AB 52 (see Section 18, Tribal Cultural Resources, of this IS/MND). A response was received from the NAHC indicating that the Sacred Lands File search produced negative results for the project site. In addition, no responses were received from either tribe.

Archaeological Reconnaissance

The entire project area was subject to a systematic and intensive archaeological reconnaissance, with field work completed by Dr. Lindström on July 7, 2021. The vegetated perimeter was walked, and all boulders were carefully checked for possible evidence of prehistoric milling activities. The central graded/graveled area was walked in east-west transects no greater than 30 feet apart, looking for all evidence of prior human activity.

Overall, ground surface visibility on the parcel was good since the majority of the area has been graded and is devoid of vegetation. The northeastern quadrant northwest of the pond and south of Estates

Drive is thickly vegetated with dead and drying grass and forbs. Here, the ground surface was largely obscured. However, intermittent rodent mounds offered a glimpse of the subsurface and any open ground between transects was examined. The project area was generally clear of refuse. Modern debris noted during the survey, but not formally recorded because an age over 50 years could not be authenticated, included small bits of road trash along Estates Drive, asphalt chunks, PVC pipe fragments, one sanitary can lid, a bottle cap, and one tent stake.

Project overview (view southwest); Estates Drive (foreground)

Native American Outreach

The Native American Heritage Commission (NAHC) was contacted by letter on June 18, 2021, to request a search of the Sacred Lands Files. A response was received on July 13, 2021, indicating "the absence of specific site information in the Sacred Lands Files," which does not preclude "the absence of Native American cultural resources in any APE [area of potential effect]." As recommended by the Native American Heritage Commission, all tribes on the Commission's contact list were contacted by letter and email on July 14, 2021 (Washoe Tribe of Nevada and California, Colfax-Todds Valley Consolidated Tribe, Tsi Akim Maidu, Wilton Rancheria, and United Auburn Indian Community of the Auburn Rancheria). When no response was received, follow-up communications were sent on July 26, 2021. A summary of these communications and copies of correspondence are included in Appendix D.

Conclusions

No cultural resources were detected in the Phase 1A pre-field records search and no immediate Native American concerns were identified. The entire project area was subject to a Phase 1B intensive archaeological field reconnaissance and no cultural resources were encountered. Due to the fact that neither pre-field research nor archaeological field survey identified any cultural resources within the project area, the study concludes that no further study or special operational constraints need be imposed on the project concerning cultural resources.

In terms of CEQA guidelines, the study states that the potential effects of this project on cultural resources are not considered to be a significant effect on the environment. It is reasonable to conclude that the project should not result in the alteration of or adverse physical or aesthetic effect to any significant archaeological or historical sites, structures, objects, or buildings; nor should the project have the potential to cause a physical change that would affect unique ethnic (including Native American) cultural values or restrict historic or pre-historic religious or sacred uses.

Although the project area has been subject to systematic surface archaeological investigations, it is remotely possible that buried or concealed cultural resources could be present and detected during project ground disturbance activities. In the event of unanticipated discoveries, project activities should cease near the find and the project sponsor should consult a qualified archaeologist (RPA) to evaluate the resource in accordance with CEQA guidelines. If the discovered resource is determined to be significant, mitigation measures should be devised, and mitigation should be implemented before ground-disturbing work near the resource find can continue.

In the unlikely event that human remains are encountered during the proposed project, all activities should be stopped immediately, and the County Coroner's Office should be contacted pursuant to Public Resources Code (PRC) Section 7050.5. If the remains are determined to be of Native American origin, the Native American Heritage Commission should be notified within 24 hours of determination, as required by PRC Section 5097.94, 5097.98 and 5097.99. The Commission should notify designated *Most Likely Descendants* (in this case the Washoe Tribe), who should provide recommendations for the proper treatment of the burial remains within 24 hours.

Impact Discussion

a) CEQA Guidelines Section 15064.5 requires the lead agency to consider the effects of a proposed project on historical resources. A historical resource is defined as any building, structure, site, or object listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR), or determined by a lead agency to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California.

   The CRHR includes resources that have been listed in or formally determined eligible for listing in the National Register of Historic Places (NRHP), as well as some California State Landmarks and Points of Historical Interest. Under U.S. Department of the Interior, National Park Service guidelines (NPS, 1997), buildings, structures, and objects usually need to be more than 50 years old to be eligible for listing in the NRHP. The California Office of Historic Preservation guidelines for project review and planning call for the identification and evaluation of resources that are more than 45 years old to account for the passage of time between the period of project review and project completion. Resources that are less than 50 years old are generally excluded from listing in the NRHP or CRHR, unless they can be shown to be exceptionally significant.

   Based on the specific findings detailed in the Cultural Resources Inventory, the archeological field reconnaissance did not find any evidence of historical resources within the project area. Therefore, the proposed project would have a ***less-than-significant*** impact related to the substantial adverse change of a historical resource.

b-c) As part of the Cultural Resource Inventory prepared for the proposed project, a records search and literature review were conducted. The records search results identified two prehistoric resource sites that exist outside the project area, within a 1/16-mile radius of the project site that two archaeological studies have been conducted within the project area and 13 others have been completed outside the project area (but within the 1/8-mile search radius). No known cultural resources occur within the project area, and five resources have been inventoried outside the project area. An archeological field reconnaissance was also conducted as part of the Cultural Resource Inventory, which did not find any cultural resources within the project area.

   Correspondence regarding the proposed project was sent by Dr. Lindström to the Native American Heritage Commission (NAHC), the Washoe Tribe of Nevada and California, Colfax-Todds Valley Consolidated Tribe, Tsi Akim Maidu, Wilton Rancheria, and United Auburn Indian Community of the Auburn Rancheria. This informal Tribal outreach is separate from the Tribal notification conducted by the Town under AB 52 (see Section 18, Tribal Cultural Resources, of

this IS/MND). A response was received from the NAHC indicating that the Sacred Lands File search produced negative results for the project site. In addition, no responses were received from any tribe.

Although the project area has been subject to a records search and a systematic surface archaeological investigation, there is a remote possibility that unknown archaeological resources, including human remains, could be uncovered during ground-disturbing activities at the proposed project site. Therefore, if previously unknown resources are encountered during construction activities, the proposed project could cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines Section 15064.5 and/or disturb human remains, including those interred outside of dedicated cemeteries, during construction. **Mitigation Measure 5a** addresses the possibility that unknown archaeological resources, including human remains, could be uncovered during ground-disturbing activities at the proposed project site.

In the unlikely event that human remains are encountered during the proposed project, all activities should be stopped immediately, and the County Coroner's Office should be contacted pursuant to Public Resources Code (PRC) Section 7050.5. If the remains are determined to be of Native American origin, the Native American Heritage Commission should be notified within 24 hours of determination, as required by PRC Section 5097.94, 5097.98 and 5097.99. The Commission should notify designated *Most Likely Descendants* (in this case the Washoe Tribe), who should provide recommendations for the proper treatment of the burial remains within 24 hours. **Mitigation Measure 5b** provides requirements in the case of the potential discovery of human remains on the project site.

With implementation of **Mitigation Measures 5a and 5b,** potential impacts to cultural resources will be reduced to ***less-than-significant***.

Mitigation Measures

5a) Prior to grading permit issuance, the developer shall submit plans to the Town of Truckee for review and approval which indicate (via notation on the improvement plans) that if unknown cultural resources are encountered during site grading or other site work, all such work shall be halted immediately within 200 feet and the developer shall immediately notify the Town of Truckee of the discovery. In such case, the developer shall be required, at their own expense, to retain the services of a qualified archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist shall be required to submit a report of the findings and method of curation or protection of the resources to the Town of Truckee for review and approval. Further grading or site work within the area of discovery shall not be allowed until the preceding work has occurred.

5b) If human remains, or remains that are potentially human, are found during construction, all work shall be halted immediately within 200 feet, and a professional archeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance. The archaeologist shall notify the Nevada County Coroner (per §7050.5 of the State Health and Safety Code). The provisions of §7050.5 of the California Health and Safety Code, §5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, then the Coroner will notify the Native American Heritage Commission (NAHC), which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the applicant does not agree with the recommendations of the MLD, the NAHC can mediate (§5097.94 of the Public Resources Code). If an agreement is not reached, the qualified archaeologist or MLD must rebury the remains where

they will not be further disturbed (§5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center, using an open space or conservation zoning designation or easement, or recording a reinternment document with the county in which the property is located (AB 2641). Work cannot resume within the no-work radius until the lead agency, through consultation as appropriate, determines that the treatment measures have been completed to the Town's satisfaction.

References

Lindström. *Rocker Memorial Skatepark Project Cultural Resource Inventory.* August 2021.

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

Setting

The main forms of available energy supply are electricity, natural gas, and oil. The 2019 California Green Building Standards Code, otherwise known as the CALGreen Code (California Code of Regulations Title 24, Part 11) regulate the method of use, properties, performance, types of materials used in construction, alteration repair, improvement and rehabilitation of a structure or improvement to property. The provisions of the code apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout California. The Town's Chief Building Official reviewed the proposed site improvements and identified that the improvements do not meet the definition of a structure, and therefore would not be subject to these requirements.

Discussions regarding the project's potential effects related to energy demand during construction and operations are provided below.

Construction Energy Use

Construction of the proposed project would involve increased energy demand and consumption related to use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling and materials delivery truck trips, and operation of off-road construction equipment. In addition, diesel-fueled portable generators may be necessary to provide additional electricity demands for temporary lighting, welding, and for supplying energy to areas of the site where energy supply cannot be met via a hookup to the existing electricity grid.

Even during the most intense period of construction, due to the different types of construction activities (e.g., site preparation, grading, construction), only portions of the project site would be disturbed at a time, with operation of construction equipment occurring at different locations on the project site, rather than a single location. In addition, all construction equipment and operation thereof would be regulated per the CARB In-Use Off-Road Diesel Vehicle Regulation, which is intended to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California by imposing limits on idling, requiring all vehicles to be reported to CARB, restricting the addition of older vehicles into fleets, and requiring fleets

to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. The In-Use Off-Road Diesel Vehicle Regulation would subsequently help to improve fuel efficiency and reduce GHG emissions. Technological innovations and more stringent standards are being researched, such as multi-function equipment, hybrid equipment, or other design changes, which could help to reduce demand on oil and emissions associated with construction.

The CARB has prepared the *2017 Climate Change Scoping Plan Update* (2017 Scoping Plan), which builds upon previous efforts to reduce GHG emissions and is designed to continue to shift the California economy away from dependence on fossil fuels. Appendix B of the 2017 Scoping Plan includes examples of local actions (municipal code changes, zoning changes, policy directions, and mitigation measures) that would support the State's climate goals. The examples provided include, but are not limited to, enforcing idling time restrictions for construction vehicles, utilizing existing grid power for electric energy rather than operating temporary gasoline/diesel-powered generators, and increasing use of electric and renewable fuel-powered construction equipment. The In-Use Off-Road Diesel Vehicle Regulation described above, with which the proposed project must comply, would be consistent with the intention of the 2017 Scoping Plan and the recommended actions included in Appendix B of the 2017 Scoping Plan.

Based on the above, the temporary increase in energy use occurring during construction of the proposed project would not result in a significant increase in peak or base demands or require additional capacity from local or regional energy supplies. In addition, the proposed project would be required to comply with all applicable regulations related to energy conservation and fuel efficiency, which would help to reduce the temporary increase in demand.

Operational Energy Use

The skate park project does not propose any uses (such as lighting) which would require the Truckee Donner Public Utility District to provide electricity or natural gas to the project site. Maintenance activities during operations, such as landscape maintenance, would involve the use of electric or gas-powered equipment. The proposed project would result in transportation energy use associated with vehicle trips generated by the proposed recreational development.

The proposed project would be subject to all relevant provisions of the CBSC, including the Building Energy Efficiency Standards and CALGreen Code. However, due to the fact that no buildings are proposed and no uses requiring electricity or natural gas are proposed as part of the project, adherence to the CALGreen Code and the Building Energy Efficiency Standards to ensure that the proposed structures would consume energy efficiently is not applicable, nor to ensure that the building energy use associated with the proposed project would not be wasteful, inefficient, or unnecessary.

With regard to transportation energy use, the proposed project would comply with all applicable regulations associated with vehicle efficiency and fuel economy. Further discussion of Vehicle Miles Traveled (VMT) associated with the proposed project is provided in Section 17, Transportation, of this IS/MND.

Impact Discussion

a-b) Construction and operation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources, nor conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Thus, a ***less-than-significant*** impact would occur.

Mitigation Measures

None required.

References

Millennium Planning & Engineering. *Summary of Air Quality Analysis.* March 21, 2022.

California Air Resources Board. *The 2017 Climate Change Scoping Plan Update.* November 2017.

7. GEOLOGY AND SOILS.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?			✓	
ii. Strong seismic ground shaking?			✓	
iii. Seismic-related ground failure, including liquefaction?		✓		
iv. Landslides?		✓		
b. Result in substantial soil erosion or the loss of topsoil?			✓	
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		✓		
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?		✓		
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste disposal systems where sewers are not available for the disposal of wastewater?				✓
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✓		

Setting

The project site lies within the Donner Lake Valley in the Sierra Nevada Mountains. The Sierra Nevada Mountains are generally characterized by exposed Sierra Nevada Batholith bedrock and glacial outwash and till deposits. There are no Alquist-Priolo designated faults in the Town of Truckee, and there are no active faults through or within one mile of the project site.

A Geotechnical Engineering Report for the project was prepared by NV5 on September 15, 2021 (see Appendix E). The purpose of the study was to explore and evaluate the subsurface conditions at the project site and to provide geotechnical engineering conclusions and recommendations for project design and construction. As part of the study, NV5 performed a site reconnaissance, literature review, and subsurface exploration involving test pits excavated with a mini-excavator; logged the subsurface conditions encountered and collected bulk soil samples for classification and laboratory testing; performed laboratory tests on selected soil samples obtained during the subsurface investigation to evaluate material properties; and performed engineering analyses to develop geotechnical engineering recommendations for project design and construction.

The site was previously graded. Based on subsurface investigation and site observations, approximately 1 to 5 feet of fill covers the site. Boulders line the perimeter of the project site. Vegetation consisting of conifer trees and brush is located in the northwest corner of the site along Estates Drive. The site lies at an elevation of approximately 5,862 feet above mean sea level (MSL). The site is relatively level. Regional topography in the immediate site vicinity slopes very gently down in a general north to south direction. NV5 anticipates that surface water flow at the site travels in a general north to south direction towards the nearby wetland area.

According to the Geotechnical Engineering Report, the project site is located in a potentially active seismic area. Several active and potentially active faults are located near the project site, including the following:

- Dog Valley Fault (active, approximately 5.3 miles northwest)
- A group of unnamed faults southeast of Truckee (active and potentially active, approximately 1.4 to 2.4 miles southwest)
- Polaris Fault (active, approximately 1.6 miles northeast)
- West Tahoe – Dollar Point Fault Zone (potentially active, approximately 3.3 miles southeast)
- Agate Bay Fault (potentially active, approximately 6.4 miles southeast)
- Tahoe Sierra Frontal Fault Zone (potentially active, approximately 6.6 miles southwest)
- West Tahoe Fault (active, approximately 17 miles south-southeast)
- North Tahoe Fault (active, approximately 12.7 miles southeast).

The report notes that earthquakes associated with these faults may cause strong ground shaking at the project site. Primary hazards associated with earthquake faults include strong ground motion and surface rupture. No faults are mapped as crossing or trending towards the site; therefore, the potential for surface rupture at the site is considered low. Earthquakes centered on regional faults in the area, such as the West Tahoe Fault, would likely result in higher ground motion at the site than earthquakes centered on smaller faults that are mapped closer to the site. Secondary seismic hazards include liquefaction, lateral spreading, and seismically induced slope instability. These potential hazards are discussed below.

Soil Liquefaction

Liquefaction is a phenomenon where loose, saturated, granular soil deposits lose a significant portion of their shear strength due to excess pore water pressure buildup. Cyclic loading, such as that caused by an earthquake, typically causes an increase in pore water pressure and subsequent liquefaction. Based on the results of the subsurface investigation, near-surface soil at the site consists of dense to very dense granular soil and hard fine-grained soil with varying amounts of gravel, cobbles, and boulders. This soil profile will have a low potential for liquefaction.

Lateral Spreading

Lateral spreading is the lateral movement of soil resulting from liquefaction of subadjacent materials. Since a low potential for liquefaction of soil at the site is anticipated, the potential for lateral spreading to occur is also considered low.

Slope Instability

Slope instability includes landslides, debris flows, and rock fall. No landslides, debris flows or rock fall hazards were observed in the project area. Due to the relatively level topography of the site and general surrounding area the potential for slope instability is considered low.

Subsurface Conditions and Expansive Soils

When subsurface earth materials move, the movement can cause the gradual settling or sudden sinking of ground. The phenomenon of settling or sinking ground is referred to as subsidence, or settlement. Expansive soils are soils which undergo significant volume change with changes in moisture content. Specifically, such soils shrink and harden when dried and expand and soften when wetted, potentially resulting in damage to building foundations.

Based on the subsurface investigation and laboratory testing at the project site and adjacent site, the report found that clay soil encountered at depths of approximately 3.5 to 7.5 feet bgs has a low potential for expansion. However, fat clay soil was encountered at the adjacent lot (10040 Estates Drive) at depths of approximately 2 to 3 feet bgs and extended to depths of about 6.5 to 7.5 feet bgs. The fat clay soil encountered at 10040 Estates Drive has a moderate expansion potential. Due to the potential for adverse effects caused by expansive soil, potentially expansive clay soil is not suitable for direct support of proposed structures on conventional shallow spread foundations, slabs-on-grades or pavements. NV5 recommended the most feasible option is to remove approximately 12 inches of potentially expansive soil below bottom of footing subgrade and concrete slabs-on-grade and replace with structural fill.

Approximately one to five feet of existing fill was found to overlay the majority of the site during the subsurface exploration. Due to the potential for excessive settlement, the fill within the site would not be suitable for support of structures or pavement. The Geotechnical Engineering Report concluded that structures should be founded on underlying native soil, or the existing fill should be removed and replaced with compacted structural fill. However, based on the dense nature of the existing fill, the report stated that provided deleterious material in the existing fill is removed, the proposed improvements may be placed over the existing fill assuming potentially expansive soil is not suspected with 24 inches of subgrade and if the potential for minor cosmetic settlement to occur is tolerable. NV5 provided recommendations for structural fill placement and subgrade preparation. Without the removal of the existing fill within the project site and/or deleterious material in the existing fill, the proposed project has the potential to create substantial direct or indirect risks to life or property related to being located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), or be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project.

The report identified that near surface site soil including the existing fill and coarse-grained soil is generally suitable for reuse as structural fill. Clay soil encountered at the site is generally not suitable for reuse as structural fill due to the high fines content but may be used as fill in landscaping areas. Structural fill meeting the requirements outlined in the *Recommendations* section of the report should be used where structural fill is required. Moisture content, dry density, and relative compaction of structural fill should be evaluated by our firm at regular intervals during structural fill placement.

Although groundwater was not encountered in the test pits to the maximum depth explored, the report noted that near-surface soil layers will likely become seasonally saturated. Groundwater elevations measured by others in the piezometer (12-2) located near the site indicate that depths to groundwater fluctuate seasonally and have been near the ground surface at a depth of about 1.18 feet bgs. The project site is approximately 3 to 5 feet above the wetland area based on the previous grading and NV5 anticipates groundwater may be encountered at depths of approximately 4 to 6 feet bgs. In addition, NV5 anticipates that the clay soil underlying the site will have low permeability and generate a significant volume of storm water runoff. Seasonal runoff and groundwater may cause moisture intrusion through concrete slab-on-grade floors, degradation of asphalt concrete pavements, and other adverse

conditions. Due to the relatively level topography of the site, water may pond on the ground surface in some areas. Consequently, positive surface and subsurface drainage will be important across the site. NV5 provided recommendations to reduce the potential for these adverse effects in the *Recommendations* section of the report.

Conclusions

Based on the above discussion, the proposed project would not result in potential hazards or risks related to liquefaction or lateral spreading. However, the potential exists for subsidence to occur due to the project site being located on moderately expansive soil.

Regulatory Setting

State Regulations

Alquist-Priolo Geologic Hazards Zone Act

The Alquist-Priolo Earthquake Fault Zoning Act (formerly the Alquist-Priolo Special Studies Zone Act), signed into law December 1972, requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazard of fault rupture and to prohibit the location of most structures for human occupancy across these traces. Cities and counties must regulate certain development projects within the zones, which includes withholding permits until geologic investigations demonstrate that development sites are not threatened by future surface displacement (Hart and Bryant, 1997). Surface fault rupture is not necessarily restricted to the area within an Alquist-Priolo Zone. The project site does not occur within an Alquist-Priolo Fault Rupture Zone.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was developed to protect the public from the effects of strong ground-shaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a seismic hazard zone, a geotechnical investigation of the site has to be conducted and appropriate mitigation measures incorporated into the project design.

California Building Code

The California Building Code is another name for the body of regulations known as the California Code of Regulations, Title 24, Part 2, which is a portion of the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable. Published by the International Conference of Building Officials, the Uniform Building Code is a widely adopted model building code in the United States. The California Building Code incorporates by reference the Uniform Building Code (UBC) with necessary California amendments. About one-third of the text within the California Building Code has been tailored for California earthquake conditions.

Impact Discussion

ai-ii) Ground motion during an earthquake is an unavoidable hazard for facilities in the Sierra Nevada region. The intensity of such an event would depend on the causative fault and the distance to the epicenter, the moment magnitude, and the duration of shaking. The project area is not located within any of the Earthquake Fault Zones delineated by the Alquist-Priolo Earthquake Fault Zoning Act (Hart and Bryant, 1999). According to the Geotechnical Engineering Report, the project site is located near several active and potentially active faults. An earthquake of

moderate to high magnitude generated by these faults could cause considerable ground shaking at the project site. Ground-shaking within the project area could cause significant damage to proposed facilities, if not constructed in accordance with California Building Code (CBC) requirements.

The Town of Truckee requires structures to be built in accordance with the CBC including seismic design parameters. Therefore, the project would be properly engineered in accordance with the CBC, which includes engineering standards appropriate for the seismic area in which the project site is located. According to the Geotechnical Engineering Report, the project site is located within Seismic Design Category D. Projects designed in accordance with the CBC should be able to: 1) resist minor earthquakes without damage, 2) resist moderate earthquakes without structural damage but with some nonstructural damage, and 3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Conformance with the design standards is verified by the Town prior to the issuance of building permits. Proper engineering of the proposed buildings would ensure that the project would not be subject to substantial risks related to seismic ground shaking. A ***less-than-significant*** impact would occur related to seismic surface rupture and strong seismic ground shaking.

aiii-iv) Soil liquefaction is a phenomenon in which loose, saturated, cohesionless soils (silts and sands) below the water table are subject to a temporary, but essentially total loss of strength under the reversing, cyclic-shear strains associated with earthquake shaking. The project is not located within a delineated Alquist-Priolo Earthquake Fault Zone, but the project site is located near several active and potentially active faults. Based on the results of the subsurface investigation, the Geotechnical Engineering Report found that the soil profile has a low potential for liquefaction and that the potential for lateral spreading to occur is also low.

Seismically induced landslides are triggered by earthquake ground shaking. The risk of landslide hazard is greatest in areas with steep, unstable slopes. Due to the relatively level topography of the project site and general surrounding area, the potential for slope instability is considered low. Further, the design of the project will comply with the standards and requirements of the Town of Truckee Development Code as well as CBC building requirements, and all applicable grading permits will be obtained. Thus, landslides are not likely to occur on- or off-site as a result of the proposed project.

The proposed project would not result in potential hazards or risks related to liquefaction, landslides, or lateral spreading. However, the potential exists for subsidence to occur due to the project site being located on moderately expansive soil. Therefore, the proposed project could create substantial direct or indirect risks to life or property and a ***potentially significant*** impact could occur. **Mitigation Measure 7a** states that all engineering recommendations provided in the site-specific Geotechnical Engineering Report prepared for the proposed project by NV5 shall be incorporated into project improvement plans, prepared by a licensed civil engineer.

Implementation of **Mitigation Measure 7a** would reduce the potential impacts to a ***less-than-significant*** level.

b) Issues related to erosion and degradation of water quality during construction are discussed in Section 10, Hydrology and Water Quality, of this IS/MND. As noted therein, the proposed project would not result in substantial soil erosion or loss of topsoil. Thus, a ***less-than-significant*** impact would occur.

c-d) As described above, the proposed project is not located within a delineated Alquist-Priolo Earthquake Fault Zone. The project will be constructed according to all state and Town requirements including CBC building standards to protect the public and construction personnel from potential geologic hazards. Additionally, the probability of soil liquefaction and lateral spreading taking place on the project area is considered to be low. However, the potential exists for subsidence to occur due to the project site being located on moderately expansive soil. Therefore, the proposed project could create substantial direct or indirect risks to life or property and a ***potentially***

significant impact could occur. Implementation of **Mitigation Measure 7a** would reduce the potential impact to a ***less-than-significant*** level.

e) Connection to the existing Town sewer infrastructure is not required for the proposed project, nor are the construction or operation of septic tanks or other alternative wastewater disposal systems proposed. Therefore, ***no impact*** regarding the capability of soil to adequately support the use of septic tanks or alternative wastewater disposal systems would occur.

f) The Town's General Plan EIR indicates that known paleontological resources exist approximately four miles southwest of Downtown Truckee and approximately five miles northeast of Truckee, near the Boca Reservoir. The two resources located near the Boca Reservoir were from the Quaternary period and the Pleistocene epoch, whereas the resource southwest of Downtown Truckee is from the Quaternary period and the Holocene epoch. The Town's General Plan EIR concluded that with implementation of the policies under Goal CC-19, which is intended to identify and protect paleontological resources from Truckee's early history, impacts related to disturbance of paleontological resources would be less than significant. Furthermore, the Town's General Plan does not note the existence of any unique geologic features within the Town. Consequently, implementation of the proposed project would not be anticipated to have the potential to result in direct or indirect destruction of unique geologic features.

Although the proposed project would not have the potential to result in the destruction of unique geologic features, previously unknown paleontological resources could exist within the project site. Thus, ground-disturbing activity, such as grading, trenching, or excavating associated with implementation of the proposed project, could have the potential to disturb or destroy unknown resources. Therefore, the proposed project could result in the direct or indirect destruction of a unique paleontological resource, and a potentially significant impact could occur.

As described in **Mitigation Measure 7b**, if paleontological resources should be encountered during construction, work would stop until the resource can be evaluated and a determination made of its significance and need for recovery, avoidance, and/or mitigation. Therefore, the proposed project would result in a ***less-than-significant*** impact on paleontological resources or unique geologic features.

Mitigation Measures

7a) Prior to approval of any building permits, all engineering recommendations provided in the site-specific Geotechnical Engineering Report prepared for the proposed project by NV5 shall be incorporated into project improvement plans, prepared by a licensed civil engineer. The project plans shall include, but not necessarily be limited to, slabs on grade supported by a uniform layer of imported non-expansive engineered fill, applicable drying of near surface soils prior to compaction as engineered fill, applicable stabilization of the bottom of excavations due to wet soil conditions, and site demolition activities, which shall include removal of all surface obstructions not intended to be incorporated into final site design. The site demolition activities shall also specify that undocumented fill, and/or utility lines encountered during demolition and construction shall be property removed and the resulting excavations backfilled with imported non-expansive engineered fill. Proof of compliance with all recommendations specified in the Geotechnical Engineering Report shall be subject to review and approval by the Town Engineer.

7b) Prior to grading permit issuance, the developer shall submit plans to the Town of Truckee for review and approval which indicate (via notation on the improvement plans) that if unknown paleontological resources are encountered during site grading or other site work, all such work shall be halted immediately within 200 feet and the developer shall immediately notify the Town of Truckee of the discovery. In such case, the developer shall be required, at their own expense, to retain the services of a qualified archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist shall be

required to submit a report of the findings and method of curation or protection of the resources to the Town of Truckee for review and approval. Further grading or site work within the area of discovery shall not be allowed until the preceding work has occurred.

References

NV5. *Geotechnical Engineering Report for Rocker Skate Park.* September 15, 2021.

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

Setting

The proposed project is located within the jurisdictional boundaries of the Northern Sierra Air Quality Management District (NSAQMD), the local agency for air quality planning with authority over air pollutant sources within Nevada County.

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

Implementation of the proposed project would cumulatively contribute to increases of GHG emissions. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO_2) and, to a lesser extent, other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O) associated with area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The primary source of GHG emissions for the project would be mobile source emissions. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO_2 equivalents ($MTCO_2e$/yr).

In September 2006, Assembly Bill (AB) 32, the California Climate Solutions Act of 2006, was enacted. Among other requirements, AB 32 required the CARB to identify the State-wide level of GHG emissions in 1990 to serve as the emissions limit to be achieved by 2020, and to develop and implement a Scoping Plan. On September 8, 2016, AB 197 and Senate Bill (SB) 32 were enacted with the goal of providing further control over GHG emissions in the State. SB 32 built on previous GHG reduction goals by requiring that the CARB ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by the year 2030.

GHG Analysis

The Air Quality Analysis that was prepared for the proposed project by Millennium Planning & Engineering on March 21, 2022 (see Attachment A) includes an analysis of the project's GHG impacts, as discussed below.

The proposed project is located within the jurisdictional boundaries of NSAQMD, which does not currently have any established thresholds for GHG emissions. However, NSAQMD prefers that GHG emissions are quantified for decision-makers and the public to consider. Similar to the NSAQMD, the Town of Truckee has not adopted GHG emission thresholds. Thus, this analysis takes the reasonable approach of applying thresholds of the nearby air pollution control districts of Placer County Air Pollution Control District (PCAPCD) and Sacramento Metropolitan Air Quality Management District (SMAQMD). These districts measure GHG emissions by metric ton of CO2 equivalents per year (MTCO2e/yr). The PCAPCD and SMAQMD thresholds of significance are identified in the table below:

GHG THRESHOLDS OF SIGNIFICANCE ($MTCO_2e$ / yr)		
Air District	**Construction Threshold**	**Operational Threshold**
PCAPCD	*10,000*	*1,100*
SMAQMD	*1,100*	*1,100*
Sources: PCAPCD. CEQA Handbook Thresholds of Significance Justification Report (October 2016) SMAQMD. CEQA Guide, SMAQMD Thresholds of Significance Table (May 2015)		

GHG emissions resulting from construction and operations of the proposed project were modeled using the CalEEMod emissions model under the same assumptions as discussed in Section 3, Air Quality, of this IS/MND. Each phase of the proposed project and the associated GHG emissions is discussed below, and all modeling outputs are included in the Appendix A.

Construction

Construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change. As discussed above, neither NSAQMD nor the Town of Truckee has adopted thresholds of significance for construction-related GHG emissions. Therefore, the total emissions have been compared to the thresholds of significance used by the nearby air districts, PCAPCD and SMAQMD. The maximum unmitigated GHG emissions from construction of the proposed project are presented in Table 3 of Appendix A, as shown below:

TABLE 3 **Construction GHG Emissions Summary**		
Construction Emissions	**Unmitigated Annual GHG Emissions ($MTCO_2e$/yr)**	**Thresholds Exceeded?**
Total Emissions	**205.90**	
PCAPCD Threshold	10,000	NO
SMAQMD Threshold	1,100	NO
Source: CalEEMod version 2020.4.0		

As shown above, construction of the proposed project would result in maximum annual GHG emissions far below both applicable thresholds of significance.

Operations

Due to the fact that NSAQMD has not adopted operational GHG thresholds, the total emissions were compared to both PCAPCD and SMAQMD operational GHG thresholds of significance. The estimated unmitigated operational GHG emissions at full buildout of the proposed project are presented in 4 of Appendix A, as shown below:

TABLE 4
Operational GHG Emissions Summary

Construction Emissions	Unmitigated Annual GHG Emissions ($MTCO_2e$/yr)	Thresholds Exceeded?
Total Emissions	**64.14**	
PCAPCD Threshold	10,000	NO
SMAQMD Threshold	1,100	NO

Source: CalEEMod version 2020.4.0

As shown in the table, the proposed project's maximum unmitigated operational GHG emissions fall well below both PCAPCD's and SMAQMD's 1,100 $MTCO_2e$/yr threshold. As such, the implementation of the project would not conflict with achievements of the Statewide GHG reduction goals established by AB 32 and SB 32.

Conclusion

Based on the above, both sources of emissions would fall under the applicable thresholds of significance. Therefore, the proposed project would not be considered to generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Impact Discussion

7a-b) Both sources of emissions (construction and operational) would fall under the applicable thresholds of significance. Therefore, the proposed project would not be considered to generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. A ***less-than-significant*** impact would occur.

Mitigation Measures

None required.

References

Millennium Planning & Engineering. *Summary of Air Quality Analysis.* March 21, 2022.

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9. HAZARDS AND HAZARDOUS MATERIALS.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			✓	
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓
d. Be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and, as a result, would it create a significant hazard to the public or the environment?				✓
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area?			✓	
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			✓	
g. Expose people or structures 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?				✓

Setting

The site is vacant and consists primarily of ruderal vegetation. Known hazards (e.g., underground storage tanks, abandoned wells, structures containing lead-based paint or asbestos) are not located on-site.

According to the California Department of Toxic Substances Control Envirostor Database, hazardous material sites do not exist at the project site. The closest hazardous waste site identified in the database is within the Truckee River Regional Park on APN 019-450-55-000. This parcel adjoins the project parcel to the north and west and consists of approximately 17 acres within the 55-acre park. The site is identified as a voluntary cleanup of a former burn dump and operated from approximately the early 1940s to the late 1960s. The site is listed as “Certified/Operation and Maintenance” as of September 20, 2010.

Construction activities associated with the proposed project would involve the use of heavy equipment, which would contain fuels and oils, and various other products such as concrete, paints, and adhesives. Small quantities of potentially toxic substances (e.g., petroleum and other chemicals used to operate and maintain construction equipment) would be used at the project site and transported to and from the site during construction. However, the project contractor would be required to comply with all California Health and Safety Codes and local Town ordinances regulating the handling, storage, and transportation of hazardous and toxic materials. Thus, construction of the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.

During project operation, hazardous materials use would be limited to landscaping products such as fertilizer and pesticides/herbicides. Such chemicals would be utilized in limited quantities according to label instructions.

Airport Land Use Compatibility

The project site is located approximately one mile from the Truckee Tahoe Airport, within Zone D of the Truckee Tahoe Airport Land Use Compatibility Plan (TTALUCUP). Zone D is designated “Primary

Traffic Patterns" and is identified for moderate noise impacts and low safety risks. About 20 to 30 percent of general aviation accidents take place in Zone D, but the large area encompassed means a low likelihood of accident occurrence in any given location.

Development Code Section 18.64.050 (Airport Compatibility Zones) requires all uses and structures in airport safety zones to be compatible with all applicable provisions of the TTALUCUP. Compatibility Zone D allows non-residential uses at an average density/intensity of 150 people per acre and a maximum average of 300 people per acre, with 10 percent open space and overflight easements required. Prohibited uses include highly noise-sensitive uses and hazards to flight; children's schools, hospitals and nursing homes discouraged. Hazards to flight include physical (e.g., tall objects), visual, and electronic forms of interference with the safety of aircraft operations. Land use development that may cause the attraction of birds to increase is also prohibited. Airspace review is required for structures over 100 feet tall. No structures over 100 feet tall are proposed, and the proposed project would not be considered a hazard to flight nor a highly noise-sensitive use, and would therefore not be a prohibited land use within Zone D.

Hazardous Materials

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous waste is any hazardous material that is discarded, abandoned, or to be recycled. The criteria that render a material hazardous also apply to wastes that are determined to be hazardous. Factors that influence the health effects of exposure to hazardous material include the dose to which the person is exposed, the frequency of exposure, the exposure pathway, and individual susceptibility.

The site has not been identified as a hazardous material site and is not located near any identified hazardous material sites. The site's zoning will allow a range of commercial uses. Although no uses are currently proposed that would entail hazardous materials, since this project site is located directly across the street from an public park, any future uses that propose to store or use hazardous material will be reviewed by the Nevada County Environmental Health Department for Hazardous Materials Storage/Hazardous Waste Generator. The site is located within Compatibility Zone D of the 2004 Truckee Tahoe Airport Land Use Compatibility Plan adopted by the Foothill Airport Land Use Commission.

Wildland Fires

The entire Truckee area is considered to be in a high fire hazard severity zone, as defined by the California Department of Forestry (CDF), although risks are particularly pronounced in certain parts of the community, particularly where homes are located within areas of dense vegetation and forest land, and where steep slopes and other similar conditions exist. Calculation of threat from wildfire hazard is based on a number of combining factors including fuel loading (vegetation), topography, and climatic conditions such as winds, humidity and temperature. According to the Town of Truckee 2025 General Plan, the project area is in a "Very High Risk" area for Community Threat from Wildland Fire. The project site and surrounding area is covered with vegetation, trees, shrubs, and ornamental landscaping, though fuel loading is not excessive and is maintained by the TDA Forester.

Impact Discussion

a) Outdoor recreational facilities are not typically associated with the routine transport, use, disposal, or generation of substantial amounts of hazardous materials. On-site maintenance may involve the use of common cleaning products, fertilizers, and herbicides, any of which could contain potentially hazardous chemicals; however, such products would be expected to be used in accordance with label instructions. Due to the regulations governing use of such products and

the amount anticipated to be used on the site, routine use of such products would not represent a substantial risk to public health or the environment. Therefore, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and a ***less-than-significant*** impact would occur.

b) The proposed project would involve limited use of hazardous materials, primarily limited to the construction phase of the project, during which the contractor would be required to adhere to all relevant guidelines and ordinances regulating the handling, storage, and transportation of hazardous materials. The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment. A ***less-than-significant*** impact would occur.

c) Schools are not located within one-quarter mile of the project site. The nearest school is Forest Charter School, located approximately 2.5 miles northwest of site. Therefore, the proposed project would result in ***no impact*** related to hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d) According to the Department of Toxic Substances Control, the project site is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, the proposed project would not create a significant hazard to the public or the environment, and ***no impact*** would occur

e) The nearest public airport to the project site is the Truckee Tahoe Airport, located approximately one mile to the southeast. According to the Truckee Tahoe Airport Land Use Compatibility Plan, the project site is located within Zone D. Prohibited uses within Zone D include hazards to flight, including physical (e.g., tall objects), visual, and electronic forms of interference with the safety of aircraft operations. Highly sensitive land uses and land uses which may cause the attraction of birds to increase are also prohibited. Non-residential uses at an average density/intensity of 150 people per acre and a maximum average of 300 people per acre are allowed. Airspace review is required for structures over 100 feet tall. No structures over 100 feet tall are proposed, and the proposed recreational uses would not be considered a hazard to flight nor a highly noise-sensitive use, and would therefore not be a prohibited land use within Zone D. Impacts related to a safety hazard or excessive noise for people residing or working in the project area associated with the project being located within an airport land use plan or within two miles of a public airport or public use airport would be ***less-than-significant***.

f) The proposed project would not alter the existing circulation system in the surrounding area. During operation, the proposed project would provide adequate access for emergency vehicles and would not interfere with potential evacuation or response routes used by emergency response teams. During construction, construction equipment would not obstruct local and regional travel routes in the Town that could be used as evacuation routes during emergency events. The project would have a ***less-than-significant*** impact with respect to impairing the implementation of or physically interfering with an adopted emergency response plan or emergency evacuation plan.

f) Issues related to wildfire hazards are further discussed in Section 20, Wildfire, of this IS/MND. As noted therein, the project site is located not within a Very High Fire Hazard Severity Zone (VHFHSZ). Additionally, the proposed project would be required to comply with all applicable requirements of the California Fire Code through the installation of fire sprinkler systems, fire hydrants, and other applicable requirements. The proposed project would also be situated near existing roads, water lines, and other utilities, which would reduce risks related to wildfire. Thus, the potential for wildland fires to reach the project site would be low. Based on the above, the proposed project would not expose people or structures to the risk of loss, injury or death involving wildland fires, and a ***no impact*** would occur.

Mitigation Measures

None required.

References

Department of Toxic Substances Control. *Hazardous Waste and Substances Site List.* Available at: https://www.envirostor.dtsc.ca.gov/public/. Accessed March 2021.

Truckee Tahoe Airport Land Use Commission. *Truckee Tahoe Land Use Compatibility Plan.* October 27, 2016.

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

Setting

The project site comprises approximately two acres of an 11.29-acre parcel (APN 019-450-045-000) within the Truckee River Regional Park. Existing residential facilities on the parcel include the rodeo grounds to the north and existing skateboarding park to the west. The project area is an undeveloped portion of the parcel, which was disturbed by past grading and previously used as an informal dirt parking lot. Most of the site is a filled, graded, gravel covered area that is nearly devoid of vegetation over most of its area, with a narrow band of a narrow band of Jeffrey pine and bitterbrush-sagebrush shrubland to the north and west of the gravel area.

The project site is relatively flat. According to the Aquatic Resources Delineation prepared by EcoSynthesis, Inc. on September 18, 2021 (see Appendix C), the report identifies that total topographic relief of the site is approximately six feet, from a low of 5,850 at the northeast corner to approximately 5,856 in the western part of the graded gravel parking area that dominates the site in area. The

Geotechnical Engineering Report prepared for the project by NV5 on September 15, 2021 (see Appendix E) identifies that surface water flow at the site travels in a general north to south direction towards the nearby wetland area.

A Post-Construction Storm Water Quality Plan was prepared for the project by Millennium Planning & Engineering on September 24, 2021 (see Appendix F), which includes stormwater calculations and a drainage map with information on proposed BMPs for the project.

A total wetland area of 0.06 acre is located on the parcel but outside the proposed development area. The project proposes to avoid direct fills of any wetland areas; however, some construction areas approach close to the wetland boundaries. The large off-site wetland to the south, of which the small mapped wetland patches within the southern site boundary are the tips, exhibits a pronounced topographic and vegetation boundary at the limit of FACW/OBL dominated vegetation. Indicators of ponding were observed, including perennial surface water in its interior, suggesting that the most correct terminology for this wetland would be Freshwater Emergent Wetlands rather than Wet Meadow (largely saturation supported).

Geology and Soils

The following soil types occupy the wetland study area: Kyburz-Trojan complex (1.2 acres) and Aquolls and Borolls (0.8 acres).

Kyburz-Trojan soils are mapped over nearly all of the study area. Both of the major series are moderately or very deep to volcanic rock (weathered or fractured), with an argillic B horizon and moderately slow permeability. Restrictive horizons would generally be found at great depth (up to 2 meters) though fractured or weathered rock are expected at shallower depths. Rock was encountered at a shallow depth (12 inches) at DP-2, which may correspond better to one or another of the inclusions (such as Aldi soil) that are noted in the soil survey. Also, a layer of probable diatomaceous clay (not confirmed by microscopic observation) was encountered at DP-4. Such clays are encountered at variable depths in other Kyburz soils within Town limits, including the parcel immediately to the east of the present study area (where the determination was confirmed microscopically). They are derived from igneous-silicaceous-enriched paleolacustrine sediments and may or may not function as a horizon that is restrictive to infiltration of water.

Aquolls and Borolls are not soil series, but rather suborders of Mollisols, which have a relatively thick, dark colored humus-rich surface horizon. Aquolls are poorly drained valley floor or drainageway soils with an aquic moisture regime (thus are almost always wetlands, unless artificially drained). Borolls are described in the 1994 soil survey as poorly drained soils on the periphery of wet meadows. This suborder is now replaced by Cryolls, and those referred to in the local soil survey would be Aquic Argicryolls: soils with an aquic (hydric) moisture regime, a clay layer, a cold climatic regime, and a thick dark surface layer. Aquolls and Borolls may include strata of variable permeability but, even with slow or even moderate permeability in some layers, may remain inundated or saturated during all or part of the year on the basis of surface or subsurface inflows.

Aquolls and Borolls are listed as hydric soils. All of the hydric soils observed at the site exhibited low chroma matrix and distinct or prominent redox concentrations within 12 inches of the surface (indicator F6, redox dark surface). As is typical in relatively flat terrain, hydric soils often extended beyond the boundary of hydrophytic vegetation.

Hydrology

The study area lies in the 16050102 (Truckee) HUC (Hydrological Unit Code) unit. Total topographic relief of the site is approximately six feet, from a low of 5,850 at the northeast corner to approximately 5,856 in the western part of the graded gravel parking area that dominates the site in area.

The nearest blue line water body on the USGS map is the Truckee River, about 0.23 mile to the north of the site along the pathway of flow from the excavated roadside ditch within and right on the boundary of the Estates Drive right of way. Most of the site, including the majority of the project elements, slopes so that flow would ultimately enter this ditch and flow to the Truckee River via the municipal storm drainage system. However, the wetlands that extend to just within the eastern and southern boundaries of the study area drain in a generally easterly, then northerly, direction through a neighborhood and a detention basin, then the flow (if any) ultimately infiltrates into the soil before arriving at the exterior berm of another, much larger, constructed basin. Available information indicates that, in order for any outflow from the first detention/infiltration basin to flow around the berm creating this second basin, it would need to flow uphill. Therefore, there is no surface connection between the wetlands on site and the Truckee River. The entire wetland complex from the south side of Brockway Road all the way past River View Drive is apparently isolated from any navigable or interstate surface waters.

Vegetation

Plant species that were observed at and near wetland determination data points. No attempt was made to include wetland species from the large wetland south of the site, a tiny portion of which extends into the site at the southwest corner. Observed plant species are summarized below:

Plant Species		
Scientific Name	**Common Name**	**Wetland Status**
Achillea millefolium	yarrow	FACU
Agropyron cristatum	crested wheatgrass	UPL
Alopecurus	*pratensis* meadow foxtail	FAC
Arnica chamissonis	Chamisso arnica	FACW
Carex nebrascensis	Nebraska sedge	OBL
Deschampsia cespitosa	hairgrass	FACW
Deschampsia danthonioides	annual hairgrass	FACW
Elymus trachycaulus	slender wheatgrass	FAC
Epilobium brachycarpum	tall annual willow-herb	UPL
Gayophytum diffusum	spreading groundsmoke	UPL
Hordeum brachyantherum	meadow barley	FAC
Juncus (arcticus var.*) balticus*	Baltic rush	FACW
Lotus purshianus/unifoliolatus	American bird's-foot trefoil	FACU
Madia glomerata	mountain tarweed	FACU
Navarretia (leucocephala)	whitehead navarretia	OBL
Penstemon rydbergii	Rydberg's beardtongue	FACU
Poa secunda	one-sided bluegrass	FACU
Polygonum aviculare	prostrate knotweed	FAC
Polygonum douglasii	Douglas' knotweed	FACU
Polygonum polygaloides	milkwort knotweed	FACW
Potentilla gracilis	slender cinquefoil	FAC
Psilocarphus (brevissimus/tenellus)	woolly marbles	FACW/OBL
Rorippa curvipes	bluntleaf yellowcress	FACW
Sisymbrium altissimum	tumble mustard	UPL
Symphyotrichum spathulatum	western mountain aster	FAC

Regulatory Setting

The Porter-Cologne Water Quality Control Act allows the California State Water Resources Control Board (SWRCB) to adopt statewide water quality control plans or basin plans. The purpose of the plans

is to establish water quality objectives for specific water bodies. The Lahontan Region Water Quality Control Board (LRWQCB), one of nine regional water boards, has prepared the Water Quality Control Plan for the Lahontan Region that establishes water quality objectives and implementation programs to meet the stated objectives and to protect the beneficial uses of the Truckee River basin waters. Most of the implementation of SWRCB's responsibilities is delegated to the nine regional boards and the LRWQCB regulates stormwater runoff in the project area.

The project site is subject to the Lahontan RWQCB water quality regulations for the Truckee River Hydrologic Unit. If development will disturb more than one acre of the site, the project will be subject to regulation under Clean Water Act and a National Pollutant Discharge Elimination System (NPDES) General Construction Permit. Development within the Town must also comply with the most current Phase 2 Municipal Separate Storm Sewer System (MS4) Permit, as regulated by the State Water Resources Control Board.

Town of Truckee Development Code

Development Code Section 18.30.050 (Drainage and Stormwater Runoff) requires Minor Use Permit approval for any disturbance within 200 feet of a wetland. A wetlands delineation report is required for all projects requiring a minor use permit and the disturbance of wetland areas is required to comply with Section 18.46.040 (Wetlands). Development Code Section 18.30.050.B.3 also requires that runoff into wetland areas shall not be increased above or decreased below pre-project levels and that runoff into wetland areas shall be treated prior to release into the wetland. The purpose of these requirements is to ensure that there will be no indirect impact to wetlands due to project proximity or operations.

Development Code Section 18.46.040 (Wetlands) provides standards intended to preserve wetland areas. Development projects resulting in the disturbance of wetlands require approval of a Minor Use Permit. The Minor Use Permit may only be approved by the review authority if the following findings can be made: 1) The wetlands cannot be avoided and there are no feasible alternatives or mitigation to disturbance of the wetlands; 2) Any wetlands removed or destroyed as part of the project are mitigated by the restoration or creation of wetland habitat at a rate of 1.5 to 1 (1.5 units of restored habitat for each unit of habitat removed or destroyed); and 3) The disturbance and/or removal of the wetlands complies with all applicable Federal and State regulations.

Impact Discussion

a) Project construction would involve activities such as excavation and soil stockpiling that would generate loose, erodible soils that, if not properly managed, could cause sedimentation. This could cause an adverse water quality impact. To minimize construction related water quality impacts, the applicants will be required to submit grading, erosion control and improvement plans designed to ensure erosion control impacts are minimized. The construction contractor will be required to protect surface water quality by preventing eroded material or contaminants from entering waterways during construction through the use of best management practices (BMPs). The project must comply with the Town's drainage and storm water runoff regulations as specified in Development Code Section 18.30.050, including ensuring that the project will not impact the nearby wetlands, and storm water runoff treatment and erosion control measures consistent with the LRWQCB's guidelines. For projects disturbing one acre or more of surface area, the project applicant is required to obtain a Stormwater Pollution Prevention Plan (SWPPP) and Waste Discharge Identification number from the Regional Water Quality Control Board. Conformance with these water quality standards in addition to **Mitigation Measures 10a to 10c** will reduce water quality impacts to a ***less-than-significant*** level.

b) The proposed development would not directly withdraw water from the local groundwater supply. The impervious surfaces proposed as part of the project would result in decreased percolation of stormwater within developed areas of the site; however, proposed bioretention areas on the project site will allow for continued percolation of runoff into soils, which could contribute to

groundwater recharge. The proposed project would not result in substantial interference with groundwater recharge in the area. Therefore, a ***less-than-significant*** impact would occur.

ci-iii) Although wetlands exist on the project site, the proposed project would avoid disturbance of the wetland areas. Construction of the proposed project could alter the existing drainage patterns of the site or area and could increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite. Development Code Section 18.30.050 and the Town-required grading and stormwater runoff plans ensure that stormwater drainage is accommodated on site and does not impact adjacent properties. For projects disturbing one acre or more of surface area, the project applicant is required to obtain a Stormwater Pollution Prevention Plan (SWPPP) and Waste Discharge Identification number from the Regional Water Quality Control Board. The applicant is required to comply with the requirements prescribed by the most current NPDES Phase II MS4 permit.

Development Code Section 18.30.050 and the Town-required grading and stormwater runoff plans to ensure that stormwater drainage is accommodated on site and not impacting adjacent properties or overwhelming the stormwater drainage system. Any runoff from the new improvements is not likely to exceed the capacity of existing or planned stormwater drainage systems because of the requirements in the Town's drainage and stormwater runoff regulations.

The construction contractor will be required to protect surface water quality by preventing eroded material or contaminants from entering waterways during construction through the use of BMPs. The project must comply with the Town's drainage and storm water runoff regulations. Storm water runoff treatment and erosion control measures will be consistent with the LRWQCB's guidelines. The applicant is required to comply with the requirements prescribed by the most current NPDES Phase II MS4 permit.

Conformance with these standards in addition to **Mitigation Measures 10a to 10c** will reduce impacts to a ***less-than-significant*** level.

civ) The project site is not located within a 100-year or 500-year floodplain. The site is located within Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel 06057C0533E, which is within Zone X, and considered an area of minimal flood hazard. Thus, the proposed project would not include development within a Special Flood Hazard Area and would not be subject to project-specific design features related to flood hazards. Development of the proposed project would not impede or redirect flood flows; therefore, a ***less-than-significant*** impact would result.

d) Development of the project would not impede or redirect flood flows. Tsunamis are defined as sea waves created by undersea fault movement, whereas a seiche is a long-wavelength, large-scale wave action set up in a closed body of water such as a lake or reservoir. The project site is not located in proximity to a coastline and would not be potentially affected by flooding risks associated with tsunamis. The project site is located approximately 3.8 miles from Donner Lake which could be prone to seiches due to seismic activity. Given the distance from Donner Lake, the project site is not anticipated to be exposed to the impacts of seiches. Based on the above, the proposed project would not pose a risk related to the release of pollutants due to project inundation due to flooding, tsunami, or seiche, and a ***less-than-significant*** impact would occur.

e) The project must comply with the Town's drainage and storm water runoff regulations as specified in Development Code Section 18.30.050 and Section Chapter 11.04 (Requirements for Construction, Development, and Redevelopment Activities) of the Town of Truckee Municipal Code, including ensuring that the project will not impact the nearby wetlands, and storm water runoff treatment and erosion control measures consistent with the LRWQCB's guidelines. For projects disturbing one acre or more of surface area, the project applicant is required to obtain a Stormwater Pollution Prevention Plan (SWPPP) and Waste Discharge Identification number from the Regional Water Quality Control Board. The proposed project would not conflict with or

obstruct implementation of a water quality control plan or sustainable groundwater management plan; therefore, a ***less-than-significant*** impact would occur.

Mitigation Measures

10a) Prior to any ground disturbance on the site, preparation of grading, erosion control and improvement plans are required to address construction related water quality impacts. These plans shall be prepared in accordance with Town of Truckee Development Code Section 18.30.050. The requirements set forth within this Section and within the grading, erosion control and improvement plans shall be implemented throughout the entire construction process.

10b) Prior to building (grading) permit issuance, the project proponents shall provide identification of all existing drainage on the property and adjacent properties, which may affect this project. This identification shall show discharge points on all downstream properties as well as drainage courses before and after the proposed development for the 10-year and 100-year flows. In conjunction with the submittal of project improvement plans, the developer shall submit a Final Drainage report that includes pre- and post-development hydrology calculations, as well as calculations for the required treatment areas to ensure that the on-site drainage system complies with the Town of Truckee Post-Construction Storm Water Quality Plan/State Municipal Phase 2 Stormwater General Permit. The drainage report shall be submitted to the Town of Truckee for review and approval.

10c) Prior to building (grading) permit issuance, the applicant shall provide an erosion control plan and stormwater quality plan, per the requirements of the Town of Truckee for review and approval that shows temporary construction BMPs and permanent on-site treatment of the 85th percentile, 24-hour storm. The plan shall provide details for the proposed project stormwater collection and treatment including the safe release of overflow. If snow storage is proposed in areas of stormwater treatment, then the features should be properly sized for the capacity of both functions. If the project is expanding an existing site and the new impervious area is more than 50% of the existing impervious surface, project shall treat all existing and proposed impervious areas.

10d) The project shall comply the Statewide Construction General Permit No. 2009-009-DWQ or most current permit. Prior to building (grading) permit issuance, the applicant shall provide the WDID number issued by the State Water Resources Control Board.

10e) If project creates or replaces one acre or more of impervious surface, post-project storm water flows shall equal pre-project flows for the design year event (2-year, 24-hour storm or current standard), unless additional mitigations are proposed to provide for the increase in flows.

10f) Prior to building or grading permit issuance, the applicant shall submit a Best Management Practice (BMP) operation and maintenance plan to the Town Engineer for review and approval. Recordation of the operation and maintenance plan for permanent structural treatment control BMPs installed by the project may be required depending on the type of permanent BMP proposed. The property owner shall submit yearly BMP operation and maintenance certifications to the Engineering Division according to the Water Quality Order No. 2013-0001-DWQ NPDES General Permit No. CAS000004 or the most current Phase 2 Municipal Separate Storm Sewer System (MS4) Permit.

References

EcoSynthesis, Inc. *Rocker Memorial Skate Park Aquatic Resources Delineation*. September 18, 2021.

NV5. *Geotechnical Engineering Report for Rocker Skate Park.* September 15, 2021.

Millennium Planning & Engineering. *Post-Construction Storm Water Quality Plan*. September 24, 2021.

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

Setting

The project site is located in the Public (PUB) General Plan Land Use Designation. The PUB land use designation applies to areas under public ownership by local, regional, State and federal government agencies. Allowed land uses include public parks and public facilities, including recreational facilities at an average Floor Area Ratio (FAR) of 0.20.

In keeping with the General Plan land use designation above, project site is also located within the "PF" (Public Facilities) zoning district. The Development Code requires the parcel to be developed/used in compliance with the requirements of the applicable zoning district. The PF zoning district applies to areas appropriate for public, institutional and auxiliary uses that are established in response to the recreational, safety, cultural and welfare needs of the Town. "Parks and Playgrounds" is identified as a permitted use in the PF zoning district when operated by a public agency.

The following table shows the land use designations, zoning districts and surrounding land uses:

Direction	General Plan	Zoning	Existing Use
North	• PUB	• PF (Public Facilities)	• Regional Park
East	• RH	• RM-15 (Multif-amily residential, 15 du/acre)	• Multi-family residential
South	• OSR • RC/OS	• REC (Recreation) • RC (Resource Conservation)	• Undeveloped
West	• PUB	• PF (Public Facilities)	• Regional Park

Impact Discussion

a) A project risks dividing an established community if the project would introduce infrastructure or alter land use so as to change the land use conditions in the surrounding community or isolate an existing land use. Existing land uses in the project vicinity include the Truckee River Regional Park to the north and west, multi-family residences to the northeast, a pond and the Ponderosa Golf Course to the southeast, and undeveloped land to the south. The proposed project would be compatible with the existing recreational uses north and west of the project site. Additionally, the proposed project is consistent with the Land Use and Zoning designations of the project site and would not isolate an existing land use. The proposed project would not physically divide an established community; therefore, a ***less-than-significant*** impact would occur.

b) The project site is currently designated Public per the Town's General Plan and is zoned PF (Public Facilities). The proposed project includes an outdoor recreational facility, consistent with the recreational uses within the Truckee River Regional Park to the north and west of the project site. The proposed project would not conflict with Town policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect. In addition, as discussed throughout this IS/MND, the proposed project would not result in any significant environmental effects that

could not be mitigated to a less-than-significant level by the mitigation measures provided herein. The proposed project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect; therefore, a ***less-than-significant*** impact would occur.

Mitigation Measures

None required.

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12. MINERAL RESOURCES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?			✓	
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?			✓	

Environmental Setting

The site does not contain any mineral resources of any importance or significance to the Town or the State, and there is no evidence of previous aggregate mining on the site.

Per the Town's General Plan EIR, mineral resources within the Town of Truckee primarily include alluvial deposits along the Truckee River Valley, while some resources are associated with volcanic features. Aggregate mining operations in the Town of Truckee are currently limited to the aggregate mining area in the far southeast portion of Truckee. According to Figure 4.5-2 of the General Plan EIR, the project site is not located in an area with important mineral resources.

Impact Discussion

a-b) The site is not an important mineral resources area because of its topography and geologic conditions as well as its proximity to existing developed areas. Because of these factors and the area not being designated as a significant mineral resources area, conversion of the site to recreational uses will not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the State or result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. A ***less-than-significant*** impact to mineral resources would occur.

Mitigation Measures

None required.

References

Town of Truckee. *Town of Truckee 2025 General Plan Draft Environmental Impact Report.* May 15, 2006.

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

Setting

The project site is located at the southeast corner of Brockway Road and Estates Drive. Land uses that may be impacted by noises from this project site include the Truckee River Regional Park to the north and west, and multi-family residential units to the northeast. Noise sources potentially impacting the proposed project include roadway traffic along Brockway Road to the south and Estates Drive to the north and west.

The noise compatibility matrix the in General Plan Noise Element established the compatibility guidelines of exterior ground transportation noise (excluding airport noise) for various land uses in Truckee and provides definitions of compatibility standards. Compatibility standards for exterior airport noise are found in the most recently adopted CLUP. The matrix is used as a guideline by the Town to achieve long-term noise compatibility for land uses.

General Plan Noise Element Figure N-3 (Noise Compatibility Guidelines) established compatible exterior noise levels for land uses. “Other Recreation; Community and Regional Parks” uses are normally acceptable in exterior areas with noise levels up to 70 CNEL, conditionally acceptable from 70 to 75 CNEL, normally unacceptable from 75-80, and clearly unacceptable above 80 CNEL.

General Plan Figure N-3 is included below for reference:

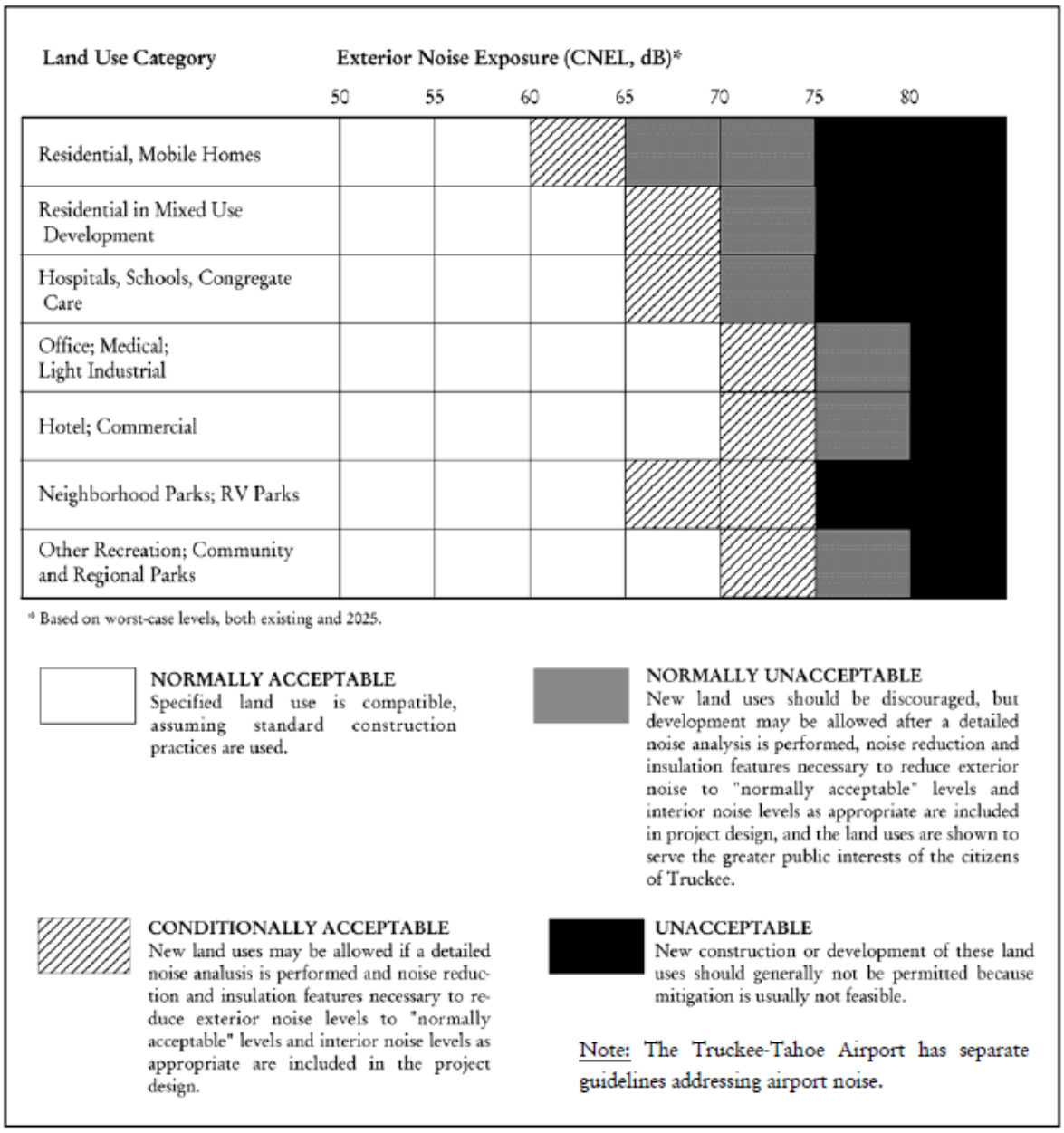


FIGURE N-3 NOISE COMPATIBILITY GUIDELINES *

In addition to the noise standards in the General Plan, the Town's Development Code includes noise level performance criteria applicable to non-transportation noise sources. Specifically, Table 3-8 of the Town's Development Code, provides the noise level performance criteria for sensitive land uses, such as residential and hospital uses. It should be noted that according to Section 18.44.070 of the Town's Development Code, such criteria do not apply to construction noise sources associated with non-single-family residential construction (such as the nearest sensitive receptors to the project site; i.e., multi-family residential uses to the north and east of the project site), provided that the activities do not take place before 7:00 AM or after 9:00 PM on any day, except Sunday, or before 9:00 AM or after 6:00 PM.

In practice, a noise impact may be considered significant if the project would generate noise that would conflict with local project criteria or ordinances, or substantially increase noise levels at noise sensitive land uses.

Technical Background

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise is defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements.

Noise Exposure and Community Noise

An individual's noise exposure is a measure of the noise experienced by the individual over a period of time. A noise level is a measure of noise at a given instant in time. However, noise levels rarely persist consistently over a long period of time. Rather, community noise varies continuously with time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.

These successive additions of sound to the community noise environment varies the community noise level from instant to instant requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

- **Leq:** The equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The Leq is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).
- **Lmax:** The instantaneous maximum noise level measured during the measurement period of interest.

- **Lmin:** The instantaneous minimum noise level measured during the measurement period of interest.
- **Lx:** The sound level that is equaled or exceeded x percent of a specified time period. The L50 represents the median sound level.
- **DNL:** Also termed the Ldn, the DNL is the energy average of the A-weighted sound levels occurring during a 24-hour period, and which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.
- **CNEL:** Similar to the DNL, the Community Noise Equivalent Level (CNEL) adds a 5-dBA "penalty" for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dBA penalty between the hours of 10:00 p.m. and 7:00 a.m.

Effects of Noise on People

The effects of noise on people can be placed into three categories:

- Subjective effects of annoyance, nuisance, dissatisfaction;
- Interference with activities such as speech, sleep, learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants generally experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation exists in the individual thresholds of annoyance, and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so called "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1-dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5-dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause adverse response.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather they combine logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

The major noise factors for this site are Interstate 80, the Truckee-Tahoe Airport, and Union Pacific Railroad. Interstate 80 is the major transportation corridor in the planning area and the loudest source of noise in Truckee. The Union Pacific Railroad bisects Truckee from east to west which has freight and

passenger trains that generate intermittent, loud sounds during pass-bys. Additional, trains are required to sound their warning whistle near "at-grade" crossing (which includes the Bridge Street crossing in Downtown, which is approximately 1.8 miles from the project site). The Truckee-Tahoe airport is a general aviation airport located east of Highway 267, south of Truckee. The airport is accessed by a mix of general aviation and jet aircraft. The primary flight paths follow the highways in the area, but the Airport District does not have the power to regulate the flight paths chosen by individual pilots using the airport.

Other stationary noise sources that impact this site include potential nearby construction and demolition activities, which are generally short-term and intermittent in nature. Additionally, domestic noise sources such as loud music, operation of yard maintenance equipment, and barking dogs can also be a source of disruption.

Operations from the future recreational uses would be create noise commonly found in regional parks. For the purpose of this project, the recreation facility is reviewed using the "Other Recreation; Community and Regional Parks" land use category. The land use must either be located in the "normally acceptable" exterior noise exposure levels, as described in the environmental setting above, or incorporate mitigation measures to reduce exterior noise to "normally acceptable" levels.

Rocker Skate Park Project Noise Analysis

For the proposed project, an environmental noise analysis was prepared by Saxelby Acoustics LLC on July 21, 2021 (see Appendix G). The study identified one potential noise impact for that project and included recommended mitigation measures, as discussed below.

Existing Ambient Noise Levels

The report notes that the existing noise environment in the project area is primarily defined by traffic on Old Brockway Road and Estates Drive, as well as surrounding recreational and residential uses. To quantify the existing ambient noise environment in the project vicinity, Saxelby Acoustics conducted continuous (24-hour) noise level measurements at two locations on the project site. Noise measurement locations are shown in Figure 2 of Appendix G, as shown below:

TABLE 2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

Site	Location	Date	L_{dn}	Daytime L_{eq}	Daytime L_{50}	Daytime L_{max}	Nighttime L_{eq}	Nighttime L_{50}	Nighttime L_{max}
LT-1	Northeast of Project Site	7/10/2021	58	55	50	74	51	46	71
		7/11/2021	58	57	50	77	50	46	71
		7/12/2021	60	57	52	76	53	48	74
LT-2	South of Project Site	7/10/2021	56	54	52	69	49	46	64
		7/11/2021	55	53	52	69	48	45	65
		7/12/2021	58	55	53	69	51	47	68

Notes:
- All values shown in dBA
- Daytime hours: 7:00 a.m. to 10:00 p.m.
- Nighttime Hours: 10:00 p.m. to 7:00 a.m.

Source: *Saxelby Acoustics, 2021.*

Off-Site Traffic Noise

To assess noise impacts due to project-related traffic increases on the local roadway network, traffic noise levels are predicted at sensitive receptors for existing and future, project and no-project conditions. The modeled traffic noise levels at the nearest sensitive receptors along each roadway segment in the project area are summarized in Table 3 of Appendix G, as shown below:

TABLE 3: BASELINE TRAFFIC NOISE LEVEL AND PROJECT-RELATED TRAFFIC NOISE LEVEL INCREASES

Roadway	Segment	Predicted Exterior Noise Level (dBA L_{dn}) at Closest Sensitive Receptors		
		Existing No Project	Existing + Project	Change
Old Brockway Road	Palisades Dr to SR 267	65.0	65.2	+0.2

Source: *Town of Truckee General Plan, Saxelby Acoustics, 2021*

Operational Noise at Existing Sensitive Receptors

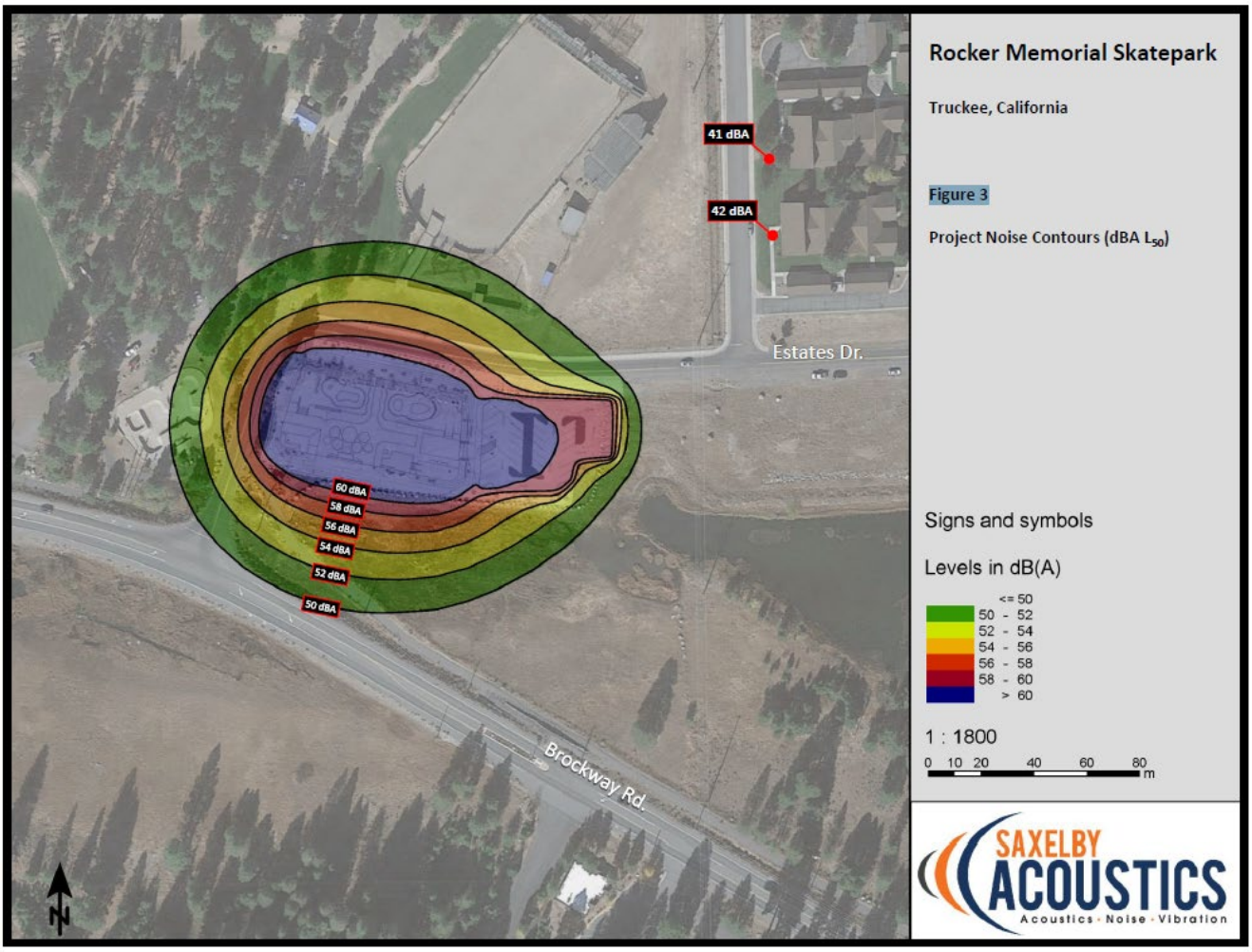
Project site skatepark and parking areas are the primary noise sources for this project. The following is a list of assumptions used for the noise modeling. The data used is based upon Saxelby Acoustics data from similar operations:

- *On-Site Circulation:* Assumes up to 60 passenger auto trips during the peak hour. Parking lot movement for cars is predicted to generate a sound exposure level (SEL) of 71 dBA SEL at 50 feet. Nighttime (10:00 p.m. to 7:00 a.m.) trips to the project site are not expected to occur. Saxelby Acoustics data.
- *Skatepark Area:* Recreational activity in center of skate park area at 55 dBA L50 at 150 feet. Assumes up to 20 individuals actively riding skateboards, scooters, or bicycles. Daytime (7:00 a.m. to 10:00 p.m.) use only. Saxelby Acoustics data.

Saxelby Acoustics used the SoundPLAN noise prediction model. Inputs to the model included sound power levels for the proposed amenities, existing and proposed buildings, terrain type, and locations of sensitive receptors.

Based upon the nature of the sport, noise generated by skateparks may include impacts of riders or equipment against concrete or metal surfaces, as well as shouting or yelling. Therefore, skatepark noise may be considered impulsive under the Town of Truckee noise level standards and subject to a stricter noise level standard.

As shown on the Project Noise Contours diagram included as Figure 3 of Appendix C and shown below, the project is predicted to expose nearby residences to daytime noise levels up to 42 dBA L50 during daytime (7:00 a.m. to 10:00 p.m.) hours. Nighttime operation of the proposed project is not expected to occur.



This would meet the Town of Truckee daytime noise level standard of 50 dBA L50 for impulsive noise sources. Therefore, no mitigation is required.

Construction Noise

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. As indicated in Table 4 of Appendix G and as shown below, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dBA Lmax at a distance of 50 feet:

TABLE 4: CONSTRUCTION EQUIPMENT NOISE

Type of Equipment	Maximum Level, dBA at 50 feet
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85

Source: *Roadway Construction Noise Model User's Guide*. Federal Highway Administration. FHWA-HEP-05-054. January 2006.

Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours. Noise would also be generated during the construction phase by increased truck traffic on area roadways. A project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from the construction site. This noise increase would be of short duration and would occur during daytime hours. Construction activities are conditionally exempt from the Development Code during certain hours. Development Code Section 18.44.070 exempts construction from the Town's noise standards between the hours of 7:00 a.m. and 9:00 p.m. Monday through Saturday and 9:00 a.m. to 6:00 p.m. on Sundays.

Although construction activities are temporary in nature and would occur during normal daytime working hours, construction-related noise could result in sleep interference at existing noise-sensitive land uses in the vicinity of the construction if construction activities were to occur outside the normal daytime hours. Therefore, impacts resulting from noise levels temporarily exceeding the threshold of significance due to construction would be considered potentially significant. However, implementation of the recommended mitigation measure would help to reduce construction-generated noise levels. With the proposed mitigation measure, the noise impacts would be reduced to less than significant levels.

Construction Vibration

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural.

As shown in Table 5 of Appendix G and shown below, construction vibration levels anticipated for the project are less than the 0.2 in/sec threshold at distances of 26 feet:

TABLE 5: VIBRATION LEVELS FOR VARIOUS CONSTRUCTION EQUIPMENT

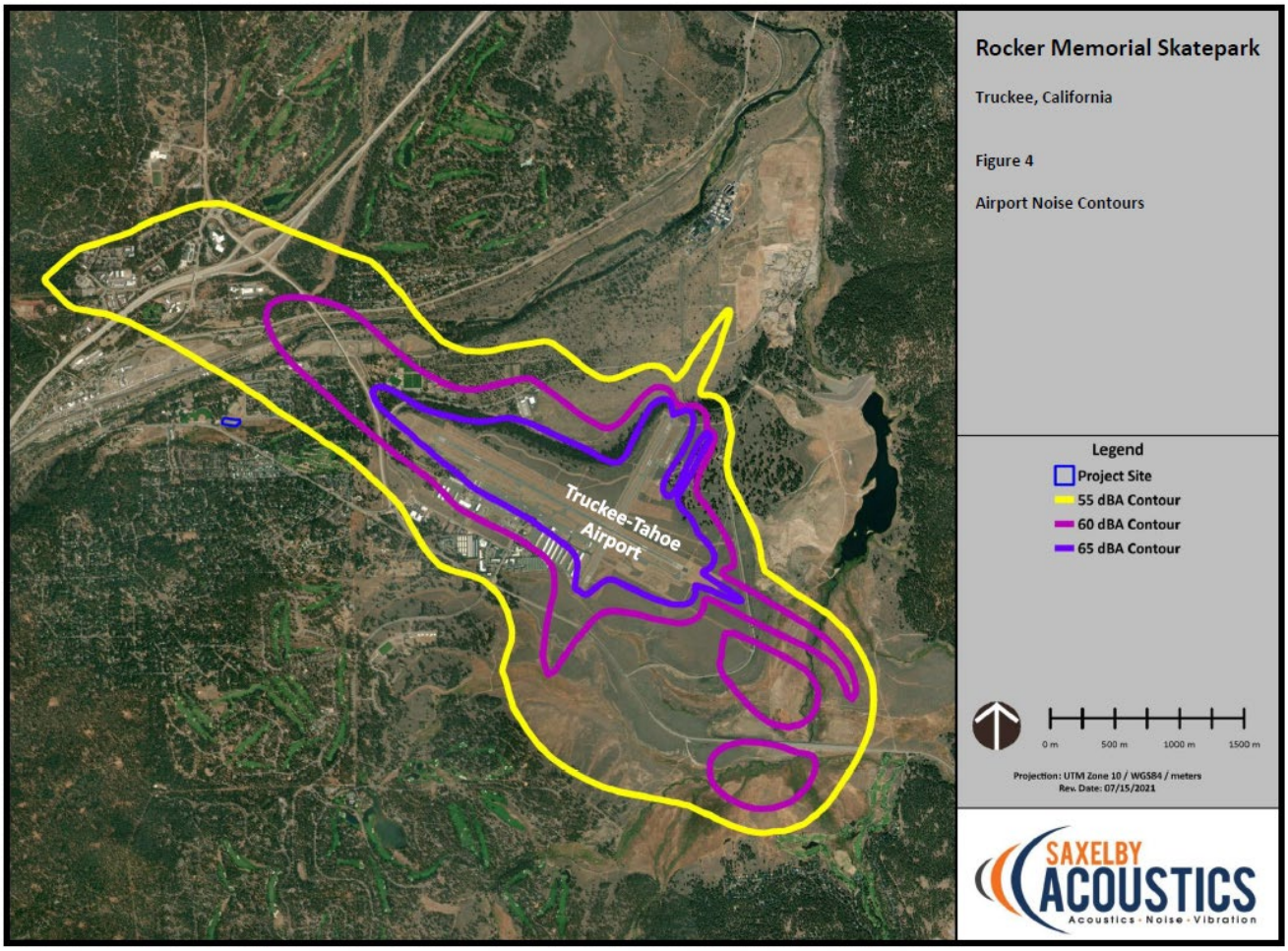
Type of Equipment	Peak Particle Velocity at 25 feet (inches/second)	Peak Particle Velocity at 50 feet (inches/second)	Peak Particle Velocity at 100 feet (inches/second)
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210 (Less than 0.20 at 26 feet)	0.074	0.026

Source: *Transit Noise and Vibration Impact Assessment Guidelines.* Federal Transit Administration. May 2006.

Sensitive receptors which could be impacted by construction related vibrations, especially vibratory compactors/rollers, are located further than 26 feet from typical construction activities. At distances greater than 26 feet construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours.

Airport Noise

The Truckee-Tahoe Airport is located approximately 0.5 miles east of the project site and aircraft overflights were observed during visits to the project site. The project is outside of the predicted 55 dBA CNEL noise contour, as shown on the Airport Noise Contours map which is included in the report as Figure 4 of Appendix G, and as shown below:



According to Figure 4.9-2 of the Truckee 2025 General Plan Noise Compatibility Guidelines, "Other Recreation; Community and Regional Parks" land uses exposed to noise levels less than 70 dBA CNEL are "Normally Acceptable." Land uses may be carried out with essentially no interference from the noise exposure. The impacts are less than significant and no mitigation is required.

Impact Discussion

a) During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. Activities involved in construction would generate maximum noise levels ranging from 76 to 90 dBA Lmax at a distance of 50 feet. Construction activities would also be temporary in nature and are anticipated to occur during normal daytime working hours. Noise would also be generated during the construction phase by increased truck traffic on area roadways. A project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from the construction site. This noise increase would be of short duration and would occur during daytime hours. Construction activities are conditionally exempt from the Development Code during certain hours. Development Code Section 18.44.070 exempts construction from the Town's noise standards between the hours of 7:00 a.m. and 9:00 p.m. Monday through Saturday and 9:00 a.m. to 6:00 p.m. on Sundays. Although construction activities are temporary in nature and would occur during normal daytime working hours, construction-related noise could result in sleep

interference at existing noise-sensitive land uses in the vicinity of the construction if construction activities were to occur outside the normal daytime hours. With incorporation of **Mitigation Measure 13a**, impacts resulting from noise levels temporarily exceeding the threshold of significance due to construction would be reduced to ***less-than-significant***.

b) Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural. Construction vibration levels anticipated for the project are less than the 0.2 in/sec threshold at distances of 26 feet. Sensitive receptors which could be impacted by construction related vibrations, especially vibratory compactors/rollers, are located further than 26 feet from typical construction activities. At distances greater than 26 feet construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours. This impact is ***less-than-significant***.

c) The proposed project is located approximately 0.2 miles outside of the predicted 55 dBA CNEL noise contour. According to Figure 4.9-2 of the Truckee 2025 General Plan Noise Compatibility Guidelines, "Other Recreation; Community and Regional Parks" land uses exposed to noise levels less than 70 dBA CNEL are "Normally Acceptable." Land use may be carried out with essentially no interference from the noise exposure. This impact is ***less-than-significant***.

Mitigation Measures

13a) Prior to building and/or grading permit issuance, the following standards shall be established for the proposed project:

- Construction activities shall not take place before 7 a.m. or after 9 p.m. on any day except Sunday, or before 9 a.m. or after 6 p.m. on Sunday.
- When not in use, motorized construction equipment shall not be left idling for more than 5 minutes.
- Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.
- Stationary equipment (power generators, compressors, etc.) shall be located at the furthest practical distance from nearby noise-sensitive land uses or sufficiently shielded to reduce noise related impacts.
- "Quiet" air compressors and other stationary noise-generating equipment shall be utilized where appropriate technology exists.
- The project sponsor shall designate a "disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint and will require that reasonable measures warranted to correct the problem be implemented. The project sponsor shall also post telephone number for excessive noise complaints in conspicuous locations in the vicinity of the project site. Additionally, the project sponsor shall send a notice to neighbors in the project vicinity with the information on the construction schedule and the telephone number for noise complaints.

References

Town of Truckee. 2025 General Plan. Amended October 23, 2018.

Town of Truckee. Development Code. Amended December 14, 2021.

Truckee Tahoe Airport Land Use Commission. *Truckee Tahoe Land Use Compatibility Plan.* October 27, 2016.

14. POPULATION AND HOUSING.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?			✓	
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?			✓	

Impact Discussion

a) The proposed project is consistent with the land use and zoning designations of the project site, the proposed project would not result in unplanned population growth. As discussed in Section 14, Public Services, of this IS/MND, public service providers, such as local police and fire departments, would be capable of accommodating the demands of the proposed project. Therefore, the proposed project would not induce substantial unplanned population growth either directly or indirectly, and a ***less-than-significant*** impact would occur

b) The proposed project would not require the demolition of any existing residences or any other structures within the project site, and would not displace a substantial number of existing housing or people and would not necessitate the construction of replacement housing elsewhere. Therefore, a ***less-than-significant*** impact would occur.

Mitigation Measures

None required.

15. PUBLIC SERVICES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
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:				
i. Fire protection?			✓	
ii. Police protection?			✓	
iii. Schools?			✓	
iv. Parks?			✓	
v. Other public facilities?			✓	

Setting

The Town of Truckee 2025 General Plan EIR determined that buildout of the General Plan would increase the overall demand on fire and law enforcement services.

Fire protection services are currently provided to the surrounding area by the Truckee Fire Protection District (TFPD). The TFPD is comprised of 40 full-time and 10 part-time firefighters and paramedics. TFPD Station 91 is the nearest station to the project site and is located approximately one mile to the west at 10049 Donner Pass Road. The Truckee Police Department (TPD) provides law enforcement services to the project area. The TPD is located at Town Hall at 10183 Truckee Airport Road, approximately 1.9 miles southeast of the project site.

Impact Discussion

a-i) The project site and surrounding area currently receive structural fire protection from the Truckee Fire Protection District. The project area is required to comply with TFPD ordinances regarding wildland fire protection and access. While some increase in demand for fire services could occur as a result of development of the proposed project, the increase would not be considered substantial and could be met by current service providers, without the need for expanding existing facilities or constructing new facilities. The impact is ***less-than-significant***.

a-ii) Law enforcement services are the responsibility of the Town of Truckee Police Department. While some increase in demand for police services could occur as a result of development of the proposed project, the increase would not be considered substantial and could be met by current service providers, without the need for expanding existing facilities or constructing new facilities. The impact is ***less-than-significant***.

a-iii) The proposed project will not generate additional residential population that would create impacts on schools. The impact is ***less-than-significant***.

a-iv) Local recreational services are provided by the Truckee Donner Recreation and Parks District. The project proposes to add a new outdoor recreational facility to the Truckee River Regional Park. The project site was identified as a future location for development of a skateboarding park in the Truckee River Regional Park Master Plan in January 2020. The new facility will not create substantial adverse physical impacts on existing park facilities, and the proposed expansion of the existing skateboarding park may reduce impacts on the existing skateboarding facility. The impact is ***less-than-significant***.

a-v) Other public services, including but not limited to snow removal, road maintenance and other governmental services, will not be impacted by the proposed project. The impact is ***less-than-significant***.

Mitigation Measures

None required.

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16. RECREATION.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			✓	

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			✓	

Setting

Local recreational services are provided by the Truckee Donner Recreation and Parks District. The Truckee River Regional Park is located directly across Brockway Road from the project site. The Trails and Bikeways Master Plan identifies existing facilities adjacent to the project site, including Class I and Class II trails along Brockway Road.

Currently, the Town of Truckee includes an ample amount of community and recreation facilities. In addition to the Truckee River Regional Park, additional community and recreation facilities in Truckee include the Truckee Community Recreation Center, Donner Memorial State Park, Meadow Park, Riverview Sports Park, Truckee Community Pool, and Truckee Bike Park. Due to the ample amount of existing recreational facilities in the Town of Truckee, the proposed project would not substantially 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.

Impact Discussion

a) The project proposes to add a new outdoor recreational facility to the Truckee River Regional Park. This site was identified as a future location for development of a skateboarding park in the Truckee River Regional Park Master Plan in January 2020. By providing a new amenity to the public, the new skateboarding park could increase use of Regional Park facilities by drawing additional visitors to the park. However, the expanded skateboarding park facility is designed to accommodate these users, and is likely to reduce impacts on the existing skateboarding facility by providing additional space to accommodate visitors. The construction of the new skateboarding park was envisioned as part of master plan for the Regional Park, which created a comprehensive plan for future development within the park. Due the amount of existing recreational facilities within Truckee, any increase of use as a result of the new facilities would not be significant. Therefore, the impact is ***less-than-significant***.

b) The proposed project includes new recreational facilities at the Regional Park, including the expansion of the existing skateboarding park, as envisioned in the Truckee River Regional Park Master Plan. Mitigation measures to address all potential impacts that could be created by the project have been prepared as part of this IS/MND to ensure that there will be no adverse physical impacts on the environment. The impact is ***less-than-significant***.

Mitigation Measures

None required.

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

Setting

Traditionally, lead agencies used LOS to assess the significance of transportation impacts, with greater levels of congestion considered to be more significant than lesser levels. Mitigation measures typically took the form of capacity-increasing improvements, which often had their own environmental impacts. In 2013, however, the Legislature passed legislation with the intention of ultimately doing away with LOS in most instances as a basis for environmental analysis under CEQA. Enacted as part of SB 743 (2013), Public Resources Code Section 21099, subdivision (b)(1), directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed CEQA Guidelines addressing "criteria for determining the significance of transportation impacts of projects within transit priority areas. Those criteria shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. In developing the criteria, [OPR] shall recommend potential metrics to measure transportation impacts that may include, but are not limited to, vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated. The office may also establish criteria for models used to analyze transportation impacts to ensure the models are accurate, reliable, and consistent with the intent of this section."

Subdivision (b)(2) of Section 21099 further provides that "[u]pon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion *shall not be considered a significant impact on the environment* pursuant to [CEQA], except in locations specifically identified in the guidelines, if any." (Italics added.)

Pursuant to Senate Bill 743, the Natural Resources Agency promulgated CEQA Guidelines Section 15064.3 in late 2018. It became effective in early 2019 and mandated Statewide by law on July 1, 2020. Subdivision (a) of that section provides that "[g]enerally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and nonmotorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact."

LOS is still currently used by the Town for purposes of determining consistency with adopted general plan goals and policies related to LOS, but is no longer used for determining significant impacts under CEQA.

VMT and Local Transportation Analysis

A VMT and Local Transportation Analysis for the proposed project was prepared by LSC Transportation Consultants, Inc. on March 7, 2022 (see Appendix H). The study estimated trip and Vehicle Miles Traveled (VMT) generation for the project; compared the VMT estimation to the Town of Truckee's Proposed CEQA VMT Thresholds of Significance (adopted by the Town Council on June 23, 2020); evaluated sight distances; and prepared a pedestrian crossing evaluation.

Trip Generation

Trip generation is the evaluation of the number of vehicle-trips that will either have an origin or destination at the project site. Daily one-way vehicle-trips and peak-hour one-way vehicle-trips must be determined in order to analyze the potential impacts from the proposed project development.

Full buildout of the project includes construction of an additional 24,686 square feet of skate park. The trip generation analysis for the proposed project land use is summarized in the study in Table 1 of Appendix H and as shown below. Due to the skate park not being a standard land use, LSC completed a person trip analysis to determine trip generation.

Table 1: Truckee Rocker Skate Park Trip Generation

Description	Quantity	Units	Trip Generation Rates[1]				Reduction for Non-Auto Access	Vehicle Trips at Site Driveways			
			Daily	PM Peak Hour				Daily	PM Peak Hour		
				In	Out	Total			In	Out	Total
Skate Park Expansion	24.686	KSF	person-trip analysis				10%	157	8	8	16

KSF = Thousand Square Feet

Note 1: Analysis based on *Truckee Regional Park - Parking Evaluation (LSC, July 3, 2019)*

Source: LSC Transportation Consultants, Inc.

According to the Truckee Regional Park Parking Evaluation prepared by LSC Transportation, Inc. on July 3, 2019, the peak number of persons found at the skate park in the future as a whole is 35 persons. The expansion part of the skate park on a typical summer day would have about 26 persons at peak time based on the ratio of existing skate park square footage to expansion skate park square footage. A peak parking demand of 12 vehicles was determined (again the total parking demand for the skate park is estimated at 16 vehicles). Each vehicle was assumed to stay at the skate park for on average for 1.5 hours for a total of 16 PM Peak Hour vehicle trips at the site driveways.

To determine the number of daily trips, the peak hour parking demand was multiplied by the proportion of peak parking demand by hour for shared parking analysis percentages shown in the Truckee Regional Park Parking Evaluation. Summing the total parking demand gives a total of 118 cars parked at the skate park over the course of a typical summer day. To be conservative, each vehicle again was assumed to stay at the skate park on average for 1.5 hours which results in 157 one-way daily vehicle trips at the skate park site driveways on a weekday.

Vehicle Miles Traveled (VMT)

Section 15064.3 of the CEQA Guidelines provides specific considerations for evaluating a project's transportation impacts. Pursuant to Section 15064.3, analysis of VMT attributable to a project is the most appropriate measure of transportation impacts.

The Town of Truckee adopted the Proposed California Environmental Quality Act VMT Thresholds of Significance on June 23, 2020). The thresholds identify some projects as being presumed to have a less than significant VMT impact. Projects that have a less than significant VMT impact do not require a full VMT analysis.

VMT Screening Review

The project is found to have a significant VMT impact if one or more of the following criteria is met:

- The project is inconsistent with the Truckee General Plan land use forecasts.
- The project's daily VMT per unit of development is greater than 85 percent of the town-wide average for the individual land use types. (In this case, we proposed that the unit of development be defined VMT per recreational attendee per day.)

After reviewing the Truckee General Plan, the project was found to be consistent with the land uses under existing and future model conditions. The project's daily VMT was calculated and compared to the threshold as described below:

- *VMT Calculation* – The total average trip length in the model area for trips in TAZ 59 is 3.7 miles. Multiplying the trip length by the 157 daily vehicle trips gives an average daily VMT of 581.
- *VMT Threshold of Significance* – The threshold of significance would be 85% of the average town-wide public-recreational area VMT. Public recreation areas in the Town of Truckee are shown in Table 2 of Appendix H. If the skate park and its 157 daily trips were located in each of these recreation areas the associated VMT is shown. The average of these VMTs was then calculated to be 926 VMT. In order for the project to be below the threshold the project could only generate 85 percent of this average or 787 daily VMT.

Below is the summary of public recreation areas as shown in Table 2 of Appendix H:

Table 2: Truckee Rocker Skate Park VMT Comparison

Area	TAZ	Average Trip Length[1]	Daily Project Trips[2]	Daily Vehicle Miles Traveled (VMT)
Project Area				
Regional Park	59	3.7	157	**581**
Truckee Public Recreation Areas				
Regional Park	59	3.7	157	581
Riverview Sport Park	67	6.4	157	1005
Meadow Park	15	3.8	157	597
West End Beach	4	8.5	157	1335
Alder Creek Adventure Center	33	7.1	157	1115
Average		**5.9**		**926**
		85 Percent Below Average VMT		**787**

Note 1: Average Trip Length within the model area from Exsiting 2018 Truckee TransCAD model

Note 2: Daily trips from Table 1.

TAZ = Truckee TransCAD Traffic Analysis Zone

Source: LSC Transportation Consultants, Inc.

Since the project generates only 581 daily VMT, it is within the threshold and considered not to have a significant impact on VMT. This is qualitatively confirmed as VMT from centrally located projects generate less VMT than if they were located in remote areas of Truckee.

Local Transportation Analysis

In addition to the trip generation and VMT analysis, a local transportation analysis was completed to address local Town of Truckee concerns. This analysis includes sight distance and an evaluation of the pedestrian crossing, as discussed below.

- **Estates Drive/Skate Park Proposed Driveway:** LSC staff visited the site and conduct a sight distance analysis for the proposed driveway along Estates Drive. Given the 25 mile per hour speed limit, a sight distance of 335 feet is required. More than 355 feet of sight distance is provided to the west and east of the driveway, therefore sight distance at the proposed driveway is adequate.
- **Estates Drive Trail Crossing:** The existing pedestrian and bike trail crossing across Estates Drive is located about 100 feet north of the stop bar at the Brockway Road/Estates Drive intersection. Currently, the crossing has minimal markings and signage. There is a sign indicating the trail crossing for northbound traffic but no existing sign marking the trail for southbound traffic. Sight distance was analyzed at this crossing. The required sight distance is the 'stopping sight distance' for vehicles traveling along Estates Drive at the posted speed limit of 25 miles per hour which would be 155 feet. Based on an LSC site visit there is more than 155 feet of sight distance north of this location. To the south, there is a clear line of sight to the intersection of Brockway Road.

  In conformance with the California MUTCD 2014 Edition (CA MUTCD), because non-intersection pedestrian crossings are generally unexpected by the road user, warning signs should be installed for all marked crosswalks at non-intersection locations and adequate visibility should be provided by parking prohibitions. The warning signs should include the W11-2 or W11-15 at the crossing and perhaps the R1-5 sign 'Yield to Peds Here" sign placed approximately 20 feet before the crossing in both directions. Additionally, crosswalk striping should be added to the crossing.

  Due to the increase of pedestrian traffic upon completion of the project, installation of a rectangular rapid-flashing beacon (RRFB) or standard flashing beacon with pedestrian activation is an option at the existing Estates Drive pedestrian crossing. There is not a threshold or warrant used for determining installation a pedestrian beacon. Instead, there is guidance on factors that should be considered for installation. The beacon would be considered appropriate at this location because the roadway has a speed of less than 40 miles per hour and there are no sight distance issues. Additionally, the beacon's main purpose is to address conflict between vehicles and non-auto users at roadway crossings and is therefore appropriate at this location. Final design of the beacon should be coordinated with the Town of Truckee similar to the other pedestrian-activated crossings in town.

Conclusions

The following conclusions were made by LSC based on the analysis:

- The net impact of the project would be approximately 157 new daily one-way vehicle trips at site driveways with 16 trips occurring in the PM peak hour (8 inbound and 8 outbound).
- The project will generate 581 daily VMT which is less than 85 percent below the town-wide average for public recreation area and therefore the project is not found to have a significant impact on VMT.
- The sight distance at the proposed driveway is adequate.
- It is recommended that the pedestrian crossing located on Estates Drive be upgraded with pedestrian crossing warning signs and crosswalk striping. Additionally, a pedestrian activated beacon would be considered appropriate at this location.

Pedestrian, Bicycle, and Transit Facilities

The proposed project's potential impacts related to pedestrian, bicycle, and transit facilities are discussed below.

- *Pedestrian Facilities* – Pedestrian facilities in the project area include sidewalks, crosswalks, and pedestrian signals. Roadways in the study area that have been developed to their ultimate width generally provide sidewalks on both sides of the street. The proposed project would provide trails and walkways within the project site to connect with existing multi-use Brockway Trail, as well as sidewalk improvements along its Estates Drive frontage, which would represent its share of the pedestrian network in the vicinity and is consistent with the Truckee Trails and Bikeways Master Plan, which identifies sidewalks in this location.
- *Bicycle Facilities* – Development Code Section 18.48.090 (Bicycle Parking and Support Facilities) requires non-residential uses to provide bicycle parking at a rate of 15 percent of the number of vehicle parking spaces required by Section 18.48.040 (Number of Parking Spaces Required), with a minimum of three spaces is required in all cases. The project proposes a total of 27 parking spaces, which requires a minimum of four bicycle parking spaces. The project site is located adjacent to the Brockway Trail, a Class I trail that provides pedestrian and bicycle connections along the Brockway Road corridor to Downtown Truckee and connects to the trail network that provides access to other parts of town. Currently, there are 22 miles of Class I paved trails, 38 miles of Class II bike lanes, and 32 miles of Class III bike routes. The Truckee Trails and Bikeways Master Plan would increase the network of bicycle infrastructure, including the construction of 19 additional miles of paved bike paths and 5 miles of bike lanes. Due to the fact that the Town has a substantial amount of bicycle trails for the public and the project will be required to comply with the Development Code standards for bicycle parking, the proposed project would not conflict with a program, plan or ordinance addressing bicycle facilities, including the Truckee Trails and Bikeways Master Plan.
- *Transit Facilities* – The Town of Truckee is served by Tahoe Truckee Area Regional Transit (TART), holiday and special event shuttles, dial-a-ride service, Greyhound, Amtrak throughway bus and rail, and the North Lake Tahoe Express airport shuttle. Over the past several years, the Town has taken a more prominent role in the regional TART system by co-branding the system with Placer County, expanding service and making the system "fare free", thereby removing a significant barrier to using transit for both the transit dependent and non-transit dependent populations. The Town of Truckee and Placer County both operate elements of the "fare free" TART system. The Town of Truckee's program consists of both fixed route service, referred to as the "Truckee Local", and complementary paratransit service known as Dial-A-Ride operating within the Truckee area. These services provide a range of options for travelers to access recreational, employment, shopping, and social service opportunities. The Truckee Local Route provides transit service along the Donner Pass Road and Brockway Road corridors seven days per week from 6:30 a.m. to 6:30 p.m., 365 days per year. This service connects passengers at the Train Depot to the Placer County Regional TART providing an important regional link between the North Lake Tahoe communities of Tahoe City, Kings Beach, and Incline Village and Truckee. Truckee TART also operates a Regional Night Service from the Train Depot to the Northstar California and Palisades Tahoe resort base areas. During the peak winter and summer seasons, service is provided from 6:00 p.m. to 11:30 p.m. The service ends one hour earlier during the shoulder seasons of spring and fall. Placer County operates a separate but coordinated element of the TART program, consisting of transit services in the North Tahoe region in both California and Nevada. This program also connects the North Lake Tahoe area to Truckee via SR 89 and SR 267. Placer TART operates hourly route service between Tahoe City, Olympic Valley, and Truckee along SR 89 with additional runs during the winter and summer months for peak commute periods. These services are partially funded by the Town of Truckee as well as the Airport District. Based on the above, adequate transit services and

facilities would be available to serve the future users of the proposed project. Additionally, the proposed project would not conflict with existing or planned transit facilities or services.

Impact Discussion

a) A VMT and Local Transportation Analysis was completed for the proposed project, which analyzed trip generation and Vehicle Miles Traveled (VMT), as well as preparing a local transportation analysis. The study found that the project will generate 581 daily VMT, which is less than 85 percent below the town-wide average for public recreation areas. Therefore, the project is not found to have a significant impact on VMT.

Additionally, LOS was analyzed to ensure compliance of the project with the Town's General Plan policy. Given the proposed project is consistent with the project site's General Plan land use designation, the potential increases in traffic due to recreational uses on the project site would have been analyzed within the Joerger Ranch Specific Plan Traffic Study under the Future Cumulative scenario. Given the fact that there is an acceleration lane on Brockway Road east of the Brockway Road/Estates Drive intersection, it is unlikely that the existing or future LOS will exceed standards with the proposed project. Thus, it can be concluded that the proposed project would not result in a conflict with the Town's General Plan LOS policy.

The proposed project would provide trails and walkways within the project site to connect with existing multi-use Brockway Trail, as well as sidewalk improvements along its Estates Drive frontage, which would represent its share of the pedestrian network in the vicinity. Due to the fact that the Town has a substantial amount of bicycle trails for the public and the project will be required to comply with the Development Code standards for bicycle parking, the proposed project would not conflict with a program, plan or ordinance addressing bicycle facilities, including the Truckee Trails and Bikeway Master Plan. Adequate transit facilities would be available to serve the future users of the proposed project and the proposed project would not conflict with existing or planned transit facilities. Therefore, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and a ***less-than-significant*** impact could occur.

b) In compliance with CEQA Guidelines Section 15064.3, a VMT and Local Transportation Analysis was completed to analyze the project's VMT impacts. The study analyzed trip generation and Vehicle Miles Traveled (VMT), as well as preparing a local transportation analysis. The study found that the project will generate 581 daily VMT, which is less than 85 percent below the town-wide average for public recreation areas. Therefore, the project is not found to have a significant impact on VMT. The impact is ***less-than-significant***.

c-d) The existing Estates Drive roadway would provide access to the project parking lot through one access point located along the northern project site boundary. This driveways into the project would be constructed in accordance with Town of Truckee standards. Additionally, the proposed drive aisles within the parking areas would be sufficiently sized to accommodate emergency vehicle access throughout the site.

Construction traffic associated with the proposed project would include heavy-duty vehicles associated with transport of construction material, as well as daily construction employee trips to and from the site that would share the area roadways with normal vehicle traffic, creating potential conflicts with other roadway users. Although construction traffic could affect traffic flows, traffic control measures would be implemented during construction activities to control traffic flows in the project area. Implementation of traffic control measures would ensure that construction traffic does not conflict with other roadway users.

A traffic control plan has not been submitted and approved by the Town of Truckee. Therefore, the proposed project could substantially increase hazards due to a design feature or

incompatible uses or result in temporary inadequate emergency access. With incorporation of **Mitigation Measure 17a**, the impact would be reduced to ***less-than-significant***.

Mitigation Measures

17a) Prior to building and/or grading permit issuance, a construction signing and traffic control plan shall be provided to the Town of Truckee for review and approval. The construction signing and traffic control plan shall include (but not necessarily be limited to) items such as:

- Guidance on the number and size of trucks per day entering and leaving the project site;
- Identification of arrival/departure times that would minimize traffic impacts;
- Approved truck circulation patterns;
- Locations of staging areas;
- Locations of employee parking and methods to encourage carpooling and use of alternative transportation;
- Methods for partial/complete street closures (e.g., timing, signage, location and duration restrictions);
- Criteria for use of flaggers and other traffic controls;
- Preservation of safe and convenient passage for bicyclists and pedestrians through/around construction areas;
- Monitoring for roadbed damage and timing for completing repairs;
- Limitations on construction activity during peak/holiday weekends and special events;
- Preservation of emergency vehicle access;
- Removing traffic obstructions during emergency evacuation events; and
- Providing a point of contact for local residents and guests to obtain construction information, have questions answered, and convey complaints.

References

LSC Transportation Consultants, Inc. *Rocker Memorial Skate Park VMT and Local Transportation Analysis.* March 7, 2022.

LSC Transportation Consultants, Inc. *Truckee Regional Park Parking Evaluation*. July 3, 2019.

LSC Transportation Consultants, Inc. *Brockway Road Corridor Update.* September 9, 2020.

Town of Truckee. *Brockway Reynolds Future*. April 5, 2017.

Tahoe Truckee Area Regional Transit. https://tahoetruckeetransit.com/. Accessed March 22, 2022.

18. TRIBAL AND CULTURAL RESOURCES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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).		✓		

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 Resources Code Section 5024.1, the lead agency shall consider the significant of the resource to a California Native American Tribe.		✓		

Setting

Assembly Bill 52 created a new category of environmental resources that must be considered under the California Environmental Quality Act. The legislation imposed requirements for consultation regarding projects that may affect a tribal cultural resource. Lead agencies are required to provide notice to tribes that are traditionally and culturally affiliated with the geographic range of the proposed project if they have requested notice of projects within that area.

In compliance with AB 52 (Public Resources Code Section 21080.3.1), the Town of Truckee distributed project notification letters to the T'si Akim Maidu, the United Auburn Indian Community of the Auburn Rancheria, the Washoe Tribe, the Shingle Springs Band of the Miwok Indians, and the Native American Heritage Commission. The letters were distributed on February 12, 2021, and requests to consult have not been received to date. The United Auburn Indian Community of the Auburn Rancheria responded on March 4, 2021, identifying that they did not show any known or previously recorded tribal cultural resources in the project area; however, the area is likely sensitive due to the proximity of the river.

In addition, as discussed in Section 5, Cultural Resources, of this IS/MND, the Cultural Resources Inventory prepared for the proposed project included a records search and literature review. Correspondence regarding the proposed project was sent by Dr. Lindström to the Native American Heritage Commission (NAHC), the Washoe Tribe, and the Colfax-Todds Valley Consolidated Tribe. This informal Tribal outreach is separate from the Tribal notification conducted by the Town under AB 52 (see Section 18, Tribal Cultural Resources, of this IS/MND). A response was received from the NAHC indicating that the Sacred Lands File search produced negative results for the project site. In addition, no responses were received from either tribe.

Although the project area has been subject to a records search and a systematic surface archaeological investigation, and tribal cultural resources were not discovered on the project site, unknown tribal cultural resources have the potential to be uncovered during ground-disturbing activities at the proposed project site. Therefore, the proposed project could result in a substantial adverse change in the significance of a tribal cultural resource.

Mitigation measures were included Section 5, Cultural Resources, of this IS/MND, to address potential impacts to cultural resources. **Mitigation Measure 5a** addresses the possibility that unknown archaeological resources, including human remains, could be uncovered during ground-disturbing activities at the proposed project site. **Mitigation Measure 5b** provides requirements in the case of the potential discovery of human remains on the project site.

Impact Discussion

a-b) Project notification letters were T'si Akim Maidu, the United Auburn Indian Community of the Auburn Rancheria, the Washoe Tribe, the Shingle Springs Band of the Miwok Indians, and the Native American Heritage Commission, and no requests to consult have been received. Although the project area has been subject to a records search and a systematic surface archaeological investigation, and tribal cultural resources were not discovered on the project site, unknown tribal cultural resources have the potential to be uncovered during ground-disturbing activities at the proposed project site. Therefore, the proposed project could result in a substantial adverse change in the significance of a tribal cultural resource. Implementation of Mitigation Measure 18a will reduce the impact to ***less-than-significant***.

Mitigation Measures

18a) Implement **Mitigation Measures 5a** and **5b**.

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

Impact Discussion

a-c) The project does not propose any utility connections and therefore will not result in the relocation or construction of new or expanded water, wastewater treatment, electric power, natural gas, or telecommunications facilities. No impacts to the water supply or wastewater treatment capacity would occur as a result of the project. The proposed project includes the construction of bioretention basins for stormwater treatment. The physical effects of the proposed expansion to the on-site stormwater system have been discussed throughout this IS/MND. The proposed on-site stormwater system will be required to be properly sized to handle stormwater under the 10- and 100-year events, and off-site expansion or relocation would not be required, and **Mitigation Measure 10b** requires the project applicant to the applicant is required to submit a Final Drainage Report to ensure that on-site drainage systems comply with the Town of Truckee Post-Construction Storm Water Quality Plan. The impact is ***less-than-significant***.

d-e) The project is required to comply with all requirements of Development Code Section 18.30.070 (Solid Waste/Recyclables Materials Storage), which provides standards for the construction and operation of solid waste and recyclable material storage areas in compliance with State law (California Solid Waste Reuse and Recycling Access Act, Public Resources Code Sections 42900 through 42911). All developments must comply with Solid Waste and Recycling requirements found in the Town of Truckee Municipal Code Chapter 6. The recreational use is expected to generate similar amounts of solid waste as other existing recreational facilities in the vicinity, including existing facilities at the Regional Park, which are serviced by the Tahoe Truckee Sierra Disposal Company. The project will not 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. Additionally, the project is required to comply with federal, state, and local management and reduction statutes and regulations related to solid waste. The impact is ***less-than-significant***.

Mitigation Measures

None required.

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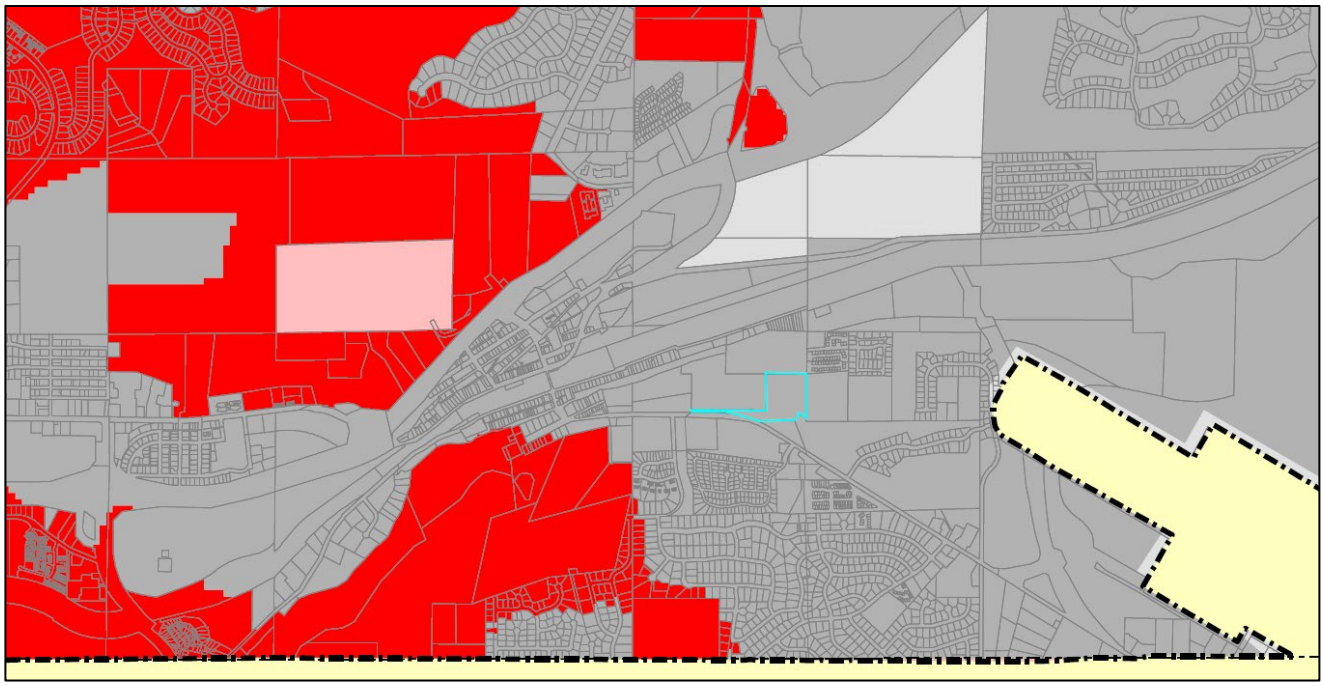
20. WILDFIRE	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?				✓
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				✓
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				✓
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				✓

Setting

According to the California Department of Forestry and Protection's (CAL FIRE) Map of Fire Hazard Severity Zones in Local Responsibility Areas, the project site is not located within a Very High Fire Hazard Severity Zone (VHFHSZ) nor in or near a State Responsibility area. The below section of the CAL FIRE map shows the project location (outlined in light blue) in relation to the Local Responsibility Area VHFHSZ (in red) and Local Responsibility Area Non-VHFHSZ (in gray):



Impact Discussion

a-d) According to the California Department of Forestry and Protection's (CAL FIRE) Map of Fire Hazard Severity Zones in Local Responsibility Areas, the project site is located not within a Very High Fire Hazard Severity Zone nor in or near a State Responsibility area. Additionally, the proposed project would be required to comply with all applicable requirements of the California Fire Code through the installation of fire hydrants, and other applicable requirements. The proposed project would also be situated near existing roads, water lines, and other utilities, which would reduce risks related to wildfire. Thus, the potential for wildland fires to reach the project site would be low. Based on the above, the proposed project would not expose people or structures to the risk of loss, injury or death involving wildland fires, and ***no impact*** would occur.

Mitigation Measures

None required.

References

None required.

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

The determinations of the mandatory findings of significance are supported by the discussion contained within the Initial Study. The Initial Study identifies potentially significant effects on the environment; however, revisions have been made to the project to eliminate or reduce these environmental effects to a less-than-significant level. There is no substantial evidence that the project, upon incorporation of the mitigation measures, may have a significant effect on the environment.

Impact Discussion

a) As demonstrated in this IS/MND, the proposed project and associated activities will potentially impact the environment in the areas of biological resources, cultural resources, geology and soils, hydrology/water quality, noise, transportation/traffic, and tribal cultural resources. However, these potential impacts will be reduced to a less-than-significant level with implementation of the mitigation measures included in this report. Considering the above, the proposed project would not degrade the quality of the environment, substantially reduce or impact the habitat of fish or wildlife species, cause fish or wildlife populations to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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. Therefore, a ***less-than-significant*** impact would occur.

b) The proposed project, in conjunction with other development within the Town of Truckee, could incrementally contribute to cumulative impacts in the area. However, as demonstrated in this IS/MND, all potential environmental impacts that could occur as a result of project implementation would be reduced to a less-than-significant level through compliance with the mitigation measures included in this IS/MND, as well as applicable General Plan policies, Development Code standards, and other applicable local and State regulations. Therefore, when viewed in conjunction with other closely related past, present, or reasonably foreseeable future projects, development of the proposed project would not result in a cumulatively considerable contribution to cumulative impacts in the Town of Truckee, and the project's incremental contribution to cumulative impacts would be **less than significant**.

c) As described in this IS/MND, the proposed project would comply with all applicable General Plan policies, Development Code standards, other applicable local and State regulations, in addition to the mitigation measures included herein. Additionally, as discussed in Section 3, Air Quality, Section 9, Hazards and Hazardous Materials, and Section 13, Noise, of this IS/MND, the proposed project would not cause substantial effects to human beings, including effects related to exposure to air pollutants and hazardous materials. Therefore, the proposed project would result in a ***less-than-significant*** impact.

DETERMINATION

On the basis of this initial evaluation, the Community Development Director finds:

____ The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

__✓_ 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.

____ The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

____ 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.

____ 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.

Initial Study Prepared By:	Town of Truckee Planning Division 10183 Truckee Airport Road Truckee, CA 96161
Date Prepared:	May 16, 2022
Initial Study Approved By:	Denyelle M. Nishimori — May 16, 2022

Denyelle Nishimori — **Date**
Community Development Director

Attachments:

1. Resources
2. Appendices

RESOURCES

The following documents are referenced information sources used for the purposes of this Initial Study:

1. Town of Truckee. *Town of Truckee 2025 General Plan*. Amended October 23, 2018.
2. Town of Truckee. *Development Code*. Amended December 14, 2021.
3. California Department of Transportation. *California Scenic Highway Mapping System.* https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed March 2022.
4. California Department of Conservation. *California Important Farmland Finder.* https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed March 2022.
5. Millennium Planning & Engineering. *Summary of Air Quality Analysis.* March 21, 2022.
6. Northern Sierra Air Quality Management District. *Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects.* March 15, 2021.
7. Town of Truckee. *Particulate Matter Air Quality Management Plan.* July 15, 1999.
8. EcoSynthesis, Inc. *Rocker Memorial Skate Park Biological Resources Study.* October 1, 2021.
9. EcoSynthesis, Inc. *Rocker Memorial Skate Park Aquatic Resources Delineation.* September 18, 2021.
10. Susan Lindström, Consulting Archaeologist. *Rocker Memorial Skatepark Project Cultural Resource Inventory.* August 2021.
11. California Air Resources Board. *The 2017 Climate Change Scoping Plan Update.* November 2017.
12. NV5. *Geotechnical Engineering Report for Rocker Skate Park.* September 15, 2021.
13. Department of Toxic Substances Control. *Hazardous Waste and Substances Site List.* Available at: https://www.envirostor.dtsc.ca.gov/public/. Accessed March 2021.
14. Truckee Tahoe Airport Land Use Commission. *Truckee Tahoe Land Use Compatibility Plan.* October 27, 2016.
15. Millennium Planning & Engineering. *Post-Construction Storm Water Quality Plan*. September 24, 2021.
16. Town of Truckee. *Town of Truckee 2025 General Plan Draft Environmental Impact Report.* May 15, 2006.
17. LSC Transportation Consultants, Inc. *Rocker Memorial Skate Park VMT and Local Transportation Analysis.* March 7, 2022.
18. Town of Truckee. *California Environmental Quality Act VMT Thresholds of Significance*. June 23, 2020.
19. LSC Transportation Consultants, Inc. *Truckee Regional Park Parking Evaluation*. July 3, 2019.
20. LSC Transportation Consultants, Inc. *Brockway Road Corridor Update.* September 9, 2020.
21. Town of Truckee. *Brockway Reynolds Future*. April 5, 2017.
22. Town of Truckee. *Truckee Trails and Bikeway Master Plan*. September 2015.
23. Tahoe Truckee Area Regional Transit. https://tahoetruckeetransit.com/. Accessed March 22, 2022.

24. California Department of Forestry and Fire Protection. *Map of CAL FIRE's Fire Hazard Severity Zones in Local Responsibility Areas – Truckee*. https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/. Accessed March 2022.

25. Raney Planning & Management, Inc. *Estates Meadows Project Initial Study/Mitigated Negative Declaration.* September 2021.

APPENDIX A

Air Quality Analysis

MILLENNIUM
PLANNING & ENGINEERING
471 Sutton Way, Suite 210
Grass Valley, CA 95945
530-446-6765
www.millenniumpe.com

Summary of Air Quality Analysis
Rocker Memorial Skatepark
10695 Brockway Road
Truckee, CA

Prepared for:
Rocker Memorial Skatepark
March 21, 2022

Prepared by:
Robert E. Wood, AICP
Millennium Planning & Engineering
530-446-6765
rob@millpe.com

INTRODUCTION

Northern Sierra Air Quality Management District

The Town of Truckee is located within the Mountain Counties Air Basin. The Northern Sierra Air Quality Management District (NSAQMD) is the local agency for air quality planning with authority over air pollutant sources within Nevada County, including the Truckee area. Responsibilities of the NSAQMD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the federal Clean Air Act and the Clean Air Act Amendments.

Air Pollutants of Concern

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. These regulated air pollutants are known as "criteria air pollutants" and are categorized into primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. The following regulated air pollutants were evaluated:

Carbon monoxide (CO) is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation.

Reactive organic gases (ROG) are compounds comprising primarily atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of ROG include evaporative emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROG, but rather by reactions of ROG to form secondary pollutants such as ozone.

Nitrogen oxides (NO_X) serve as integral participants in the process of photochemical smog production. The two major forms of NO_X are nitric oxide (NO) and nitrogen dioxide (NO_2). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO_2 is a reddish-brown irritating gas formed by the combination of NO and oxygen, a byproduct of fuel combustion. NO_2 also contributes to the formation of PM_{10} (particulates having an aerodynamic diameter of 10 microns—or 0.0004 inch—or less in

diameter) and ozone. NO_X acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.

Particulate matter (PM) consists of solid and liquid particles of dust, soot, aerosols, and other matter, which are small enough to remain suspended in the air for a long period of time. Particulate matter can be divided into several size fractions. Coarse particles (PM_{10}) are between 2.5 and 10 microns in diameter and arise primarily from natural processes, such as wind-blown dust or soil. Fine particles ($PM_{2.5}$) are less than 2.5 microns in diameter and are produced mostly from combustion or burning activities.

A portion of the particulate matter in the air is due to natural sources such as wind-blown dust and pollen, which are associated with the aggravation of respiratory conditions. Man-made sources include combustion, automobiles, field burning, factories, and road dust. Primary sources of PM_{10} emissions are road traffic, construction, open burning, and wildfires. The amount of particulate matter and PM_{10} generated is dependent on the soil type and the soil moisture content. Traffic also generates particulate matter emissions through entrainment of dust and dirt particles that settle onto roadways and parking lots.

The emission rates were calculated for the construction and occupancy phases of the project. To assess the significance of the air quality impacts, the daily emission rates of the various air pollutants were compared to the NSAQMD's threshold of significance.

PROJECT DETAILS

The following project details were used to calculate daily emission rates of the above-referenced air pollutants:

- **Skatepark**
  - **24,686 SF Skatepark Area**
  - **17,974 SF Landscape Area**
- **Additional Impervious Area**
  - **10,468 SF Parking Lot (AC)**
  - **3,621 SF Sidewalk Areas (Concrete)**
- **25,101 SF Open Space**

METHODOLOGY

For purposes of this assessment, California Emissions Estimator Model (CalEEMod) version 2020.4.0 was used to quantify emissions and identify mitigation measures to reduce pollutants. CalEEMod is a statewide land use emissions computer model accepted by the air districts of California to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations. The model quantifies direct emissions from construction and operations (including vehicle and off-road equipment use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Construction emissions are typically short-term impacts and operational emissions are considered long-term based on day-to-day operations. The model also identifies mitigation measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from measures chosen by the user. These mitigation measures were developed and adopted by the California Air Pollution Control Officers Association (CAPCOA) in collaboration with various air districts. Default data (e.g., emission factors, trip lengths, source inventory, etc.) have been provided by individual air districts to account for local conditions and requirements. Where specific data is known to be more accurate than default data, it is added to the model and a brief explanation is given for each instance.

EMISSION THRESHOLDS OF CRITERIA POLLUTANTS

The NSAQMD has developed thresholds of significance to determine air quality impacts associated with land use proposals. Thresholds of significance are based on a source's projected impacts and are a basis from which to apply mitigation measures (*NSAQMD March 15, 2021*). NSAQMD has developed a tiered approach to significance levels: a project with emissions meeting Level A thresholds will require the most basic mitigations; projects with projected emissions in the Level B range will require more extensive mitigations; and those projects within Level C thresholds will require the most extensive mitigations. The NSAQMD-recommended thresholds are identified below:

NSAQMD THRESHOLDS OF SIGNIFICANCE			
Significance Level	**Project-Generated Emissions (lbs/day)**		
	NO_X	**ROG**	**PM_{10}**
Level A	*<24*	*<24*	*<79*
Level B	*24–136*	*24–136*	*79–136*
Level C	*>136*	*>136*	*>136*
Source: NSAQMD Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects. (March 15, 2021)			

EMISSION THRESHOLDS OF GREENHOUSE GASSES (GHG)

The proposed project is located within the jurisdictional boundaries of NSAQMD, which does not currently have any established thresholds for GHG emissions. However, NSAQMD prefers that GHG emissions are quantified for decision-makers and the public to consider. Similar to the NSAQMD, the Town of Truckee has not adopted GHG emission thresholds. Thus, this analysis takes the reasonable approach of applying thresholds of the nearby air pollution control districts of Placer County Air Pollution Control District (PCAPCD) and Sacramento Metropolitan Air Quality Management District (SMAQMD). These districts measure GHG emissions by metric ton of CO_2 equivalents per year ($MTCO_2e/yr$). The PCAPCD and SMAQMD thresholds of significance are identified in the table below:

GHG THRESHOLDS OF SIGNIFICANCE ($MTCO_2e$ / yr)		
Air District	**Construction Threshold**	**Operational Threshold**
PCAPCD	*10,000*	*1,100*
SMAQMD	*1,100*	*1,100*
Sources: PCAPCD. CEQA Handbook Thresholds of Significance Justification Report (October 2016) SMAQMD. CEQA Guide, SMAQMD Thresholds of Significance Table (May 2015)		

RESULTS & SIGNIFICANCE OF IMPACTS

The results of this analysis indicate that air quality impacts would be less than significant for all air pollutants, both for the construction phase and operational phase (See Tables 1 and 2 below), and would be further reduced through project design and requirements set forth in the Town of Truckee Development Code:

TABLE 1

Construction Criteria Pollutants Emissions Summary

Criteria Pollutants	Daily Emissions Unmitigated (lbs/day)	Threshold Level	Significance
ROG	1.77	A	Less than significant
NO_X	6.50	A	Less than significant
CO	6.98	N/A	Less than significant
SO2	0.01	N/A	Less than significant
PM_{10}	0.51	A	Less than significant
$PM_{2.5}$	0.35	N/A	Less than significant

Source: NSAQMD Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects dated March 15, 2021; and CalEEMod version 2020.4.0

TABLE 2 Operational Criteria Pollutants Emissions Summary			
Criteria Pollutants	**Daily Emissions Unmitigated (lbs/day)**	**Threshold Level**	**Significance**
ROG	1.20	A	Less than significant
NO_X	0.49	A	Less than significant
CO	2.92	N/A	Less than significant
SO2	0.004	N/A	Less than significant
PM_{10}	0.32	A	Less than significant
$PM_{2.5}$	0.09	N/A	Less than significant
Source: NSAQMD Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects dated March 15, 2021; and CalEEMod version 2020.4.0			

TABLE 3 Construction GHG Emissions Summary		
Construction Emissions	**Unmitigated Annual GHG Emissions ($MTCO_2e/yr$)**	**Thresholds Exceeded?**
Total Emissions	**205.90**	
PCAPCD Threshold	10,000	NO
SMAQMD Threshold	1,100	NO
Source: CalEEMod version 2020.4.0		

TABLE 4 Operational GHG Emissions Summary		
Construction Emissions	**Unmitigated Annual GHG Emissions ($MTCO_2e/yr$)**	**Thresholds Exceeded?**
Total Emissions	**64.14**	
PCAPCD Threshold	10,000	NO
SMAQMD Threshold	1,100	NO
Source: CalEEMod version 2020.4.0		

PROJECT DESIGN AND DEVELOPMENT CODE COMPLIANCE

Based on the project design (see Project Details) and Town of Truckee Development Code requirements, each of the criteria pollutants listed in Tables 1 & 2 will be reduced during the construction phase, operational phase or both phases with implementation of the following:

1. Prepare a Dust Control Plan in compliance with Air District/State/Town of Truckee rules and regulations.
2. Use water efficient irrigation system for landscaping.
3. Improve accessibility to the site w/ improvements to pedestrian network and road crossing.

SUMMARY

This project would result in emissions (both construction and operational) that would be below the thresholds stated by the NSAQMD, PCAPCD, and SMAQMD. Therefore, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutants, and the project's incremental contribution to the cumulative emissions would be considered less than significant.

Based on the project design, compliance with Air Quality Districts (NSAQMD, PCAPCD, SMAQMD), and Town of Truckee Development Code, the project does not pose a significant effect on the environment or sensitive receptors, and does not conflict with any applicable plans, policies or regulations related to air quality.

Attachment 1

CalEEMod Results

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Rocker Memorial Skatepark

Northern Sierra AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	10.47	1000sqft	0.24	10,468.00	0
Other Asphalt Surfaces	2.32	1000sqft	0.05	2,317.00	0
Other Non-Asphalt Surfaces	1.30	1000sqft	0.03	1,304.00	0
City Park	0.98	Acre	0.98	42,688.80	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	72
Climate Zone	14			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - "City Park" is the total combined area of the skate park (24,686 SF) and the landscaped area (17,974 SF). "Other Asphalt Surfaces" and "Other Non-Asphalt Surfaces" are paved trails and concrete sidewalks, respectively.

Vehicle Trips - "Trip Rate" and "Trip Length" data derived from independent study.

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	10,470.00	10,468.00
tblLandUse	LandUseSquareFeet	2,320.00	2,317.00
tblLandUse	LandUseSquareFeet	1,300.00	1,304.00
tblVehicleTrips	CC_TL	7.30	3.70

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	CNW_TL	7.30	3.70
tblVehicleTrips	CW_TL	9.50	3.70
tblVehicleTrips	ST_TR	1.96	160.00
tblVehicleTrips	SU_TR	2.19	160.00
tblVehicleTrips	WD_TR	0.78	160.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1534	1.1915	1.2732	2.4200e-003	0.0420	0.0510	0.0930	0.0157	0.0490	0.0647	0.0000	204.2643	204.2643	0.0330	2.7100e-003	205.8959
2024	0.3232	0.2446	0.2965	5.5000e-004	5.1600e-003	9.9000e-003	0.0151	1.4000e-003	9.5000e-003	0.0109	0.0000	46.4888	46.4888	7.5300e-003	5.9000e-004	46.8526
Maximum	**0.3232**	**1.1915**	**1.2732**	**2.4200e-003**	**0.0420**	**0.0510**	**0.0930**	**0.0157**	**0.0490**	**0.0647**	**0.0000**	**204.2643**	**204.2643**	**0.0330**	**2.7100e-003**	**205.8959**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1534	1.1915	1.2732	2.4200e-003	0.0420	0.0510	0.0930	0.0157	0.0490	0.0647	0.0000	204.2641	204.2641	0.0330	2.7100e-003	205.8957
2024	0.3232	0.2446	0.2965	5.5000e-004	5.1600e-003	9.9000e-003	0.0151	1.4000e-003	9.5000e-003	0.0109	0.0000	46.4888	46.4888	7.5300e-003	5.9000e-004	46.8526
Maximum	**0.3232**	**1.1915**	**1.2732**	**2.4200e-003**	**0.0420**	**0.0510**	**0.0930**	**0.0157**	**0.0490**	**0.0647**	**0.0000**	**204.2641**	**204.2641**	**0.0330**	**2.7100e-003**	**205.8957**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**4-10-2023**	**7-9-2023**	0.4737	0.4737
2	**7-10-2023**	**10-9-2023**	0.4564	0.4564
3	**10-10-2023**	**1-9-2024**	0.4554	0.4554
4	**1-10-2024**	**4-9-2024**	0.5241	0.5241
		Highest	0.5241	0.5241

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1266	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.3390	0.3390	5.0000e-005	1.0000e-005	0.3423
Mobile	0.0862	0.0900	0.5332	6.6000e-004	0.0569	8.2000e-004	0.0577	0.0152	7.7000e-004	0.0160	0.0000	61.7364	61.7364	8.0300e-003	4.8100e-003	63.3719
Waste						0.0000	0.0000		0.0000	0.0000	0.0162	0.0000	0.0162	9.6000e-004	0.0000	0.0402
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.3781	0.3781	6.0000e-005	1.0000e-005	0.3819
Total	**0.2128**	**0.0900**	**0.5333**	**6.6000e-004**	**0.0569**	**8.2000e-004**	**0.0577**	**0.0152**	**7.7000e-004**	**0.0160**	**0.0162**	**62.4538**	**62.4700**	**9.1000e-003**	**4.8300e-003**	**64.1366**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1266	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.3390	0.3390	5.0000e-005	1.0000e-005	0.3423
Mobile	0.0862	0.0900	0.5332	6.6000e-004	0.0569	8.2000e-004	0.0577	0.0152	7.7000e-004	0.0160	0.0000	61.7364	61.7364	8.0300e-003	4.8100e-003	63.3719
Waste						0.0000	0.0000		0.0000	0.0000	0.0162	0.0000	0.0162	9.6000e-004	0.0000	0.0402
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.3781	0.3781	6.0000e-005	1.0000e-005	0.3819
Total	**0.2128**	**0.0900**	**0.5333**	**6.6000e-004**	**0.0569**	**8.2000e-004**	**0.0577**	**0.0152**	**7.7000e-004**	**0.0160**	**0.0162**	**62.4538**	**62.4700**	**9.1000e-003**	**4.8300e-003**	**64.1366**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	3/5/2024	3/18/2024	5	10	
2	Building Construction	Building Construction	5/16/2023	2/19/2024	5	200	
3	Demolition	Demolition	4/10/2023	5/5/2023	5	20	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Grading	Grading	5/10/2023	5/15/2023	5	4	
5	Paving	Paving	2/20/2024	3/4/2024	5	10	
6	Site Preparation	Site Preparation	5/6/2023	5/9/2023	5	2	

Acres of Grading (Site Preparation Phase): 1.88

Acres of Grading (Grading Phase): 4

Acres of Paving: 0.32

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 37,029; Non-Residential Outdoor: 12,343; Striped Parking Area: 845 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	24.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2909					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	**0.2918**	**6.0900e-003**	**9.0500e-003**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**1.2766**	**1.2766**	**7.0000e-005**	**0.0000**	**1.2784**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	7.3000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1627	0.1627	1.0000e-005	1.0000e-005	0.1645
Total	**1.0000e-004**	**7.0000e-005**	**7.3000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1627**	**0.1627**	**1.0000e-005**	**1.0000e-005**	**0.1645**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2909					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	**0.2918**	**6.0900e-003**	**9.0500e-003**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**1.2766**	**1.2766**	**7.0000e-005**	**0.0000**	**1.2784**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	7.3000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1627	0.1627	1.0000e-005	1.0000e-005	0.1645
Total	**1.0000e-004**	**7.0000e-005**	**7.3000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1627**	**0.1627**	**1.0000e-005**	**1.0000e-005**	**0.1645**

3.3 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1249	0.9603	1.0341	1.8100e-003		0.0422	0.0422		0.0407	0.0407	0.0000	148.9113	148.9113	0.0253	0.0000	149.5435
Total	**0.1249**	**0.9603**	**1.0341**	**1.8100e-003**		**0.0422**	**0.0422**		**0.0407**	**0.0407**	**0.0000**	**148.9113**	**148.9113**	**0.0253**	**0.0000**	**149.5435**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2600e-003	0.0402	0.0135	1.6000e-004	4.8300e-003	2.5000e-004	5.0800e-003	1.4000e-003	2.4000e-004	1.6400e-003	0.0000	14.9860	14.9860	1.0000e-004	2.2100e-003	15.6457
Worker	8.0900e-003	5.9800e-003	0.0620	1.4000e-004	0.0155	1.0000e-004	0.0156	4.1200e-003	9.0000e-005	4.2100e-003	0.0000	13.0968	13.0968	5.4000e-004	4.7000e-004	13.2491
Total	**9.3500e-003**	**0.0462**	**0.0755**	**3.0000e-004**	**0.0203**	**3.5000e-004**	**0.0207**	**5.5200e-003**	**3.3000e-004**	**5.8500e-003**	**0.0000**	**28.0828**	**28.0828**	**6.4000e-004**	**2.6800e-003**	**28.8948**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1249	0.9603	1.0341	1.8100e-003		0.0422	0.0422		0.0407	0.0407	0.0000	148.9111	148.9111	0.0253	0.0000	149.5433
Total	**0.1249**	**0.9603**	**1.0341**	**1.8100e-003**		**0.0422**	**0.0422**		**0.0407**	**0.0407**	**0.0000**	**148.9111**	**148.9111**	**0.0253**	**0.0000**	**149.5433**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2600e-003	0.0402	0.0135	1.6000e-004	4.8300e-003	2.5000e-004	5.0800e-003	1.4000e-003	2.4000e-004	1.6400e-003	0.0000	14.9860	14.9860	1.0000e-004	2.2100e-003	15.6457
Worker	8.0900e-003	5.9800e-003	0.0620	1.4000e-004	0.0155	1.0000e-004	0.0156	4.1200e-003	9.0000e-005	4.2100e-003	0.0000	13.0968	13.0968	5.4000e-004	4.7000e-004	13.2491
Total	**9.3500e-003**	**0.0462**	**0.0755**	**3.0000e-004**	**0.0203**	**3.5000e-004**	**0.0207**	**5.5200e-003**	**3.3000e-004**	**5.8500e-003**	**0.0000**	**28.0828**	**28.0828**	**6.4000e-004**	**2.6800e-003**	**28.8948**

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0256	0.1992	0.2253	4.0000e-004		8.1100e-003	8.1100e-003		7.8300e-003	7.8300e-003	0.0000	32.6900	32.6900	5.4400e-003	0.0000	32.8261
Total	**0.0256**	**0.1992**	**0.2253**	**4.0000e-004**		**8.1100e-003**	**8.1100e-003**		**7.8300e-003**	**7.8300e-003**	**0.0000**	**32.6900**	**32.6900**	**5.4400e-003**	**0.0000**	**32.8261**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.7000e-004	8.6700e-003	2.8800e-003	3.0000e-005	1.0600e-003	5.0000e-005	1.1100e-003	3.1000e-004	5.0000e-005	3.6000e-004	0.0000	3.2382	3.2382	2.0000e-005	4.7000e-004	3.3801
Worker	1.6600e-003	1.1700e-003	0.0125	3.0000e-005	3.4000e-003	2.0000e-005	3.4200e-003	9.0000e-004	2.0000e-005	9.2000e-004	0.0000	2.8112	2.8112	1.1000e-004	9.0000e-005	2.8422
Total	**1.9300e-003**	**9.8400e-003**	**0.0154**	**6.0000e-005**	**4.4600e-003**	**7.0000e-005**	**4.5300e-003**	**1.2100e-003**	**7.0000e-005**	**1.2800e-003**	**0.0000**	**6.0494**	**6.0494**	**1.3000e-004**	**5.6000e-004**	**6.2223**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0256	0.1992	0.2253	4.0000e-004		8.1100e-003	8.1100e-003		7.8300e-003	7.8300e-003	0.0000	32.6900	32.6900	5.4400e-003	0.0000	32.8261
Total	**0.0256**	**0.1992**	**0.2253**	**4.0000e-004**		**8.1100e-003**	**8.1100e-003**		**7.8300e-003**	**7.8300e-003**	**0.0000**	**32.6900**	**32.6900**	**5.4400e-003**	**0.0000**	**32.8261**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.7000e-004	8.6700e-003	2.8800e-003	3.0000e-005	1.0600e-003	5.0000e-005	1.1100e-003	3.1000e-004	5.0000e-005	3.6000e-004	0.0000	3.2382	3.2382	2.0000e-005	4.7000e-004	3.3801
Worker	1.6600e-003	1.1700e-003	0.0125	3.0000e-005	3.4000e-003	2.0000e-005	3.4200e-003	9.0000e-004	2.0000e-005	9.2000e-004	0.0000	2.8112	2.8112	1.1000e-004	9.0000e-005	2.8422
Total	**1.9300e-003**	**9.8400e-003**	**0.0154**	**6.0000e-005**	**4.4600e-003**	**7.0000e-005**	**4.5300e-003**	**1.2100e-003**	**7.0000e-005**	**1.2800e-003**	**0.0000**	**6.0494**	**6.0494**	**1.3000e-004**	**5.6000e-004**	**6.2223**

3.4 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0147	0.1432	0.1346	2.4000e-004		6.7700e-003	6.7700e-003		6.3300e-003	6.3300e-003	0.0000	21.0866	21.0866	5.3500e-003	0.0000	21.2202
Total	**0.0147**	**0.1432**	**0.1346**	**2.4000e-004**		**6.7700e-003**	**6.7700e-003**		**6.3300e-003**	**6.3300e-003**	**0.0000**	**21.0866**	**21.0866**	**5.3500e-003**	**0.0000**	**21.2202**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-004	4.0000e-004	4.1000e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8651	0.8651	4.0000e-005	3.0000e-005	0.8752
Total	**5.3000e-004**	**4.0000e-004**	**4.1000e-003**	**1.0000e-005**	**1.0200e-003**	**1.0000e-005**	**1.0300e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.8651**	**0.8651**	**4.0000e-005**	**3.0000e-005**	**0.8752**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0147	0.1432	0.1346	2.4000e-004		6.7700e-003	6.7700e-003		6.3300e-003	6.3300e-003	0.0000	21.0865	21.0865	5.3500e-003	0.0000	21.2202
Total	**0.0147**	**0.1432**	**0.1346**	**2.4000e-004**		**6.7700e-003**	**6.7700e-003**		**6.3300e-003**	**6.3300e-003**	**0.0000**	**21.0865**	**21.0865**	**5.3500e-003**	**0.0000**	**21.2202**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-004	4.0000e-004	4.1000e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8651	0.8651	4.0000e-005	3.0000e-005	0.8752
Total	**5.3000e-004**	**4.0000e-004**	**4.1000e-003**	**1.0000e-005**	**1.0200e-003**	**1.0000e-005**	**1.0300e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.8651**	**0.8651**	**4.0000e-005**	**3.0000e-005**	**0.8752**

3.5 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0142	0.0000	0.0142	6.8500e-003	0.0000	6.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6700e-003	0.0289	0.0174	4.0000e-005		1.2100e-003	1.2100e-003		1.1100e-003	1.1100e-003	0.0000	3.6208	3.6208	1.1700e-003	0.0000	3.6501
Total	**2.6700e-003**	**0.0289**	**0.0174**	**4.0000e-005**	**0.0142**	**1.2100e-003**	**0.0154**	**6.8500e-003**	**1.1100e-003**	**7.9600e-003**	**0.0000**	**3.6208**	**3.6208**	**1.1700e-003**	**0.0000**	**3.6501**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	6.3000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1331	0.1331	1.0000e-005	0.0000	0.1347
Total	**8.0000e-005**	**6.0000e-005**	**6.3000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1331**	**0.1331**	**1.0000e-005**	**0.0000**	**0.1347**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0142	0.0000	0.0142	6.8500e-003	0.0000	6.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6700e-003	0.0289	0.0174	4.0000e-005		1.2100e-003	1.2100e-003		1.1100e-003	1.1100e-003	0.0000	3.6208	3.6208	1.1700e-003	0.0000	3.6501
Total	**2.6700e-003**	**0.0289**	**0.0174**	**4.0000e-005**	**0.0142**	**1.2100e-003**	**0.0154**	**6.8500e-003**	**1.1100e-003**	**7.9600e-003**	**0.0000**	**3.6208**	**3.6208**	**1.1700e-003**	**0.0000**	**3.6501**

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3.5 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	6.3000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1331	0.1331	1.0000e-005	0.0000	0.1347
Total	**8.0000e-005**	**6.0000e-005**	**6.3000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1331**	**0.1331**	**1.0000e-005**	**0.0000**	**0.1347**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.0900e-003	0.0293	0.0441	7.0000e-005		1.4100e-003	1.4100e-003		1.3000e-003	1.3000e-003	0.0000	5.8870	5.8870	1.8700e-003	0.0000	5.9337
Paving	3.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.4700e-003**	**0.0293**	**0.0441**	**7.0000e-005**		**1.4100e-003**	**1.4100e-003**		**1.3000e-003**	**1.3000e-003**	**0.0000**	**5.8870**	**5.8870**	**1.8700e-003**	**0.0000**	**5.9337**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.8000e-004	1.8900e-003	0.0000	5.1000e-004	0.0000	5.1000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4230	0.4230	2.0000e-005	1.0000e-005	0.4276
Total	**2.5000e-004**	**1.8000e-004**	**1.8900e-003**	**0.0000**	**5.1000e-004**	**0.0000**	**5.1000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4230**	**0.4230**	**2.0000e-005**	**1.0000e-005**	**0.4276**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.0900e-003	0.0293	0.0441	7.0000e-005		1.4100e-003	1.4100e-003		1.3000e-003	1.3000e-003	0.0000	5.8870	5.8870	1.8700e-003	0.0000	5.9337
Paving	3.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.4700e-003**	**0.0293**	**0.0441**	**7.0000e-005**		**1.4100e-003**	**1.4100e-003**		**1.3000e-003**	**1.3000e-003**	**0.0000**	**5.8870**	**5.8870**	**1.8700e-003**	**0.0000**	**5.9337**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.8000e-004	1.8900e-003	0.0000	5.1000e-004	0.0000	5.1000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4230	0.4230	2.0000e-005	1.0000e-005	0.4276
Total	**2.5000e-004**	**1.8000e-004**	**1.8900e-003**	**0.0000**	**5.1000e-004**	**0.0000**	**5.1000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4230**	**0.4230**	**2.0000e-005**	**1.0000e-005**	**0.4276**

3.7 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.2700e-003	0.0000	6.2700e-003	3.0000e-003	0.0000	3.0000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1300e-003	0.0124	6.6400e-003	2.0000e-005		5.1000e-004	5.1000e-004		4.7000e-004	4.7000e-004	0.0000	1.5114	1.5114	4.9000e-004	0.0000	1.5236
Total	**1.1300e-003**	**0.0124**	**6.6400e-003**	**2.0000e-005**	**6.2700e-003**	**5.1000e-004**	**6.7800e-003**	**3.0000e-003**	**4.7000e-004**	**3.4700e-003**	**0.0000**	**1.5114**	**1.5114**	**4.9000e-004**	**0.0000**	**1.5236**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.5000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0532	0.0532	0.0000	0.0000	0.0539
Total	**3.0000e-005**	**2.0000e-005**	**2.5000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0532**	**0.0532**	**0.0000**	**0.0000**	**0.0539**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.2700e-003	0.0000	6.2700e-003	3.0000e-003	0.0000	3.0000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1300e-003	0.0124	6.6400e-003	2.0000e-005		5.1000e-004	5.1000e-004		4.7000e-004	4.7000e-004	0.0000	1.5114	1.5114	4.9000e-004	0.0000	1.5236
Total	**1.1300e-003**	**0.0124**	**6.6400e-003**	**2.0000e-005**	**6.2700e-003**	**5.1000e-004**	**6.7800e-003**	**3.0000e-003**	**4.7000e-004**	**3.4700e-003**	**0.0000**	**1.5114**	**1.5114**	**4.9000e-004**	**0.0000**	**1.5236**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.5000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0532	0.0532	0.0000	0.0000	0.0539
Total	**3.0000e-005**	**2.0000e-005**	**2.5000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0532**	**0.0532**	**0.0000**	**0.0000**	**0.0539**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0862	0.0900	0.5332	6.6000e-004	0.0569	8.2000e-004	0.0577	0.0152	7.7000e-004	0.0160	0.0000	61.7364	61.7364	8.0300e-003	4.8100e-003	63.3719
Unmitigated	0.0862	0.0900	0.5332	6.6000e-004	0.0569	8.2000e-004	0.0577	0.0152	7.7000e-004	0.0160	0.0000	61.7364	61.7364	8.0300e-003	4.8100e-003	63.3719

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	156.80	156.80	156.80	154,503	154,503
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	156.80	156.80	156.80	154,503	154,503

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	3.70	3.70	3.70	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.400899	0.065698	0.241183	0.160889	0.051395	0.009704	0.007820	0.013614	0.000831	0.000178	0.040125	0.000640	0.007025
Other Asphalt Surfaces	0.400899	0.065698	0.241183	0.160889	0.051395	0.009704	0.007820	0.013614	0.000831	0.000178	0.040125	0.000640	0.007025
Other Non-Asphalt Surfaces	0.400899	0.065698	0.241183	0.160889	0.051395	0.009704	0.007820	0.013614	0.000831	0.000178	0.040125	0.000640	0.007025
Parking Lot	0.400899	0.065698	0.241183	0.160889	0.051395	0.009704	0.007820	0.013614	0.000831	0.000178	0.040125	0.000640	0.007025

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.3390	0.3390	5.0000e-005	1.0000e-005	0.3423
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.3390	0.3390	5.0000e-005	1.0000e-005	0.3423
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	3663.8	0.3390	5.0000e-005	1.0000e-005	0.3423
Total		**0.3390**	**5.0000e-005**	**1.0000e-005**	**0.3423**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	3663.8	0.3390	5.0000e-005	1.0000e-005	0.3423
Total		**0.3390**	**5.0000e-005**	**1.0000e-005**	**0.3423**

6.0 Area Detail

6.1 Mitigation Measures Area

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1266	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Unmitigated	0.1266	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0291					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0975					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Total	**0.1266**	**0.0000**	**1.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.7000e-004**	**2.7000e-004**	**0.0000**	**0.0000**	**2.9000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0291					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0975					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Total	**0.1266**	**0.0000**	**1.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.7000e-004**	**2.7000e-004**	**0.0000**	**0.0000**	**2.9000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.3781	6.0000e-005	1.0000e-005	0.3819
Unmitigated	0.3781	6.0000e-005	1.0000e-005	0.3819

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.16765	0.3781	6.0000e-005	1.0000e-005	0.3819
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.3781**	**6.0000e-005**	**1.0000e-005**	**0.3819**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.16765	0.3781	6.0000e-005	1.0000e-005	0.3819
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.3781**	**6.0000e-005**	**1.0000e-005**	**0.3819**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0162	9.6000e-004	0.0000	0.0402
Unmitigated	0.0162	9.6000e-004	0.0000	0.0402

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.08	0.0162	9.6000e-004	0.0000	0.0402
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0162**	**9.6000e-004**	**0.0000**	**0.0402**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.08	0.0162	9.6000e-004	0.0000	0.0402
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0162**	**9.6000e-004**	**0.0000**	**0.0402**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number

11.0 Vegetation

Rocker Memorial Skatepark

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Northern Sierra AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Rocker Memorial Skatepark

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Cement and Mortar Mixers	Diesel	No Change	0	1	No Change	0.00
Concrete/Industrial Saws	Diesel	No Change	0	1	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Forklifts	Diesel	No Change	0	1	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Graders	Diesel	No Change	0	2	No Change	0.00
Pavers	Diesel	No Change	0	1	No Change	0.00
Paving Equipment	Diesel	No Change	0	1	No Change	0.00
Rollers	Diesel	No Change	0	1	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	3	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	8	No Change	0.00
Welders	Diesel	No Change	0	3	No Change	0.00

Rocker Memorial Skatepark

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	9.00000E-004	6.09000E-003	9.05000E-003	1.00000E-005	3.00000E-004	3.00000E-004	0.00000E+000	1.27663E+000	1.27663E+000	7.00000E-005	0.00000E+000	1.27842E+000
Cement and Mortar Mixers	2.20000E-004	1.38000E-003	1.16000E-003	0.00000E+000	5.00000E-005	5.00000E-005	0.00000E+000	1.71850E-001	1.71850E-001	2.00000E-005	0.00000E+000	1.72300E-001
Concrete/Industrial Saws	3.34000E-003	2.58400E-002	3.65700E-002	6.00000E-005	1.28000E-003	1.28000E-003	0.00000E+000	5.37657E+000	5.37657E+000	2.60000E-004	0.00000E+000	5.38320E+000
Cranes	2.60900E-002	2.81960E-001	1.36780E-001	4.30000E-004	1.17700E-002	1.08300E-002	0.00000E+000	3.80213E+001	3.80213E+001	1.23000E-002	0.00000E+000	3.83287E+001
Forklifts	7.58000E-003	7.09500E-002	8.57900E-002	1.10000E-004	4.34000E-003	3.99000E-003	0.00000E+000	1.00719E+001	1.00719E+001	3.26000E-003	0.00000E+000	1.01533E+001
Generator Sets	3.02100E-002	2.68480E-001	3.66840E-001	6.60000E-004	1.25100E-002	1.25100E-002	0.00000E+000	5.65208E+001	5.65208E+001	2.45000E-003	0.00000E+000	5.65820E+001
Graders	1.15000E-003	1.39600E-002	5.08000E-003	2.00000E-005	4.50000E-004	4.20000E-004	0.00000E+000	1.74412E+000	1.74412E+000	5.60000E-004	0.00000E+000	1.75822E+000
Pavers	6.90000E-004	6.53000E-003	1.08500E-002	2.00000E-005	3.10000E-004	2.80000E-004	0.00000E+000	1.54844E+000	1.54844E+000	5.00000E-004	0.00000E+000	1.56096E+000
Paving Equipment	8.20000E-004	7.48000E-003	1.28500E-002	2.00000E-005	3.60000E-004	3.30000E-004	0.00000E+000	1.78927E+000	1.78927E+000	5.80000E-004	0.00000E+000	1.80373E+000
Rollers	6.40000E-004	6.67000E-003	8.09000E-003	1.00000E-005	3.50000E-004	3.20000E-004	0.00000E+000	1.00869E+000	1.00869E+000	3.30000E-004	0.00000E+000	1.01684E+000
Rubber Tired Dozers	8.82000E-003	9.17600E-002	3.99900E-002	1.10000E-004	4.13000E-003	3.80000E-003	0.00000E+000	9.65937E+000	9.65937E+000	3.12000E-003	0.00000E+000	9.73747E+000
Tractors/Loaders/Backhoes	1.71900E-002	1.74220E-001	2.55570E-001	3.60000E-004	8.51000E-003	7.83000E-003	0.00000E+000	3.13287E+001	3.13287E+001	1.01300E-002	0.00000E+000	3.15821E+001
Welders	7.53300E-002	4.24020E-001	5.02610E-001	7.70000E-004	1.61200E-002	1.61200E-002	0.00000E+000	5.64662E+001	5.64662E+001	6.09000E-003	0.00000E+000	5.66184E+001

Rocker Memorial Skatepark

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	9.00000E-004	6.09000E-003	9.05000E-003	1.00000E-005	3.00000E-004	3.00000E-004	0.00000E+000	1.27663E+000	1.27663E+000	7.00000E-005	0.00000E+000	1.27842E+000
Cement and Mortar Mixers	2.20000E-004	1.38000E-003	1.16000E-003	0.00000E+000	5.00000E-005	5.00000E-005	0.00000E+000	1.71850E-001	1.71850E-001	2.00000E-005	0.00000E+000	1.72300E-001
Concrete/Industrial Saws	3.34000E-003	2.58400E-002	3.65700E-002	6.00000E-005	1.28000E-003	1.28000E-003	0.00000E+000	5.37657E+000	5.37657E+000	2.60000E-004	0.00000E+000	5.38319E+000
Cranes	2.60900E-002	2.81960E-001	1.36780E-001	4.30000E-004	1.17700E-002	1.08300E-002	0.00000E+000	3.80212E+001	3.80212E+001	1.23000E-002	0.00000E+000	3.83287E+001
Forklifts	7.58000E-003	7.09500E-002	8.57900E-002	1.10000E-004	4.34000E-003	3.99000E-003	0.00000E+000	1.00718E+001	1.00718E+001	3.26000E-003	0.00000E+000	1.01533E+001
Generator Sets	3.02100E-002	2.68480E-001	3.66840E-001	6.60000E-004	1.25100E-002	1.25100E-002	0.00000E+000	5.65207E+001	5.65207E+001	2.45000E-003	0.00000E+000	5.65819E+001
Graders	1.15000E-003	1.39600E-002	5.08000E-003	2.00000E-005	4.50000E-004	4.20000E-004	0.00000E+000	1.74412E+000	1.74412E+000	5.60000E-004	0.00000E+000	1.75822E+000
Pavers	6.90000E-004	6.53000E-003	1.08500E-002	2.00000E-005	3.10000E-004	2.80000E-004	0.00000E+000	1.54843E+000	1.54843E+000	5.00000E-004	0.00000E+000	1.56095E+000
Paving Equipment	8.20000E-004	7.48000E-003	1.28500E-002	2.00000E-005	3.60000E-004	3.30000E-004	0.00000E+000	1.78926E+000	1.78926E+000	5.80000E-004	0.00000E+000	1.80373E+000
Rollers	6.40000E-004	6.67000E-003	8.09000E-003	1.00000E-005	3.50000E-004	3.20000E-004	0.00000E+000	1.00869E+000	1.00869E+000	3.30000E-004	0.00000E+000	1.01684E+000
Rubber Tired Dozers	8.82000E-003	9.17600E-002	3.99900E-002	1.10000E-004	4.13000E-003	3.80000E-003	0.00000E+000	9.65936E+000	9.65936E+000	3.12000E-003	0.00000E+000	9.73746E+000
Tractors/Loaders/Backhoes	1.71900E-002	1.74220E-001	2.55560E-001	3.60000E-004	8.51000E-003	7.83000E-003	0.00000E+000	3.13287E+001	3.13287E+001	1.01300E-002	0.00000E+000	3.15820E+001
Welders	7.53300E-002	4.24010E-001	5.02610E-001	7.70000E-004	1.61200E-002	1.61200E-002	0.00000E+000	5.64661E+001	5.64661E+001	6.09000E-003	0.00000E+000	5.66183E+001

Rocker Memorial Skatepark

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.85763E-006
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.31505E-006	1.31505E-006	0.00000E+000	0.00000E+000	1.30451E-006
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.92866E-007	9.92866E-007	0.00000E+000	0.00000E+000	9.84903E-007
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.23848E-006	1.23848E-006	0.00000E+000	0.00000E+000	1.23714E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	6.45811E-006	6.45811E-006	0.00000E+000	0.00000E+000	6.40631E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	5.58887E-006	5.58887E-006	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.03526E-006	1.03526E-006	0.00000E+000	0.00000E+000	1.02696E-006
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	3.91282E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.57587E-007	9.57587E-007	0.00000E+000	0.00000E+000	1.26654E-006
Welders	0.00000E+000	2.35838E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.23968E-006	1.23968E-006	0.00000E+000	0.00000E+000	1.23635E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			

Rocker Memorial Skatepark

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)			
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.02	0.01	0.02	0.01	0.00	0.00
Demolition	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Fugitive Dust	0.01	0.01	0.01	0.01	0.00	0.00
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.01	0.00	0.01	0.00	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Rocker Memorial Skatepark

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.06	0.25		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

Rocker Memorial Skatepark

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	

Rocker Memorial Skatepark

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	250.00
No	Use Low VOC Paint (Residential Exterior)	250.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	Use Low VOC Paint (Parking)	250.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		

Rocker Memorial Skatepark

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Rocker Memorial Skatepark

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Rocker Memorial Skatepark

Northern Sierra AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	10.47	1000sqft	0.24	10,468.00	0
Other Asphalt Surfaces	2.32	1000sqft	0.05	2,317.00	0
Other Non-Asphalt Surfaces	1.30	1000sqft	0.03	1,304.00	0
City Park	0.98	Acre	0.98	42,688.80	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	72
Climate Zone	14			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - "City Park" is the total combined area of the skate park (24,686 SF) and the landscaped area (17,974 SF). "Other Asphalt Surfaces" and "Other Non-Asphalt Surfaces" are paved trails and concrete sidewalks, respectively.

Vehicle Trips - "Trip Rate" and "Trip Length" data derived from independent study.

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	10,470.00	10,468.00
tblLandUse	LandUseSquareFeet	2,320.00	2,317.00
tblLandUse	LandUseSquareFeet	1,300.00	1,304.00
tblVehicleTrips	CC_TL	7.30	3.70

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	CNW_TL	7.30	3.70
tblVehicleTrips	CW_TL	9.50	3.70
tblVehicleTrips	ST_TR	1.96	160.00
tblVehicleTrips	SU_TR	2.19	160.00
tblVehicleTrips	WD_TR	0.78	160.00

2.0 Emissions Summary

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.6458	14.4929	13.8851	0.0258	7.1647	0.6773	7.7696	3.4465	0.6334	4.0030	0.0000	2,425.6259	2,425.6259	0.6482	0.0351	2,441.3400
2024	58.3906	11.5787	13.3995	0.0257	0.2581	0.4547	0.7129	0.0699	0.4387	0.5086	0.0000	2,382.7769	2,382.7769	0.4147	0.0341	2,401.4615
Maximum	**58.3906**	**14.4929**	**13.8851**	**0.0258**	**7.1647**	**0.6773**	**7.7696**	**3.4465**	**0.6334**	**4.0030**	**0.0000**	**2,425.6259**	**2,425.6259**	**0.6482**	**0.0351**	**2,441.3400**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.6458	14.4929	13.8851	0.0258	7.1647	0.6773	7.7696	3.4465	0.6334	4.0030	0.0000	2,425.6259	2,425.6259	0.6482	0.0351	2,441.3400
2024	58.3906	11.5787	13.3995	0.0257	0.2581	0.4547	0.7129	0.0699	0.4387	0.5086	0.0000	2,382.7769	2,382.7769	0.4147	0.0341	2,401.4615
Maximum	**58.3906**	**14.4929**	**13.8851**	**0.0258**	**7.1647**	**0.6773**	**7.7696**	**3.4465**	**0.6334**	**4.0030**	**0.0000**	**2,425.6259**	**2,425.6259**	**0.6482**	**0.0351**	**2,441.3400**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6938	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.5653	0.4454	2.6217	3.7600e-003	0.3265	4.5200e-003	0.3310	0.0871	4.2400e-003	0.0914		388.5703	388.5703	0.0412	0.0269	397.6141
Total	**1.2591**	**0.4454**	**2.6232**	**3.7600e-003**	**0.3265**	**4.5300e-003**	**0.3310**	**0.0871**	**4.2500e-003**	**0.0914**		**388.5736**	**388.5736**	**0.0412**	**0.0269**	**397.6176**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6938	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.5653	0.4454	2.6217	3.7600e-003	0.3265	4.5200e-003	0.3310	0.0871	4.2400e-003	0.0914		388.5703	388.5703	0.0412	0.0269	397.6141
Total	**1.2591**	**0.4454**	**2.6232**	**3.7600e-003**	**0.3265**	**4.5300e-003**	**0.3310**	**0.0871**	**4.2500e-003**	**0.0914**		**388.5736**	**388.5736**	**0.0412**	**0.0269**	**397.6176**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	3/5/2024	3/18/2024	5	10	
2	Building Construction	Building Construction	5/16/2023	2/19/2024	5	200	
3	Demolition	Demolition	4/10/2023	5/5/2023	5	20	
4	Grading	Grading	5/10/2023	5/15/2023	5	4	
5	Paving	Paving	2/20/2024	3/4/2024	5	10	
6	Site Preparation	Site Preparation	5/6/2023	5/9/2023	5	2	

Acres of Grading (Site Preparation Phase): 1.88

Acres of Grading (Grading Phase): 4

Acres of Paving: 0.32

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 37,029; Non-Residential Outdoor: 12,343; Striped Parking Area: 845 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	24.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.1890					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**58.3697**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0208	0.0113	0.1512	3.7000e-004	0.0411	2.4000e-004	0.0413	0.0109	2.2000e-004	0.0111		38.0673	38.0673	1.2300e-003	1.0700e-003	38.4165
Total	**0.0208**	**0.0113**	**0.1512**	**3.7000e-004**	**0.0411**	**2.4000e-004**	**0.0413**	**0.0109**	**2.2000e-004**	**0.0111**		**38.0673**	**38.0673**	**1.2300e-003**	**1.0700e-003**	**38.4165**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.1890					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**58.3697**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0208	0.0113	0.1512	3.7000e-004	0.0411	2.4000e-004	0.0413	0.0109	2.2000e-004	0.0111		38.0673	38.0673	1.2300e-003	1.0700e-003	38.4165
Total	**0.0208**	**0.0113**	**0.1512**	**3.7000e-004**	**0.0411**	**2.4000e-004**	**0.0413**	**0.0109**	**2.2000e-004**	**0.0111**		**38.0673**	**38.0673**	**1.2300e-003**	**1.0700e-003**	**38.4165**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**1.5233**	**11.7104**	**12.6111**	**0.0221**		**0.5145**	**0.5145**		**0.4968**	**0.4968**		**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0157	0.4689	0.1607	1.9000e-003	0.0610	3.0700e-003	0.0641	0.0176	2.9300e-003	0.0205		201.2835	201.2835	1.3800e-003	0.0296	210.1340
Worker	0.1068	0.0607	0.7891	1.8300e-003	0.1972	1.2000e-003	0.1984	0.0523	1.1100e-003	0.0534		186.8862	186.8862	6.5500e-003	5.5400e-003	188.6994
Total	**0.1225**	**0.5296**	**0.9498**	**3.7300e-003**	**0.2581**	**4.2700e-003**	**0.2624**	**0.0699**	**4.0400e-003**	**0.0739**		**388.1697**	**388.1697**	**7.9300e-003**	**0.0351**	**398.8334**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**1.5233**	**11.7104**	**12.6111**	**0.0221**		**0.5145**	**0.5145**		**0.4968**	**0.4968**	**0.0000**	**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0157	0.4689	0.1607	1.9000e-003	0.0610	3.0700e-003	0.0641	0.0176	2.9300e-003	0.0205		201.2835	201.2835	1.3800e-003	0.0296	210.1340
Worker	0.1068	0.0607	0.7891	1.8300e-003	0.1972	1.2000e-003	0.1984	0.0523	1.1100e-003	0.0534		186.8862	186.8862	6.5500e-003	5.5400e-003	188.6994
Total	**0.1225**	**0.5296**	**0.9498**	**3.7300e-003**	**0.2581**	**4.2700e-003**	**0.2624**	**0.0699**	**4.0400e-003**	**0.0739**		**388.1697**	**388.1697**	**7.9300e-003**	**0.0351**	**398.8334**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**1.4200**	**11.0639**	**12.5172**	**0.0221**		**0.4506**	**0.4506**		**0.4348**	**0.4348**		**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0151	0.4606	0.1567	1.8700e-003	0.0610	3.0100e-003	0.0640	0.0176	2.8800e-003	0.0204		198.1326	198.1326	1.3400e-003	0.0290	206.8062
Worker	0.1000	0.0542	0.7256	1.7700e-003	0.1972	1.1300e-003	0.1983	0.0523	1.0400e-003	0.0533		182.7229	182.7229	5.9200e-003	5.1300e-003	184.3991
Total	**0.1152**	**0.5148**	**0.8824**	**3.6400e-003**	**0.2581**	**4.1400e-003**	**0.2623**	**0.0699**	**3.9200e-003**	**0.0738**		**380.8555**	**380.8555**	**7.2600e-003**	**0.0341**	**391.2053**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**1.4200**	**11.0639**	**12.5172**	**0.0221**		**0.4506**	**0.4506**		**0.4348**	**0.4348**	**0.0000**	**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0151	0.4606	0.1567	1.8700e-003	0.0610	3.0100e-003	0.0640	0.0176	2.8800e-003	0.0204		198.1326	198.1326	1.3400e-003	0.0290	206.8062
Worker	0.1000	0.0542	0.7256	1.7700e-003	0.1972	1.1300e-003	0.1983	0.0523	1.0400e-003	0.0533		182.7229	182.7229	5.9200e-003	5.1300e-003	184.3991
Total	**0.1152**	**0.5148**	**0.8824**	**3.6400e-003**	**0.2581**	**4.1400e-003**	**0.2623**	**0.0699**	**3.9200e-003**	**0.0738**		**380.8555**	**380.8555**	**7.2600e-003**	**0.0341**	**391.2053**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4725	14.3184	13.4577	0.0241		0.6766	0.6766		0.6328	0.6328		2,324.3959	2,324.3959	0.5893		2,339.1278
Total	**1.4725**	**14.3184**	**13.4577**	**0.0241**		**0.6766**	**0.6766**		**0.6328**	**0.6328**		**2,324.3959**	**2,324.3959**	**0.5893**		**2,339.1278**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0579	0.0329	0.4274	9.9000e-004	0.1068	6.5000e-004	0.1074	0.0283	6.0000e-004	0.0289		101.2300	101.2300	3.5500e-003	3.0000e-003	102.2122
Total	**0.0579**	**0.0329**	**0.4274**	**9.9000e-004**	**0.1068**	**6.5000e-004**	**0.1074**	**0.0283**	**6.0000e-004**	**0.0289**		**101.2300**	**101.2300**	**3.5500e-003**	**3.0000e-003**	**102.2122**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4725	14.3184	13.4577	0.0241		0.6766	0.6766		0.6328	0.6328	0.0000	2,324.3959	2,324.3959	0.5893		2,339.1278
Total	**1.4725**	**14.3184**	**13.4577**	**0.0241**		**0.6766**	**0.6766**		**0.6328**	**0.6328**	**0.0000**	**2,324.3959**	**2,324.3959**	**0.5893**		**2,339.1278**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0579	0.0329	0.4274	9.9000e-004	0.1068	6.5000e-004	0.1074	0.0283	6.0000e-004	0.0289		101.2300	101.2300	3.5500e-003	3.0000e-003	102.2122
Total	**0.0579**	**0.0329**	**0.4274**	**9.9000e-004**	**0.1068**	**6.5000e-004**	**0.1074**	**0.0283**	**6.0000e-004**	**0.0289**		**101.2300**	**101.2300**	**3.5500e-003**	**3.0000e-003**	**102.2122**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560		1,995.6147	1,995.6147	0.6454		2,011.7503
Total	**1.3330**	**14.4676**	**8.7038**	**0.0206**	**7.0826**	**0.6044**	**7.6869**	**3.4247**	**0.5560**	**3.9807**		**1,995.6147**	**1,995.6147**	**0.6454**		**2,011.7503**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0445	0.0253	0.3288	7.6000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.6000e-004	0.0223		77.8693	77.8693	2.7300e-003	2.3100e-003	78.6248
Total	**0.0445**	**0.0253**	**0.3288**	**7.6000e-004**	**0.0822**	**5.0000e-004**	**0.0827**	**0.0218**	**4.6000e-004**	**0.0223**		**77.8693**	**77.8693**	**2.7300e-003**	**2.3100e-003**	**78.6248**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503
Total	**1.3330**	**14.4676**	**8.7038**	**0.0206**	**7.0826**	**0.6044**	**7.6869**	**3.4247**	**0.5560**	**3.9807**	**0.0000**	**1,995.6147**	**1,995.6147**	**0.6454**		**2,011.7503**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0445	0.0253	0.3288	7.6000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.6000e-004	0.0223		77.8693	77.8693	2.7300e-003	2.3100e-003	78.6248
Total	**0.0445**	**0.0253**	**0.3288**	**7.6000e-004**	**0.0822**	**5.0000e-004**	**0.0827**	**0.0218**	**4.6000e-004**	**0.0223**		**77.8693**	**77.8693**	**2.7300e-003**	**2.3100e-003**	**78.6248**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.0760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6939**	**5.8607**	**8.8253**	**0.0136**		**0.2810**	**0.2810**		**0.2594**	**0.2594**		**1,297.8688**	**1,297.8688**	**0.4114**		**1,308.1547**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0542	0.0293	0.3931	9.6000e-004	0.1068	6.1000e-004	0.1074	0.0283	5.6000e-004	0.0289		98.9749	98.9749	3.2100e-003	2.7800e-003	99.8829
Total	**0.0542**	**0.0293**	**0.3931**	**9.6000e-004**	**0.1068**	**6.1000e-004**	**0.1074**	**0.0283**	**5.6000e-004**	**0.0289**		**98.9749**	**98.9749**	**3.2100e-003**	**2.7800e-003**	**99.8829**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.0760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6939**	**5.8607**	**8.8253**	**0.0136**		**0.2810**	**0.2810**		**0.2594**	**0.2594**	**0.0000**	**1,297.8688**	**1,297.8688**	**0.4114**		**1,308.1547**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0542	0.0293	0.3931	9.6000e-004	0.1068	6.1000e-004	0.1074	0.0283	5.6000e-004	0.0289		98.9749	98.9749	3.2100e-003	2.7800e-003	99.8829
Total	**0.0542**	**0.0293**	**0.3931**	**9.6000e-004**	**0.1068**	**6.1000e-004**	**0.1074**	**0.0283**	**5.6000e-004**	**0.0289**		**98.9749**	**98.9749**	**3.2100e-003**	**2.7800e-003**	**99.8829**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2662	0.0000	6.2662	3.0041	0.0000	3.0041			0.0000			0.0000
Off-Road	1.1339	12.4250	6.6420	0.0172		0.5074	0.5074		0.4668	0.4668		1,666.0573	1,666.0573	0.5388		1,679.5282
Total	**1.1339**	**12.4250**	**6.6420**	**0.0172**	**6.2662**	**0.5074**	**6.7736**	**3.0041**	**0.4668**	**3.4709**		**1,666.0573**	**1,666.0573**	**0.5388**		**1,679.5282**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0356	0.0202	0.2630	6.1000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		62.2954	62.2954	2.1800e-003	1.8500e-003	62.8998
Total	**0.0356**	**0.0202**	**0.2630**	**6.1000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**62.2954**	**62.2954**	**2.1800e-003**	**1.8500e-003**	**62.8998**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2662	0.0000	6.2662	3.0041	0.0000	3.0041			0.0000			0.0000
Off-Road	1.1339	12.4250	6.6420	0.0172		0.5074	0.5074		0.4668	0.4668	0.0000	1,666.0573	1,666.0573	0.5388		1,679.5282
Total	**1.1339**	**12.4250**	**6.6420**	**0.0172**	**6.2662**	**0.5074**	**6.7736**	**3.0041**	**0.4668**	**3.4709**	**0.0000**	**1,666.0573**	**1,666.0573**	**0.5388**		**1,679.5282**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0356	0.0202	0.2630	6.1000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		62.2954	62.2954	2.1800e-003	1.8500e-003	62.8998
Total	**0.0356**	**0.0202**	**0.2630**	**6.1000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**62.2954**	**62.2954**	**2.1800e-003**	**1.8500e-003**	**62.8998**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5653	0.4454	2.6217	3.7600e-003	0.3265	4.5200e-003	0.3310	0.0871	4.2400e-003	0.0914		388.5703	388.5703	0.0412	0.0269	397.6141
Unmitigated	0.5653	0.4454	2.6217	3.7600e-003	0.3265	4.5200e-003	0.3310	0.0871	4.2400e-003	0.0914		388.5703	388.5703	0.0412	0.0269	397.6141

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	156.80	156.80	156.80	154,503	154,503
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	156.80	156.80	156.80	154,503	154,503

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	3.70	3.70	3.70	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.400899	0.065698	0.241183	0.160889	0.051395	0.009704	0.007820	0.013614	0.000831	0.000178	0.040125	0.000640	0.007025
Other Asphalt Surfaces	0.400899	0.065698	0.241183	0.160889	0.051395	0.009704	0.007820	0.013614	0.000831	0.000178	0.040125	0.000640	0.007025
Other Non-Asphalt Surfaces	0.400899	0.065698	0.241183	0.160889	0.051395	0.009704	0.007820	0.013614	0.000831	0.000178	0.040125	0.000640	0.007025
Parking Lot	0.400899	0.065698	0.241183	0.160889	0.051395	0.009704	0.007820	0.013614	0.000831	0.000178	0.040125	0.000640	0.007025

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6938	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5100e-003
Unmitigated	0.6938	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1594					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5342					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5100e-003
Total	**0.6938**	**1.0000e-005**	**1.5400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.3000e-003**	**3.3000e-003**	**1.0000e-005**		**3.5100e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1594					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5342					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5100e-003
Total	**0.6938**	**1.0000e-005**	**1.5400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.3000e-003**	**3.3000e-003**	**1.0000e-005**		**3.5100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Rocker Memorial Skatepark

Northern Sierra AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	10.47	1000sqft	0.24	10,468.00	0
Other Asphalt Surfaces	2.32	1000sqft	0.05	2,317.00	0
Other Non-Asphalt Surfaces	1.30	1000sqft	0.03	1,304.00	0
City Park	0.98	Acre	0.98	42,688.80	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	72
Climate Zone	14			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - "City Park" is the total combined area of the skate park (24,686 SF) and the landscaped area (17,974 SF). "Other Asphalt Surfaces" and "Other Non-Asphalt Surfaces" are paved trails and concrete sidewalks, respectively.

Vehicle Trips - "Trip Rate" and "Trip Length" data derived from independent study.

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	10,470.00	10,468.00
tblLandUse	LandUseSquareFeet	2,320.00	2,317.00
tblLandUse	LandUseSquareFeet	1,300.00	1,304.00
tblVehicleTrips	CC_TL	7.30	3.70

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	CNW_TL	7.30	3.70
tblVehicleTrips	CW_TL	9.50	3.70
tblVehicleTrips	ST_TR	1.96	160.00
tblVehicleTrips	SU_TR	2.19	160.00
tblVehicleTrips	WD_TR	0.78	160.00

2.0 Emissions Summary

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.6447	14.5010	13.8773	0.0257	7.1647	0.6773	7.7696	3.4465	0.6334	4.0030	0.0000	2,418.5237	2,418.5237	0.6486	0.0364	2,434.4368
2024	58.3905	11.6268	13.3953	0.0256	0.2581	0.4547	0.7129	0.0699	0.4387	0.5086	0.0000	2,370.3933	2,370.3933	0.4152	0.0353	2,389.4498
Maximum	**58.3905**	**14.5010**	**13.8773**	**0.0257**	**7.1647**	**0.6773**	**7.7696**	**3.4465**	**0.6334**	**4.0030**	**0.0000**	**2,418.5237**	**2,418.5237**	**0.6486**	**0.0364**	**2,434.4368**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.6447	14.5010	13.8773	0.0257	7.1647	0.6773	7.7696	3.4465	0.6334	4.0030	0.0000	2,418.5237	2,418.5237	0.6486	0.0364	2,434.4368
2024	58.3905	11.6268	13.3953	0.0256	0.2581	0.4547	0.7129	0.0699	0.4387	0.5086	0.0000	2,370.3933	2,370.3933	0.4152	0.0353	2,389.4498
Maximum	**58.3905**	**14.5010**	**13.8773**	**0.0257**	**7.1647**	**0.6773**	**7.7696**	**3.4465**	**0.6334**	**4.0030**	**0.0000**	**2,418.5237**	**2,418.5237**	**0.6486**	**0.0364**	**2,434.4368**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6938	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.4651	0.5221	3.1927	3.6000e-003	0.3265	4.5300e-003	0.3310	0.0871	4.2500e-003	0.0914		371.7677	371.7677	0.0531	0.0305	382.1800
Total	**1.1589**	**0.5222**	**3.1942**	**3.6000e-003**	**0.3265**	**4.5400e-003**	**0.3310**	**0.0871**	**4.2600e-003**	**0.0914**		**371.7710**	**371.7710**	**0.0532**	**0.0305**	**382.1835**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6938	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.4651	0.5221	3.1927	3.6000e-003	0.3265	4.5300e-003	0.3310	0.0871	4.2500e-003	0.0914		371.7677	371.7677	0.0531	0.0305	382.1800
Total	**1.1589**	**0.5222**	**3.1942**	**3.6000e-003**	**0.3265**	**4.5400e-003**	**0.3310**	**0.0871**	**4.2600e-003**	**0.0914**		**371.7710**	**371.7710**	**0.0532**	**0.0305**	**382.1835**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	3/5/2024	3/18/2024	5	10	
2	Building Construction	Building Construction	5/16/2023	2/19/2024	5	200	
3	Demolition	Demolition	4/10/2023	5/5/2023	5	20	
4	Grading	Grading	5/10/2023	5/15/2023	5	4	
5	Paving	Paving	2/20/2024	3/4/2024	5	10	
6	Site Preparation	Site Preparation	5/6/2023	5/9/2023	5	2	

Acres of Grading (Site Preparation Phase): 1.88

Acres of Grading (Grading Phase): 4

Acres of Paving: 0.32

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 37,029; Non-Residential Outdoor: 12,343; Striped Parking Area: 845 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	24.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.1890					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**58.3697**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0208	0.0149	0.1489	3.4000e-004	0.0411	2.4000e-004	0.0413	0.0109	2.2000e-004	0.0111		35.4018	35.4018	1.4600e-003	1.2900e-003	35.8217
Total	**0.0208**	**0.0149**	**0.1489**	**3.4000e-004**	**0.0411**	**2.4000e-004**	**0.0413**	**0.0109**	**2.2000e-004**	**0.0111**		**35.4018**	**35.4018**	**1.4600e-003**	**1.2900e-003**	**35.8217**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.1890					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**58.3697**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0208	0.0149	0.1489	3.4000e-004	0.0411	2.4000e-004	0.0413	0.0109	2.2000e-004	0.0111		35.4018	35.4018	1.4600e-003	1.2900e-003	35.8217
Total	**0.0208**	**0.0149**	**0.1489**	**3.4000e-004**	**0.0411**	**2.4000e-004**	**0.0413**	**0.0109**	**2.2000e-004**	**0.0111**		**35.4018**	**35.4018**	**1.4600e-003**	**1.2900e-003**	**35.8217**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**1.5233**	**11.7104**	**12.6111**	**0.0221**		**0.5145**	**0.5145**		**0.4968**	**0.4968**		**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0153	0.5002	0.1675	1.9100e-003	0.0610	3.0800e-003	0.0641	0.0176	2.9500e-003	0.0205		201.6890	201.6890	1.3400e-003	0.0297	210.5728
Worker	0.1062	0.0801	0.7746	1.7000e-003	0.1972	1.2000e-003	0.1984	0.0523	1.1100e-003	0.0534		173.7744	173.7744	7.7100e-003	6.6700e-003	175.9551
Total	**0.1215**	**0.5803**	**0.9422**	**3.6100e-003**	**0.2581**	**4.2800e-003**	**0.2624**	**0.0699**	**4.0600e-003**	**0.0739**		**375.4633**	**375.4633**	**9.0500e-003**	**0.0364**	**386.5279**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**1.5233**	**11.7104**	**12.6111**	**0.0221**		**0.5145**	**0.5145**		**0.4968**	**0.4968**	**0.0000**	**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0153	0.5002	0.1675	1.9100e-003	0.0610	3.0800e-003	0.0641	0.0176	2.9500e-003	0.0205		201.6890	201.6890	1.3400e-003	0.0297	210.5728
Worker	0.1062	0.0801	0.7746	1.7000e-003	0.1972	1.2000e-003	0.1984	0.0523	1.1100e-003	0.0534		173.7744	173.7744	7.7100e-003	6.6700e-003	175.9551
Total	**0.1215**	**0.5803**	**0.9422**	**3.6100e-003**	**0.2581**	**4.2800e-003**	**0.2624**	**0.0699**	**4.0600e-003**	**0.0739**		**375.4633**	**375.4633**	**9.0500e-003**	**0.0364**	**386.5279**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**1.4200**	**11.0639**	**12.5172**	**0.0221**		**0.4506**	**0.4506**		**0.4348**	**0.4348**		**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0147	0.4915	0.1636	1.8800e-003	0.0610	3.0200e-003	0.0640	0.0176	2.8900e-003	0.0205		198.5434	198.5434	1.3100e-003	0.0291	207.2494
Worker	0.0996	0.0714	0.7145	1.6500e-003	0.1972	1.1300e-003	0.1983	0.0523	1.0400e-003	0.0533		169.9285	169.9285	7.0000e-003	6.1800e-003	171.9441
Total	**0.1143**	**0.5629**	**0.8781**	**3.5300e-003**	**0.2581**	**4.1500e-003**	**0.2623**	**0.0699**	**3.9300e-003**	**0.0738**		**368.4719**	**368.4719**	**8.3100e-003**	**0.0353**	**379.1935**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**1.4200**	**11.0639**	**12.5172**	**0.0221**		**0.4506**	**0.4506**		**0.4348**	**0.4348**	**0.0000**	**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0147	0.4915	0.1636	1.8800e-003	0.0610	3.0200e-003	0.0640	0.0176	2.8900e-003	0.0205		198.5434	198.5434	1.3100e-003	0.0291	207.2494
Worker	0.0996	0.0714	0.7145	1.6500e-003	0.1972	1.1300e-003	0.1983	0.0523	1.0400e-003	0.0533		169.9285	169.9285	7.0000e-003	6.1800e-003	171.9441
Total	**0.1143**	**0.5629**	**0.8781**	**3.5300e-003**	**0.2581**	**4.1500e-003**	**0.2623**	**0.0699**	**3.9300e-003**	**0.0738**		**368.4719**	**368.4719**	**8.3100e-003**	**0.0353**	**379.1935**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4725	14.3184	13.4577	0.0241		0.6766	0.6766		0.6328	0.6328		2,324.3959	2,324.3959	0.5893		2,339.1278
Total	**1.4725**	**14.3184**	**13.4577**	**0.0241**		**0.6766**	**0.6766**		**0.6328**	**0.6328**		**2,324.3959**	**2,324.3959**	**0.5893**		**2,339.1278**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0575	0.0434	0.4196	9.2000e-004	0.1068	6.5000e-004	0.1074	0.0283	6.0000e-004	0.0289		94.1278	94.1278	4.1800e-003	3.6100e-003	95.3090
Total	**0.0575**	**0.0434**	**0.4196**	**9.2000e-004**	**0.1068**	**6.5000e-004**	**0.1074**	**0.0283**	**6.0000e-004**	**0.0289**		**94.1278**	**94.1278**	**4.1800e-003**	**3.6100e-003**	**95.3090**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4725	14.3184	13.4577	0.0241		0.6766	0.6766		0.6328	0.6328	0.0000	2,324.3959	2,324.3959	0.5893		2,339.1278
Total	**1.4725**	**14.3184**	**13.4577**	**0.0241**		**0.6766**	**0.6766**		**0.6328**	**0.6328**	**0.0000**	**2,324.3959**	**2,324.3959**	**0.5893**		**2,339.1278**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0575	0.0434	0.4196	9.2000e-004	0.1068	6.5000e-004	0.1074	0.0283	6.0000e-004	0.0289		94.1278	94.1278	4.1800e-003	3.6100e-003	95.3090
Total	**0.0575**	**0.0434**	**0.4196**	**9.2000e-004**	**0.1068**	**6.5000e-004**	**0.1074**	**0.0283**	**6.0000e-004**	**0.0289**		**94.1278**	**94.1278**	**4.1800e-003**	**3.6100e-003**	**95.3090**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560		1,995.6147	1,995.6147	0.6454		2,011.7503
Total	**1.3330**	**14.4676**	**8.7038**	**0.0206**	**7.0826**	**0.6044**	**7.6869**	**3.4247**	**0.5560**	**3.9807**		**1,995.6147**	**1,995.6147**	**0.6454**		**2,011.7503**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0443	0.0334	0.3228	7.1000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.6000e-004	0.0223		72.4060	72.4060	3.2100e-003	2.7800e-003	73.3146
Total	**0.0443**	**0.0334**	**0.3228**	**7.1000e-004**	**0.0822**	**5.0000e-004**	**0.0827**	**0.0218**	**4.6000e-004**	**0.0223**		**72.4060**	**72.4060**	**3.2100e-003**	**2.7800e-003**	**73.3146**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503
Total	**1.3330**	**14.4676**	**8.7038**	**0.0206**	**7.0826**	**0.6044**	**7.6869**	**3.4247**	**0.5560**	**3.9807**	**0.0000**	**1,995.6147**	**1,995.6147**	**0.6454**		**2,011.7503**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0443	0.0334	0.3228	7.1000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.6000e-004	0.0223		72.4060	72.4060	3.2100e-003	2.7800e-003	73.3146
Total	**0.0443**	**0.0334**	**0.3228**	**7.1000e-004**	**0.0822**	**5.0000e-004**	**0.0827**	**0.0218**	**4.6000e-004**	**0.0223**		**72.4060**	**72.4060**	**3.2100e-003**	**2.7800e-003**	**73.3146**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.0760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6939**	**5.8607**	**8.8253**	**0.0136**		**0.2810**	**0.2810**		**0.2594**	**0.2594**		**1,297.8688**	**1,297.8688**	**0.4114**		**1,308.1547**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0540	0.0387	0.3870	8.9000e-004	0.1068	6.1000e-004	0.1074	0.0283	5.6000e-004	0.0289		92.0446	92.0446	3.7900e-003	3.3500e-003	93.1364
Total	**0.0540**	**0.0387**	**0.3870**	**8.9000e-004**	**0.1068**	**6.1000e-004**	**0.1074**	**0.0283**	**5.6000e-004**	**0.0289**		**92.0446**	**92.0446**	**3.7900e-003**	**3.3500e-003**	**93.1364**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.0760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6939**	**5.8607**	**8.8253**	**0.0136**		**0.2810**	**0.2810**		**0.2594**	**0.2594**	**0.0000**	**1,297.8688**	**1,297.8688**	**0.4114**		**1,308.1547**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0540	0.0387	0.3870	8.9000e-004	0.1068	6.1000e-004	0.1074	0.0283	5.6000e-004	0.0289		92.0446	92.0446	3.7900e-003	3.3500e-003	93.1364
Total	**0.0540**	**0.0387**	**0.3870**	**8.9000e-004**	**0.1068**	**6.1000e-004**	**0.1074**	**0.0283**	**5.6000e-004**	**0.0289**		**92.0446**	**92.0446**	**3.7900e-003**	**3.3500e-003**	**93.1364**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2662	0.0000	6.2662	3.0041	0.0000	3.0041			0.0000			0.0000
Off-Road	1.1339	12.4250	6.6420	0.0172		0.5074	0.5074		0.4668	0.4668		1,666.0573	1,666.0573	0.5388		1,679.5282
Total	**1.1339**	**12.4250**	**6.6420**	**0.0172**	**6.2662**	**0.5074**	**6.7736**	**3.0041**	**0.4668**	**3.4709**		**1,666.0573**	**1,666.0573**	**0.5388**		**1,679.5282**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0354	0.0267	0.2582	5.7000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		57.9248	57.9248	2.5700e-003	2.2200e-003	58.6517
Total	**0.0354**	**0.0267**	**0.2582**	**5.7000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**57.9248**	**57.9248**	**2.5700e-003**	**2.2200e-003**	**58.6517**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2662	0.0000	6.2662	3.0041	0.0000	3.0041			0.0000			0.0000
Off-Road	1.1339	12.4250	6.6420	0.0172		0.5074	0.5074		0.4668	0.4668	0.0000	1,666.0573	1,666.0573	0.5388		1,679.5282
Total	**1.1339**	**12.4250**	**6.6420**	**0.0172**	**6.2662**	**0.5074**	**6.7736**	**3.0041**	**0.4668**	**3.4709**	**0.0000**	**1,666.0573**	**1,666.0573**	**0.5388**		**1,679.5282**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0354	0.0267	0.2582	5.7000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		57.9248	57.9248	2.5700e-003	2.2200e-003	58.6517
Total	**0.0354**	**0.0267**	**0.2582**	**5.7000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**57.9248**	**57.9248**	**2.5700e-003**	**2.2200e-003**	**58.6517**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4651	0.5221	3.1927	3.6000e-003	0.3265	4.5300e-003	0.3310	0.0871	4.2500e-003	0.0914		371.7677	371.7677	0.0531	0.0305	382.1800
Unmitigated	0.4651	0.5221	3.1927	3.6000e-003	0.3265	4.5300e-003	0.3310	0.0871	4.2500e-003	0.0914		371.7677	371.7677	0.0531	0.0305	382.1800

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	156.80	156.80	156.80	154,503	154,503
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	156.80	156.80	156.80	154,503	154,503

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	3.70	3.70	3.70	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.400899	0.065698	0.241183	0.160889	0.051395	0.009704	0.007820	0.013614	0.000831	0.000178	0.040125	0.000640	0.007025
Other Asphalt Surfaces	0.400899	0.065698	0.241183	0.160889	0.051395	0.009704	0.007820	0.013614	0.000831	0.000178	0.040125	0.000640	0.007025
Other Non-Asphalt Surfaces	0.400899	0.065698	0.241183	0.160889	0.051395	0.009704	0.007820	0.013614	0.000831	0.000178	0.040125	0.000640	0.007025
Parking Lot	0.400899	0.065698	0.241183	0.160889	0.051395	0.009704	0.007820	0.013614	0.000831	0.000178	0.040125	0.000640	0.007025

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6938	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5100e-003
Unmitigated	0.6938	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1594					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5342					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5100e-003
Total	**0.6938**	**1.0000e-005**	**1.5400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.3000e-003**	**3.3000e-003**	**1.0000e-005**		**3.5100e-003**

Rocker Memorial Skatepark - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1594					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5342					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5100e-003
Total	**0.6938**	**1.0000e-005**	**1.5400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.3000e-003**	**3.3000e-003**	**1.0000e-005**		**3.5100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B

Biological Resources Study

Eco Synthesis
SCIENTIFIC & REGULATORY SERVICES, INC.

Rocker Memorial Skate Park

Biological Resources Study

Prepared by:
Adrian Juncosa, PhD

Report Date:
October 1, 2021

16173 Lancaster Place, Truckee, CA 96161 · Telephone: 530.412.1601 · E-mail: ajuncosa@ecosynthesis.com

Contents

Figures

Tables

Appendices

1 INTRODUCTION

1.1 Site Information

Project name: Rocker Memorial Skate Park

APN: Nevada County 019-450-054 (portion)

Study Area: Approximately 2 acres (1.957 acre as drawn in GIS; may not precisely match AutoCAD area determination)

Location: Study area is within Section 14, T. 17 N, R. 16 E

Latitude/longitude: center of site is at approximately 39.3263 N, -120.1712 W.

Address: Estates Drive, Truckee, CA 96161

Study dates: Several dates in summer of 2021 between June and August

Report date: October 1, 2021

1.2 Site Location and General Description

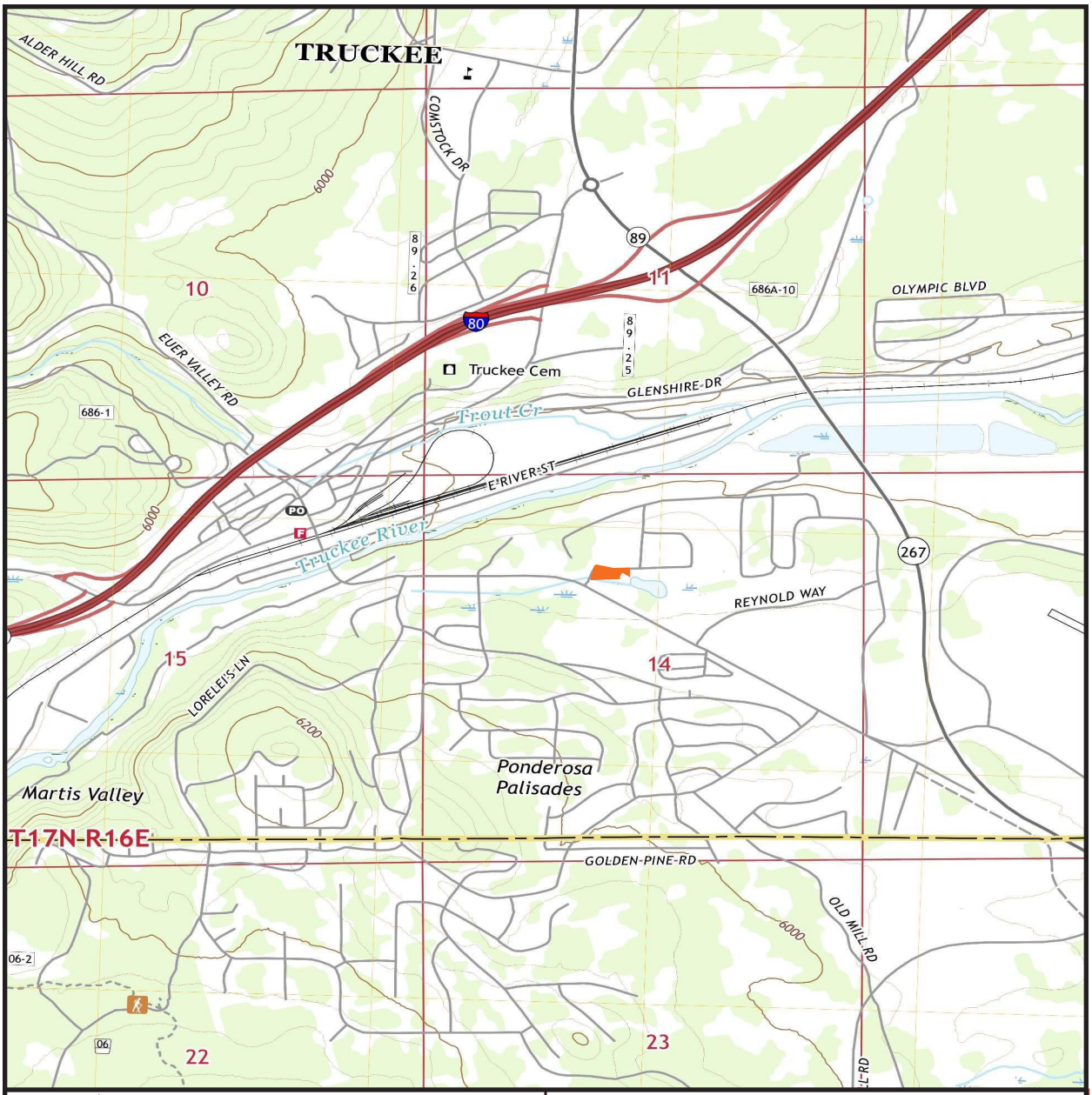
The Rocker Memorial Skate Park study area is approximately 2.0 acres, and mostly quite level, at an elevation of approximately 5,850 feet above mean sea level.

The study site is adjacent to multi-family residential areas across Estates Drive to the north, and is abutted on the east, south, and west by undeveloped land. Some of this is ruderal and unvegetated (disturbed), and other areas, particularly on the south, support fairly extensive wet meadows. More widely, the site is located in a generally urban and urban park/recreational (golf course) area.

The study area lies in the Sierra Nevada ecoregion (Level III), Northern Sierra Upper Montane Forests (Level IV). However, even the Level IV regions are very broad biological cagetories encompassing an amount of species and ecological process diversity that is not useful for environmental review of individual small project sites. Further discussion of habitat mapping is provided under Methods, below.

The study area is located in a small valley floor on a terrace about 90 feet above the level of the Truckee River. Soils are mostly derived from residuum (rock weathered in place) of volcanic lithology. There is obvious evidence that the site was graded and/or otherwise modified at some point in the distant past. In addition to earthen berms just off site, there is a berm constructed of boulders around two sides of the site, just within the parcel boundary. and about half of the vegetation is dominated by clumps of crested wheat grass, which is a non-native species that was (and still is) often used to seed grazing land in cold, arid sites. The boulder berm and surrounding anthropogenic changes are visible, and apparently already of long standing, in a NAPP aerial photograph from June 1987.

Most of the site is a filled, graded, gravel covered area that is nearly devoid of vegetation over most of its area, with a small area of ruderal non-native forb-dominated vegetation in the northeast corner. Land cover to the east of the gravel area is a mostly grassy upland to mesic meadow of variable species dominance. North and west of the gravel area is a narrow band of Jeffrey pine and bitterbrush-sagebrush shrubland. The southern side of the fill slope of the gravel area was revegetated with native forbs at the time that some wetland restoration work was completed. The restored wet meadow extends a few feet into the study area at several points.



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Scale: Approximately 1:24,000 (1"=2,000')

North

Rocker Memorial Skate Park

Figure 1. Location Map

Project site (approximate)

USGS 7.5-minute Truckee quadrangle

2 METHODS

2.1 Field Survey

The site was traversed by both meandering and more-or-less linear transects spaced no more than 25-30 feet apart to identify any notable habitat types or elements that had not drawn attention at the time of the wetland delineation (2019), and to develop a floristic plant list.

Plant species observed were identified by sight or by reference to Baldwin et al. (2012), and were noted on a proprietary checklist of the local flora.

The site was studied on June 23, July 20, and August 6, 2021.

2.2 Mapping

Wetland polygons were derived from a formal three-parameter wetland delineation that had been completed earlier. Remaining site land cover types were mapped from satellite imagery informed by the field work.

2.3 Investigator Qualifications

The site was studied and this report written by Adrian Juncosa, Ph.D. (Botany; Duke University). Since 1988, he has completed over 200 botanical, wildlife, and general biological site studies, impact analyses, mitigation, and monitoring projects in central and northern California, with particular expertise in the foothills and montane Sierra Nevada, where he has been based since 1995.

3 RESULTS

Land cover types that are found within the study area are depicted in Figure 2. Appendix A includes a list of plants that were observed on the site.

3.1 Land Cover Types

The site has been substantially altered by human actions, probably since early in the history of the Town of Truckee. Anthropogenic alterations have included grading, ditching for drainage, and, in the more distant past, grazing and cultivation of native and non-native pasture species.

Ideally, vegetation should be labeled according to the Manual of California Vegetation, 2nd edition (MCV2), which conforms to the US National (and international) Vegetation Classification. However, the small areas, patchiness, and level of disturbance made mapping of MCV2 alliances or stands difficult for much of the study area, so site-specific headings and map labels are used in this report. Also, a large proportion of the study area is essentially devoid of vegetation; for these reason this section heading is "land cover" rather than "vegetation".

Land cover types are listed generally in order of decreasing area within the site, upland vegetation first with the one wetland map class listed last.

3.1.1 GRAVEL AREA

The largest single type of land cover is an area of about one acre where a substantial volume of fill material of unknown origin was deposited, then graded to the gentle slope that drains to the northeast, and finally covered with a variable thickness of crushed (angular) commercial gravel. Most of the Gravel supports only sparse or zero vegetation, but small patches of almost entirely non-native ruderal (weedy) vegetation are present, in particular at the extreme northeast end (prostrate knotweed, tumble mustard, and Sierra tarweed; see Appendix for scientific names).

3.1.2 DRY MONTANE MEADOW

This land cover type is a mosaic of non-wetland grass-dominated vegetation including, but not entirely limited to, the following MCV2 alliances:

Hordeum brachyantherum alliance (meadow barley)

Poa secunda alliance (one-sided bluegrass)

Where meadow barley is present, it is sometimes a codominant species, but with other upland or facultative-upland codominants and lacking indicators of hydric soils and wetland hydrology.

The dominance of species not native to the Truckee area is indicative of a site that has been substantially altered from its original native condition.

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Rocker Memorial Skate Park
Biological Resources Study
Figure 2. Land Cover Map

Scale approximately 1:1,000 North
Base image is from Google Earth.

Legend:

- Dry Meadow
- Berm and Upland Revegetation
- Eastside Pine/Shrubland
- Freshwater Emergent Wetland

Remainder of site (no color pattern) is Urbanized (Gravel Area, other graded areas, and ruderal vegetation)

Notes:

Alignment of image, parcel, and land cover layers is approximate.

All of the mapped wetland features are contiguous outside the study area. See Aquatic Resources Delineation for additional information. The labeling of the individual tips of this large wetland is retained for possible reference in project approval conditions.

3.1.3 EASTSIDE PINE/SHRUBLAND

This small area may conform to either of the following MCV2 alliances:

Pinus jeffreyi alliance (Jeffrey pine woodland)

Purshia tridentata alliance (antelope bitterbrush shrubland)

This land cover type may represent residual original vegetation, or vegetation that recolonized disturbed areas where the soil profile remained largely intact. The dominant plant in terms of size is Jeffrey pine, one of which (located just within the northwest corner of the site) is approximately 36 inches in diameter at 4.5 feet above the ground. However, pine trees are just scattered individuals within this cover type. The shrub stratum is dominated mostly by antelope bitterbrush and rubber rabbitbrush, with other locally common species also present (e.g. mountain sagebrush).

3.1.4 BERM

Most of the area mapped as this land cover type is the fill slope between the Gravel Area and the large off-site wetland and pond. The vegetation is largely from an upland seed mix applied during restoration work carried out in that wetland and is dominated by perennial forbs and subshrubs ("wildflowers") such as sulfur buckwheat, showy penstemon (beardtongue), and Gray's lupine.

3.1.5 FRESHWATER EMERGENT WETLAND

Carex nebrascensis (Nebraska sedge) alliance

Wetland is present within the study area in one patch at the far eastern end, four very small areas along the southern boundary, and a final patch of wetland between two culverts, just within the southwest corner of the site but separated from the project development area by the paved multi-use Brockway Trail. All of these separate polygons are contiguous off site, being the ends of a large wetland and pond system referred to as Truckee Meadow (not to be confused with Truckee Meadows meaning a portion of Reno, NV). The in-site wetland area totals 0.06 acre.

The main, off-site portion of the wetland is sustained by perennial surface water, but the small extensions within the study area are sustained only by near-surface saturation and possibly occasional brief inundation. The vegetation of the extensions within the site is dominated by Nebraska sedge.

In the course of previous studies in the Estates Drive area, I examined all of the limits and downslope flow directions from this large wetland system, beginning with the culvert under Estates Drive through which all of the wetlands surface water flows northward to the undeveloped area between Martis Drive and Crestview Drive, finally entering fenced Tahoe Truckee Sanitation Agency property (which I was not able to access).

To the best of my ability to determine from field observation and available lidar topography, there is no surface flow connection between the wetlands and the Truckee River. This connection appears to be interrupted by higher topography within the fenced TTSA area containing what appears to be an overflow basin intended only to impound water under exceptional surface water circumstances.

3.2 General Wildlife

Wildlife surveys were not carried out for this study, but it is unlikely that any wildlife make anything more than occasional use of the project development area, which is almost entirely a graded, graveled urbanized area.

The large Jeffrey pine tree at the northwest corner of the site is theoretically suitable to support raptor or owl nesting, or day roosting sites for bat species (between or under bark plates). Given the extensive availability of similar or superior nesting trees in non-urbanized settings including the entire Truckee River corridor less than 0.25 mile away, it is extremely unlikely that any predatory bird species would select this location in which to nest. No deer sign was observed, and the site's habitats, location, and mostly urbanized surroundings make it unsuitable for use as a deer migratory corridor or fawning area.

3.3 Special Status Species

For this report, we consulted the CNDDB BIOS system for relevant occurrences, mostly those within about five miles of the site. These results are presented in Table 1. The greater project region includes many habitat resources such as conifer woodlands and rivers that are not represented within the site. Also, many of the special-status species, both plants and wildlife, which resulted from the CNDDB query are found in wetland and aquatic habitats, which the proposed development proposes to avoid. Table 1 includes these species, but indicates that their habitat is not found within the development footprint, though it may occur within the study site. Additional text on several species is provided below.

Site surveys sufficient to provide a floristic botanical survey of proposed development footprint were conducted, and no special status species of plants were observed. Surveys for special status wildlife species were not deemed to be necessary to evaluate impacts, as discussed below and in Table 1.

Table 1. Special-status species recorded by the CNDDB within five miles of the Rocker Memorial Skate Park study site. Animals are listed by phylogenetic relationships; plants are listed alphabetically by scientific name. See text for additional information on species for which suitable habitat is present. Many species tracked by CNDDB have no regulatory status, or have status applicable only within federal lands (e.g., U.S. Forest Service sensitive species), and do not necessarily meet the threatened/endangered criteria applicable under CEQA guideline 15380, but these are included for completeness. For this table, "Project Area" means the development footprint, not the entire study area. Accordingly, "No" is entered for any species for which suitable habitat may occur, but only in wetlands, which will remain undeveloped.

Status definitions (Federal status/State status/Rare Plant Ranking):

E or T, listed as endangered or threatened under federal or state Endangered Species Act;

C, candidate for listing as endangered or threatened;

SC, species of special concern; FP, fully protected (California DFW);

List 1B, considered rare, threatened or endangered by CDFW and normally regarded as meriting consideration under CEQA Guideline 15380; List 2, rare, threatened, or endangered in California but more common elsewhere; effects on List 3 (insufficient information) and List 4 (watch list) species are not normally considered to be significant except on a case-by-case basis.

Species	Status (US/Ca/ RPR)	Microhabitat/Occurrence	Suitable Habitat in Development Footprint?	Other Information
MAMMALS				
Sierra Nevada red fox *Vulpes vulpes necator*	-/T	Meadows with adequate small mammal prey and friable soils for burrowing.	No	No mesic, high-biomass meadows within site; soils are very rocky.
Sierra Nevada mountain beaver *Aplodontia rufa californica*	-/SC	Wet areas with forb-rich wetland vegetation; streamsides and wetland seeps.	No	Perennially saturated forb-dominated seeps not found within study area.
Sierra Nevada showshoe hare *Lepus americanus tahoensis*	-/SC	Coniferous forest with shrub cover.	No	Though unlikely, could possibly forage within the site, possible nesting areas nearby offsite.
Porcupine *Erethizon dorsatus*	none	Forest, woodland, shrubland. Many regional records, often roadkill.	No	No current status but numbers believed to be declining.

BIRDS				
Northern goshawk *Accipiter gentilis*	-/SC	High-canopy-cover coniferous forest without nearby human disturbance (within ¼ mile).	No	Intolerant of the level of urbanization at the site.
Bald eagle *Haliaeetus leucocephala*	Delisted/ E, FP	Nests and winters in large trees or snags at large bodies of water; forages for fish and waterfowl.	No	Habitat not suitable, and intolerant of the level of urbanization at the site.
Osprey *Pandion haliaetus*	(watch list)	Snags or large trees adjacent to lakes.	No	
Willow flycatcher *Empidonax traillii*	-/E	Willow thickets near perennial or near-perennial surface water.	No	Suitable habitat is present off site, but not within study area. See text .
Yellow warbler *Setophagia petechia (brewsteri)*	-/SC	Riparian forest and shrubland, nesting records in region are close to water.	No	
AMPHIBIANS				
Sierra Nevada yellow-legged frog *Rana sierrae*	E/T	Lakes, ponds, meadow streams, isolated pools, and sunny riverbanks.	No	No perennial water bodies within study area.
Southern long-toed salamander *Ambystoma macrodactylum sigillatum*	-/SC	Lakes, ponds for breeding, adults utilize underground or covered areas in mesic areas.	Marginal	Nearby pond is surrounded by urban development; terrestrial use likeliest under the two or three boulders mmediately adjacent to wetland FEW-1. Sites of other boulders are too dry.
FISHES				
Mountain sucker *Catostomus platyrhynchus*	-/SC	Perennial streams	No	
Lahontan cutthroat trout *Oncorhynchus clarkii henshawi*	T/-	Perennial streams without non-native trout species.	No	
Mountain whitefish *Prosopium williamsoni*	-/SC	Perennial streams	No	

INVERTEBRATES				
Morrison's bumblebee *Bombus morrisoni*	none	Open dry scrub. Requires flower diversity for season-long foraging.	No	Record is from 1915 in general vicinity of Truckee.
Western bumblebee *Bombus occidentalis*	-/CE	Open grassy areas with season-long foraging.	Marginal or no	Most of known food plants absent from site. 1958 record at Boca.
Western pearlshell *Margaritifera falcata*	none	Low velocity flowing water.	No	Truckee River about six miles east.
Sheldon's amphipod *Stygobromus sheldoni*	none	Springs.	No	5-mile (im)precision record centered at UC Sagehen station.
PLANTS				
Three-tip sagebrush *Artemisia tripartita*	-/-/2B	Rocky slopes and exposed ridges; one regional occurrence at meadow edge.	Yes	Potentially suitable habitat was surveyed; species was not found.
Common moonwort *Botrychium lunaria*	-/-/2B	Wet meadows and seeps.	No	5-mile (im)precision record centered at UC Sagehen station.
Donner Pass buckwheat *Eriogonum umbellatum* var. *torreyanum*	-/-/1B	Open areas on specific type of volcanic soils substrate.	Marginal or no	Potentially suitable habitat was surveyed; species was not found.
Plumas ivesia *Ivesia sericoleuca*	-/-/1B	Vernally moist flats and areas just outside meadow wetlands.	Yes	Potentially suitable habitat was surveyed during appropriate season; species was not found.
Santa Lucia dwarf rush *Juncus luciensis*	-/-/1B	Vernal pools, wet meadow, streamsides.	No	Possibly suitable habitat in Freshwater Emergent Wetland, where no development will occur.
Robbins' pondweed *Potamogeton robbinsii*	-/-/1B	Perennial lakes, ponds.	No	
Alder buckthorn *Rhamnus alnifolia*	-/-/2	Wet meadow edges, seeps, stream sides; obligate wetland species in California.	No	No woody riparian habitat within site; no *Rhamnus* species present.
Tahoe yellow cress *Rorippa subumbellata*	C/E/1B	Known only from sandy lakeshore habitat (Lake Tahoe).	No	Truckee record is very old (19th c.) and probably not here.
Marsh skullcap *Scutellaria galericulata*	-/-/2	Wetland (wet meadow) species.	No	No wet meadows within development area.

3.3.1 WILDLIFE

Willow Flycatcher

Willow flycatcher is a candidate for state listing as endangered, which nests in willow or similar riparian shrublands with surface water (ponds or very wet marshes; not merely mesic grass or sedge meadows) present throughout the breeding season. Most records in the greater Truckee region are in relatively extensive riparian habitat. Birds of this species in migration use generally similar habitats as they do for nesting (Sedgwick, 2020).

Truckee River Watershed Council staff state that a visual observation of willow flycatcher (*Empidonax traillii*) was reported on the adjoining wetland restoration site southeast of the study site. Further communications about this observation suggest that it is not a definitive record. However, in any case, the nearest potentially suitable nesting habitat for willow flycatcher is located over 200 feet away from the limits of proposed development. Given that a seasonal avoidance distances that are commonly used to ensure non-disturbance of nesting birds are 50 or 100 feet for small passerine birds, this habitat would not be expected to be adversely affected by construction or operational disturbance. Excellent foraging habitat for willow flycatcher (and other related non-special-status species) exists throughout the wetland, particularly in the areas of summertime surface water, however, in the context of the urbanized setting of the site, no significant impact on foraging use would reasonably be anticipated.

Sierra Nevada Yellow-legged Frog (SNYLF)

This species breeds in perennial ponds or generally slow moving flowing water, and is highly aquatic, rarely straying more than a few feet from water except in special cases such as very wet marshes around or intervening between breeding ponds. There is a suitable breeding pond immediately off site.

Southern Long-toed Salamander

This is species whose range includes a wide variety of habitats from forest to semi-arid shrubland or grassland. It breeds in perennial or, at least, very long-seasonal water bodies, and the larvae are aquatic. Unlike SNYLF, it does not remain in or immediately adjacent to the pond as an adult, instead, it exits and lives in moist underground sites such as under logs or boulders with moist soil. Although many salamanders utilize rodent burrows during non-breeding adulthood, to quote Stebbins (2010) about the long-toed salamander: "Found in piles of rotten wood, under bark, rotting logs, rock, and other objects near quiet water of ponds, lakes, or streams." This would indicate that such surface features are necessary for the upland phase of adult southern long-toed salamander. The only such features present within the Rocker Memorial Skate Park site are the boulders at the furthest eastern wetland patch and around the Gravel Area which is the project development area. The boulders in and next to the wetland patch seem to afford perfect upland habitat as described above, but the setting of the perimeter boulders is very dry at nearly all times of year, making them unsuitable or at best only marginally suitable for southern long-toed salamander use or daytime refuge.

Morrison's and Western Bumble Bees

These species nest underground, or in or under organic material on the ground; thus, theoretically suitable nesting habitat exists almost everywhere that is not paved. However, the essential habitat characteristic for these bees is the presence of abundant flower resources of reasonably high species diversity, so that there are nearby foraging opportunities throughout the entire season of activity (Goulson, 2010). The study site has a very limited number of such forb or shrub species, and almost none of the highly preferred genera used by these species (Williams, 2014).

Bumble bees are known to be declining steeply in numbers, and the western bumble bee is a candidate for state endangered status. Reasons for their decline include loss of diverse herbaceous and shrub habitat, use of certain pesticides, and, perhaps above all, a non-native parasite.

3.3.2 PLANTS

Potentially (albeit probably only marginally) suitable habitat occurs within the study site for three special status plant species. This habitat was surveyed at a time of year when the plants would be evident and definitively identifiable, and none of these species were found.

Three-tip Sagebrush

This species is identifed by its leaves, not flower or fruits, so the plant is definitively identifiable at any time from approximately April through October or even November. Nearly all of the regional records are on high, exposed rocky ridges and slopes, however, there is one record in the Lake Van Norden area just outside the edge of a meadow (not found in CNDDB but there is a herbarium specimen, and I have seen the plant in the reported location). No three-tip sagebrush was found at the study area.

Donner Pass Buckwheat

This plant grows on a rather specific type of volcanic-derived soil, though its exact characteristics are not yet precisely known. Most of the occurrences are on steep slopes or open ridges, but there are records in western Truckee in a site that may be sufficiently similar to the Estate Drive to consider that it is potentially suitable habitat. Donner Pass buckwheat is formally keyed out using inflorescences, which are relatively persistent after the July to September flowering dates (later ones at higher elevations). However, it is also just as definitively identifiable from leaves alone, among all regional *Eriogonum* species. No Donner Pass buckwheat was found at the study site.

Plumas Ivesia

This species is found in several locations around Truckee, in modest to major occurrences (>10,000 plants) in Martis Valley and on the Waddle Ranch open space area, and in an even more extensive and populous occurrence at Sardine Meadow, north of Stampede Reservoir (many thousands of plants over hundreds of acres). Scattered occurrences of Plumas ivesia are found throughout parts of Truckee, even in partially disturbed sites within otherwise urbanized areas. It occurs most often on volcanic soils in meadows that are not quite wetlands, similar to portions of the study site. However, no plants of Plumas ivesia were found.

4 IMPACT ASSESSMENT AND MITIGATION

4.1 Project Description

The proposed project is a recreational development of a skate park and vehicle parking. Nearly all of the construction areas (including stormwater management) are located within the already-urbanized Gravel Area, and no direct fills of wetlands are proposed.

4.2 Potential Impacts

4.2.1 SPECIAL STATUS SPECIES

As discussed in Section 3.4, no suitable habitat for most of the regional special status wildlife species is found within the study site, or is found within it only in areas that are proposed to be avoided by proposed development. An observation of willow flycatcher is reported from the restoration parcel to the south, though, as discussed, the most plausible nesting area is sufficiently far from the present study site that disturbance from construction and occupation of the project would be unlikely to have a significant adverse effect .

Suitable habitat for three special status plant species is present within the development footprint, but none of those species were found during floristic botanical survey of the site.

4.2.2 WETLANDS

Although the project proposes to avoid direct fills of any wetland areas, some construction areas approach close to the wetland boundaries. Exactly how close is uncertain due to difficulties aligning the multiple different spatial data sources, but the southeast corner of the asphalt perimeter path probably lies within 10 or 20 feet of the wetland polygon identified as FEW-2. All other construction areas, including those related to stormwater management, are further from wetlands.

All construction projects in the area are subject to during-construction stormwater requirements with respect to control of sediment within the construction area, so that it cannot enter local waters, whether tributary to the Truckee River or not.

In the present case, detailed specifications for prevention of indirect wetland impacts on the wetlands should be evaluated during the development of project approval conditions. This report recommends, in addition to normal sediment controls pursuant to the general permit, that either the entire line of boulders along the southern side of the Gravel be left in place throughout construction, or that exclusion fencing be installed no more than five feet away from (south of) the limit of the improvements as shown in the Preliminary Grading and Drainage Plan, then running northeastward along the parcel boundary to inside right-angle corner where the parcel is narrowest. In addition, from that corner to the east, similar fencing or other physical exclusion measure should be installed ten feet away from the limit of the proposed swale and return to the existing excavated roadside drainage.

4.3 Other Regulatory Consistency

California Fish and Game Code (FGC)

Various sections of the FGC prohibit take of protected species. Fully protected species are included in the CNDDB and are properly treated as special-status species in CEQA analysis. Such species do not occur on the study site, therefore these sections are not applicable to the project.

Section 3503.5 prohibits take or possession of raptors, owls, or the destruction of eggs or occupied nests during the nesting season.

Migratory Bird Treaty Act

Loss of limited numbers of common species of plants or animals is not a significant impact under current CEQA guidelines pertaining to biological resources. However, the MBTA and FGC §3513 prohibit take of migratory birds, which is defined to include destruction of active nests (presumed to contain eggs or nestlings). The implementation of the MBTA's provisions has changed in recent years and may change yet again prior to construction of the project, so it is prudent to assume that compliance with the nesting bird protections of both the federal and state acts requires that no grading, brush clearing (mechanized or otherwise), or tree removal occur during the nesting season without a nesting bird survey that confirms that no occupied nests are present, or contingent mitigation actions if nests are present.

If vegetation removal or ground surface disturbance (any form of grading) are to occur between May 1 and August 15, this report recommends that nesting bird surveys should occur between 7 and 14 days prior to initiation of construction. Nesting surveys for small birds are only fully effective if carried out between dawn and 11 AM; many species become inactive during mid-day.

Survey work should cover all habitat within 100 feet of vegetation removal or ground disturbance, or a greater distance in the case of raptor/owl survey, a distance of 500 feet from the limit of disturbance. In the event that nests are identified, temporary non-disturbance zones should be the same width as the survey buffer (100-500 feet, depending on the species found to be nesting), and a revisit by the biologist, with confirmed observations of fledglings in the nest vicinity, would be required prior to vegetation removal or soil disturbance, unless this were to be delayed past August 15.

5 REFERENCES

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Appendix A:

Botanical Survey Plant List

Appendix A. Plant species observed on the project site, with emphasis on development areas.

Plant species are listed first, by major divisions, then alphabetically by family. Nomenclature is generally according to Baldwin et al. (2012). The names and placements of families and genera in the current Jepson Manual are based upon major changes in angiosperm systematics and phylogeny in recent years. Many may seem unfamiliar but are regarded as the standard for projects carried out in California.

Scientific Name	Common Name	Notes
Pinaceae	**Pine Family**	
Pinus jeffreyii	Jeffrey pine	
ANGIOSPERMS-DICOTYLEDONS	FLOWERING PLANTS	
Apiaceae (Umbelliferae)	**Carrot Family**	
Conium maculatum	poison hemlock	Non-native
Perideridia lemmonii	yampah	
Sanicula tuberosa	sanicle	
Apocynaceae	**Dogbane Family**	
Asclepias fascicularis	milkweed	
Asteraceae (Compositae)	**Sunflower Family**	
Achillea millefolium	yarrow	
Agoseris glauca var. *monticola*	false dandelion	
Antennaria rosea	rosy pussy-toes	
Arnica chamissonis	Chamisso arnica	
Artemisia tridentata ssp. *vaseyana*	mountain sagebrush	
Cirsium andersonii	Sierra thistle	
Cirsium vulgare	common thistle	Non-native
Ericameria nauseosa var. *hololeuca*	(white) rubber rabbitbrush	
Grindelia squarrosa	gumweed	Non-native
Lactuca serriola	prickly lettuce	Non-native
Madia glomerata	mountain tarweed	
Psilocarphus sp.	woolly marbles	
Symphyotrichum spathulatum	western aster	= *Aster occidentalis.*
Taraxacum officinale	common dandelion	Non-native
Tragopogon dubius	salsify, goatsbeard	Non-native
Boraginaceae	**Borage Family**	
Cryptantha affinis	cryptantha	
Phacelia hastata ssp. *hastata*	silver-leaf scorpion-weed	
Plagiobothrys sp.	popcorn flower	

Brassicaceae (Cruciferae)	**Mustard Family**	
Lepidium densiflorum	peppergrass	
Rorippa curvipes	yellow cress (not Tahoe!)	
Sisymbrium altissimum	tumble mustard	Non-native
Caryophyllaceae	**Pink Family**	
Dianthus barbatus	sweet-william	Non-native
Spergularia rubra	purple sand-spurry	Non-native
Chenopodiaceae	**Goosefoot Family**	
Chenopodium sp.	pigweed	Probably a non-native sp.
Salsola tragus	Russian thistle; tumbleweed	Non-native
Ericaceae	**Heath Family**	
Arctostaphylos patula	greenleaf manzanita	
Fabaceae	**Legume Family**	
Acmispon americanus var. *americanus*	bird's-foot trefoil	*=Lotus unifoliolatus/ purshianus*
Lupinus argenteus	silver lupine	
Lupinus grayi	lupine	
Lupinus lepidus	dwarf lupine	
Melilotus alba	sweet-clover	Non-native; invasive; few at southern edge of site.
Geraniaceae	**Geranium Family**	
Erodium cicutarium	cranesbill	Non-native
Grossulariaceae	**Gooseberry Family**	
Ribes cereum	wax currant	
Linaceae	**Flax Family**	
Linum lewisii	Lewis' flax	
Malvaceae	**Mallow Family**	
Malva neglecta		Non-native
Sidalcea oregana		
Onagraceae	**Evening Primrose Family**	
Gayophytum diffusum ssp. *parviflorum*	groundsmoke	
Epilobium brachycarpum	willowherb	
Phrymaceae	**Lopseed Family**	
Mimulus guttatus	monkey flower	

Plantaginaceae	**Plantain Family**	
Collinsia parviflora	blue-eyed Mary	
Penstemon rydbergii ssp. *oreocharis*	penstemon; beard-tongue	
Penstemon speciosus	showy penstemon	
Plantago lanceolata	narrowleaf plantain	
Polemoniaceae	**Phlox Family**	
Allophyllum gilioides		
Collomia tinctoria		
Navarretia sp.		Probably *leucocephala*
Polygonaceae	**Buckwheat Family**	
Eriogonum nudum var. *nudum*	naked stem buckwheat	
Eriogonum umbellatum ssp. *nevadense*	sulfur buckwheat	
Polygonum aviculare ssp. *depressum*	prostrate knotweed	Non-native
Polygonum douglasii	Douglas's knotweed	
Polygonum polygaloides		
Rumex salicifolius	willow dock	
Rosaceae	**Rose Family**	
Geum macrophyllum	big-leaved avens	
Potentilla gracilis	cinquefoil	
Poteridium annuum	western burnet	=*Sanguisorba occidentalis*.
Purshia tridentata	bitterbrush; antelope bush	
Scrophulariaceae	**Figwort Family**	
Verbascum thapsus	woolly mullein	Non-native
Urticaceae	**Nettle Family**	
Urtica dioica	stinging nettle	
ANGIOSPERMS-MONOCOTYLEDONS	FLOWERING PLANTS	
Cyperaceae	**Sedge Family**	
Carex athrostachya		
Carex nebrascensis		
Carex praegracilis		
Juncaceae	**Rush Family**	
Juncus arcticus var. *balticus*	Baltic rush	

Poaceae	**Grass Family**	
Agropyron cristatum	crested wheatgrass	Non-native
Agrostis exarata	bent grass	
Agrostis gigantea	bent grass	
Alopecurus pratensis	meadow foxtail	
Bromus carinatus var. *marginatus*	mountain brome	
Deschampsia cespitosa	hair grass	
Deschampsia danthonioides	annual hair grass	
Elymus elymoides (Sitanion hystrix)	squirrel-tail	
Elymus hispidus (Thinopyrum [Elytrigia] intermedium)	pubescent wheatgrass	Non-native
Elymus trachycaulus ssp. *trachycaulus*	slender wheatgrass	
Hordeum brachyantherum	meadow barley	
Poa secunda	one-sided bluegrass	
Stipa (Achnatherum) occidentale	western needle-grass	

APPENDIX C

Aquatic Resources Delineation

Eco Synthesis
SCIENTIFIC & REGULATORY SERVICES, INC.

Rocker Memorial Skate Park

Aquatic Resources Delineation

Prepared by:
Adrian Juncosa, PhD

Report Date:
September 18, 2021

16173 Lancaster Place, Truckee, CA 96161 · Telephone: 530.412.1601 · E-mail: ajuncosa@ecosynthesis.com

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Summary

This report is a preliminary delineation and description of aquatic resources within the Rocker Memorial Skate Park site, a study area of approximately two acres in Placer County, California. It includes the information needed for verification by the U.S. Army Corps of Engineers by means of either a preliminary or an approved jurisdictional determination, and for other environmental review and permitting purposes.

Determinations at possible wetland areas were carried out according to the 1987 Corps of Engineers (Corps) Wetlands Delineation Manual and 2010 Regional Supplement for the Western Mountains, Valleys, and Coast Region, Version 2.0.

The following areas of aquatic features were found within the study area:

Freshwater Emergent Wetland 0.0594 acre

As best as could be determined from available information, water draining from the site (if and when it does so) ultimately infiltrates before flowing to the Truckee River or any feature that is tributary thereto. All wetland features within the site are therefore isolated waters not falling under the jurisdiction of the (federal) Clean Water Act.

1 INTRODUCTION

1.1 Contact Information

Owner: Truckee Donner Recreation and Parks District

Delineation: EcoSynthesis Scientific & Regulatory Services, Inc.
16173 Lancaster Place
Truckee, CA 96161

Contact: Adrian Juncosa
Telephone: (530) 412-1601
E-mail: ajuncosa@ecosynthesis.com

1.2 Site Information

Project name: Rocker Memorial Skate Park

Corps Number: no number assigned yet

APN: Nevada County 019-450-054 (portion)

Study Area: Approximately 2 acres (1.957 acre as drawn in GIS; may not precisely match AutoCAD area determination)

Location: Study area is within Section 14, T. 17 N, R. 16 E

Latitude/longitude: center of site is at approximately 39.3263 N, -120.1712 W.

Address: Estates Drive, Truckee, CA 96161

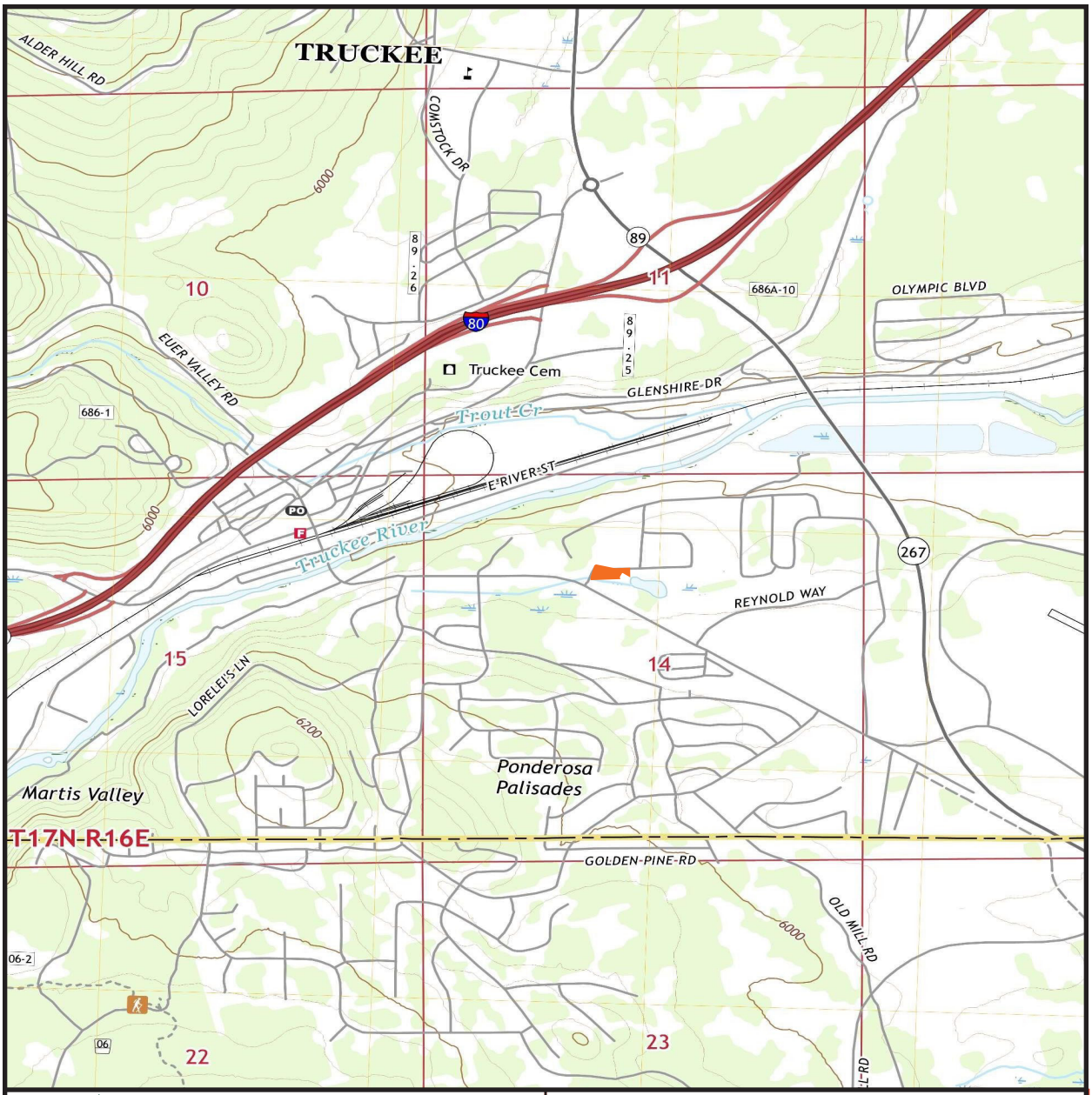
Study dates: Several dates in summer of 2021; data points studied on August 6, 2021

Report date: September 18, 2021

Driving Directions from Sacramento:

Travel I-80 east, exit at Central Truckee, turn right at the end of the off ramp, and exit from the roundabout at the first opportunity. Turn left on West River Street, go approximately 0.5 mile and turn right onto Brockway Road.

Follow this approximately 0.6 mile, past one traffic signal, and turn left onto Estates Drive. Follow this around, curving to the right around the site, opposite the rodeo grounds.



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Scale: Approximately 1:24,000 (1"=2,000')

North

Rocker Memorial Skate Park

Figure 1. Location Map

Project site (approximate)

USGS 7.5-minute Truckee quadrangle

Site Description

The Rocker Memorial Skate Park study area is approximately 2.0 acres, and mostly quite level, at an elevation of approximately 5,850 feet above mean sea level.

The study area is located in a small valley floor on a terrace about 90 feet above the level of the Truckee River. Soils are mostly derived from residuum (rock weathered in place) of volcanic lithology. There is obvious evidence that the site was graded and/or otherwise modified at some point in the distant past. In addition to earthen berms just off site, there is a berm constructed of boulders around two sides of the site, just within the parcel boundary. and about half of the vegetation is dominated by clumps of crested wheat grass, which is a non-native species that was (and still is) often used to seed grazing land in cold, arid sites. The boulder berm and surrounding anthropogenic changes are visible, and apparently already of long standing, in a NAPP aerial photograph from June 1987.

Most of the site is a filled, graded, gravel covered area that is nearly devoid of vegetation over most of its area, with a small area of ruderal non-native forb-dominated vegetation in the northeast corner. Land cover to the east of the gravel area is a mostly grassy upland to mesic meadow of variable species dominance. North and west of the gravel area is a narrow band of Jeffrey pine and bitterbrush-sagebrush shrubland. The southern side of the fill slope of the gravel area was revegetated with native forbs at the time that some wetland restoration work was completed. The restored wet meadow extends a few feet into the study area at several points.

2 METHODS

2.1 Background Information

Preliminary wetland mapping was obtained from the US Fish and Wildlife Service National Wetlands Inventory (NWI) via the on-line Wetlands Mapper application (USFWS, 2019). Information on soils was obtained from the Web Soil Survey on-line application (NRCS, 2019). Climatic information was obtained from the Western Regional Climate Center (WRCC, 2019) and from the National Oceanic and Atmospheric Administration (NOAA, 2020).

2.2 Field Methods

Field work was carried out according to the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987) and Regional Supplement for the Western Mountains, Valleys, and Coast (WMVC) Region, Version 2.0 (ERDC, 2010).

The present study was informed by several visits to the site during the summer of 2021. Wetland determination data points were studied on August 6, 2019.

Specific field methods that were applied to the determination of each of the criteria within the study area are described below.

2.2.1 VEGETATION

Plant species were identified on sight based on extensive (25 years') experience with plant identification within the Town of Truckee and the surrounding region.

The generic names of some plants that are on the national wetland plant list are different from the ones that are found in The Jepson Manual, 2nd Edition (Baldwin et al., 2012), and the Flora of North America North of Mexico (which references do not always agree with one another either). Scientific names provided in this report include synonymy in such cases.

Determinations of plant cover were visual estimates, aided where necessary by cover percentage diagrams originally provided in Forest Service (2001) and also distributed by other entities.

Wetland indicator status assignments were made according to current National Wetland Plant List (Lichvar et al., 2016). This delineation report uses the standard abbreviations as defined below:

OBL obligate (almost always found within wetlands)

FACW facultative-wetland (generally, but not always, found within wetlands)

FAC facultative (found equally within and outside wetlands)

FACU facultative-upland (generally not, but may be, found within wetlands)

UPL upland (rarely found within wetlands)

2.2.2 SOILS

Wetland determination soil test pits were excavated by hand tools to depths of 12-14 inches. Determination of the presence or absence of hydric soils field indicators was made on the basis of

Field Indicators of Hydric Soils in the United States (NRCS, 2017; Version 8.1) and the WMVC Regional Supplement (ERDC, 2010). Due to updates in the names and numbers of hydric soils indicators, there are minor discrepancies between the indicators in NRCS (2017) and those listed on the WMVC data form, but in no case did this impair the hydric soils determination.

2.2.3 HYDROLOGY

Determinations of wetland hydrology or absence thereof were made by means of field indicators described in the Regional Supplement (ERDC, 2010).

2.2.4 BOUNDARIES

The limits of delineated wetlands were determined at the point where one or more mandatory criteria were no longer met.

2.2.5 SURVEY AND MAPPING TECHNOLOGY

Boundaries and data point locations were surveyed with a Trimble GeoXH 6000 GNSS ("GPS") unit. The resulting data were then differentially post-processed using publicly available base station data. Given the open terrain, with no woody overstory or nearby buildings to create multipath signal reception, satellite reception was excellent and the post-processed points were overwhelmingly (>78 percent) determined by the Trimble Pathfinder Office software to be within the 5-15 cm accuracy range. Field work was exported in California State Plan zone 2, US survey feet, and reprojected to WGS 1984 for the contents of this report and digital submittals.

3 RESULTS

This section includes information on the site's environmental setting and specific information on each of the mandatory wetland criteria (vegetation, soils, and hydrology) and observations at the data points, followed by a description of the wetlands that were delineated.

The NWI mapping from Wetlands Mapper is provided in Figure 2. NRCS soil survey mapping is shown in Figure 3 (page 9). The aquatic resources mapping is provided in Figure 4 (page 12). A list of plant species relevant to the determination of wetlands and other waters is provided in Table 1, and acreages of delineated features are summarized in Table 2. Wetland determination data forms are found in Appendix A.

3.1 Wetland Criteria

3.1.1 VEGETATION

Vegetation at areas studied by means of three-parameter wetland determination data points is described on the data sheets (Appendix A) and in Section 3.2, which discusses the reasons for non-wetland determinations. Plant species observed at data points are listed in Table 1. Two species could not be definitively identified in summer, though the overwhelmingly most likely species identifications are known, or would not affect the vegetation determination.

Table 1. Plant species that were observed at and near wetland determination data points. No attempt was made to include wetland species from the large wetland south of the site, a tiny portion of which extends into the site at the southwest corner. Nomenclature follows Baldwin et al. (2012) with some updates from UCJEPS Jepson Interchange. Wetland indicator status is from Lichvar et al. (2016).

Scientific Name	Common Name	Wetland Status
Achillea millefolium	yarrow	FACU
Agropyron cristatum	crested wheatgrass	UPL
Alopecurus pratensis	meadow foxtail	FAC
Arnica chamissonis	Chamisso arnica	FACW
Carex nebrascensis	Nebraska sedge	OBL
Deschampsia cespitosa	hairgrass	FACW
Deschampsia danthonioides	annual hairgrass	FACW
Elymus trachycaulus	slender wheatgrass	FAC
Epilobium brachycarpum	tall annual willow-herb	UPL
Gayophytum diffusum	spreading groundsmoke	UPL
Hordeum brachyantherum	meadow barley	FAC
Juncus (arcticus var.*) balticus*	Baltic rush	FACW
Lotus purshianus/unifoliolatus	American bird's-foot trefoil	FACU
Madia glomerata	mountain tarweed	FACU
Navarretia (leucocephala)	whitehead navarretia	OBL
Penstemon rydbergii	Rydberg's beardtongue	FACU
Poa secunda	one-sided bluegrass	FACU
Polygonum aviculare	prostrate knotweed	FAC
Polygonum douglasii	Douglas' knotweed	FACU
Polygonum polygaloides	milkwort knotweed	FACW
Potentilla gracilis	slender cinquefoil	FAC
Psilocarphus (brevissimus/tenellus)	woolly marbles	FACW/OBL
Rorippa curvipes	bluntleaf yellowcress	FACW
Sisymbrium altissimum	tumble mustard	UPL
Symphyotrichum spathulatum	western mountain aster	FAC

U.S. Fish and Wildlife Service
National Wetlands Inventory

Rocker Memorial Skate Park Area NWI
Figure 2. NWI Map

September 24, 2021

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

3.1.2 SOILS

Results from Soil Survey

The following soil types occupy the wetland study area (with map symbol in Figure 3 and acreage):

Kyburz-Trojan complex, 9 to 30 percent slopes (1.2 acres)

Aquolls and Borolls, 0 to 5 percent slopes (0.8 acres)

Given that the site is relatively level, the mapping of a soil complex with slopes of 9 to 30 percent slopes is clearly incorrect, however, some observed soils corresponded reasonably well to Kyburz series.

Kyburz-Trojan soils are mapped over nearly all of the study area. Both of the major series are moderately or very deep to volcanic rock (weathered or fractured), with an argillic B horizon and moderately slow permeability. The data explorer on WebSoilSurvey indicates that restrictive horizons would generally be found at great depth (up to 2 meters) though fractured or weathered rock are expected at shallower depths.

Rock was encountered at a shallow depth (12 inches) at DP-2, which may correspond better to one or another of the inclusions (such as Aldi soil) that are noted in the soil survey. Also, a layer of probable diatomaceous clay (not confirmed by microscopic observation) was encountered at DP-4. Such clays are encountered at variable depths in other Kyburz soils within Town limits, including the parcel immediately to the east of the present study area (where the determination was confirmed microscopically). They are derived from igneous-silicaceous-enriched paleolacustrine sediments and may or may not function as a horizon that is restrictive to infiltration of water.

Aquolls and Borolls are not soil series, but rather suborders of Mollisols, which have a relatively thick, dark colored humus-rich surface horizon. Aquolls are poorly drained valley floor or drainageway soils with an aquic moisture regime (thus are almost always wetlands, unless artificially drained). Borolls are described in the 1994 soil survey as poorly drained soils on the periphery of wet meadows. This suborder is now replaced by Cryolls, and those referred to in the local soil survey would be Aquic Argicryolls: soils with an aquic (hydric) moisture regime, a clay layer, a cold climatic regime, and a thick dark surface layer. Aquolls and Borolls may include strata of variable permeability but, even with slow or even moderate permeability in some layers, may remain inundated or saturated during all or part of the year on the basis of surface or subsurface inflows.

Hydric Soils List

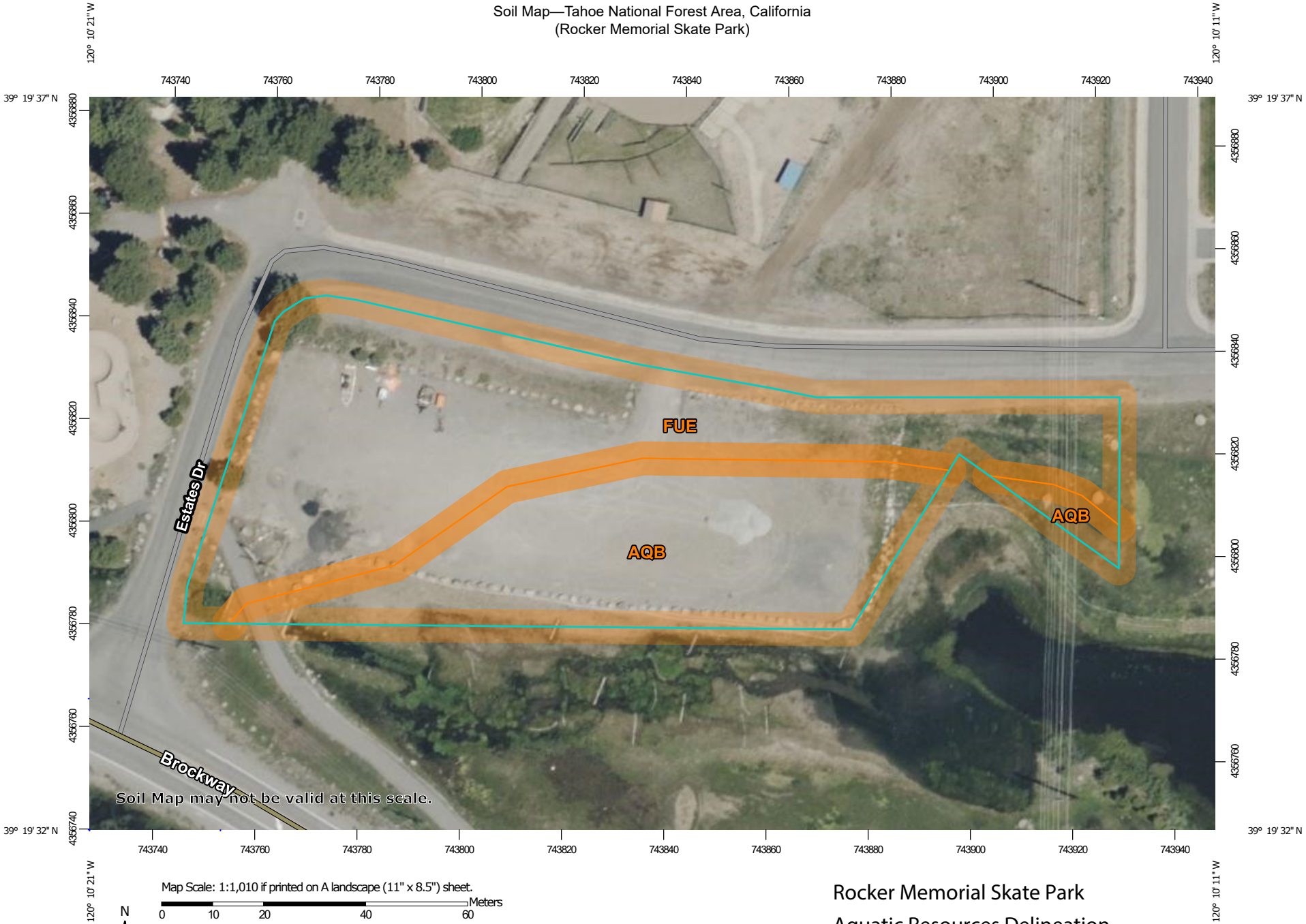
Aquolls and Borolls are listed as hydric soils.

Field Observations

Hydric soils determinations were made in the field in accordance with NRCS (2017).

All of the hydric soils observed at the site exhibited low chroma matrix and distinct or prominent redox concentrations within 12 inches of the surface (indicator F6, redox dark surface). As is typical in relatively flat terrain, hydric soils often extended beyond the boundary of hydrophytic vegetation.

Soil Map—Tahoe National Forest Area, California
(Rocker Memorial Skate Park)



Map Scale: 1:1,010 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 10 20 40 60

Feet
0 45 90 180 270

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

Rocker Memorial Skate Park
Aquatic Resources Delineation
Figure 3. Soil map with approximate study area

3.1.3 HYDROLOGY

The study site is in hydrologic unit 16050102 (Truckee).

Detailed and long-term ("normal") precipitation records are not all available for the same stations. Average precipitation for the Truckee Ranger Station for 1904-2016 (WCDC, 2021) is 30.15 inches; for October-June, 28.83 inches. Summaries from National Centers for Environmental Information for 1981-2010 for the same station are 31.24 inches annual and 29.66 inches for October-June.

Precipitation at the Truckee-Tahoe Airport (about 1.2 mile from the site) for the period of October 1, 2020, through June 30, 2021, totaled 11.97 inches (NOAA, 2020), thus, much lower than either longer term average. For a delineation study site where the determinations of mandatory criteria were dependent largely on annual plants and current-season hydrology indicators such as sediment or drift deposits, the abnormally low antecedent precipitation would be possible cause to consider deviating from the usual indicators in making criterion determinations. However, for the present study site, almost all of the dominant plants are perennial (thus, dominance not significantly affected by a single low precipitation year), and hydric soils indicators are likewise not highly sensitive to single dry years. In no case was any site determined to be non-wetland solely on the basis of absence of wetland hydrology indicators. Accordingly, we are confident that the aquatic resources delineation reported herein is accurate notwithstanding the very low precipitation in the preceding nine months.

Total topographic relief of the site is only about six feet, from a low of 5,850 at the northeast corner to about 5,856 in the western part of the graded gravel parking area that dominates the site in area.

Nearby and Downstream Waters

The nearest blue line water body on the USGS map is the Truckee River, about 0.23 mile to the north of the site along the pathway of flow from the excavated roadside ditch within and right on the boundary of the Estates Drive right of way. Most of the site, including the majority of the project elements, slopes so that flow would ultimately enter this ditch and flow to the Truckee River via the municipal storm drainage system. However, the wetlands that extend to just within the eastern and southern boundaries of the study area drain in a generally easterly, then northerly, direction through a neighborhood and a detention basin, then the flow (if any) ultimately infiltrates into the soil before arriving at the exterior berm of another, much larger, constructed basin. Available information indicates that, in order for any outflow from the first detention/ infiltration basin to flow around the berm creating this second basin, it would need to flow uphill. Therefore there is no surface connection between the wetlands on site and the Truckee River. The entire wetland complex from the south side of Brockway Road all the way past River View Drive is apparently isolated from any navigable or interstate surface waters.

3.2 Discussion of Wetland Determination Data Points

Three-parameter wetland determination data points were studied at four locations (see Figure 4, Aquatic Resources Delineation Map). Data forms for the wetland determination data points that were studied are included in Appendix A.

Point DP-1 was the only one that met all three mandatory wetland criteria; the other three lacked hydric soils and wetland hydrology, though DP-2 and DP-3 had a prevalence of hydrophytic vegetation.

3.3 Observed Wetlands

Wetlands observed on the Rocker Memorial Skate Park site are listed in Table 2, with the applicable FGDC (2013) categories of wetlands and deepwater habitats of the U.S. The large off-site wetland to the south, of which the small mapped wetland patches within the southern site boundary are the tips, exhibits a pronounced topographic and vegetation boundary at the limit of FACW/OBL dominated vegetation. Indicators of ponding were observed, including perennial surface water in its interior, suggesting that the most correct terminology for this wetland would be Freshwater Emergent Wetlands rather than Wet Meadow (largely saturation supported).

Table 2. Summary of wetlands delineated at the site. All mapped wetland areas are contiguous off site but are labeled with individual identifiers in the event this is helpful in stating the applicability of any project design or construction conditions.

DESCRIPTION	MAP IDENTIFIER	AREA (acres)	FGDC (COWARDIN) CATEGORY AND DOMINANT SUBSTRATE
Palustrine			
Intermittently exposed	FEW-1	0.0441	Palustrine emergent wetland persistent
Intermittently exposed	FEW-2	0.0008	Palustrine emergent wetland persistent
Intermittently exposed	FEW-3	0.0014	Palustrine emergent wetland persistent
Intermittently exposed	FEW-4	0.0003	Palustrine emergent wetland persistent
Intermittently exposed	FEW-5	0.0054	Palustrine emergent wetland persistent
Intermittently exposed	FEW-6	0.0074	Palustrine emergent wetland persistent
Total:	**Freshwater Emergent Wetland**	**0.0594 acre**	**Palustrine emergent wetland persistent**

3.4 Commerce and Recreation

The site described in this report is public land with no known current commercial or recreational use other than occasional event parking or traveling carnival use.

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Rocker Memorial Skate Park
Aquatic Resources Delineation
Figure 4. Aquatic Resources Map

Scale approximately 1:1,000 North
Base image is from Google Earth.

Acreage Table:

FEW-1	0.0441
FEW-2	0.0014
FEW-3	0.0008
FEW-4	0.0003
FEW-5	0.0054
FEW-6	0.0074
Total:	0.0594 acre
Study area:	1.957 acres

All of the mapped wetland features are contiguous outside the study area, and this large wetland is not tributary to the Truckee River by surface flow.

Notes:

All layers projected in State Plane, California Zone 2, datum NAD 1983. Parcel boundary shown here was edited from County shapefile in part relying on pdf figures exported from AutoCAD and provided by Millenium Planning & Engineering.

Nevada County GIS parcel boundary did not align with land survey landmarks found in the field and recorded with accuracy of better than 6" according to Trimble hardware and software.

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Appendix A:

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Rocker Memorial Skate Park City/County: Town of Truckee Sampling Date: 6 August 2021

Applicant/Owner: Truckee Donner Recreation and Park District State: CA Sampling Point: DP-1

Investigator(s): Adrian Juncosa Section, Township, Range: Sect. 14, T. 17 N, R. 16 E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): <2

Subregion (LRR): C Lat: 39.32639 Long: -120.17031 Datum: WGS 84

Soil Map Unit Name: Aquolls and Borolls, 0 to 5 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:
Site was examined during the dry season. Data point location is in the lowest elevation area of this (eastern) portion of the site.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 150 sf)			
1. Carex nebrascensis	30	Y	OBL
2. Hordeum brachyantherum	30	Y	FAC
3. Juncus arcticus var. balticus	8	N	FACW
4. Poa secunda	2	N	FACU
5. Potentilla gracilis	5	N	FAC
6. Arnica chamissonis	T	N	FACW
7. Penstemon rydbergii	T	N	FAC
8. Psilocarphus brevissimus	T	N	OBL
9. Rorippa curvipes	T	N	OBL
10. Navarretia (leucocephala)	T	N	OBL
11.			
	76 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 24

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: DP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10 YR 2/2	100					high organic	High live, dead, fibric, and sapric OM
2-10	10 YR 2/1.5	95	7.5 YR 3/4	5	C	M,PL	CL	
10-14	10 YR 2/1	97	7.5 YR 4/4	3	C	PL	L	Very pale and low density when dry

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

Very large topographic depression, but still technically meets F8.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Rocker Memorial Skate Park City/County: Town of Truckee Sampling Date: 6 August 2021

Applicant/Owner: Truckee Donner Recreation and Park District State: CA Sampling Point: DP-2

Investigator(s): Adrian Juncosa Section, Township, Range: Sect. 14, T. 17 N, R. 16 E

Landform (hillslope, terrace, etc.): extremely shallow valley Local relief (concave, convex, none): concave Slope (%): <2

Subregion (LRR): C Lat: 39.32642 Long: -120.17035 Datum: WGS 84

Soil Map Unit Name: Aquolls and Borolls, 0 to 5 percent slopes (but is Kyburz-Trojan soil) NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____ No X	
Wetland Hydrology Present?	Yes _____ No X	

Remarks:

Site was examined during the dry season. Data point location is at an elevation roughly 8-12" higher than DP-1.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 150 sf)			
1. Juncus arcticus var. balticus	90	Y	FACW
2. Potentilla gracilis	6	N	FAC
3. Alopecurus pratensis	4	N	FAC
4. Sisymbrium altissimum	T	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Juncus does not seem to have flowered in years, not very vigorous plants. This species can persist vegetatively, and even be dominant, for decades after the wetland conditions that prevailed have become slightly drier.

SOIL

Sampling Point: DP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10 YR 2/2	100					GrC	
12	Fractured rocks							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** X

Remarks:

No field indicators of hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No field indicators of wetland hydrology.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Rocker Memorial Skate Park City/County: Town of Truckee Sampling Date: 6 August 2021

Applicant/Owner: Truckee Donner Recreation and Park District State: CA Sampling Point: DP-3

Investigator(s): Adrian Juncosa Section, Township, Range: Sect. 14, T. 17 N, R. 16 E

Landform (hillslope, terrace, etc.): extremely shallow valley Local relief (concave, convex, none): concave Slope (%): <2

Subregion (LRR): C Lat: 39.32638 Long: -120.17039 Datum: WGS 84

Soil Map Unit Name: near Aquolls and Borolls/Kyburz-Trojan boundary NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____ No X	
Wetland Hydrology Present?	Yes ____ No X	

Remarks:
Higher elevation than DP-1.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: 150 sf)			
1. Carex nebrascensis	70	Y	OBL
2. Elymus trachycaulus	15	N	FAC
3. Potentilla gracilis	15	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species ____	x 1 =	____
FACW species ____	x 2 =	____
FAC species ____	x 3 =	____
FACU species ____	x 4 =	____
UPL species ____	x 5 =	____
Column Totals: ____ (A)		____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: DP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-1	10 YR 2/2	100					CL	
1-10	10 YR 2/1.5	100					CL	Flecks of redox, <1%
10-13	10 YR 2/1	100					L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No field indicators of hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No field indicators of wetland hydrology.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Rocker Memorial Skate Park City/County: Town of Truckee Sampling Date: 6 August 2021

Applicant/Owner: Truckee Donner Recreation and Park District State: CA Sampling Point: DP-4

Investigator(s): Adrian Juncosa Section, Township, Range: Sect. 14, T. 17 N, R. 16 E

Landform (hillslope, terrace, etc.): extremely shallow valley Local relief (concave, convex, none): none Slope (%): <2

Subregion (LRR): C Lat: 39.32646 Long: -120.17081 Datum: WGS 84

Soil Map Unit Name: Kyburz-Trojan complex, 9 to 30 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation X, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

Lowest point in large gravel parking area, to which any runoff from the rest of the area drains. Graded (original vegetation removed) and possibly filled in places in the past. Completely altered soil profile with considerable angular gravel (commercial drain rock).

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 150 sf)			
1. Polygonum aviculare	15	Y	FAC
2. Epilobium brachycarpum	15	N	UPL
3. Sisymbrium altissimum	15	N	FACU
4. Madia glomerata	5	N	FACU
5. Acmispon americanus (Lotus unifoliolatus)	3	N	FACU
6. Poa secunda	1	N	FACU
7.			
8.			
9.			
10.			
11.			
	54 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 46

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species 15	x 3 = 45
FACU species 24	x 4 = 96
UPL species 15	x 5 = 75
Column Totals: 54 (A)	216 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: DP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	7.5 YR 2.5/2	100					ExtrGrC	Mixture of commercial gravel and original Bt horizon

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** X

Remarks:

No field indicators of hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No field indicators of wetland hydrology. Possibly ponds briefly during snowmelt (prior to growing season) or heavy precipitation, but not for sufficient duration to create indicators of wetland hydrology.

APPENDIX D
Cultural Resources Inventory

ROCKER MEMORIAL SKATEPARK PROJECT

CULTURAL RESOURCE INVENTORY

Report prepared by

Susan Lindström, Ph.D. (RPA), Consulting Archaeologist

Truckee, California

Report prepared for

Millennium Planning & Engineering

Grass Valley, California

On behalf of

Colin Robinson, Director, Rocker Memorial Skatepark

Truckee, California

August 2021

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SUMMARY

The project sponsor plans to develop an approximate two-acre area with a new skatepark and adjacent parking lot. The parcels (APN 19-450-054 and 019-450-014) are located near the intersection of Estates Drive and Brockway Road, Truckee, California (Nevada County).

As part of baseline environmental studies, the project applicant is required to consider potential project impacts on cultural resources under the California Environmental Quality Act (CEQA Section 5024, Public Resource Code). Wetlands adjoin the project area on the south, which the project would work around to avoid any disturbance. However, should project activities involve these wetlands and thereby the waters of the United States, the applicant would obtain a permit from the U.S. Army Corps of Engineers, in accordance with 33 CFR Part 325, Appendix C. Federal studies must comply with 36 CFR 800 regulations implementing Section 106 of the National Historic Preservation Act of 1966. Section 106 of the act requires the federal government to consider the effects of an undertaking on cultural resources listed on or eligible for inclusion in the National Register of Historic Places within the project area of potential effect (APE).

Under these state and federal regulations, cultural resource studies are customarily performed in a series of phases, each one building upon information gained from the prior study. The inventory phase (*Phase 1*) involves pre-field research and Native American contact (*Phase 1A*), archaeological field reconnaissance/resource discovery (*Phase 1B*), and documentation of any cultural resources located within the project area (*Phase 1C*). If cultural properties are present and if they may be subject to project-related impacts, their significance is evaluated (*Phase 2*) according to eligibility criteria established in the California Register of Historical Resources and/or National Register of Historic Places. If project redesign to avoid impacts to significant resources is unfeasible, then mitigation measures are implemented (*Phase 3*). Mitigation (or data recovery) typically involves supplemental archival research, field excavation, photo documentation, mapping, archaeological monitoring, interpretation, etc.

To accomplish these tasks, Millennium Planning & Engineering, on behalf of Colin Robinson, Director, Rocker Memorial Skatepark, contacted Susan Lindstrom, Ph.D., Consulting Archaeologist. Her qualifications to perform these tasks include over four decades of professional experience in regional prehistory and history, a doctoral degree in anthropology/archaeology, accreditation since 1982 by the Register of Professional Archaeologists (formerly Society of Professional Archaeologists), and certification by the Secretary of Interior's Professional Qualifications Standards (48 FR 44738-44739) for archaeology, history and related disciplines.

Study findings conclude that no cultural resources were detected in the *Phase 1A* prefield records search and no immediate Native American concerns were identified. The entire project area was subject to a *Phase 1B* intensive archaeological field reconnaissance and no cultural resources were encountered. With the completion and submittal of this report, state, county and federal requirements for a cultural resource study have been accomplished and no further archaeological study is recommended.

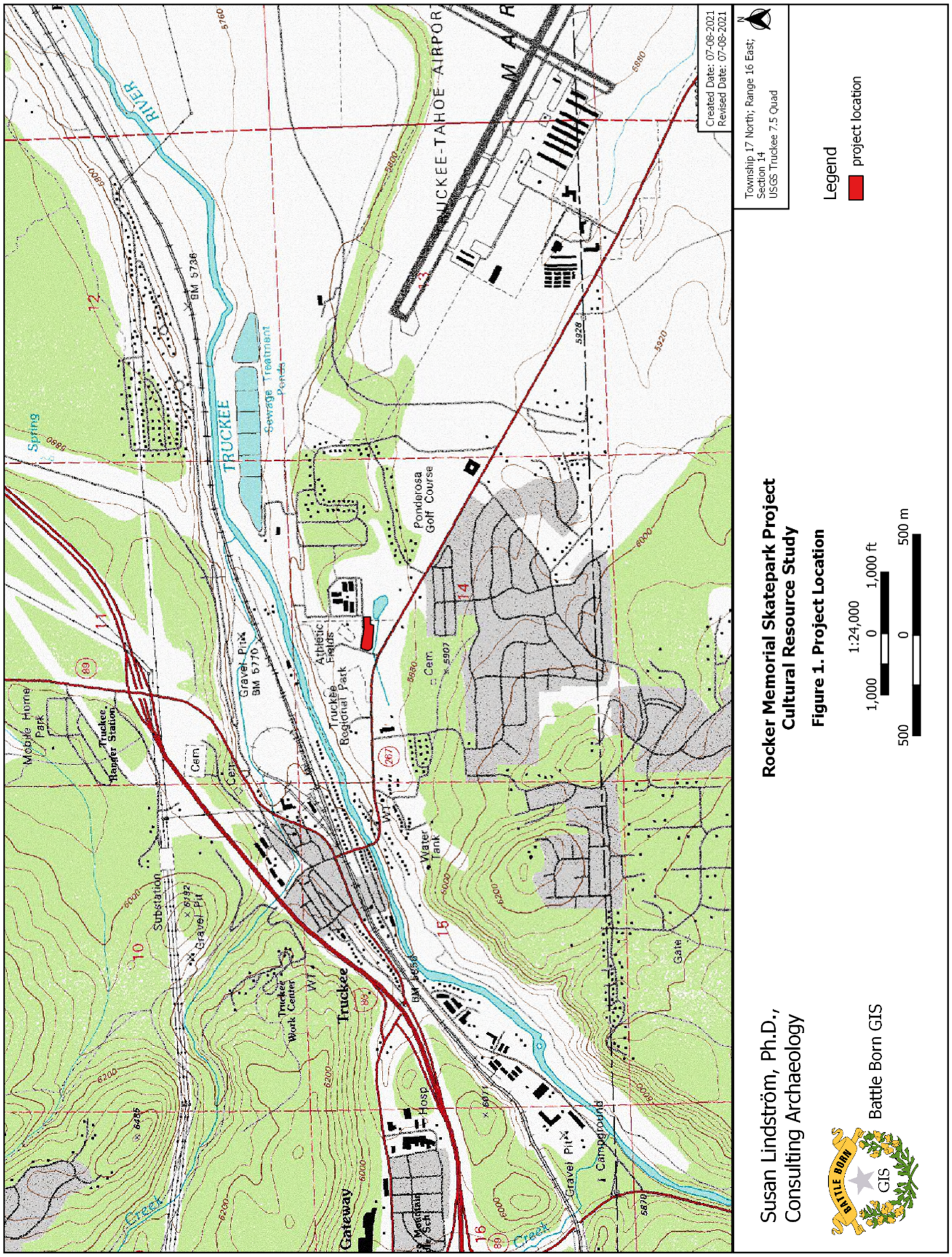
PROJECT BACKGROUND

PROJECT DESCRIPTION AND LOCATION

The project sponsor plans to develop an approximate two-acre area with a new skatepark and adjacent parking lot. The parcels (APN 19-450-054 and 019-450-014) are located near the intersection of Estates Drive and Brockway Road, Truckee, California (Nevada County). The project falls within Township 17 North, Range 16 East, Section 14 M.D.M., Truckee 7.5' Quad (figures 1 through 3). The parcels are bounded by Estates Drive on the north and west, across from the Truckee Rodeo Grounds and existing skatepark, and the intersection of Old Brockway Road, Estates Drive and the Truckee River Legacy Trail on the southwest. Wetlands border the project on the south.

PROJECT AUTHORITY AND SCOPE

In compliance with guidelines established by Nevada County under the California Environmental Quality Act (CEQA Section 5024, Public Resource Code), the project sponsor is required to consider potential project impacts on cultural resources within a proposed project area. Wetlands adjoin the project area on the south, which the project would work around to avoid any disturbance. However, should project activities involve these wetlands and thereby the navigable waters of the United States, the applicant would obtain a Section 404 permit from the U.S. Army Corps of Engineers (USACE). To comply with the Department of Army authorization under Section 10 of the Rivers and Harbors Act and process the permit, a cultural resource report sufficient to initiate consultation for compliance with Section 106 of the National Historic Preservation Act of 1966 (as amended) is required, to be prepared in accordance with the Sacramento District Guidelines for Compliance with Section 106 of the National Historic Preservation Act. (http://www.spk.usace.army.mil/Portals/12/documents/regulatory/sec-106-tribal/FINAL2014-03-24Section-106-Guidelines.pdf. Section 106 of the act requires the federal government to consider the effects of an undertaking on cultural resources listed on or eligible for inclusion in the National Register of Historic Places within the project area of potential effect (APE). In accordance with 33 Code of Federal Regulations (CFR) Part 325, Appendix C, the "permit area" or APE for an activity would include the area to be disturbed by the proposed project and all construction and staging areas. The APE encompasses the horizontal surface area and vertical area extending below ground to the depth of any project excavation.


Rocker Memorial Skatepark Project
Cultural Resource Study
Figure 1. Project Location
1:24,000
1,000 0 1,000 ft
500 0 500 m
Legend
project location
Township 17 North; Range 16 East; Section 14
USGS Truckee 7.5 Quad
Created Date: 07-08-2021
Revised Date: 07-08-2021
Susan Lindström, Ph.D.,
Consulting Archaeology
Battle Born GIS


Rocker Memorial Skatepark Project
Cultural Resource Study
Figure 2. Project Location
1:1,600
100 0 100 ft
50 0 50 m
Legend
project location
Township 17 North; Range 16 East; Section 14
USGS Truckee 7.5 Quad
Created Date: 07-06-2021
Revised Date: 07-06-2021
N
Susan Lindström, Ph.D., Consulting Archaeology
Battle Born GIS

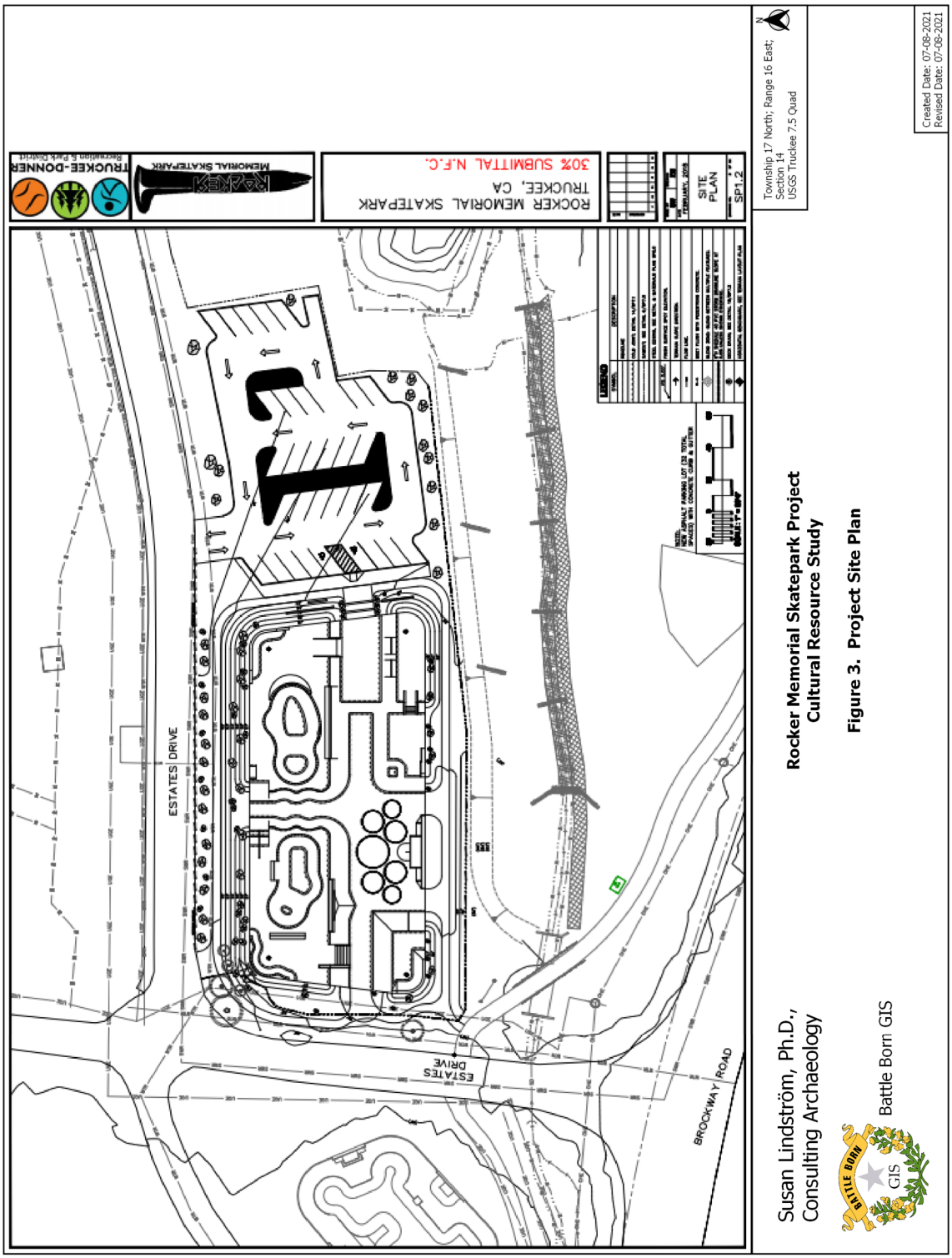

ROCKER MEMORIAL SKATEPARK
TRUCKEE, CA
30% SUBMITTAL N.F.C.
SITE PLAN
SP1.2
Township 17 North; Range 16 East;
Section 14
USGS Truckee 7.5 Quad
Created Date: 07-08-2021
Revised Date: 07-08-2021
ESTATES DRIVE
BROCKWAY ROAD
Rocker Memorial Skatepark Project
Cultural Resource Study
Figure 3. Project Site Plan
Susan Lindström, Ph.D.,
Consulting Archaeology
Battle Born GIS

Photo 1. Project overview (view southwest); Estates Drive (foreground)

State Guidelines

The CEQA process is outlined in CEQA Guidelines Section 15060-15065. For the purposes of CEQA, significant "historical resources" and "unique archaeological resources" are defined as (Section 15064.5[a]):

> (1) A resource listed in or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4850 et seq.).
>
> (2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
>
> (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 may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

Federal Guidelines

The National Historic Preservation Act of 1966 (as amended 16 USC§ 470 *et seq*.) is the primary federal legislation that outlines the federal government's responsibility to cultural resources. Section 106 of the Act requires the federal government to take into consideration the effects of an undertaking on cultural resources listed in or eligible for inclusion in the National Register of Historic Places. Those resources that are on or eligible for inclusion on the National Register are referred to as historic properties. The Section 106 process is outlined in the federal regulations at 36 Code of Federal Regulations Part 800. These regulations describe the process that the federal agency takes to

identify cultural resources and the level of effect that the proposed undertaking would have on historic properties. In summary, an agency must first determine if the action is the type of action that has the potential to affect historic properties. If the action is the type of action to affect historic properties, the agency must identify the project area, determine if historic properties are present within that area, determine the effect that the undertaking would have on historic properties, and consult with the State Historic Preservation Office (SHPO), to seek concurrence on the agency's findings. In addition, the agency is required through the Section 106 process to consult with American Indian tribes concerning the identification of sites of religious or cultural significance and consult with individuals or groups who are entitled to be consulting parties or have requested to be consulting parties.

A cultural resource is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. Cultural resource studies are customarily performed in a series of phases, each one building upon information gained from the prior study.

> PHASE 1 INVENTORY: First, archival research and an archaeological field reconnaissance are performed to inventory and record known cultural resources and identify potential project constraints. *Phase 1A* of the inventory involves prefield research, Native American consultation and the required records search at the appropriate archaeological clearing house. A *Phase 1B* field survey to identify surface sites, features, buildings, and/or artifacts follows. If cultural resources are discovered, and based upon their number and complexity, a subsequent task and cost proposal is prepared to complete *Phase 1C* cultural resource recording.
>
> PHASE 2 EVALUATION: Once cultural properties are recorded and if they may be subject to project-related impacts, their significance is evaluated according to criteria established in the California Register of Historical Resources and/or National Register of Historic Places. For significant resources, a determination of project impacts is assessed and detailed measures to mitigate impacts are proposed. If project redesign to avoid impacts is unfeasible, then mitigation measures are recommended to recover the significant information contained within these cultural properties prior to project ground disturbance activities.
>
> PHASE 3 IMPACT MITIGATION AND DATA RECOVERY: A final phase may involve the implementation of mitigation measures recommended during the prior evaluation phase. Mitigation, or data recovery, typically involves additional archival research, field excavation, photo documentation, mapping, archaeological monitoring, etc.

Objectives for this study were designed only to complete the *Phase 1A* prefield research and *Phase 1B* field inventory.

SETTING

PHYSICAL ENVIRONMENT

The project area is situated in the Truckee Basin, an alluviated structural basin west of the Carson Range and east of the main crest of the Sierra Nevada. Low hills and ridges are Tertiary and Pleistocene volcanic rocks (Birkeland l963) and valley floors are covered with relatively flat-laying alluvial, glacial and glacio-fluviatile deposits (Birkeland l964). Pleistocene volcanic activity occurred between 2.3 and l.2 million years ago. These flows are correlated with the Lousetown Formation, a series of early Quaternary basaltic rocks extruded from several local vents that underlie

much of the Truckee Basin and its flanks (Birkeland l963). The presence of tool stone-quality basalt in the region attracted prehistoric populations into the general area for stone tool manufacture. However, basalt occurring naturally within the project area is coarse-grained and unsuitable tool stone. Holocene glaciation within the past 10,000 years was limited to the advance of small cirque glaciers. Residual boulders from this glacial activity were modified as bedrock mills to process plant and animal foods. Large volcanic boulders present on the project are displaced and have been relocated from elsewhere. Project topography is flat, with elevations ranging around 5,850 feet. The entire project area has been graded. Fill along the project perimeter ranges up to six feet high above the wetland on the south and two to four feet on the north near Estates Drive.

The study area lies within Storer and Usinger's (l97l) Yellow Pine/Jeffrey Pine Belt. In the Truckee Basin Jeffrey pine (*Pinus jeffreyi*) dominates forest stands and shares dominance with ponderosa pine (*P. ponderosa*) and lodgepole pine (*P. murrayana*). Understory species include sagebrush (*Artemesia tridentata*), bitterbrush (*Pursia tridentata*), current (*Ribes* spp.), and assorted forbs and grasses. It is doubtful that modern plant (or animal) communities closely resemble their pristine composition due to historic and modern disturbance. The entire project area has been graded and is devoid of vegetation. A few Jeffrey pines, and an assortment of native shrubs and grasses grow in fill areas around the project perimeter.

There is no running water on the project parcel; however, wetlands border the project on the south. They may be an extension of natural wetlands located farther to the south and bisected by Brockway Road (former State Route 267) that have been artificially augmented in more recent times (Gary Davis, JK Architecture Engineering, personal communication July 2020 in Lindtröm 2020). The current alignment of the Brockway Road was constructed in 1960 (Lindström 2009). It was improved as a raised causeway ca. late 1960s-early 1970s (Bob Sutton, personal communication 2009 in Lindström 2009). The causeway crossed a native wetland that centered upon a spring emanating from the hillside south of Brockway Road and east of Hilltop (Bucar, personal communication 2009 in Lindström 2009). The Truckee Donner Public Utility District has incorporated this spring into its "Southside Complex" facility, which is located southeast of the intersection of Brockway Road and Palisades Drive (about ¼ mile west of the project area). A modern ditch extends about 1,000 feet northeast of this facility and diverts water under Brockway Road near the intersection of Estates Drive. The ditch collects water from sources near Hilltop, as well as draining roadsides along Palisades Drive and Brockway Road (Bucar, personal communication 2009 in Lindström 2009). The ditch empties into an artificial pond due south and outside the project area. Pond water may also be supplied by ground water (Bucar, personal communication 2009 in Lindström 2009). The pond stores irrigation water for the Ponderosa Golf Course, which commenced operations in 1961 (Bucar, personal communication 2009 in Lindström 2009). Both the irrigation pond and ditch are shown in their modern form on USGS quadrangles dating from 1969. The pond does not appear on the 1955 quad map. Rather a different body of water (barely one-tenth the size of the current irrigation pond) appears south of Brockway Road and in proximity to the spring at the TDPUD's Southside Complex. This small pond south of the road is not shown on the USGS 1940 Truckee Quad, yet it appears as a sump or wet meadow on the 1897 map edition. It is possible that water introduced via the ditch and stored in the golf course irrigation pond has influenced the creation, expansion and/or intensification of the wetland that currently exists between the north side of Brockway Road and the southern boundary of the project.

Photo 2. Overview of wetland bordering project area on the south and elevated fill comprising the southern perimeter of the project area (view east); pond (back right)

NATIVE AMERICAN PERIOD

Prehistory

The cultural setting of this report is adapted from Lindström and Waechter (1996) and Waechter and Lindström (2014).

A large view divides the prehistory of the Sierra Nevada and adjoining regions into intervals marked by changes in adaptive strategies that represent major stages of cultural evolution (Elston1982,1986).

Current understanding of northern Sierra Nevada and western Great Basin prehistory is framed within a chronological sequence spanning nearly 12,000 years that is drawn from paleoclimatic and archaeological studies throughout the western Great Basin, eastern Sierra front and the Tahoe-Truckee area (especially see Elston 1971, 1982, 1986; Elston et al. 1977, 1994, 1995; Heizer and Elsasser 1953; Grayson 1993, and as summarized by Waechter and Lindström 2014). In broadest terms, the archaeological signature of the Tahoe Sierra marks a trend from hunting-based societies in earlier times to more dispersed populations that were increasingly reliant upon diverse resources by historic contact. The change in lifeways may be attributed partially to factors involving paleoclimatic fluctuations, a shifting subsistence base, and variable demographics.

Pre-Archaic remains suggest occupation by at least 9,000 years ago in the Tahoe Sierra during the Late Pleistocene/Early Holocene (~12,500-8,000 years ago) as glaciers retreated, pluvial lakes

shrank, and climates warmed (Elston's et al. 1977 "Tahoe Reach Phase"). Early populations were highly mobile in the pursuit of large game animals.

Pre-Archaic to Early Archaic occupation dates from about 7,000-5,500 years ago during the Middle Holocene (~8,000 to 5,500 years ago). Increased warming and drying caused diminished creek flows and lake levels in Tahoe and other regional lakes to drop, allowing trees to grow in areas that were once inundated (Lindström et al. 2000). This period is characterized by a decrease in the number of archaeological sites that may reflect declining resources and populations in the Tahoe Sierra.

The "Early" Late Holocene dating between 5,500 and 2,000 years ago (Elston's et al. 1977 "Early Martis Phase") witnessed the end of the Mid-Holocene droughts, with a consequent expansion of forests and woodlands and a rise in Lake Tahoe and other regional lakes and streams that drowned ancient forests along the shoreline (Lindström et al. 2000). This was the most intensive period of prehistoric occupation in the region.

A warming and drying trend with a decline in winter precipitation during the "Middle" Late Holocene between 2,000 and 1,000 years ago (Elston's et al. "Late Martis" / "Early Kings Beach" phases) coincided with profound cultural changes.

Around 1,000 years ago during the Late Holocene (Elston's et al 1977 "Kings Beach" Phase), much of the west was affected by frequent and dramatic fluctuations in temperature and precipitation marked by prolonged and severe droughts (Stine 1994). Late Archaic human populations continued to rise and stressed by periodic but extreme warm and dry conditions (known as the "Medieval Climatic Anomaly"), shifted away from large game hunting to the further pursuit of foods previously ignored (e.g., plants, fish and small game). This period is reflected archaeologically in more intensive use of all parts of the Tahoe Sierra landscape, with more dispersed and ephemeral settlement patterns allowing for year-round residence in the Tahoe highlands at sometimes and prohibiting even seasonal occupation at other times. These changes may reflect the arrival of incoming Numic-speaking populations (e.g., Paiute groups) into an area that had been occupied for thousands of years by Hokan-speakers (Jacobsen 1966), the protohistoric ancestors of the Washoe Indians (Elston's et al 1977 "Late Kings Beach Phase"). It is estimated that the prehistoric Washoe had one of the highest population densities in the western Great Basin. Relatively high estimates are attributed to the bountiful environment in which they lived (Price 1962:2). Historic declines in Washoe population and traditional resource use were caused by disruptions imposed by incoming Euroamerican groups.

Washoe History

The project area falls within the center of Washoe (*Wa She Shu*) territory, with primary use by the northern Washoe or *Wel mel ti* (Downs 1966; Nevers l976; Steward 1966). The Washoe regard all "prehistoric" remains and sites within the Truckee-Tahoe area as associated with their own history. Washoe settlements are known to have existed in the project vicinity. Truckee town is at the location of the large Washoe village site of *K'ubuna detde'yi'* and below Truckee, at the confluence of Trout Creek and the Truckee River, was the village site of *Pele ma'lam detde'yi'*. *Dat'sa sut ma'lam detde'yi'* was an ethnographic encampment near Gateway (d'Azevedo 1956:51, 55).

The Washoe once embodied a blend of Great Basin and California in their geographical position and cultural attributes. While they were an informal and flexible political collectivity, Washoe ethnography hints at a level of technological specialization and social complexity for Washoe groups, non-characteristic of their surrounding neighbors in the Great Basin. Semi-sedentism and higher population densities, concepts of private property, and communal labor and ownership are reported and may have developed in conjunction with their residential and subsistence resource stability (Lindström 1992).

The ethnographic record suggests that during the mild season, small groups traveled through high mountain valleys collecting edible and medicinal roots, seeds and marsh plants. In the higher elevations, men hunted large game (mountain sheep, deer) and trapped smaller mammals. Suitable tool stone (such as basalt) was quarried at various locales surrounding Truckee town. The Washoe have a tradition of making long treks across the sierran passes to hunt, trade and gather acorns. These aboriginal trek routes, patterned after game trails, are often the precursors of our historic and modern road systems. Archaeological evidence of these ancient subsistence activities is found along the mountain flanks as temporary small hunting camps containing waste flakes of stone and broken tools. In the high valleys, permanent base camps are represented by stone flakes, tools, grinding implements, and house depressions.

Their relatively rich environment afforded the Washoe a degree of isolation and independence from neighboring peoples and may account for their long tenure in their known area of historic occupation (d'Azevedo 1986:466, 471; Price 1962). The Washoe are part of an ancient Hokan-speaking residual population that has been subsequently surrounded by Numic-speaking incomers, such as the Northern Paiute (Jacobsen 1966). Even into the 21st century, the Washoe have not been completely displaced from their traditional lands. The contemporary Washoe have developed a Comprehensive Land Use Plan (Washoe Tribal Council 1994) that includes goals of reestablishing a presence within the Tahoe Sierra and re-vitalizing Washoe heritage and cultural knowledge, including the harvest and care of traditional plant resources and the protection of traditional properties within the cultural landscape (Rucks 1996:3).

EUROAMERICAN PERIOD

Truckee's beginnings are marked by the arrival of Joseph Gray, who built a stage station near the present-day downtown in l863. Gray was soon joined by a blacksmith named S. S. Coburn, and the fledgling settlement of Gray's Toll Station was renamed Coburn's Station. This tiny way station grew from two structures into a thriving town that accommodated emigrants, stagecoach travelers and freight wagons in route westward to California's gold fields and eastward to the Comstock Lode in Nevada. In 1868 Coburn's Station burned and the name was changed to Truckee. Throughout the rest of the 19th century, Truckee thrived on the related fields of lumber, railroading and ice. By the 1920s, this industrial economy and society had largely disappeared, due in major part to the relocation of the train’s switching yard to Roseville, the depletion of local timber supplies and the development of mechanical refrigeration. In its place, the community began to develop into a recreation-based economy, boosted by the completion of a transcontinental highway over Donner Pass (Lincoln Highway/Victory Highway/ U.S. Highway 40/Interstate 80). The 1960 Winter Olympics at nearby Olympic Valley secured Truckee's position as a center point for year-round recreation.

Transportation

As noted above, Brockway Road (former State Route 267) is located due south of the project area. The road appears on the 1955 USGS Quad, but its current alignment was reconstructed and improved in the 1960s by the State of California Division of Highways. Former paving contractor, Bob Sutton, who worked on the road in 1948, recalled that the prior alignment followed the natural topography and that the cut-and-fill configuration of the present roadway dates from the late 1960s-early 1970s (Bob Sutton, personal communication 2009 in Lindström 2009). The initial paving of Brockway Road/Highway 267 between Truckee and Kings Beach in 1963 escalated communication between the Truckee and Tahoe basins and opened the north-Tahoe area. Previously, the road had been a rough gravel surface, and travel was slow. According to the *Index to California Highways and Public Works,* in 1966 this "Brockway-Truckee Shortcut" became part of the state highway system (Lindström 2005). With the recent construction of the Highway 267 Bypass, Caltrans has transferred the jurisdiction of Brockway Road to the Town of Truckee. The predecessor "Old Brockway Road" (located farther south of the project area) was a major historic turnpike that commenced from Truckee's transcontinental railroad stop and went eastward across the river into Martis Valley and over Brockway Summit to Lake Tahoe. It was constructed in August of 1869 by William Campbell and George Schaffer, stage and lumber-mill owners from Truckee (Scott 1957:319).

Lumbering

Logging was first initiated in the Truckee-Donner area after the discovery of the Comstock Lode in l859 (Knowles 1942). When production began to fall in the mines in l867, the lumbering business also began to suffer. A new market for lumber was found in the transcontinental railroad. It had been building toward Donner Pass since l864 and proved to greatly enhance the fortunes of sawmills along its path. As the rails reached the summit in l866-1867, multiple mills established operations in the Truckee Basin to supply the railroad with cordwood for fuel, lumber for construction, and ties for the roadbed. Coburn's Station (Truckee) soon became one of the major lumbering centers. After the completion of the railroad in l868-1869 lumber companies diversified and grew as new markets were opened to them from California to Utah.

Tourism

With timber stands increasingly depleted and the ice industry replaced by mechanical refrigeration technology, Truckee channeled local business and industry into tourism and winter sports. Truckee was unique among turn-of-the-century mountain communities, in that summer recreationists and winter-sports enthusiasts could easily reach the town in summer or winter via the first transcontinental railroad or the first transcontinental highway. By the mid-1890s Truckee was host to ice carnivals, drawing people from both east and west of the Sierra to enjoy the mountain winters. Sleighing, tobogganing, dog races, two large ice palaces, and Hilltop's ski area and ski jump were some of the attractions offered to tourists, along with "Snow-Ball" special excursion trains.

METHODS

Phase 1A prefield research and *Phase 1B* field survey was accomplished by Susan Lindstrom, Ph.D., Consulting Archaeologist. She has over 48 years of professional experience in regional prehistory and history, holds a doctoral degree in anthropology/archaeology, has been accredited by the Register of Professional Archaeologists (formerly Society of Professional Archaeologists) since 1982, and is certified by the Secretary of Interior's Professional Qualifications Standards (48 FR 44738-44739) for archaeology, history and related disciplines (Appendix 1). The project's GPS/GIS mapping effort was performed by Devin Blom, GIS Analyst and owner of Battleborn GIS, who has a Bachelor of Arts Degree in Anthropology with over 10 years of regional archaeological experience (Appendix 1). Rob Wood, AICP, Principal Planner for Millennium Planning & Engineering provided necessary project background and mapping materials.

NORTH CENTRAL INFORMATION CENTER RECORDS SEARCH

Prefield research entailed a literature review of prehistoric and historic themes for the project area and included a review of prior archaeological research and of pertinent published and unpublished literature. To identify any properties listed on the National Register, state registers and other listings, including the files of the State Historic Preservation Office (SHPO), the required records search at the California Historical Resources Information System, North Central Information Center (NCIC) at California State University Sacramento (CSUS) was completed on June 23, 2021 (NCIC: NEV-21-19). References checked include archaeological sites and surveys in Nevada County and other official inventories (Appendix 2):

- ✓ Office of Historic Preservation's *Historic Property Directory*
- ✓ *Determination of Eligibility*
- ✓ *California Inventory of Historical Resources*
- ✓ *California State Historical Landmarks*
- ✓ *National Register of Historical Places/California Register of Historic Resources listings*
- ✓ *California Points of Historical Interest*
- ✓ *Caltrans State and Local Bridge* Surveys

The NCIC review of the 1/8-mile radius search area disclosed that two archaeological studies have been conducted within the project area and 13 others have been completed outside the project area (but within the 1/8-mile search radius). No known cultural resources occur within the project area, and five resources have been inventoried outside the project area (but within a 1/8-mile radius). NCIC search results are summarized on tables 1 and 2.

Table 1. Summary of Prior Cultural Resource Studies

NCIC Report No.	*Author/Date*	*Title*	*Location*
4385	Randolph-Burke/1991	Cultural Resources Survey for a 120 kV Transmission Line between Squaw Valley and Truckee	Within project area
4385B	Burke/1991	Cultural Resources Overview for a 120 kV Transmission Line between Squaw Valley and Truckee	Within project area
575	Jensen/2001	Archaeological Survey, Riverview Townhomes	Within 1/8-mile radius
3391	Peak/1997	Cultural Resource Assessment of the Pacific Bel Mobile Services West Star Hill Site	Within 1/8-mile radius
3438	Maniery/1994	Cultural Resources Inventory of the Truckee Pines Apartments Project	Within 1/8-mile radius
3439	Offermann/1990a	Archaeological Survey for a Proposed Road Improvement Project on State Route 267	Within 1/8-mile radius
3439B	Offermann/1990b	Historic Property Survey Report for a Proposed Widening of State Route 267	Within 1/8-mile radius
6770	Lindström/2005	Brockway Transmission Water Pipeline Project Heritage Resource Inventory	Within 1/8-mile radius
8921	Banka-Fergusson/2004	Archaeological Survey Report for the Winter Creek Subdivision THP	Within 1/8-mile radius
8930	Haney/2002	Historical Resource Compliance Report 03-NEV-267 K.P. O. 19-3.70 EA	Within 1/8-mile radius

9665	Gerike et. Al/1994	Cultural Resources Archival and Literature Study for the Southwest Gas Expansion Project	Within 1/8-mile radius
10269	Lindström/2009	Heritage Resource Study Brockway Road Bike Trail	Within 1/8-mile radius
10454	Waechter et al./2010	Revised Cultural Resources Inventory for the Proposed 625- and 650-Line Upgrade Project	Within 1/8-mile radius
11886	Lindström/2015	Donner Lake Basin Watershed Assessment: A Contextual Overview of Human Land Use and Environmental Conditions - Workbook	Within 1/8-mile radius
n/a	Lindström/2020	Cascade Housing Project Cultural Resource Inventory	Within 1/8-mile radius

Table 2. Summary of Known Cultural Resources

Resource No.	*Resource Type*	*Report No.*	*Location*
P-29-631/CA-NEV-573	Prehistoric lithic scatter	3438	Within 1/8-mile radius
P-29-1385/CA-NEV-1981	Prehistoric lithic scatter	4385,10269	Within 1/8-mile radius
P-29-3009	Historic walls/fences	8921	Within 1/8-mile radius
P-29-3014	Historic foundation/structure pads/privies/dumps/trash scatters	8921	Within 1/8-mile radius
P-29-4554	Historic	11499	Within 1/8-mile radius

NATIVE AMERICAN OUTREACH

The Native American Heritage Commission (NAHC) was contacted by letter on June 18, 2021 to request a search of the Sacred Lands Files. A response was received on July13, 2021 indicating "the absence of specific site information in the Sacred Lands Files", which does not preclude "the absence of Native American cultural resources in any APE [area of potential effect]." As recommended by the Native American Heritage Commission, all tribes on the Commission's contact list were contacted by letter and email on July14, 2021 (Washoe Tribe of Nevada and California, Colfax-Todds Valley Consolidated Tribe, Tsi Akim Maidu, Wilton Rancheria, and United Auburn Indian Community of the Auburn Rancheria). When no response was received,

follow-up communications were sent on July 26th. A summary communications log is presented below, and correspondence is attached (Appendix 3).

Table 3. Native American Outreach: Summary Communications Log

Tribe	**Contact Date/Time**	**Comments**
Native American Heritage Commission (NAHC)	6/18/21 7/13/21	Records search request letter mailed/emailed Received NAHC response
Washoe Tribe of Nevada & California, Darrel Cruz, Tribal Historic Preservation Officer	7/14/21 7/26/21	Letter & email sent Follow-up email sent
Colfax-Todds Valley Consolidated Tribe, Pamela Cubbler, Treasurer & Clyde Prout, Chairperson	7/14/21 7/26/21	Letter & email sent Follow-up email sent
Wilton Rancheria, Jesus Tarango, Chairperson, Dahlton Brown, Director of Administration, Steven Hutchason, THPO	7/14/21 7/26/21 7/27/21 7/27/21	Letter & email sent Follow-up email sent to THPO; message blocked; email forwarded to Chairperson Tarango Received Tribal response requesting more project details follow-up voice mail and email sent inviting further communications regarding the project; message blocked
Tsi Akim Maidu, Grayson Coney, Cultural Director	7/14/21 7/26/21	Letter & email sent; letter returned as undeliverable Follow-up email sent
United Auburn Indian Community of the Auburn Rancheria, Gene Whitehouse, Chairperson and Brian Guth	7/14/21 7/26/21 7/30/21	Letter & email sent Follow-up email sent Tribal email response recommending contact with Washoe Tribe

FIELD RESEARCH

An archaeological field reconnaissance was conducted by Dr. Lindström on July 7, 2021. A USGS topographic map (7.5' quadrangle) and an expanded scale project site plan and aerial photograph were used to structure the field work phase. Locational information was monitored by compass, pacing, range finder, and a *Garmin 62st* GPS unit. Property boundaries were delineated according to topography, physical barriers and a road and bike trail.

The entire project area was subject to a systematic and intensive archaeological reconnaissance (figures 1-2, 4-5). The entire project area has been subject to prior disturbance where the ground surface has been bulldozed, graded and filled; a layer of fine pea gravel covers the project surface area, except for the interface along the edges of the elevated fill that are revegetated with assorted shrubs and grasses. This perimeter is lined with numerous displaced large boulders with multiple evidence of bulldozer scarring scattered on the parcel. The vegetated perimeter was walked, and all boulders were carefully checked for possible evidence of prehistoric milling activities. The central graded/graveled area was walked in east-west transects no greater than 30 feet (~10 meters) apart, looking for all evidence of prior human activity.

Overall, ground surface visibility on the parcel was good since the majority of the area has been graded and is devoid of vegetation. The northeastern quadrant northwest of the pond and south of Estates Drive is thickly vegetated with dead and drying grass and forbs. Here, the ground surface was largely obscured. However, intermittent rodent mounds offered a glimpse of the subsurface and any open ground between transects was examined.

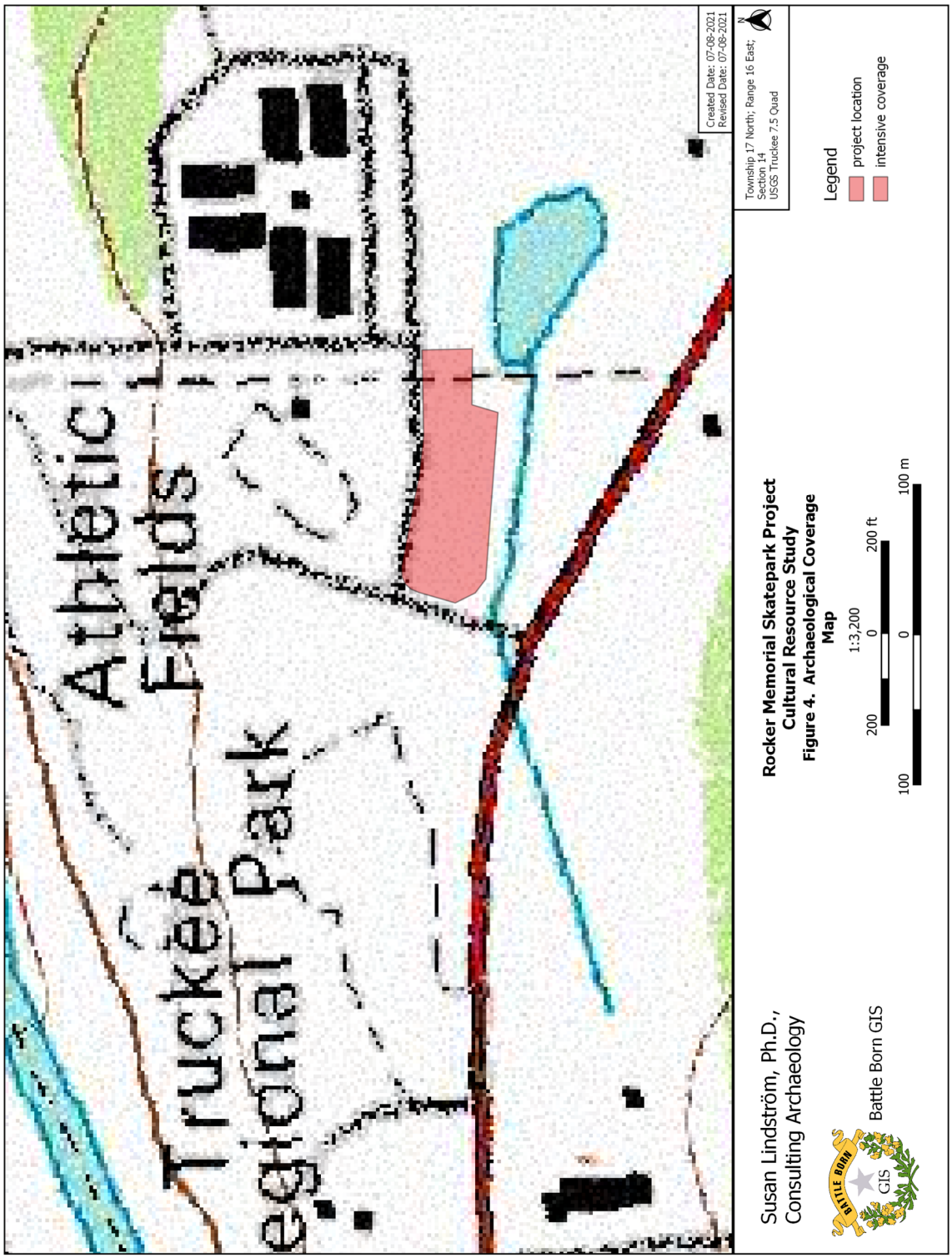
The project area is generally clear of refuse; modern debris noted during the survey, but not formally recorded because an age over 50 years could not be authenticated, include: small bits of road trash along Estates Drive, asphalt chunks, PVC pipe fragments, one sanitary can lid, a bottle cap, and one tent stake.

RESULTS AND RECOMMENDATIONS

Neither prefield research nor archaeological field survey identified any cultural resources within the project area.

In terms of CEQA guidelines, the potential effects of this project on cultural resources are not considered to be a significant effect on the environment. It is reasonable to conclude that the project should not result in the alteration of or adverse physical or aesthetic effect to any significant archaeological or historical sites, structures, objects, or buildings; nor should the project have the potential to cause a physical change that would affect unique ethnic (including Native American) cultural values or restrict historic or pre-historic religious or sacred uses.

In terms of Section 106 compliance, a finding of "no historic properties will be affected" is recommended (i.e., no properties are within the project area, including below the ground or water surface).


Athletic Fields
Truckee Regional Park
Created Date: 07-08-2021
Revised Date: 07-08-2021
Township 17 North; Range 16 East; Section 14
USGS Truckee 7.5 Quad
N
Legend
project location
intensive coverage
Rocker Memorial Skatepark Project
Cultural Resource Study
Figure 4. Archaeological Coverage Map
1:3,200
200 0 200 ft
100 0 100 m
Susan Lindström, Ph.D.,
Consulting Archaeology
Battle Born GIS

Rocker Memorial Skatepark Project
Cultural Resource Study
Figure 5. Archaeological Coverage Map
1:800
0
100
100 ft
0
50
50 m
Legend
project location
intensive coverage
Township 17 North; Range 16 East; Section 14
USGS Truckee 7.5 Quad
Created Date: 07-08-2021
Revised Date: 07-08-2021
Susan Lindström, Ph.D.,
Consulting Archaeology
Battle Born GIS

Photo 3. Project overview (view northwest)

Photo 4. Project overview (view northeast)

With the completion and submittal of this report, federal, state, regional, and county requirements for a cultural resource study have been accomplished. No further study or special operational constraints need be imposed on the project sponsor concerning cultural resources.

Although the project area has been subject to systematic surface archaeological investigations, it is remotely possible that buried or concealed cultural resources could be present and detected during project ground disturbance activities. In the event of unanticipated discoveries, project activities should cease near the find and the project sponsor should consult a qualified archaeologist (RPA) to evaluate the resource in accordance with CEQA guidelines. If the discovered resource is determined to be significant, mitigation measures should be devised, and mitigation should be implemented before ground-disturbing work near the resource find can continue.

In the unlikely event that human remains are encountered during the proposed project, all activities should be stopped immediately, and the County Coroner's Office should be contacted pursuant to Public Resources Code (PRC) Section 7050.5. If the remains are determined to be of Native American origin, the Native American Heritage Commission should be notified within 24 hours of determination, as required by PRC Section 5097.94, 5097.98 and 5097.99. The Commission should notify designated *Most Likely Descendants* (in this case the Washoe Tribe), who should provide recommendations for the proper treatment of the burial remains within 24 hours.

REFERENCES CITED

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3391 Cultural Resource Assessment of the Pacific Bell Mobile Services West Star Hill Site (Site SA-375-04). Report (#3391) on file North Central Information Center, California State University, Sacramento.

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Washoe Tribal Council

1994 *Comprehensive Land Use Plan*. Ms. on file, Tribal Government Headquarters, Gardnerville.

APPENDIX 1: RESUMES

RESUME

Susan Lindström, Ph.D.
Box 3324, Truckee CA 96160
530-587-7072 (530-713-1920 cell)
susanglindstrom@gmail.com

Education

Ph.D. Archaeology 1992 - University of California Davis
M.A. Anthropology 1978 - University of California Davis
B.A. Anthropology 1972 - University of California Berkeley

Expertise

Cultural Resource Management
Archaeology (prehistoric and historic period)
History and archival records research
Ethnography, ethnohistory, oral history
Native American consultation
Interpretation and public education

Professional Organizations

Register of Professional Archaeologists
(member since 1982)
Society for Historical Archaeology
Society for California Archaeology
Various county and regional historical societies

Lindström's qualifications include archaeological field work and analytical and archival research in the prehistory and history of the western United States including California, the northern and western Great Basin in Nevada and Oregon, and the Cascade Range and the Columbia River Plateau in Oregon and Washington. Her area of expertise is centered in the north-central Sierra where she has over 43 years of experience in historic preservation matters on a local, state and federal level. She has resided in the Tahoe Sierra and accrued full-time professional experience here since 1973.

Heritage Resource Management -- As Forest Archaeologist from 1973 until 1978 for the Tahoe National Forest and "zone" Archaeologist for the El Dorado National Forest and Lake Tahoe Basin Management Unit, and as District Archaeologist for the Bureau of Land Management in 1978 (Burns, Oregon), Lindström initiated and implemented heritage resource programs for the inventory, protection, management and interpretation of prehistoric and historic heritage resources. She conducted training sessions on heritage resource identification and on antiquities legislation.

Contracting and Consulting -- Between 1980 and the present time, as a private consultant, Lindström has conducted and/or supervised fieldwork, data analysis, archival research, and report preparation for hundreds of federal, state, county, and private projects within the north-central Sierra and adjoining regions in California and Nevada. During this time, she has served as an expert witness on historic and prehistoric resources involving California State Supreme Court cases within the Tahoe Sierra.

Teaching -- Lindström instructed introductory level courses in cultural and physical anthropology and archaeology at the University of Nevada, Reno and the University of California, Davis and was appointed as an adjunct professor to the University of Nevada, Reno in 2010.

****Research, Publications and Papers*** -- Academic and heritage management reports pertain to regional prehistory and history, as well as print and video publications for the popular audience (including research findings on the Donner Party, California gold mining, Washoe Indians, and California ethnobotany).

Secretary of Interior Standards: Archaeology and History (Prehistory, Ethnography, Ethnohistory, Ethnobotany, History, Paleoenvironmental Studies)

Lindström's 43 years of full-time professional experience in archaeological research, administration and management at the supervisory level involves the study of resources of the prehistoric, ethnographic, ethnohistoric, and historic period. In the Lake Tahoe Basin and Truckee Basin alone, Lindström has supervised and/or participated in the cumulative survey of nearly 50,000 acres. Her work in the adjoining sierran foothills and valleys approaches an additional 25,000 acres.

Prehistory. Experience in prehistoric archaeology largely pertains to the study of hunter-gatherer groups in the far west. Her surveys and excavations center upon the prehistoric ancestors of the Washoe and Maidu Indians of the north-central Sierra.

Lindström's Ph.D. dissertation focused on Washoe fishing in the Truckee River Drainage Basin. Her M.A. thesis explored high-elevation prehistoric land use in the Truckee-Tahoe Sierra.

During the 1990s she participated in the development of a research design for the Framework for Archaeological Resource Management (FARM), a heritage resource management document used by all north-central sierran forests.

She is presently a reviewer for the *Journal of California Archaeology*.

Ethnography, Ethnohistory, Ethnobotany. Lindström has developed an extensive knowledge of Washoe and Maidu territory and has maintained a good working relationship with these groups beginning in 1973. Since 2000 she has collaborated with prominent Washoe ethnographers such as Warren D'Azevedo and Merideth (Penny) Rucks. Lindström conducted and coordinated ethnographic research to develop a management plan for Cave Rock, a high-profile Washoe Traditional Cultural Property within the Lake Tahoe Basin. She authored a chapter on Native Californian ethnobotany that appears in a standard source book on California vegetation.

History. Experience in historic sites archaeology has focused on resources associated with the study of mining, logging, ranching, transportation, and water management resources. Since 1991 Lindström has conducted excavations at several rural work camps and industrial sites, many involving Chinese wood cutters and colliers. In 1987 and 1990 she field-directed excavations at two Donner Party camps (Murphy's Cabin and Alder Creek) and co-authored a book detailing the archival research, archaeology, architecture, dendrochronology, and zooarchaeology surrounding the tragedy.

Paleoenvironmental Studies. Lindström is a contributor to the 1997 congressionally funded, multi-disciplinary study assessing the environmental health and ecosystem management of the Sierra Nevada (*Sierra Nevada Ecosystem Project* [SNEP]) and the pilot case study focusing on the Lake Tahoe Basin.

She is also a contributor to the *Lake Tahoe Watershed Assessment* study, published in 2000 by the Pacific Southwest Research Station, USDA Forest Service, in collaboration with the Pacific Southwest Region of the USDA Forest Service, the Tahoe Regional Planning Agency, the University of California at Davis, the University of Nevada at Reno, and the Desert Research Institute, Reno, Nevada. The study was mandated as part of former President Clinton's actions to protect Lake Tahoe.

Through a series of snorkel and SCUBA surveys during the 1980s and 1990s in Lake Tahoe and its tributary lakes, Lindström investigated lake level changes and explored submerged remnant forests and prehistoric milling features as paleoenvironmental indicators over the past 6000 years. She presented her findings in scientific journals as a co-author with geologists, hydrologists and limnologists. Her work was also featured in *National Geographic* magazine (March 1992).

Secretary of Interior Standards: Closely Related Fields

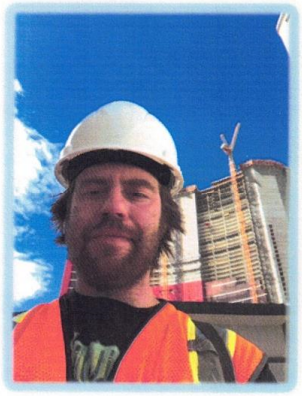
Lindström's 43 years of full-time experience also entails research, writing, inventory, evaluation, data recovery, and management in closely related fields pertaining to the "built environment." Her work falls within the historical context of mining, logging, water supply engineering, and ranching landscapes, as well as transportation and communications networks, and town sites. Evaluation and data recovery have been directed to 19th and 20th century structural remains for the following resource types: Chinese/Basque/miner cabins; bake ovens/hearths; sawmills; railroad grades and camps; flumes; ditches; pipelines; dams; reservoirs; water tanks; ice works; ranch complexes; charcoal kilns; mine features; trails/roads/highways; utility lines; and fences.

For her projects involving more complex structural properties such as intact standing buildings, bridges and other architectural features, Lindström has had the opportunity to collaborate and learn from prominent architectural historians, beginning in the early 1980s with the Town of Truckee National Register District nomination process up until the present time.

Lindström also has experience with several historic preservation projects. She authored the heritage resource components for local community plans (from 1989 through 2005) and for county general plans (beginning in 1991). During the 1980s she served as a charter member of the Truckee Historical Preservation Advisory Council. She assisted in the preparation of the Truckee Historic Preservation Plan in 2009, followed by the formal National Register District nomination and subsequent Truckee Streetscape project. She served as a member of the "Placer County Department of Museums Collections Management Task Force" in 2000 and is currently an advisor to the California Department of Parks and Recreation (Sierra District) for their upcoming museum at Donner Memorial State Historic Park.

*available upon request

Devin Gonzales Blom



Archaeologist/ GIS Analyst

Expertise

GIS/ Mapping
Aerial Drone (UAV, UAS) Pilot
Aerial Drone-based Orthomosaic Mapping
Underwater Drone (ROV) Pilot
Cultural Resources Management
Great Basin Prehistory
Comstock Mining History

Education

UNR, University of Nevada Reno, B.A., Anth, 2014
LTCC, Lake Tahoe Community College A.A.,, Anth, 2010
Bessemer Gynasiet, Sandviken, Sweden, Natural Sciences, 2001

Professional Registrations

FAA Part 107 Certified Remote Pilot

Professional Experience

Owner/Archaeolgical/ GIS Consultant, Battle Born GIS, June 2014 to present
Archaeological Technician, United States Forest Service, 2009-2014

Selected Project Experience

Pacific Coast Highway – CalTrans PAL Mapping, Malibu CA, 2020
Big Chief - Wetland Delineation, Alpine Meadows, 2020
Tahoe Donner Trails Five Year Implementation Plan – Cultural Resource Inventory, Tahoe Donner, 2015-2020
Washoe Mapping Project, Gardnerville, 2019-2020
Trout Unlimited, Truckee River Stream Enhancement Project, Glenshire, 2019
South Tahoe Public Utility District, Waterline Replacement Project, Cultural Resource Inventory, South Lake Tahoe, 2019
Squaw Creek North Meadow Enhancement Project, Aerial Mapping and Wetland Delineation, Olympic Valley, 2016-2020
Perazzo Meadow Restoration Project, Aerial Mapping and Vegetation Mapping, 2019-2020
Sardine Meadow Restoration Project, Aerial Mapping and Wetland Delineation, Boca Reservoir 2018-2020
Mt Rose Atoma Architectural Assessment, Resource Mapping, Mt Rose, 2019
Cold Stream Canyon Restoration, Cultural Resource Study- Pre-Field Research, Truckee, 2019
Cal Neva Resort Hotel and Casino Restoration, Public Spaces Project, Archaeological Resource Inventory, Crystal Bay, 2019
Angeles National Forest, High Speed Rail Project, ANF, 2019
Eureka Migratory Bird Survey, Eureka, 2018
Squaw Valley Olympic Museum, Cultural Resource Inventory and Evaluation, Olympic Valley, 2018
Kings Beach Center, Cultural Resource Inventory, Kings Beach, 2018
South Tahoe Public Utility District, Tahoe Keys and Upper Truckee Pump Station Rehabilitation Project, Cultural Resource Inventory, South Lake Tahoe, 2018
Truckee Roundabout Project, Cultural Resource Study, Truckee, 2018
Angeles National Forest, Sand Fire, ANF, 2017
Donner Lake Rim Trail, Cultural Resource Inventory, Donner Lake, 2017
Squaw Valley-Alpine Meadows, Base-To-Base Gondola Project Cultural Resources Inventory, Olympic Valley, 2017-2020
Plumas Northern Goshawks, Mapping Survey Strategy, Detections and Active Nest Trees Mapping, Plumas, 2016-2017
Flume Trail, Ponderosa Ranch Parcel Bullwheel, Heritage Resource Inventory, Ponderosa Ranch, 2016
Incline Flume Trail, Cultural Resource Inventory and Evaluation Phase 1c/ Phase 2, Incline, 2016
Black Rock Canyon, Mine MBTA Survey, Black Rock Canyon, 2016
Fibreboard Road-Brockway Campground Project, Cultural Resource Inventory and Evaluation Report, Brockway Summit, 2015

APPENDIX 2: NORTH CENTRAL INFORMATION CENTER

California Historical Resources Information System

NORTH CENTRAL INFORMATION CENTER

AMADOR
EL DORADO
NEVADA
PLACER
SACRAMENTO
YUBA

California State University, Sacramento
6000 J Street, Folsom Hall, Suite 2042
Sacramento, California 95819-6100
phone: (916) 278-6217
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email: ncic@csus.edu

6/23/2021 NCIC File No.: NEV-21-119

Susan Lindstrom
Consulting Archaeologist
P.O. Box 3324
Truckee, CA 96160

Re: Rocker Memorial Skatepark

The North Central Information Center (NCIC) received your records search request for the project area referenced above, located on the Truckee USGS 7.5' quad. The following reflects the results of the records search for the project area and a 1/8-mi radius.

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ custom GIS maps ☒ shapefiles

Recorded resources within project area:	None
Recorded resources outside project area, within radius:	P-29-1385 P-29-3009 P-29-3014 P-29-4554
Known reports within project area:	4385 10269
Known reports outside project area, within radius:	575 3391 3439 6770 8921 8930 9665 10454 11886

Resource Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed/NA
Resource Database Printout (details):	☒ enclosed	☐ not requested	☐ nothing listed/NA
Resource Digital Database Records:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Report Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed/NA
Report Database Printout (details):	☒ enclosed	☐ not requested	☐ nothing listed/NA
Report Digital Database Records:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Resource Record Copies:	☐ enclosed	☐ not requested	☒ nothing listed/NA
Report Copies:	☒ enclosed	☒ not requested	☐ nothing listed/NA
Built Environment Resources Directory:	☐ enclosed	☐ not requested	☒ nothing listed/NA
Archaeological Determinations of Eligibility:	☐ enclosed	☐ not requested	☒ nothing listed/NA
CA Inventory of Historic Resources (1976):	☐ enclosed	☐ not requested	☒ nothing listed/NA

Caltrans Bridge Survey:	☐ enclosed	☐ not requested	☒ nothing listed/NA
Ethnographic Information:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Historical Literature:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Historical Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Local Inventories:	☐ enclosed	☐ not requested	☒ nothing listed/NA
GLO and/or Rancho Plat Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Shipwreck Inventory:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Soil Survey Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA

Please forward a copy of any resulting reports and resource records from this project to NCIC as soon as possible. The lead agency/authority and cultural resources consultant should coordinate sending documentation to NCIC. Please note that local planning agencies rarely, if ever, send reports and resource records to our office. Digital materials are preferred and can be sent to our office through our file transfer system or on a CD by mail via USPS to the address on the top of the first page. Hard copies may also be mailed. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, it is possible that not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the records search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Sincerely,

Paul Rendes, Coordinator
North Central Information Center

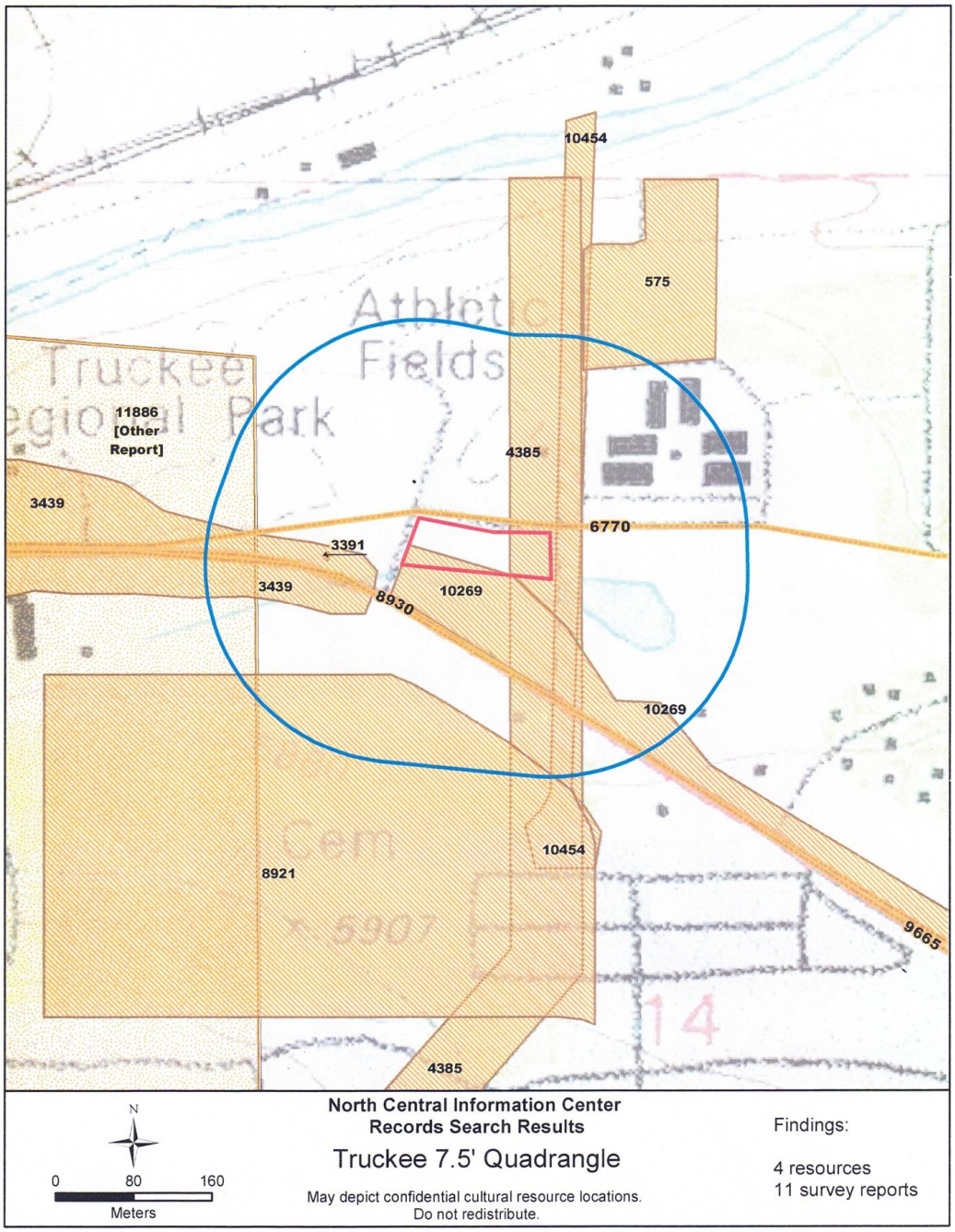
Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
000575		2001	Jensen, Peter	Archaeological Survey, Riverview Townhomes, Truckee		
003391		1997	Peak, Ann S.	Cultural Resource Assessment Of The Pacific Bell Mobile Services West Star Hill Site (Site SA-375-04)		
003439		1990	Janis K. Offermann	Report on an Archaeological Survey For A Proposed Road Improvement Project on State Route 267 Just South of Truckee in Nevada County, California, 03-NEV-267 P.M. 1.1/1.5 03357-326100	Caltrans	29-001133, 29-001134
003439B		1990	Janis K. Offermann	Historic Property Survey Report for a Proposed Widening of State Route 267 Just South of Truckee, Nevada County, California, 03-NEV-267 P.M. 1.1/1.5 03357-326100	Caltrans	
004385		1991	Joseph Randolph and Thomas Burke	Cultural Resources Survey for a 120 kV Transmission Line Between Squaw Valley and Truckee, Nevada and Placer Counties	Archaeological Research Services, Inc.	29-001226, 29-001385, 29-002366, 31-000149, 31-000171, 31-000275, 31-000278, 31-000909, 31-001875, 31-001883, 31-001935, 31-001937, 31-001959, 31-001960, 31-001961, 31-001962, 31-001963, 31-001965, 31-001966, 31-001967, 31-001968, 31-001969, 31-001970, 31-002953
004385B		1991	Thomas Burke	Cultural Resources Overview for a 120 kV Transmission Line Between Squaw Valley and Truckee, Nevada and Placer Counties, California	Archaeological Research Services, Inc.	
006770		2005	Susan Lindstrom	Brockway Transmission Water Pipeline Project Heritage Resource Inventory Truckee, CA Nevada County	Consultant	
008921		2004	William Banka and Aaron Fergusson	Archaeological Survey Report for the Winter Creek Subdivision THP	William J. Banka Forestry Consulting/ SWCA Inc., Environmental Consultants	29-002984, 29-003006, 29-003008, 29-003009, 29-003010, 29-003011, 29-003012, 29-003013, 29-003014, 29-003015
008930		2002	Jeff Haney	Historical Resource Compliance Report 03-NEV-267 K.P. 0.19-3.70 (P.M. 0.12-2.30) EA 03-291020	Caltrans District 3	
009665		1994	Christian Gerike, Suzanne Stewart, and Brian F. Terhorst	A Cultural Resources Archival and Literature Study for the Southwest Gas Expansion Project	Stewart/Gerike Consultants	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
010269		2009	Lindstrom, Susan	Heritage Resource Study Brockway Road Bike Trail Truckee, California (Nevada County)		29-001385
010454		2010	Sharon A. Waechter, Darren J. Andolina, Susan G. Lindstrom, Julie Garibaldi, and Eugene Romanski	Revised Cultural Resources Inventory for the Proposed 625 and 650 Line Upgrade Project, Nevada and Placer Counties, California. LTBMU Report no. TB-2007-043/R2007051900068	Far Western Anthropological Research Group, Inc.	29-001129, 29-003835, 31-000132, 31-000133, 31-000398, 31-000616, 31-001940, 31-001945, 31-001954, 31-002591, 31-002592, 31-002593, 31-003352, 31-003388, 31-003393, 31-003396, 31-003680, 31-003681, 31-003682, 31-003683, 31-003684, 31-003685, 31-003686, 31-003687, 31-003688, 31-003689, 31-003690, 31-003691, 31-003692, 31-003693, 31-003694, 31-003695, 31-003696, 31-003697, 31-003698, 31-003699, 31-003700, 31-003817, 31-003819, 31-003820, 31-003821, 31-003822, 31-003823, 31-003824
011886		2015	Susan Lindstrom	Donner Lake Basin Watershed Assessment A Contexual Overview of Human Land Use and Environmental Conditions: Workbook	Susan Lindstrom, Ph.D. (RPA), Consulting Archaeologist	

Rocker Memorial Skatepark



Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-29-001385	CA-NEV-001981	USFS - 05-17-57-444; Other - 663-2	Site	Prehistoric	AP02	1991 (Joseph Randolph & Thomas Burke, Archaeological Research Services, Inc.); 2009 (Susan Lindstrom)	004385, 010269
P-29-003009		Other - SWCA WC 4	Site	Historic	AH11	2003 (Adam Berg, SWCA, Inc. Environmental Consultants)	008921
P-29-003014		Other - SWCA WC-9	Site	Historic	AH02; AH04	2003 (Christina Kelly, SWCA, Inc)	008921
P-29-004554		Resource Name - KM-ISO-05	Other	Historic	AH16	2012 (Kelly Mitchell, Power Engineers, Inc)	011499

APPENDIX 3: NATIVE AMERICAN OUTREACH

Susan Lindström, Ph.D.
Consulting Archaeologist

P.O. Box 3324
Truckee CA 96160
530-587-7072
530-713-1920 (cell)
susanglindstrom@gmail.com

DATE: June 18, 2021

TO: Native American Heritage Commission
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
916-373-3710; 916-373-5471 (fax)
nahc@nahc.ca.gov

RE: Rocker Memorial Skatepark Project
Cultural Resource Study

I am writing to request a records search of the Sacred Land Files. The project sponsor plans to develop a two-acre parcel with a new skatepark and parking area. The parcels (APN 19-450-054 and 014) are located on Estates Drive and the intersection of Old Brockway Road, Truckee, California (Nevada County). The project area falls within Township 17 North, Range 16 East, Section 14, USGS Truckee 7.5 Quad (see attached map).

I wish to bring this project to your attention, and I invite your opinions, knowledge and sentiments regarding any potential concerns for traditional Native American lands within the project vicinity.

Thank you very much.

Susan Lindström, Ph.D.
Consulting Archaeologist

STATE OF CALIFORNIA — Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

July 13, 2021

Susan Lindstrom, PhD

Via Email to: susanglindstrom@gmail.com

Re: Rocker Memorial Skatepark Project, Nevada County

Dear Dr. Lindstrom:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

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

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Sarah.Fonseca@nahc.ca.gov.

Sincerely,

Sarah Fonseca
Cultural Resources Analyst

Attachment

Page 1 of 1

Native American Heritage Commission
Native American Contact List
Nevada County
7/13/2021

Tsi Akim Maidu
Grayson Coney, Cultural Director
P.O. Box 510 — Maidu
Browns Valley, CA, 95918
Phone: (530) 383 - 7234
tsi-akim-maidu@att.net

United Auburn Indian Community of the Auburn Rancheria
Gene Whitehouse, Chairperson
10720 Indian Hill Road — Maidu
Auburn, CA, 95603 — Miwok
Phone: (530) 883 - 2390
Fax: (530) 883-2380
bguth@auburnrancheria.com

Washoe Tribe of Nevada and California
Darrel Cruz, Cultural Resources Department
919 Highway 395 North — Washoe
Gardnerville, NV, 89410
Phone: (775) 265 - 8600
darrel.cruz@washoetribe.us

Wilton Rancheria
Jesus Tarango, Chairperson
9728 Kent Street — Miwok
Elk Grove, CA, 95624
Phone: (916) 683 - 6000
Fax: (916) 683-6015
jtarango@wiltonrancheria-nsn.gov

Wilton Rancheria
Dahlton Brown, Director of Administration
9728 Kent Street — Miwok
Elk Grove, CA, 95624
Phone: (916) 683 - 6000
dbrown@wiltonrancheria-nsn.gov

Wilton Rancheria
Steven Hutchason, THPO
9728 Kent Street — Miwok
Elk Grove, CA, 95624
Phone: (916) 683 - 6000
Fax: (916) 863-6015
shutchason@wiltonrancheria-nsn.gov

Colfax-Todds Valley Consolidated Tribe
Clyde Prout, Chairperson
P.O. Box 4884 none — Maidu
Auburn, CA, 95604 — Miwok
Phone: (530) 577 - 3558
miwokmaidu@yahoo.com

Colfax-Todds Valley Consolidated Tribe
Pamela Cubbler, Treasurer
P.O. Box 4884 — Maidu
Auburn, CA, 95604 — Miwok
Phone: (530) 320 - 3943
pcubbler@colfaxrancheria.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Rocker Memorial Skatepark Project, Nevada County.

PROJ-2021-003838 — 07/13/2021 05:36 PM — 1 of 1

Susan Lindström, Ph.D.
Consulting Archaeologist

P.O. Box 3324
Truckee CA 96160
530-713-1920 (cell)
susanglindstrom@gmail.com

DATE: July 14, 2021

TO: Darrel Cruz, THPO
Washoe Tribe of Nevada and California
Cultural Resources Department
919 Highway 395 South
Gardnerville, NV 89410
darrel.cruz@washoetribe.us
775-782-0014; 775-546-3421 (cell)

RE: Rocker Memorial Skatepark Project
Cultural Resource Study

I am writing to request a records search of the Sacred Land Files. The project sponsor plans to develop a two-acre parcel with a new skatepark and parking area. The parcels (APN 19-450-054 and 014) are located on Estates Drive and the intersection of Old Brockway Road, Truckee, California (Nevada County). The project area falls within Township 17 North, Range 16 East, Section 14, USGS Truckee 7.5 Quad (see attached map). The entire project area has been graded and filled. I completed an intensive archaeological field survey and found no Native American sites, features or artifacts.

I wish to bring this project to your attention, and I invite your opinions, knowledge and sentiments regarding any potential concerns for traditional Native American lands within the project vicinity.

Thank you very much.

Susan Lindström, Ph.D.
Consulting Archaeologist

Gmail **Susan Lindstrom <susanglindstrom@gmail.com>**

Rocker Memorial Skatepark Project

2 messages

Susan Lindstrom <susanglindstrom@gmail.com> Wed, Jul 14, 2021 at 8:43 AM
To: Darrel Cruz <darrel.cruz@washoetribe.us>

Hi Darrel;
Attached please find information regarding this project. As always, I welcome your input and will include it in my report.
Thanks.

Susan G. Lindstrom, Ph.D.
Consulting Archaeologist

susanglindstrom@gmail.com
P.O. Box 3324
Truckee, CA 96160
530-713-1920

2 attachments

Rocker Skatepark NAHC Cruz.docx
14K

Rocker Memorial Skate Park. Fig 1. Project Location Map (Topo).pdf
3805K

Susan Lindstrom <susanglindstrom@gmail.com> Mon, Jul 26, 2021 at 10:25 AM
To: Darrel Cruz <darrel.cruz@washoetribe.us>

Hi Darrel;
I'm following up my communications on July 14th to confirm that you received information regarding the proposed Rocker Skatepark Project. Again, I welcome your comments and will include them in my report. Thank you.

Susan G. Lindstrom, Ph.D.
Consulting Archaeologist

susanglindstrom@gmail.com
P.O. Box 3324
Truckee, CA 96160
530-713-1920

[Quoted text hidden]

Susan Lindström, Ph.D.
Consulting Archaeologist

P.O. Box 3324
Truckee CA 96160
530-713-1920 (cell)
susanglindstrom@gmail.com

DATE: July 14, 2021

TO: Pamela Cubbler, Treasurer
(Clyde Prout, Chairman)
Colfax-Todds Valley Consolidated Tribe
P.O. Box 4884
Auburn, CA 95604
pcubbler@colfaxrancheria.com (miwokmaidu@yahoo.com)
530-320-3943; 530-367-2093 (home); (916-577-3558)

RE: Rocker Memorial Skatepark Project
Cultural Resource Study

I am writing to request a records search of the Sacred Land Files. The project sponsor plans to develop a two-acre parcel with a new skatepark and parking area. The parcels (APN 19-450-054 and 014) are located on Estates Drive and the intersection of Old Brockway Road, Truckee, California (Nevada County). The project area falls within Township 17 North, Range 16 East, Section 14, USGS Truckee 7.5 Quad (see attached map). The entire project area has been graded and filled. I completed an intensive archaeological field survey and found no Native American sites, features or artifacts.

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Thank you very much.

Susan Lindström, Ph.D.
Consulting Archaeologist

Gmail **Susan Lindstrom <susanglindstrom@gmail.com>**

Rocker Memorial Skatepark Project

2 messages

Susan Lindstrom <susanglindstrom@gmail.com> Wed, Jul 14, 2021 at 8:45 AM
To: pcubbler@colfaxrancheria.com

Hello Pamela;
Attached please find information regarding this project. I welcome your comments and will include them in my report.
Thank you.

Susan G. Lindstrom, Ph.D.
Consulting Archaeologist

susanglindstrom@gmail.com
P.O. Box 3324
Truckee, CA 96160
530-713-1920

2 attachments

Rocker Skatepark NAHC Cubbler.docx
14K

Rocker Memorial Skate Park. Fig 1. Project Location Map (Topo).pdf
3805K

Susan Lindstrom <susanglindstrom@gmail.com> Mon, Jul 26, 2021 at 10:24 AM
To: pcubbler@colfaxrancheria.com
Cc: miwokmaidu@yahoo.com

Hello Pamela;
I'm following up my communications on July 14th to confirm that you received the information regarding the proposed Rocker Skatepark Project. Again, I welcome your comments and will include them in my report. Thank you.

Susan G. Lindstrom, Ph.D.
Consulting Archaeologist

susanglindstrom@gmail.com
P.O. Box 3324
Truckee, CA 96160
530-713-1920

[Quoted text hidden]

Susan Lindström, Ph.D.
Consulting Archaeologist

P.O. Box 3324
Truckee CA 96160
530-713-1920 (cell)
susanglindstrom@gmail.com

DATE: July 14, 2021

TO: Steven Hutchason, Tribal Historic Preservation Officer
Wilton Rancheria
9728 Kent Street
Elk Grove, CA 95624
916-683-6000; shutchasson@wiltonrancheria-nsn.gov

RE: Rocker Memorial Skatepark Project
Cultural Resource Study

I am writing to request a records search of the Sacred Land Files. The project sponsor plans to develop a two-acre parcel with a new skatepark and parking area. The parcels (APN 19-450-054 and 014) are located on Estates Drive and the intersection of Old Brockway Road, Truckee, California (Nevada County). The project area falls within Township 17 North, Range 16 East, Section 14, USGS Truckee 7.5 Quad (see attached map). The entire project area has been graded and filled. I completed an intensive archaeological field survey and found no Native American sites, features or artifacts.

I wish to bring this project to your attention, and I invite your opinions, knowledge and sentiments regarding any potential concerns for traditional Native American lands within the project vicinity.

Thank you very much.

Susan Lindström, Ph.D.
Consulting Archaeologist

Gmail **Susan Lindstrom <susanglindstrom@gmail.com>**

Rocker Memorial Skatepark Project

4 messages

Susan Lindstrom <susanglindstrom@gmail.com> Wed, Jul 14, 2021 at 8:47 AM
To: shutchasson@wiltonrancheria-nsn.gov

Mr. Hutchason;
Attached please find information regarding this project. I welcome any comments and will include them in my report.
Thank you.

Susan G. Lindstrom, Ph.D.
Consulting Archaeologist

susanglindstrom@gmail.com
P.O. Box 3324
Truckee, CA 96160
530-713-1920

2 attachments

Rocker Skatepark NAHC Hutchason.docx
14K

Rocker Memorial Skate Park. Fig 1. Project Location Map (Topo).pdf
3805K

Mail Delivery Subsystem <mailer-daemon@googlemail.com> Wed, Jul 14, 2021 at 8:47 AM
To: susanglindstrom@gmail.com

Message blocked

Your message to **shutchasson@wiltonrancheria-nsn.gov** has been blocked. See technical details below for more information.

The response from the remote server was:

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Status: 5.4.1
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Last-Attempt-Date: Wed, 14 Jul 2021 08:47:57 -0700 (PDT)

---------- Forwarded message ----------
From: Susan Lindstrom <susanglindstrom@gmail.com>
To: shutchasson@wiltonrancheria-nsn.gov
Cc:
Bcc:
Date: Wed, 14 Jul 2021 08:47:42 -0700
Subject: Rocker Memorial Skatepark Project
----- Message truncated -----

Susan Lindstrom <susanglindstrom@gmail.com> Wed, Jul 14, 2021 at 8:53 AM
To: jtarango@wiltonrancheria-nsn.gov

Please see attached email...

Susan G. Lindstrom, Ph.D.
Consulting Archaeologist

susanglindstrom@gmail.com
P.O. Box 3324
Truckee, CA 96160
530-713-1920

[Quoted text hidden]
---------- Forwarded message ----------
From: Susan Lindstrom <susanglindstrom@gmail.com>
To: shutchasson@wiltonrancheria-nsn.gov
Cc:
Bcc:
Date: Wed, 14 Jul 2021 08:47:42 -0700
Subject: Rocker Memorial Skatepark Project
----- Message truncated -----

Susan Lindstrom <susanglindstrom@gmail.com> Mon, Jul 26, 2021 at 10:21 AM
To: jtarango@wiltonrancheria-nsn.gov
Cc: dbrown@wiltonrancheria-nsn.gov

Chairperson Tarango;
I'm following up my communications on July 14th to confirm that you received information regarding the proposed Rocker Skatepark Project. Again, I welcome any comments and will include them in my report. Thank you.

Susan G. Lindstrom, Ph.D.
Consulting Archaeologist

susanglindstrom@gmail.com
P.O. Box 3324

Gmail

Susan Lindstrom <susanglindstrom@gmail.com>

Rocker Memorial Skatepark Project

1 message

Cultural Preservation Department Inbox <cpd@wiltonrancheria-nsn.gov> Tue, Jul 27, 2021 at 10:31 AM
To: "susanglindstrom@gmail.com" <susanglindstrom@gmail.com>
Cc: Cultural Preservation Department Inbox <cpd@wiltonrancheria-nsn.gov>

Good morning,

Please see attached letter regarding the subjected project.

Thanks

Mariah Mayberry
Wilton Rancheria
Tel: 916.683.6000 ext 2023 | Fax: 916.683.6015
9728 Kent Street | Elk Grove | CA | 95624
mmayberry@wiltonrancheria-nsn.gov
wiltonrancheria-nsn.gov

2021-7-27 CL 2895 Lead Agency request .pdf
128K

Wilton Rancheria

9728 Kent Street, Elk Grove, CA 95624

July 27, 2021

P.O. Box 3324
Truckee, CA 96160
Susan Lindstrom

RE:

Dear: Sir/ Madam,

Thank you for your letter dated July 14, 2021, regarding the proposed project. Wilton Rancheria ("Tribe") is a federally recognized Tribe as listed in the Federal Register, Vol. 74, No. 132, p. 33468-33469, as "Wilton Rancheria of Wilton, California". The Tribe's Service Delivery Area ("SDA") as listed in the Federal Register, Vol. 78, No. 176, p. 55731, is Sacramento County. The Tribe's Trust Lands are in Sacramento County however, the Tribe's ancestral territory spans from Sacramento County to portions of the surrounding Counties. The Tribe is concerned about projects and undertakings that have potential to impact resources that are of cultural and environmental significance to the tribe.

After review of your letter, we have determined the project lies within the Tribe's ancestral territory. We appreciate the opportunity to comment on this and any other projects within the Tribe's ancestral territory. The proposed project may directly or indirectly negatively impact Cultural or Environmental resources of the Tribe.

The Tribe supports the United States Government to Government Consultation Process with Tribes:

Executive Orders

- Executive Order 13175 (2000), Consultation and Coordination with Tribal Government
- Executive Order 13007 (1996), Indian Sacred Sites
- Executive Order 12898 (1994), Federal Actions to Adress Environmental Justice in Minority Populations and Low-Income Populations.

Legal Requirements and Directives to Consult with Indian Tribes

- The Federal Trust Responsibility towards Indian Tribes.
- National Historic Preservation Act of 1996 (NHPA), 54U.S.C. 302706 (a), 54 U.S.C. 302706 (b), and Section 106.
- The National Environmental Policy Act of 1969 (NEPA).

- The American Indian Religious Freedom Act of 1978 (AIRFA).
- The Native American Graves Protection and Repatriation Act of 1990 (NAGPRA).
- The United Nations Declarations on Rights of Indigenous Peoples.

Secretarial Orders

- Secretarial Order #3206: American Indian Tribal Rights, Federal Tribal Trust Responsibilities, and Endangered Species Act (June 5, 1997).

Furthermore, we support the States Consultation Policies as follows

State Laws

- California Environmental Quality Act (CEQA)
- Assembly Bill 52 (AB52)
- Assembly Bill 978 (AB978) - California Native American Graves Repatriation Act (CalNAGPRA)
- Assembly Bill 275 (AB275) – Native American Cultural Preservation
- Executive Order B-10-11
- Executive Order N-15-19

Resource Codes

- (Pub. Resources Code § 21080.3.1, subd. (b)).

Government Code

- (Govt. Code Section 65352.4).

The Tribe requires the inclusion of a review and the results of the California Historical Resources Information System (CHRIS) and the California Native American Heritage Commission (NAHC) Sacred Lands File (SLF). If the results are negative, the Tribe may require its own review at the Tribes discretion.

Please contact the Cultural Preservation Department, via email at cpd@wiltonrancheria-nsn.gov to set up a meeting.

Sincerely,

Gmail **Susan Lindstrom <susanglindstrom@gmail.com>**

Rocker Memorial Skatepark Project

3 messages

Susan Lindstrom <susanglindstrom@gmail.com> Tue, Jul 27, 2021 at 11:39 AM
To: cdp@wiltonrancheria-nsn.gov

Hello Mariah;
Thank you for your comment letter regarding this project. I would be happy to discuss the project with you in more detail, perhaps by phone or email exchange. Please feel free to give me a call (530-713-1920) or email (susanglindstrom@gmail.com). I welcome our further communications.

Susan G. Lindstrom, Ph.D.
Consulting Archaeologist

susanglindstrom@gmail.com
P.O. Box 3324
Truckee, CA 96160
530-713-1920

Mail Delivery Subsystem <mailer-daemon@googlemail.com> Tue, Jul 27, 2021 at 11:39 AM
To: susanglindstrom@gmail.com

Message blocked

Your message to **cdp@wiltonrancheria-nsn.gov** has been blocked. See technical details below for more information.

The response from the remote server was:

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550 5.4.1 Recipient address rejected: Access denied. AS(201806281) [DM6NAM11FT030.eop-nam11.prod.protection.outlook.com]
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Final-Recipient: rfc822; cdp@wiltonrancheria-nsn.gov
Action: failed
Status: 5.4.1
Remote-MTA: dns; wiltonrancheriansn-gov03i.mail.protection.outlook.com.
(104.47.57.138, the server for the domain wiltonrancheria-nsn.gov.)
Diagnostic-Code: smtp; 550 5.4.1 Recipient address rejected: Access denied. AS(201806281) [DM6NAM11FT030.eop-nam11.prod.protection.outlook.com]

Susan Lindström, Ph.D.
Consulting Archaeologist

P.O. Box 3324
Truckee CA 96160
530-713-1920 (cell)
susanglindstrom@gmail.com

DATE: July 14, 2021

TO: Grayson Coney, Cultural Director
(Don Ryberg, Chairperson)
Tsi Akim Maidu
P.O. Box 510
Browns Valley, CA 95918
530-383-7234
Tsi-akim-maidu@att.net

RE: Rocker Memorial Skatepark Project
Cultural Resource Study

I am writing to request a records search of the Sacred Land Files. The project sponsor plans to develop a two-acre parcel with a new skatepark and parking area. The parcels (APN 19-450-054 and 014) are located on Estates Drive and the intersection of Old Brockway Road, Truckee, California (Nevada County). The project area falls within Township 17 North, Range 16 East, Section 14, USGS Truckee 7.5 Quad (see attached map). The entire project area has been graded and filled. I completed an intensive archaeological field survey and found no Native American sites, features or artifacts.

I wish to bring this project to your attention, and I invite your opinions, knowledge and sentiments regarding any potential concerns for traditional Native American lands within the project vicinity.

Thank you very much.

Susan Lindström, Ph.D.
Consulting Archaeologist

Gmail **Susan Lindstrom <susanglindstrom@gmail.com>**

Rocker Memorial Skatepark Project

2 messages

Susan Lindstrom <susanglindstrom@gmail.com> Wed, Jul 14, 2021 at 8:49 AM
To: tsi-akim-maidu@att.net

Hello Grayson;
Attached please find information regarding this project. As always, I welcome your comments and will include them in my report. Thank you.

Susan G. Lindstrom, Ph.D.
Consulting Archaeologist

susanglindstrom@gmail.com
P.O. Box 3324
Truckee, CA 96160
530-713-1920

2 attachments

Rocker Skatepark NAHC Coney.docx
14K

Rocker Memorial Skate Park. Fig 1. Project Location Map (Topo).pdf
3805K

Susan Lindstrom <susanglindstrom@gmail.com> Mon, Jul 26, 2021 at 10:22 AM
To: tsi-akim-maidu@att.net

Hello Grayson;
I'm following up my communications on July 14th to confirm that you have the necessary information regarding the proposed Rocker Skatepark Project. Again, I welcome your comments and will include them in my report. Thank you.

Susan G. Lindstrom, Ph.D.
Consulting Archaeologist

susanglindstrom@gmail.com
P.O. Box 3324
Truckee, CA 96160
530-713-1920

[Quoted text hidden]

Susan Lindström, Ph.D.
Consulting Archaeologist

P.O. Box 3324
Truckee CA 96160
530-713-1920 (cell)
susanglindstrom@gmail.com

DATE: July 14, 2021

TO: Gene Whitehouse, Chairperson
United Auburn Indian Community of the Auburn Rancheria
10720 Indian Hill Road
Auburn, CA 95603
530-883-2390
bguth@auburnrancheria.com

RE: Rocker Memorial Skatepark Project
Cultural Resource Study

I am writing to request a records search of the Sacred Land Files. The project sponsor plans to develop a two-acre parcel with a new skatepark and parking area. The parcels (APN 19-450-054 and 014) are located on Estates Drive and the intersection of Old Brockway Road, Truckee, California (Nevada County). The project area falls within Township 17 North, Range 16 East, Section 14, USGS Truckee 7.5 Quad (see attached map). The entire project area has been graded and filled. I completed an intensive archaeological field survey and found no Native American sites, features or artifacts.

I wish to bring this project to your attention, and I invite your opinions, knowledge and sentiments regarding any potential concerns for traditional Native American lands within the project vicinity.

Thank you very much.

Susan Lindström, Ph.D.
Consulting Archaeologist

Gmail **Susan Lindstrom <susanglindstrom@gmail.com>**

Rocker Skatepark Project

3 messages

Susan Lindstrom <susanglindstrom@gmail.com> Mon, Jul 26, 2021 at 10:30 AM
To: Brian Guth <bguth@auburnrancheria.com>

Hello Brian;
I'm following up on my communications with the Native American Heritage Commission on July 14th to confirm that you received information regarding the proposed Rocker Skatepark Project. Again, I welcome your comments and will include them in my report. Thank you.

Susan G. Lindstrom, Ph.D.
Consulting Archaeologist

susanglindstrom@gmail.com
P.O. Box 3324
Truckee, CA 96160
530-713-1920

2 attachments

Rocker Skatepark NAHC Whitehouse.docx
14K

Rocker Memorial Skate Park. Fig 1. Project Location Map (Topo).pdf
3805K

Anna Cheng <acheng@auburnrancheria.com> Fri, Jul 30, 2021 at 11:27 AM
To: Susan Lindstrom <susanglindstrom@gmail.com>
Cc: Anna Starkey <astarkey@auburnrancheria.com>

Dear Ms. Lindstrom,

On behalf of the United Auburn Indian Community, thank you for the notification and opportunity to review the project referenced above. Our records do show known or previously recorded tribal cultural resources near the project area. Have you reached out to Washoe regarding this project? UAIC generally recommend reaching out to Washoe for projects in the Truckee and Tahoe Basin area as they may have more information about those locations that UAIC does not.

Best,

Anna Cheng

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Signatures in Global and National Commerce Act (E-Sign Act), 15, U.S.C. §§ 7001 to 7006 or the Uniform Electronic Transactions Act of any state or the federal government unless a specific statement to the contrary is included in this e-mail.

Susan Lindstrom <susanglindstrom@gmail.com> Fri, Jul 30, 2021 at 1:53 PM
To: Anna Cheng <acheng@auburnrancheria.com>

Thank you, Anna, for your comments. I will include them in my upcoming report. And, as you have recommended, I have reached out to the Washoe Tribe, along with several other tribes on the Commission's contact list.

Susan G. Lindstrom, Ph.D.
Consulting Archaeologist

susanglindstrom@gmail.com
P.O. Box 3324
Truckee, CA 96160
530-713-1920

[Quoted text hidden]

APPENDIX E

Geotechnical Engineering Report

GEOTECHNICAL ENGINEERING REPORT
ROCKER MEMORIAL SKATEPARK

TRUCKEE, CALIFORNIA

SEPTEMBER 15, 2021

PREPARED FOR:

CHARITYSMITH NATIONAL SOCIETY OF MEMORIAL FUNDS
COLIN ROBINSON
13100 FILLY LANE
TRUCKEE, CALIFORNIA 96161

NV5
10775 PIONEER TRAIL, SUITE 213
TRUCKEE, CALIFORNIA 96161

PROJECT NO. 42941.00

Project No. 42941.00
September 15, 2021

CharitySmith National Society of Memorial Funds
Colin Robinson
13100 Filly Lane
Truckee, California 96161

Reference: **Rocker Memorial Skatepark**
Truckee, California

Subject: **Geotechnical Engineering Report**

Dear Mr. Robinson:

This report presents the results of our geotechnical engineering investigation for the proposed Skatepark to be constructed in the southeast corner of the Truckee River Regional Park on Estates Drive in Truckee, California. We understand the proposed project will involve construction of a new 25,000 square-foot Skatepark at the site. Appurtenant construction will include an asphalt concrete paved parking lot (32 spaces) and driveway, hardscape around the Skatepark features, underground utilities and landscaping.

Approximately 1 to 5 feet of existing fill was encountered in our test pits across the site. The existing fill was generally dense to very dense coarse-grained soil containing some trash and debris. Due to the potential for excessive settlement, existing fill will not be suitable for support of structures and pavements. However, based on the dense nature of the fill, existing fill may remain in place beneath the proposed Skatepark improvements assuming potentially expansive soil is not suspected with 24 inches of subgrade and if the potential for minor cosmetic settlement to occur is tolerable. We have provided recommendations in the following report for these alternatives.

Although groundwater was not encountered in our test pits to the maximum depth explored, near-surface soil layers will likely become seasonally saturated. Groundwater elevations measured by others in the piezometer (12-2) located near the site indicates that depths to groundwater fluctuate seasonally and have been near the ground surface at a depth of about 1.18 feet bgs. The project site is approximately 3 to 5 feet above the wetland area based on the previous grading at the site and we anticipate groundwater may be encountered at depths of approximately 4 to 6 feet bgs. We anticipate that the clay soil underlying the site will have low permeability and generate a significant volume of storm water runoff. Depending on final site grades, rainfall, and/or irrigation practices, groundwater may be present at shallow depths and could cause adverse effects to the proposed structures. We have provided

recommendations to reduce the potential adverse effects of groundwater in the following report.

With the exception of the aforementioned issues, our professional opinion is that the site is suitable for the proposed development using conventional earthwork grading and foundation construction techniques. Specific recommendations regarding the geotechnical aspects of project design and construction are presented in the following report.

The findings presented in this report are based on our subsurface exploration, laboratory test results, and experience in the project area. We recommend retaining our firm to provide construction monitoring services during earthwork and foundation excavation to observe subsurface conditions encountered with respect to our recommendations provided in this report. As plans develop, we should be consulted concerning the need for additional services.

Please contact us if you have any questions regarding this report or if we can be of additional service.

Sincerely,
NV5

Prepared by:

Allison K. Hathon, P.E.
Senior Engineer

Reviewed by:

Nicole C. McCurdy, P.E.
Project Engineer

copies: Millennium Planning & Engineering, Rob Wood

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FIGURES

APPENDICES

1 INTRODUCTION

This report presents the results of our geotechnical engineering investigation for the proposed Rocker Memorial Skatepark to be constructed at the intersection of Estates Drive and Brockway Road adjacent to the existing Skatepark located in the Truckee River Regional Park in Truckee, California. We performed our investigation in general accordance with our June 16, 2021 proposal for the project. A copy of the proposal is included as Appendix A of this report. For your review,

1.1 PURPOSE

The purpose of our work was to explore and evaluate the subsurface conditions at the project site and to provide our geotechnical engineering conclusions and recommendations for project design and construction.

Our findings are based on our subsurface exploration, laboratory test results, and our experience in the project area. We recommend retaining our firm to provide construction monitoring services during earthwork and foundation excavation to observe subsurface conditions encountered with respect to our recommendations.

1.2 SCOPE OF SERVICES

To prepare this report we performed the following scope of services:

- We performed a site reconnaissance, literature review, and subsurface exploration involving test pits excavated with a mini-excavator.
- We logged the subsurface conditions encountered and collected bulk soil samples for classification and laboratory testing.
- We performed laboratory tests on selected soil samples obtained during our subsurface investigation to evaluate material properties.
- Based on our subsurface exploration and the results of our laboratory testing, we performed engineering analyses to develop geotechnical engineering recommendations for project design and construction.

1.3 SITE DESCRIPTION

The project site consists of a gravel parking area on the southeast corner of the Truckee River Regional Park in Truckee, California. The approximate location of the site is shown on Figure 1, Site Vicinity Map. The proposed project will involve construction of a new 25,000 square-foot Skatepark at the site. A plan view of the project site is shown on Figure 2, Test Pit Location Plan.

The project site is bounded by Estates Drive to the west and north, a vacant lot to the east, and a recently restored wetland area to the south and southeast. A pedestrian bike path and Old Brockway Road are located south of the wetland area. The site was previously graded and based on our subsurface investigation and site observations, approximately 1 to 5 feet of fill

covers the site. Boulders line the perimeter of the project site. Vegetation consisting of conifer trees and brush is located in the northwest corner of the site along Estates Drive.

The site is located at 39.3264°N latitude and 120.1717°W longitude (WGS84 datum). As previously mentioned, site grades have been previously modified by grading. Based on Google Earth imagery, the site lies at an elevation of approximately 5,862 feet above mean sea level (MSL). The site is relatively level. Regional topography in the immediate site vicinity slopes very gently down in a general north to south direction. NV5 anticipates that surface water flow at the site travels in a general north to south direction towards the nearby wetland area.

1.4 PROPOSED IMPROVEMENTS

Information about the proposed project was obtained from our site visits, conversations with Rob Wood of Millennium Planning & Engineering, and a 30% submittal project plans provided by Millennium Planning & Engineering dated February, 2018. As currently proposed, the project consists of constructing a Skatepark at the site. The Skatepark features will be constructed with concrete, steel and shotcrete. Appurtenant construction will include an asphalt concrete paved parking lot (32 spaces) and driveway, hardscape around the Skatepark features, underground utilities and landscaping. Cuts and fills for the proposed construction are anticipated to be up to about 6 to 8 feet.

2 LITERATURE REVIEW

We reviewed available geologic and soil literature in our files to evaluate geologic and anticipated subsurface conditions at the project site.

2.1 SITE GEOLOGY

We reviewed the *Geologic Map of the Lake Tahoe Basin, California and Nevada*, by George J. Saucedo, California Geological Survey, 2005. We also reviewed a geologic map and report titled *Geologic Map of the North Lake Tahoe-Donner Pass Region, Northern Sierra Nevada, California*, by Arthur Gibbs Sylvester et al., California Geological Survey, 2012. The geologic maps indicate that the site is generally underlain by Quaternary aged glacial outwash deposits that are comprised of silt, sand, gravel, and cobbles. The glacial outwash locally contain jökulhlaup (flood) deposits. Based on our subsurface investigation, described below, near-surface soil conditions are consistent with the mapped geology.

2.2 REGIONAL FAULTING

The project is located in a potentially active seismic area. To evaluate the location of mapped faults relative to the project site, we reviewed the following maps:

- *Fault Activity Map of California <http://maps.conservation.ca.gov/ cgs/fam/>;* by Charles W. Jennings and William A. Bryant, California Geological Survey, Geologic Data Map No. 6, 2010.
- Google Earth/KMZ files provided by USGS Earthquakes Hazards Program. Quaternary Faults & Folds in the U.S. Retrieved August 10, 2021. *https://www.usgs.gov/natural-hazards/earthquake-hazards/faults.*

The potential risk of fault rupture is based on the concept of recency and recurrence. The more recently a particular fault has ruptured, the more likely it will rupture again. The California State Mining and Geology Board define an “active fault” as one that has had surface displacement within the past 11,000 years (Holocene). Potentially active faults are defined as those that have ruptured between 11,000 and 1.6 million years before the present (Quaternary). Faults are generally considered inactive if there is no evidence of displacement during the Quaternary period.

The referenced geologic maps show several active and potentially active faults located near the project site, including the Dog Valley Fault (active, approximately 5.3 miles northwest), a group of unnamed faults southeast of Truckee (active and potentially active, approximately 1.4 to 2.4 miles southwest), the Polaris Fault (active, approximately 1.6 miles northeast), the West Tahoe – Dollar Point Fault Zone (potentially active, approximately 3.3 miles southeast), the Agate Bay Fault (potentially active, approximately 6.4 miles southeast), the Tahoe Sierra Frontal Fault Zone (potentially active, approximately 6.6 miles southwest), the West Tahoe Fault (active, approximately 17 miles south-southeast), and the North Tahoe Fault (active, approximately 12.7 miles southeast). Earthquakes associated with these faults may cause strong ground shaking at the project site.

2.3 POTENTIAL SEISMIC HAZARDS

Primary hazards associated with earthquake faults include strong ground motion and surface rupture. No faults are mapped as crossing or trending towards the site; therefore, the potential for surface rupture at the site is considered low. Earthquakes centered on regional faults in the area, such as the West Tahoe Fault, would likely result in higher ground motion at the site than earthquakes centered on smaller faults that are mapped closer to the site.

Secondary seismic hazards include liquefaction, lateral spreading, and seismically induced slope instability. These potential hazards are discussed below.

2.3.1 Soil Liquefaction

Liquefaction is a phenomenon where loose, saturated, granular soil deposits lose a significant portion of their shear strength due to excess pore water pressure buildup. Cyclic loading, such as that caused by an earthquake, typically causes an increase in pore water pressure and subsequent liquefaction. Based on the results of our subsurface investigation, near-surface soil at the site consists of dense to very dense granular soil and hard fine-grained soil with varying amounts of gravel, cobbles, and boulders. This soil profile will have a low potential for liquefaction.

2.3.2 Lateral Spreading

Lateral spreading is the lateral movement of soil resulting from liquefaction of subadjacent materials. Since we anticipate that there is a low potential for liquefaction of soil at the site, the potential for lateral spreading to occur is also considered low.

2.3.3 Slope Instability

Slope instability includes landslides, debris flows, and rock fall. No landslides, debris flows or rock fall hazards were observed in the project area. Due to the relatively level topography of the site and general surrounding area the potential for slope instability is considered low.

3 SUBSURFACE EXPLORATION

We performed our subsurface exploration to characterize typical subsurface conditions at the site.

3.1 FIELD EXPLORATION

We explored subsurface conditions at the site on July 28, 2021 by excavating three exploratory test pits to depths ranging from 8 to 10 feet below the ground surface (bgs). Test pits were excavated with a Deere 50D mini-excavator equipped with a 24-inch bucket. Test pit locations were selected based on locations of proposed improvements and site access.

An engineer from our firm logged the soil conditions exposed in the test pits, visually classified soil, and collected bulk soil samples for laboratory testing. Soil samples were packaged and sealed in the field to reduce moisture loss and were returned to our laboratory for testing. Upon completion, test pits were backfilled with the excavated soil. The approximate locations of our test pits are shown on Figure 2, Test Pit Location Plan.

3.2 SUBSURFACE SOIL CONDITIONS

Near-surface soil encountered in our test pits consisted of 1 to 5 feet of existing fill. The existing fill was comprised of loose to very dense well-graded Sand with silt (SW-SM) and silty Sand (SM) with varying amounts of gravel, cobbles, and boulders. The existing fill generally transitioned from loose to dense material at a depth of approximately 2 to 6 inches bgs. Some debris and trash was encountered in the existing fill. Underlying the existing fill, Test Pit TP-1 encountered approximately 6 inches of dense poorly graded Sand (SP) overlying approximately 2 feet of dense silty Sand with gravel (SM). Test Pit TP-1 was terminated at a depth of approximately 10 feet bgs in very stiff lean Clay with sand and gravel (CL). Underlying the existing fill, Test Pit TP-2 encountered approximately 6 inches of dense clayey Sand (SC) overlying very stiff lean Clay with sand and gravel (CL). Test Pit TP-2 encountered essential refusal on boulders at a depth of approximately 8.5 feet bgs. Underlying the existing fill, Test Pit TP-3 encountered approximately 2.5 feet of very dense silty Sand (SM) overlying approximately 3 feet of stiff lean Clay (CL). Underlying the clay soil, Test Pit TP-3 encountered dense well-graded sand (SW) containing some gravel and boulders. Test Pit TP-3 encountered essential refusal on boulders at a depth of approximately 8 feet bgs. More detailed descriptions of the subsurface conditions observed are presented in our Test Pit Logs in Appendix B.

3.3 SUBSURFACE SOIL CONDITIONS – 10040 ESTATES DRIVE (PROJECT NO. 42769.00)

We performed a subsurface investigation on September 3, 2020 at the adjacent lot, 10040 Estates Drive. We excavated four exploratory test pits to depths ranging from approximately 3.5 to 10 feet below the ground surface (bgs) with a Takeuchi TB240 mini-excavator equipped with a 24-inch bucket.

Near-surface soil encountered in our test pits consisted of approximately 1 to 2 feet of existing fill. The existing fill was comprised of loose to dense silty Sand with gravel (SM) and poorly

graded Gravel with clay and sand (GP-GC) and varying amounts of cobbles. The upper 4 to 6 inches of existing fill contained organic material. Underlying the existing fill, Test Pits TP-1, TP-2 and TP-3 encountered dense to very dense clayey Gravel with sand (GC). Test Pit TP-3 encountered refusal on cobbles and very dense soil in the clayey Gravel with sand (GC) layer at a depth of approximately 3.5 feet bgs. Hard gravelly fat Clay with sand (CH) containing some boulders was encountered below the clay Gravel with sand (GC) in Test Pits TP-1 and TP-2 at depths of 3 feet bgs and below the existing fill in Test Pit TP-4 at a depth of 2 feet bgs. The clay layer was approximately 4 to 4.5 feet deep in Test Pits TP-1 and TP-4 and was underlain by very dense clayey Gravel with sand (GC). Test Pit TP-1 and TP-4 were excavated to depths of approximately 10 and 9 feet bgs, respectively. Test Pit TP-2 encountered essential refusal in hard clay soil at 7.5 feet bgs. More detailed descriptions of the subsurface conditions observed are presented in our Test Pit Logs in Appendix C.

3.4 GROUNDWATER CONDITIONS

Based on our previous experience in the project area, we understand that the piezometer located near the project site (designated as 12-2) was installed by the Truckee River Watershed Council (TRWC) in 2012 as part of the wetland restoration project located immediately adjacent to and southeast of the site. NV5 contacted TRWC to obtain groundwater elevation measurements collected in the onsite piezometer. Based on our review of groundwater elevation data, it appears that depths to groundwater measured in piezometer 12-2 ranged from 1.18 to 5.74 feet bgs between October 31, 2017 and October 5, 2018. In addition, we observed ponded water in portions of the wetland area southeast of the project site during our subsurface investigation.

We did not observe groundwater during our subsurface exploration to the depths explored. However, groundwater elevations measured in the nearby piezometer 12-2 indicate seasonally high groundwater at depths a little over 1 foot bgs at the site. The project site is approximately 3 to 5 feet above the wetland area based on the previous grading and we anticipate groundwater may be encountered at depths of approximately 4 to 6 feet bgs. Fluctuations in soil moisture content and groundwater levels should be anticipated depending on precipitation, irrigation, runoff conditions, and other factors. Based on our experience in the project area, seasonal saturation of near-surface soil should be anticipated, especially during and immediately after seasonal snowmelt. Depending on final site grades, rainfall, irrigation practices, and other factors, groundwater may be present at shallow depths. Groundwater may cause moisture intrusion through concrete slab-on-grade floors, degradation of asphalt concrete pavements, and other adverse conditions. Mitigation measures such as gravel underdrains, trench drains, water barriers, or other methods may be required to intercept shallow groundwater or reduce potential adverse effects on project features. We recommend the project civil engineer in conjunction with NV5 review the subsurface information available within this report and revealed during site preparation in order to develop appropriate surface and subsurface drainage plans. The contractor should prepare detailed as-built drawings of the subsurface drainage system.

4 LABORATORY TESTING

We performed laboratory tests on bulk soil samples collected from our exploratory test pits to evaluate their engineering properties. We performed the following laboratory tests:

- Atterberg Limits / Plasticity (ASTM D4318)
- Sieve Analysis (ASTM D422)
- Expansion Index (ASTM D4829)

Sieve analysis and Atterberg limits data resulted in Unified Soil Classification System (USCS) classifications of silty Sand (SM), silty Sand with gravel (SM), and lean Clay with sand and gravel (CL). Expansion index testing of a soil sample collected from Test Pit TP-1 at a depth of 8 feet bgs indicated that the soil has a low potential for expansion. More specific soil classification and laboratory test data is included in Appendix D. USCS classifications and Atterberg indices are summarized below.

Table 4.1 – Summary of Laboratory Test Results

Test Pit Number	Depth (feet)	USCS Classification	Percent Passing #200 Sieve	Liquid Limit	Plasticity Index
TP-1	2.5 - 3	Silty Sand with Gravel (SM)	14	--	--
TP-1	8 – 8.5	Lean Clay with Sand and Gravel (CL)	--	46	18
TP-3	3 – 3.5	Silty Sand (SM)	41	Non-Plastic	Non-Plastic

5 CONCLUSIONS

The following conclusions are based on our field observations, laboratory test results, and our experience in the area.

1. Based on our subsurface investigation and laboratory testing at the project site and adjacent site, clay soil encountered at depths of approximately 3.5 to 7.5 feet bgs has a low potential for expansion. However, fat clay soil was encountered at the adjacent lot (10040 Estates Drive - Project No. 42769.00) at depths of approximately 2 to 3 feet bgs and extended to depths of about 6.5 to 7.5 feet bgs. The fat clay soil encountered at 10040 Estates Drive has a moderate expansion potential. Due to the potential for adverse effects caused by expansive soil, potentially expansive clay soil is not suitable for direct support of proposed structures on conventional shallow spread foundations, slabs-on-grades or pavements. We recommend the most feasible option is to remove approximately 12 inches of potentially expansive soil below bottom of footing subgrade and concrete slabs-on-grade and replace with structural fill. A representative of NV5 should be onsite during grading to observe subsurface conditions and assist in identifying areas of potentially expansive soil.
2. It appears that approximately 1 to 5 feet of existing fill is overlaying the majority of the site. Due to the potential for excessive settlement, the fill will not be suitable for support of structures. Structures should be founded on underlying native soil, or the existing fill can be removed and replaced with compacted structural fill. However, based on the dense nature of the existing fill, provided deleterious material in the existing fill is removed, the proposed Skatepark improvements may be placed over the existing fill assuming potentially expansive soil is not suspected with 24 inches of subgrade and if the potential for minor cosmetic settlement to occur is tolerable. We have provided recommendations for structural fill placement and subgrade preparation in the *Earthwork* section of this report.
3. Near surface site soil including the existing fill and coarse-grained soil is generally suitable for reuse as structural fill. Clay soil encountered at the site is generally <u>not</u> suitable for reuse as structural fill due to the high fines content but may be used as fill in landscaping areas. Structural fill meeting the requirements outlined in the *Recommendations* section of this report should be used where structural fill is required. Moisture content, dry density, and relative compaction of structural fill should be evaluated by our firm at regular intervals during structural fill placement.
4. Although groundwater was not encountered in our test pits to the maximum depth explored, near-surface soil layers will likely become seasonally saturated. Groundwater elevations measured by others in the piezometer (12-2) located near the site indicate that depths to groundwater fluctuate seasonally and have been near the ground surface at a depth of about 1.18 feet bgs. The project site is approximately 3 to 5 feet above the wetland area based on the previous grading and we anticipate groundwater may be encountered at depths of approximately 4 to 6 feet bgs. In addition, we anticipate that

the clay soil underlying the site will have low permeability and generate a significant volume of storm water runoff. Seasonal runoff and groundwater may cause moisture intrusion through concrete slab-on-grade floors, degradation of asphalt concrete pavements, and other adverse conditions. Due to the relatively level topography of the site, water may pond on the ground surface in some areas. Consequently, positive surface and subsurface drainage will be important across the site. We have provided recommendations to reduce the potential for these adverse effects in the Recommendations section of this report.

5. Based on site grading, we anticipate existing fill will be encountered at subgrade for pavement. Based on the dense nature of the existing fill, provided deleterious material in the existing fill is removed, pavement sections may be placed over the existing fill assuming potentially expansive soil is not suspected with 24 inches of subgrade and if the potential for minor cracking to occur is tolerable. Seasonal saturation of near-surface soil should be considered in the design of pavement areas. Subdrains under pavement areas and/or v-ditches along the side of roads should be considered to reduce saturation.

6 RECOMMENDATIONS

The following geotechnical engineering recommendations are based on our understanding of the project as currently proposed, our field observations, results of our laboratory tests, engineering analyses, and our experience in the area.

6.1 EARTHWORK

The following sections present our recommendations for site clearing and grubbing, preparation for and placement of fill material, cut/fill slope grading, temporary excavations, utility trench construction, and construction dewatering.

6.1.1 Clearing and Grubbing

Areas proposed for fill placement, road and driveway construction, and building areas should be cleared and grubbed of vegetation and other deleterious materials. Existing vegetation, organic topsoil, fill, and any debris should be stripped and hauled offsite or stockpiled outside the construction limits. Based on our subsurface exploration, the site has already been stripped of organic surface soil.

Man-made debris and backfill soil in our exploratory test pits or any other onsite excavations should be over-excavated to underlying, competent material and replaced with compacted structural fill. Grubbing may be required where concentrations of organic soil or tree roots are encountered during site grading.

Existing fill should be removed in areas that will support foundation elements, earth retention structures, concrete slabs-on-grade, and pavement sections. Based on our field observations, the depth of existing fill ranges from about one to five feet across the site. Existing fill should either be replaced with compacted structural fill or improvements may be founded directly on properly prepared underlying native coarse grained soil but not clay soil. However, based on the dense nature of the existing fill, provided deleterious material in the existing fill is removed, the proposed skatepark improvements may be placed over the existing fill assuming potentially expansive soil is not suspected with 24 inches of subgrade and if the potential for minor cosmetic settlement to occur is tolerable. Existing fill material will be suitable for re-use as structural fill material provided any debris exceeding eight inches in maximum dimension and all organic or deleterious material are removed prior to placement. Preparation of the subgrade exposed by over-excavation and requirements for structural fill should be in accordance with recommendations provided below.

Existing fill beneath pavement sections may be removed and replaced with structural fill to essentially eliminate potential risks associated with fill subsidence. However, based on our experience in the area and our understanding of the proposed project, we think this procedure will provide only a small reduction in settlement risk. Therefore, existing fill may remain in place beneath proposed pavements provided that it is benched and the surface is scarified, moisture conditioned, and compacted prior to placement of structural fill. We recommend that an NV5 representative observe existing fill during slab-on-grade and pavement section

construction and, if necessary, provide additional recommendations at the time of construction.

All rocks greater than 8 inches in greatest dimension (oversized rock) should be removed from the top 12 inches of soil, if encountered. Oversized rock may be used in landscape areas, rock faced slopes, or removed from the site. Oversized rock should not be placed in fill without prior approval by the project geotechnical engineer.

6.1.2 Preparation for Fill Placement

Prior to fill placement, man-made debris, or backfill soil should be removed to expose non-expansive native soil as discussed in the previous section. Where potentially expansive soil is encountered at subgrade level, please see the following section to address potentially expansive soil.

Where fill placement is planned, the near-surface soil should be scarified to a depth of about 12 inches or to competent material and then uniformly moisture conditioned to within 2 percent of the optimum moisture content. Scarified and moisture conditioned soil should be recompacted with appropriate compaction equipment and proof rolled with a loaded, tandem-axle truck under the observation of an NV5 representative. Any areas that exhibit pumping or rutting should be over-excavated and replaced with compacted structural fill placed according to the recommendations below.

6.1.3 Expansive Soil

Based on the results of our field investigation and laboratory testing, clay soil is present across the site at depths ranging from approximately 3.5 to 7.5 feet bgs. Fat clay soil was encountered at the adjacent lot (10040 Estates Drive - Project No. 42769.00) at depths of approximately 2 to 3 feet bgs and extended to depths of about 6.5 to 7.5 feet bgs. The fat clay soil has a moderate expansion potential. Expansive soil is characterized by its ability to undergo significant volume change (shrink or swell) due to variations in moisture content. Changes in soil moisture content can result from rainfall, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors and may cause settlement or heave of structures, concrete slabs supported-on-grade, or pavements supported over this material. Depending on the extent and location below finished subgrade, this soil could have a detrimental effect on the proposed construction.

We recommend a representative of NV5 be present during site preparation and grading to evaluate proposed building and pavement areas for the presence of near-surface, expansive soil. In the event expansive soil is encountered or suspected within 24 inches of the bottom of foundations, slabs, or pavements we recommend removing and replacing potentially expansive soil with non-expansive fill. Based on our subsurface exploration and experience in the area, the moderately expansive soil may extend to depths greater than approximately 8.5 feet bgs. Based on the depth of the potentially expansive soil and the potential for groundwater seepage, it will likely not be feasible to remove the entire extent of the potentially expansive soil. As a result, we recommend removing approximately 12 inches of potentially

expansive soil below bottom of footing subgrade and concrete slabs on grade and replacing with structural fill.

Based on our experience in the site area, cracks parallel to pavement edges adjacent to landscaped and other areas subject to uncontrolled surface drainage and/or evaporation may occur due to seasonal wetting and drying of the subgrade soil. The pavement sections provided in Section 6.3.3 will not reduce this effect. If potential pavement cracking described above is not acceptable, we recommend removing a minimum of 12 inches of potentially expansive clay soil from beneath the pavement and replacing it with compacted non-expansive fill.

With the exception of removing all expansive soil beneath structures, the recommendations provided above are intended to reduce the potential for distress to structures and pavements caused by expansive soil. However, even with proper implementation of these recommendations, minor slab (interior and exterior) and/or pavement movement and/or distress may occur due to swelling and shrinking of the subgrade soil.

6.1.4 Fill Placement

All fill placed beneath structural improvements (e.g., foundation elements, concrete flatwork, pavements, and utility lines) and as part of a fill slope or retaining structure should be considered structural fill. Material used for structural fill should consist of uncontaminated, predominantly granular, non-expansive native soil or approved import soil. Structural fill should consist of granular material, nearly free of organic debris, with a liquid limit of less than 40, a plasticity index less than 15, 100 percent passing the 8-inch sieve, and less than 30 percent passing the No. 200 sieve. Near surface site soil including the existing fill and coarse-grained soil is generally suitable for reuse as structural fill. Clay soil encountered at the site is not suitable for reuse as structural fill and has greater than 30 percent passing the No. 200 sieve which does not meet the above recommendations. The clay soil may be used as fill in landscaping areas. However, selective grading may be needed to separate the suitable coarse grained soil for reuse as structural fill. Based on our previous experience in the area, site soil may be above optimum moisture content even in late summer and may require air drying or additional compaction effort to reach the specified compaction. Moisture content, dry density, and relative compaction of fill should be evaluated by our firm at regular intervals during fill placement. Rock used in fill should be broken into fragments no larger than eight inches in diameter. Rocks larger than eight inches are considered oversized material and should be stockpiled for offhaul, later use in rock-faced slopes, or placement in landscape areas.

Imported fill material should be predominantly granular, non-expansive, and free of deleterious or organic material. Import material that is proposed for use on site should be submitted to NV5 for approval and laboratory analysis at least 72 hours prior to import.

If site grading is performed during periods of wet weather, near-surface site soil may be significantly above its optimum moisture content. These conditions could hamper equipment maneuverability and efforts to compact fill materials to the recommended compaction criteria. Fill material may require drying to facilitate placement and compaction, particularly during or

following the wet season or spring snowmelt. Suitable compaction results may be difficult to obtain without processing the soil (e.g., discing during favorable weather, covering stockpiles during periods of precipitation, etc.).

Compaction requirements (maximum dry density and moisture content) specified in this report reference ASTM D1557 – *Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort*. Structural fill should be uniformly moisture conditioned to within 2 percent of the optimum moisture content and placed in maximum 8-inch thick, loose lifts (layers) prior to compacting. Structural fill should be compacted to at least 90 percent of the maximum dry density. The upper 8 inches of structural fill in paved areas should be compacted to at least 95 percent of the maximum dry density. Moisture content, dry density, and relative compaction of fill should be evaluated by our firm at regular intervals during fill placement. The earthwork contractor should assist our representative by preparing test pads with the onsite earth moving equipment.

Structural fill material with more than 30 percent rock larger than ¾-inch cannot be reliably tested using conventional compaction testing equipment. We recommend that a procedural approach, or method specification, be used for quality assurance during rock fill placement rather than a specified relative compaction. The procedural requirements will depend on the equipment used, as well as the nature of the fill material, and will need to be determined by the geotechnical engineer on site. Based on our experience in the area, we anticipate that the procedural specification will require a minimum of six passes with a Cat 563 or similar, self-propelled vibratory compactor to compact a maximum 8-inch thick loose lift. Processing or screening of the fill may be required to remove rocks larger than 8-inches in maximum dimension. Continuous observation by an NV5 representative will be required during fill placement to confirm that procedural specifications have been met.

6.1.5 Cut/Fill Slope Grading

Permanent cut and fill slopes at the subject site should be stable at inclinations up to 2H:1V (horizontal to vertical); however, we recommend re-vegetating or armoring all cut/fill slopes to reduce the potential for erosion. Steeper slopes may be possible at the site provided slopes are protected from excessive erosion using rock slope protection or similar slope reinforcement. Slopes steeper than 2H:1V (horizontal to vertical) should be evaluated on a case-by-case basis.

Fill should be placed in horizontal lifts to the lines and grades shown on the project plans. Slopes should be constructed by overbuilding the slope face and then cutting it back to design slope grades. Fill slopes should not be constructed or extended horizontally by placing soil on an existing slope face and/or compacted by track walking.

Equipment width keyways and benches should be provided where fill is placed on side-slopes with gradients steeper than 5H:1V. The keyway should be excavated at the toe of the slope and extend into competent material. Benching must extend through loose surface soil into suitable material, and be performed at intervals such that no loose soil is left beneath the fill. NV5 should observe keyways and benches prior to fill placement.

The upper two to five feet of cut slopes should be rounded into the existing terrain above the slope to remove loose material and produce a contoured transition from cut face to natural ground. Scaling to remove unstable cobbles and boulders may be necessary. Fill slopes should be compacted as recommended for the placement of structural fill. The upper four to eight inches may be scarified to help promote revegetation.

6.1.6 Temporary Unconfined Excavations

Based on our understanding of the proposed project, temporary unconfined excavations deeper than four feet will likely not be necessary. However, the following criteria may be used for construction of temporary cut slopes at the site.

Table 6.1.6.1 – Unconfined Excavation Slopes

Temporary Slope Inclination (Horizontal to Vertical)	Depth Below Ground Surface (feet)
0.5H:1V	0-8

These temporary slope inclinations may require modification in the field during construction or where loose soil, groundwater seepage, or existing fill is encountered. The slope should be scaled of loose cobbles and boulders. Higher slopes should be covered with strong wire or fabric, firmly secured to prevent roll down of cobbles or other deleterious materials. The contractor is responsible for the safety of workers and should strictly observe federal and local Occupational Safety and Health Administration (OSHA) requirements for excavation shoring and safety. Some raveling of temporary cut slopes should be anticipated. During wet weather, surface water runoff should be prevented from entering excavations. To reduce the likelihood of sloughing or failure, temporary cut slopes must not remain over the winter.

6.1.7 Underground Utility Trenches

We anticipate that the contractor will be able to excavate underground utility trenches using conventional earthmoving equipment across the majority of the site. However, confined excavations that extend into very dense coarse grained and very stiff fine-grained soil may be difficult. Based on the excavation conditions encountered in our test pits, we anticipate that a track-mounted excavator equipped with a ripper may be required below about two feet at the site. An excavator with a “thumb” attachment may increase ease of boulder removal at the site.

We expect that some caving and sloughing of utility trench sidewalls will occur. OSHA requires all utility trenches deeper than five feet bgs be shored with bracing equipment or sloped back prior to entry.

Shallow subsurface seepage may be encountered in trench excavations, particularly if utility trenches are excavated during the spring or early summer. The earthwork contractor may need to employ dewatering methods as discussed in the *Construction Dewatering* section below to excavate, place, and compact trench backfill materials.

Soil used as trench backfill should be non-expansive and should not contain rocks greater than 3 inches in maximum dimension. Trench backfill should consist of uniformly moisture conditioned soil and be placed in maximum 8-inch thick loose lifts prior to compacting. Unless otherwise specified by the applicable local utility district, pipe bedding and trench backfill should be compacted to at least 90 percent of the maximum dry density. Trench backfill placed within 8 inches of building subgrade and driveway areas should be compacted to at least 95 percent of the maximum dry density. The moisture content, density, and relative compaction of fill should be tested by NV5 at regular intervals during fill placement.

6.1.8 Construction Dewatering

During our subsurface exploration, we did not encounter groundwater seepage in our exploratory test pits. However, groundwater elevations measured by others in the piezometer (12-2) near the site indicates that depths to groundwater fluctuate seasonally and have been near the ground surface at a depth of about 1.18 feet bgs. We anticipate that the clay soil underlying the site will have low permeability and generate a significant volume of storm water runoff. If grading is performed during or immediately following the wet season or spring snowmelt, seepage will likely be encountered during grading. We should observe those conditions, if they are encountered, and provide site specific subsurface drainage recommendations. The following recommendations are preliminary and are not based on a groundwater flow analysis. We anticipate that dewatering of excavations can be performed by gravity or by constructing sumps to depths below the excavation and removing water with pumps. To maintain stability of the excavation when placing and compacting trench backfill, groundwater levels should be drawn down at least two feet below the lowest point of the excavation.

If seepage is encountered during trench excavation, it may be necessary to remove underlying saturated soil and replace it with free draining, open-graded, crushed rock (drain rock). Soil backfill may be placed after backfilling with drain rock to an elevation higher than encountered groundwater.

6.2 SURFACE WATER AND FOUNDATION DRAINAGE

This section of the report presents our recommendations to reduce the possibility of surface water and near-surface groundwater entering below grade areas. Care should be taken to reduce water and moisture introduced into the building interior, including crawlspaces, during construction.

Based on our observations and past experience with geotechnical investigations in the project vicinity, there is a relatively high potential for seasonal saturation of near-surface soil and groundwater seepage into foundation areas. Previous measurements of groundwater elevations collected by others near the site indicate seasonal fluctuations in groundwater elevations underlying the site and a near-surface depth of 1.18 feet bgs. We anticipate that the clay soil underlying the site will have low permeability and generate a significant volume of storm water runoff. Depending on final site grades, rainfall, irrigation practices, and other factors beyond the scope of this study, groundwater may be present at shallow depths at the

project site. Near-surface groundwater may migrate through concrete floor slabs, degrade asphalt concrete pavements, increase frost heave, and contribute to other adverse conditions.

Final site grading should be planned so that surface water is directed away from all foundations and pavements. Ponding of surface water should not be allowed near pavements or structures. Paved areas should be sloped away from structures a minimum of 2 percent and drainage gradients should be maintained to carry all surface water to a properly designed infiltration facility. The surface drainage system should generally be kept separate from the foundation (subsurface) drainage system. Surface water should not be infiltrated at elevations above the lowest foundation elements.

Drains should be constructed on the upslope side of exterior foundations or the base of the Skatepark concrete structures. Drains should extend to a properly designed infiltration facility. Recommended subsurface drain locations can be provided at the time of construction and when foundation elevations and configuration are known. Due to the gentle topography of the site, elevations of foundations should be carefully planned so that it is possible to install gravity-fed drains that daylight a minimum of 10 feet from structures. Subsurface and foundation drain locations should be included on the project plans.

All foundation and slab-on-grade concrete should have a water to cement ratio of 0.45 or less. Underslab or blanket drains should be considered in slab-on-grade floor areas to reduce moisture transmission through the floor and help maintain subgrade support, particularly if the floor surface is lower than the adjacent exterior grade.

Where utility trenches slope toward structures, potential flow paths through utility trench backfill should be plugged with a less permeable material at the exterior of the foundation. All utility pipes should have sealed joints.

6.3 STRUCTURAL IMPROVEMENT DESIGN CRITERIA

The following sections provide design criteria for foundations, seismic design, slabs-on-grade, retaining walls, and pavement sections.

6.3.1 Foundations

Our opinion is that shallow spread foundations are suitable for support of the proposed structures. The following paragraphs discuss foundation design parameters and construction recommendations.

Exterior foundations should be embedded a minimum of 18 inches below the lowest adjacent exterior finish grade for frost protection and confinement. The bottom of interior footings should be at least 12 inches below lowest adjacent finish grade for confinement. Reinforcing steel requirements for foundations should be determined by the project structural engineer.

Foundations founded in competent, undisturbed native soil or compacted fill may be designed using an allowable bearing capacity of 2,500 psf for dead plus live loads. Allowable bearing pressures may be increased by 33 percent for transient loading such as wind or seismic loads.

Resistance to lateral loads (including transient loads) may be provided by frictional resistance between the bottom of concrete foundations and the underlying soil, and by passive soil pressure against the sides of foundations. Lateral resistance derived from passive earth pressure can be modeled as a triangular pressure distribution ranging from 0 psf at the ground surface to a maximum of 300d psf, where d equals the depth of the foundation in feet. A coefficient of friction of 0.35 may be used between poured-in-place concrete foundations and the underlying native soil. Lateral load resistance provided by passive soil pressure and friction may be used in combination without reduction.

Total settlement of individual foundations will vary depending on the plan dimensions of the foundation and actual structural loading. Based on anticipated foundation dimensions and loads, we estimate that total post-construction settlement of footings designed and constructed in accordance with our recommendations will be on the order of ½ inch. Differential settlement between similarly loaded, adjacent footings is expected to be less than ¼ inch, provided footings are founded on similar materials (e.g., all on structural fill, native soil, or rock). Differential settlement between adjacent footings founded on dissimilar materials (e.g., one footing on soil and an adjacent footing on rock) may approach the maximum anticipated total settlement. Settlement of foundations is expected to occur rapidly and should be essentially complete shortly after initial application of loads.

Loose material remaining in footing excavations should be removed to expose firm, unyielding material or compacted to at least 90 percent relative compaction. Footing excavations should be moistened prior to placing concrete to reduce risk of problems caused by wicking of moisture from curing concrete. NV5 should observe footing excavations prior to reinforcing steel and concrete placement.

6.3.2 Seismic Design Criteria

In accordance with the 2019 California Building Code (CBC), the seismic design criteria shown in the table below should be used for the project site. The values were obtained for the site using the online Office of Statewide Health Planning and Development (OSHPD) Seismic Design Maps tool found at https://seismicmaps.org. Input values included the site's approximate latitude and longitude obtained from Google Earth and the Site Class. Site Class selection was based on our literature review, our subsurface investigation, our experience in the area, and the Site Class definitions provided in Chapter 20 of ASCE 7-16.

Table 6.3.2.1 – 2019 CBC Seismic Design Parameters

Description	Value	Reference
Approximate Latitude/Longitude	39.3264°N/120.1717 °W	Google Earth
Site Class	C	Table 20.3-1, ASCE 7-16
Mapped Short-Period Spectral Response Acceleration Parameter	S_S = 1.342 g	Figure 1613.2.1(1), 2019 CBC
Mapped 1-Second Period Spectral Response Acceleration Parameter	S_1 = 0.443 g	Figure 1613.2.1(2), 2019 CBC
Short Period Site Coefficient	F_A = 1.2	Table 1613.2.3(1), 2019 CBC
1-Second Period Site Coefficient	F_V = 1.5	Table 1613.2.3(2), 2019 CBC
Site Adjusted Short-Period Spectral Response Acceleration Parameter	S_{MS} = 1.611 g	Equation 16-36, 2019 CBC
Site Adjusted 1-Second Period Spectral Response Acceleration Parameter	S_{M1} = 0.665 g	Equation 16-37, 2019 CBC
Design Short-Period Spectral Response Acceleration Parameter	S_{DS} = 1.074 g	Equation 16-38, 2019 CBC
Design 1-Second Period Spectral Response Acceleration Parameter	S_{D1} = 0.443 g	Equation 16-39, 2019 CBC
Peak Ground Acceleration	PGA = 0.578 g	Figure 22-7, ASCE 7-16
Risk Category	II	Table 1604.5, 2019 CBC
Seismic Design Category	D	Tables 1613.2.5 (1) & (2) 2019 CBC

6.3.3 Slab-on-Grade Construction

Concrete slabs-on-grade may be used in conjunction with perimeter concrete footings. Slabs-on-grade should be a minimum of four inches thick. If floor loads higher than 250 psf, intermittent live loads, or vehicle loads are anticipated, the project structural engineer should provide slab thickness and steel reinforcing requirements.

Prior to constructing concrete slabs, the upper eight inches of slab subgrade should be scarified, uniformly moisture conditioned to within two percent of optimum moisture content and compacted to at least 90 percent of the maximum dry density. Scarification and compaction may not be required if floor slabs are placed directly on undisturbed compacted structural fill.

Slabs should be underlain by at least four inches of Class 2 aggregate base placed over the prepared subgrade. The aggregate base should be compacted to a minimum of 95 percent of the maximum dry density. If a subdrain is installed as described below, slabs may be

constructed over the crushed gravel layer provided a moisture barrier will be placed over the gravel.

To reduce the potential for groundwater intrusion, the project architect and/or owner should consider constructing a drain beneath concrete slabs-on-grade in areas where groundwater and/or saturated soil may be present during wet periods. Subdrains should consist of a minimum of four inches of clean crushed gravel placed over native subgrade leveled or sloped at two percent towards a 4-inch diameter perforated drain pipe. The drain pipe should be placed with perforations faced down in a minimum 12-inch wide gravel-filled trench. The depth of the trench may vary depending on cover requirements for the drain pipe and the slope required to drain water from beneath the slab to a properly constructed infiltration facility. A minimum of one pipe should be installed in each area of the slab surrounded by continuous perimeter foundation elements.

In slab-on-grade areas where moisture sensitive floor coverings are proposed, a vapor barrier (e.g., 15 mil Stego® Wrap) should be placed over the base course or gravel subdrain to reduce the migration of moisture vapor through the concrete slab. The vapor barrier should be installed in accordance with the manufacturer's instructions. Concrete should be placed directly on the vapor barrier. All slab concrete should have a water-cement ratio of 0.45 or less. Alternatively, two inches of spray insulation may be placed between the gravel layer and slab-on-grade.

Regardless of the type of vapor barrier used, moisture can wick up through a concrete slab. Excessive moisture transmission through a slab can cause adhesion loss, warping, and peeling of resilient floor coverings, deterioration of adhesive, seam separation, formation of air pockets, mineral deposition beneath flooring, odor, and fungi growth. Slabs can be tested for water transmissivity in areas that are moisture sensitive. Commercial sealants, moisture retarding admixtures, fly ash, and a reduced water-to-cement ratio can be incorporated into the concrete to reduce slab permeability. To further reduce the chance of moisture transmission, a waterproofing consultant should be contacted.

Exterior slabs-on-grade such as sidewalks should be placed on a minimum 6-inch thick compacted aggregate base section to help reduce the potential for frost heave. Deleterious material should be removed from floor slab subgrades prior to concrete placement. For exterior slabs, the upper eight inches of native soil should be scarified, moisture conditioned, and compacted to at least 90 percent of the maximum dry density. We recommend a minimum concrete thickness of four inches. Where traffic loads are possible, we recommend a minimum concrete thickness of six inches. Concrete used for sidewalk construction should meet the durability requirements of Section 1904 of the 2019 CBC. The Exposure Class should be F2 unless the surface will be exposed to deicing chemicals, in which case the Exposure Class should be F3.

Concrete slabs impart a relatively small load on the subgrade (approximately 50 psf). Therefore, some vertical movement should be anticipated from possible expansion, freeze-thaw cycles, or differential loading.

6.3.4 Retaining Wall Design Criteria

Retaining walls should be designed to resist lateral earth pressures exerted by retained soil plus additional lateral forces (i.e., surcharge loads) that will be applied to walls. Pressures exerted against retaining walls may be calculated by modeling soil as an equivalent fluid with unit weights presented in the following table. The equivalent fluid weights are for well-drained walls.

Table 6.3.4.1 – Equivalent Fluid Unit Weights*

Loading Condition	Retained Cut or Compacted Fill (Level Backfill)	Retained Cut or Compacted Fill (Backfill Slopes up to 2H:1V)
At-Rest Pressure (pcf)	50	70
Active Pressure (pcf)	35	50
Passive Pressure (pcf)	300	300
Coefficient of Friction	0.35	0.35

*Equivalent fluid unit weights presented are ultimate values and do not include a factor of safety. Passive pressures provided assume footings are founded in competent native soil or compacted and tested fill.

The values presented in Table 6.3.4.1 assume that the retained soil will not exceed approximately eight feet in height and that no surcharge loads (e.g., footings, vehicles) are anticipated within a horizontal distance of approximately five feet from the face of the wall. Fifty percent of any uniform areal surcharge placed at the top of a restrained wall (at-rest condition) may be assumed to act as a uniform horizontal pressure over the entire height of the wall. This may be reduced to 30 percent for unrestrained walls (active condition). In addition, we can provide retaining wall and rockery wall design criteria for specific loading and backfill configurations, if requested.

The use of the tabulated active pressure unit weight requires that the wall design accommodate sufficient deflection for mobilization of the retained soil to occur. Typically, a wall yield of at least 0.1 percent of the wall height is sufficient to mobilize active conditions in granular soil (*Caltrans Bridge Design Specifications*, August 2004). If the walls are rigid or restrained to prevent rotation, at-rest conditions should be used for design.

We recommend including additional lateral loading (ΔP_{ae}) on retaining structures due to seismic accelerations when designing walls greater than six feet in height. The USGS Seismic Design Maps tool was used to establish seismic design parameters and provides an estimated peak ground acceleration (PGA) corresponding to the maximum considered earthquake (MCE_R) ground motion.

For an earthquake producing a design PGA of 0.578g and a horizontal seismic coefficient (k_h) equal to one-third the PGA, and following the Mononobe-Okabe procedure to evaluate seismic loading on retaining walls, we recommend that the resulting additional lateral force applied to retaining structures with drained level backfill be estimated as $\Delta P_{ae}=6.4H^2$ (pounds per foot), where H is the height of the wall in feet. The additional seismic force may be assumed

to be applied at a height of H/3 above the base of the wall. This seismic loading is for standard retaining walls with drained, level backfill conditions only. NV5 should be consulted to provide seismic loading values for more critical walls or walls with non-level or non-drained backfill conditions. The use of reduced factors of safety is often appropriate when reviewing overturning and sliding resistance during seismic events.

Heavy compaction equipment or other loads should not be used in close proximity to retaining walls unless the wall is designed or braced to resist the additional lateral forces. If planned surface loads are closer to the top of the retaining wall than one-half of its height, NV5 should review the loads and loading configuration.

Retaining wall backfill should consist of granular material, nearly free of organic debris, with a liquid limit less than 40, a plasticity index less than 15, 100 percent passing the 8-inch sieve, and less than 30 percent passing the No. 200 sieve. Backfill should be uniformly moisture conditioned to within two percent of the optimum moisture content and compacted with appropriate compaction equipment to at least 90 percent of the maximum dry density. If the retaining wall backfill will support foundations or rigid pavements, the backfill should be compacted to at least 95 percent of the maximum dry density. An NV5 representative should review and provide specific backfill criteria for all retaining walls over 10 feet in height. Utilities that run through retaining wall backfill should allow for vertical movement where they pass through the wall.

Retaining wall design criteria presented in Table 6.3.4.1 assume that retaining walls are well-drained to reduce hydrostatic pressures. Back-of-wall drainage consisting of graded gravel drains and geosynthetic blankets should be installed to reduce hydrostatic pressures. Gravel drains should consist of at least 18 inches of open-graded, crushed rock placed directly behind the wall, wrapped in non-woven geotextile filter fabric such as Mirafi 140N or approved equivalent. Drains should have a minimum 4-inch diameter, perforated drain pipe placed at the base of the wall, inside the drain rock, with perforations placed down. The pipe should be sloped so that water is directed away from the wall by gravity. A geosynthetic drainage blanket such as Enkadrain™ or equivalent should also be placed against the back of the wall. Backfill must be compacted carefully so that equipment or soil does not tear or crush the drainage blanket.

We recommend that subsurface walls and slabs be treated to resist moisture migration. Moisture retarding material should consist of sheet membrane rubberized asphalt, polymer-modified asphalt, butyl rubber, or other approved material capable of bridging nonstructural cracks, applied in accordance with the manufacturers recommendations. A manufactured water-stop and/or key should be placed at all cold joints. The project architect or contractor may wish to consult with a waterproofing expert regarding additional options for reducing moisture migration into living areas.

6.3.5 Pavement Sections

Based on our experience in the Tahoe-Truckee area, environmental factors, such as freeze-thaw cycles and thermal cracking will usually govern the life of asphalt concrete (AC)

pavements. Thermal cracking of asphalt pavement allows more water to enter the pavement section, which promotes deterioration and increases maintenance costs. In addition, snow removal activities on site may result in heavy traffic loads. For these reasons, we recommend a minimum driveway/parking area pavement section of three inches of AC on six inches of aggregate base (AB).

We recommend that paving stones in non-traffic areas be supported by a minimum of four inches of Caltrans Class 2 AB. For light traffic areas, the AB section should be increased to at least six inches. An underlying concrete slab is not necessary for light traffic and non-traffic areas. Prior to placing aggregate base, the subgrade should be prepared in accordance with the recommendations provided below.

Due to seasonal saturation of the underlying AB and freeze-thaw cycles, some vertical movement of paving stones over time should be anticipated. This movement can likely be reduced by constructing a drainage layer beneath paving stone pavements. The drainage layer should consist of at least 4 inches of compacted clean angular gravel under the AB layer. The drainage layer should contain a minimum 4-inch diameter perforated pipe, sloped to drain water from beneath the pavement towards an infiltration facility. All open-graded gravel should be consolidated using vibratory compaction equipment. A minimum 4-ounce non-woven filter fabric such as Mirafi 140N or approved equivalent should be placed between the compacted gravel subdrain and aggregate base course.

The upper six inches of native soil should be compacted to at least of 95 percent of the maximum dry density prior to placing AB. AB should also be compacted to a minimum of 95 percent of the maximum dry density. Subgrade and AB dry densities should be evaluated by NV5. In addition to field density tests, the subgrade should be proof rolled under NV5's observation prior to AB placement. If temporary pavement is used during construction, we recommend preparation of the subgrade and AB as outlined above prior to construction of the temporary pavement.

To improve pavement performance and lifespan, we recommend promoting drainage of the pavement subgrade. Drainage can be accomplished through roadway layout and design, subdrains, and/or roadside ditches. An NV5 representative should evaluate pavement subgrade at the time of construction and provide location-specific recommendations for subdrains. Typical subdrains consist of a shallow trench with a minimum 4-inch diameter perforated pipe encased in open-graded gravel wrapped in filter fabric. Pavement subgrade should be graded and prepared such that water drains from beneath the pavement section to a properly designed infiltration facility. Subdrains may be used in conjunction with roadside ditches located on one or both sides of the roadway. Roadside ditches should be constructed to a depth greater than the proposed pavement and subdrain section. Ditches should be rock-lined or vegetated to help reduce erosion and convey water to a properly designed infiltration facility.

We recommend installing cut-off curbs where paved areas abut landscaped areas to reduce migration of irrigation water into subgrade soil or baserock, promoting asphalt failure. Cut-off

curbs should be a minimum of 4-inches wide, and extend through the aggregate base a minimum of four inches into subgrade soil.

6.4 PLAN REVIEW AND CONSTRUCTION MONITORING

Construction monitoring includes review of plans and specifications and observation of onsite activities during construction as described below. We should review final grading and foundation plans prior to construction to evaluate whether our recommendations have been implemented and to provide additional and/or modified recommendations, if necessary. We also recommend that our firm be retained to provide construction monitoring and testing services during site grading, foundation, retaining wall, underground utility, and road construction to observe subsurface conditions with respect to our engineering recommendations.

7 LIMITATIONS

Our professional services were performed consistent with generally accepted geotechnical engineering principles and practices employed in the site area at the time the report was prepared. No warranty, express or implied, is intended.

Our services were performed consistent with our agreement with our client. We are not responsible for the impacts of changes in environmental standards, practices, or regulations subsequent to performance of our services. We do not warrant the accuracy of information supplied by others or the use of segregated portions of this report. This report is solely for the use of our client. Reliance on this report by a third party is at the risk of that party.

If changes are made to the nature or design of the project as described in this report, then the conclusions and recommendations presented in the report should be reviewed by NV5 to assess the relevancy of our conclusions and recommendations. Additional field work and laboratory tests may be required to revise our recommendations. Costs to review project changes and perform additional field work and laboratory testing necessary to modify our recommendations are beyond the scope of services provided for this report. Additional work will be performed only after receipt of an approved scope of services, budget, and written authorization to proceed.

Analyses, conclusions, and recommendations presented in this report are based on site conditions as they existed at the time we performed our subsurface exploration. We assumed that subsurface soil conditions encountered at the locations of our subsurface explorations are generally representative of subsurface conditions across the project site. Actual subsurface conditions at locations between and beyond our explorations may differ. If subsurface conditions encountered during construction are different than those described in this report, we should be notified so that we can review and modify our recommendations as needed. Our scope of services did not include evaluating the project site for the presence of hazardous materials or petroleum products.

The elevation or depth to groundwater and soil moisture conditions underlying the project site may differ with time and location. The project site map shows approximate exploration locations as determined by pacing distances from identifiable site features. Therefore, exploration locations should not be relied upon as being exact.

The findings of this report are valid as of the present date. Changes in the conditions of the property can occur with the passage of time. These changes may be due to natural processes or human activity, at the project site or adjacent properties. In addition, changes in applicable or appropriate standards can occur, whether they result from legislation or a broadening of knowledge. Therefore, the recommendations presented in this report should not be relied upon after a period of two years from the issue date without our review.

8 REFERENCES

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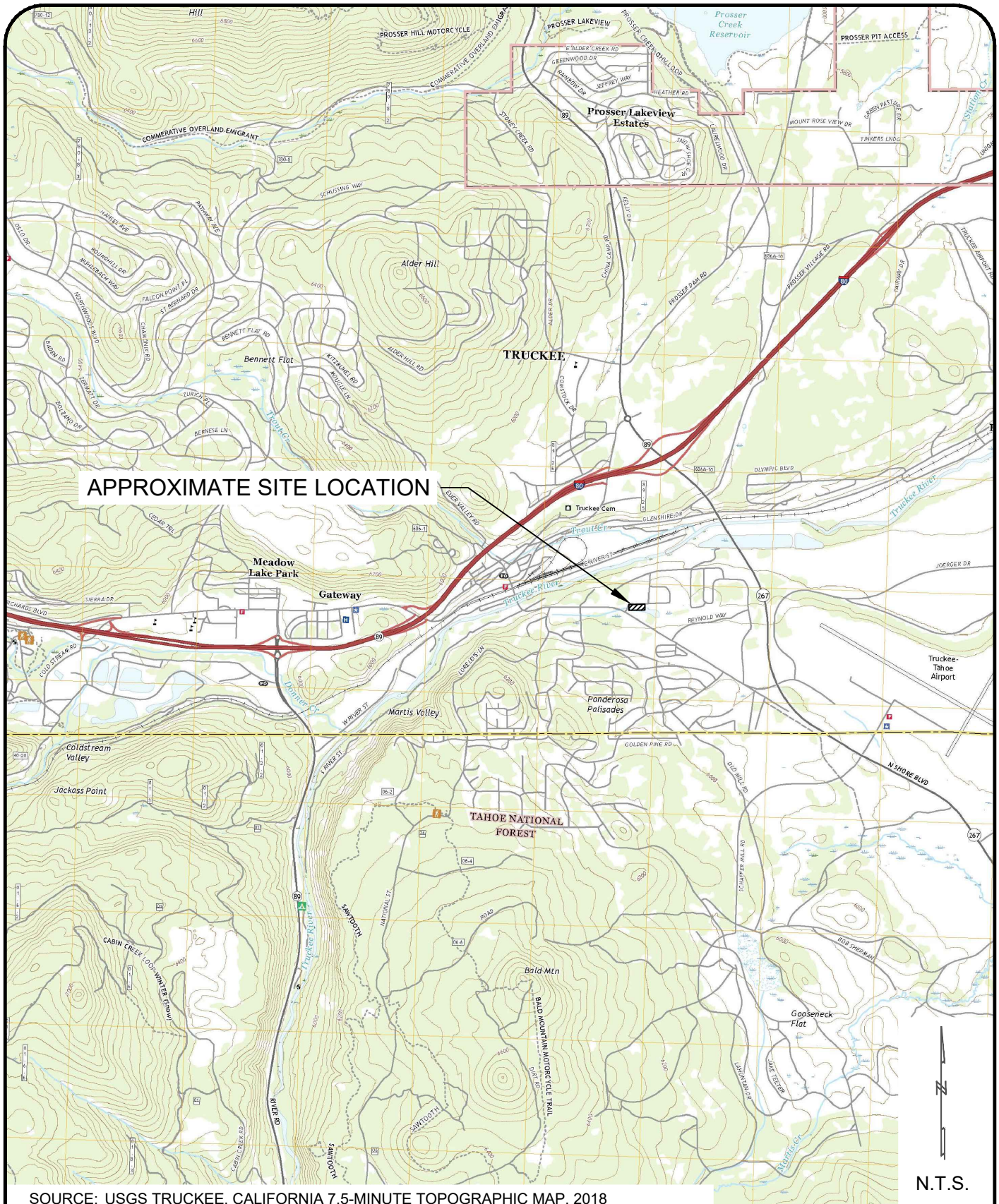
FIGURES



SOURCE: USGS TRUCKEE, CALIFORNIA 7.5-MINUTE TOPOGRAPHIC MAP, 2018

NV5

SITE VICINITY MAP

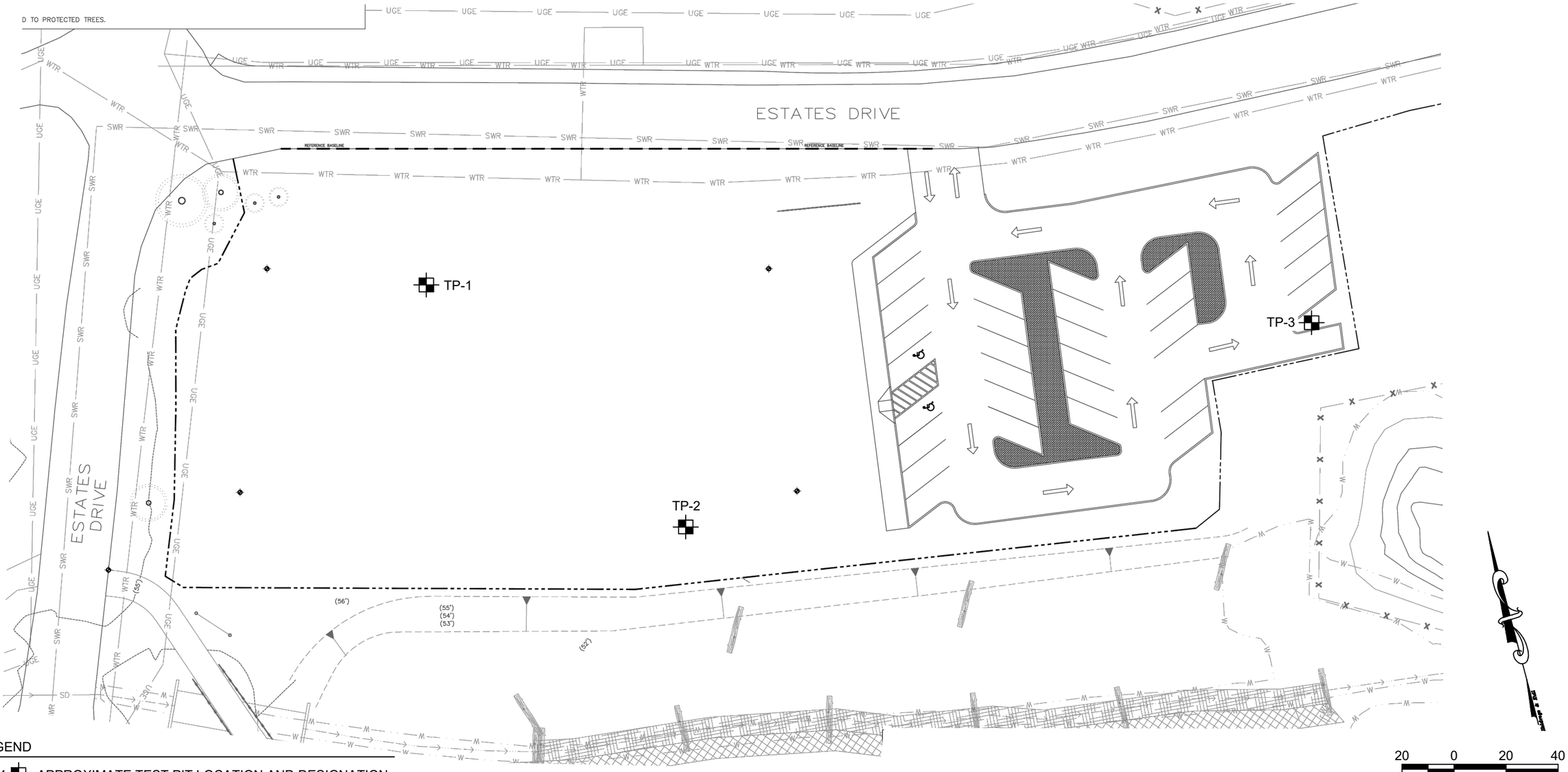
ROCKER MEMORIAL SKATEPARK

TRUCKEE, CALIFORNIA

PROJECT NO.: 42941.00

DATE: SEPTEMBER 2021

FIGURE NO.: 1



LEGEND

TP-4 APPROXIMATE TEST PIT LOCATION AND DESIGNATION

20 0 20 40

SCALE IN FEET

1" = 40'

MODIFIED FROM EXISTING CONDITIONS PLAN, SHEET SP1.1, PROVIDED BY MILLENIUM PLANNING & ENGINEERING DATED FEBRUARY, 2018.

NV5

TEST PIT LOCATION PLAN

ROCKER MEMORIAL SKATEPARK

TRUCKEE, CALIFORNIA

DRAWN BY: AKH	CHECKED BY: NCM
PROJECT NO.: 42941.00	
DATE: SEPTEMBER 2021	
FIGURE NO.: 2	

APPENDIX A

Proposal

Proposal No. PT21185
June 16, 2021

Colin Robinson
Cdrobin12@gmail.com

c/o Millennium Planning & Engineering
Attention: Rob Wood

Reference: **Rocker Memorial Skatepark**
Truckee, California

Subject: **Proposal for Geotechnical Engineering Report**

This letter presents our proposal to prepare a geotechnical engineering report for the proposed Rocker Memorial Skatepark to be constructed at the intersection of Estates Drive and Brockway Road adjacent to the existing skatepark in the Truckee River Regional Park in Truckee, California. The purpose of our services will be to explore and evaluate subsurface conditions at the project site and to develop geotechnical engineering recommendations for project design and construction. Site subsurface conditions and specific recommendations regarding the geotechnical aspects of project design and construction can significantly affect project costs. NV5 will provide site-specific design recommendations to help reduce construction costs for your project. We have a reputation for responsive, innovative, yet practical approaches to geotechnical problems. Included in this proposal is a brief summary of our understanding of the project, the scope of services we intend to provide, and an estimate of our fees.

PROJECT DESCRIPTION

This proposal is based on a brief review of 30% submittal project plans prepared by Millennium Planning & Engineering dated February, 2018, and our previous experience in the project area. The project will involve construction of a skatepark at the site. The skatepark features will be constructed with concrete and shotcrete. The parcel is currently a gravel parking area that appears to be on several feet of fill soil and is adjacent to a wetlands area. Cuts and fills for the proposed construction are anticipated to be up to about 6 to 8 feet in vertical extent. Appurtenant construction will include an asphalt concrete paved parking lot (32 spaces), hardscape around the skatepark features, underground utilities, and landscaping.

ANTICIPATED CONDITIONS

In preparation of this proposal, we reviewed reports in our files regarding subsurface conditions in the vicinity of the site. Based on this information and our experience in the area, we anticipate that native subsurface soil conditions will consist primarily of glacial outwash deposits which consist of sand, gravel, silt, clay and large boulders. Based on the adjacent wetlands we anticipate that hard clay layers may be encountered. In addition, due to the

previous grading at the site for the existing parking area, we anticipate that existing fill is present at the site.

Based on the adjacent wetlands area, we anticipate that groundwater will be seasonally present at shallow depths and will likely affect the proposed construction. We anticipate that the site can be accessed by track-mounted equipment.

SCOPE OF SERVICES

Review of Available Literature

Prior to our subsurface exploration, we will review regional geologic maps and reports in our files from other nearby sites. Our field exploration locations will be selected based on site access and the anticipated project layout.

Field Exploration

Prior to conducting our subsurface investigation, we will mark the site for Underground Service Alert (USA) and contact this agency to locate underground public utilities on and adjacent to the site. We propose to explore the subsurface conditions at the project site by excavating 2 to 3 test pits to depths up to approximately 8 feet below the existing ground surface or refusal. The test pits will be excavated using a mini-excavator or backhoe. The test pits will be visually logged by a field representative who will obtain bulk soil samples for classification and laboratory testing. Upon completion, the test pits will be backfilled with excavated soil.

Laboratory Testing

The purpose of laboratory testing is to evaluate the physical and engineering properties of the soil samples collected in the field. We anticipate the laboratory testing program will consist of tests for soil classification (gradations and plasticity) and expansion potential, as needed.

Analysis and Report

Based on the results of our field exploration and laboratory testing, we will provide our opinions and recommendations regarding the following:

- General soil and groundwater conditions at the project site, with emphasis on how the conditions are expected to affect the proposed construction;
- Discussion of special geotechnical engineering constraints such as existing fill, highly expansive or compressible soil, near-surface groundwater, liquefaction potential, potential secondary seismic hazards, and/or near-surface rock;
- Recommendations for earthwork construction, including site preparation recommendations, a discussion of reuse of existing near-surface soil as structural fill, and a discussion of remedial earthwork recommendations, if warranted;
- Recommendations for temporary excavations, construction dewatering, and trench backfill;

- Recommendations for permanent cut and fill slopes;
- Surface and subsurface drainage recommendations;
- Recommendations for conventional shallow spread foundation design including soil bearing values, minimum footing depth, resistance to lateral loads and estimated settlements, and California Building Code Site Class and seismic coefficients for use in structural design;
- Lateral earth pressures and drainage recommendations for short retaining structures;
- Subgrade preparation for slab-on-grade concrete and ACI concrete exposure category; and
- Asphalt concrete and paving stone pavement recommendations.

We will present our opinions and recommendations in a written report complete with logs of our test pits, a test pit location plan and laboratory test results.

SCHEDULE AND FEES

At the present time, we can begin our subsurface exploration within three to four weeks of receipt of your authorization to proceed, depending on availability of excavating equipment and an operator. If weather, access, or site conditions restrict our field operations, we may need to revise our scope of services and fee estimate. We anticipate submitting our final written report within three to four weeks after completion of our subsurface exploration. If requested, we can provide preliminary verbal information with respect to our anticipated conclusions and recommendations prior to completion of our final report.

We will provide the scope of services described above for a fixed unit fee of $xxx. This cost includes the excavation equipment and operator we plan to use for our subsurface exploration. We will send you an invoice upon completion of our report for the full amount. Additional services beyond the scope of this proposal performed at the client's request will be billed on a time and expense basis using the fee schedule applicable at the time the services are provided.

Prior to initiating our subsurface exploration, all site utilities and utility easements must be accurately located in the field, on a scaled map, or both. This information must be made available to NV5 by the client before beginning our subsurface exploration. Our fee is not adequate to compensate for both the performance of the services and the assumption of risk of damage to such structures. NV5 will not accept responsibility for damage to existing utilities not accurately located in the manner described above. Services rendered by NV5 to repair them will be billed at cost.

In order to defray the initial mobilization costs of the excavation equipment, we are requesting a retainer in the amount of $xxx at the time of contract signing. All remittances should be sent to our Truckee office at the following address:

Accounts Receivable
NV5
10775 Pioneer Trail, Suite 213
Truckee, CA 96161

Remittances should reference this proposal number, PT21185

CLOSING

NV5 will perform its services in a manner consistent with the standard of care and skill ordinarily exercised by members of the profession practicing under similar conditions in the geographic vicinity at the time the services are performed. No warranty or guarantee, express or implied, is part of the services offered by this proposal.

Enclosed with this proposal is our firm's Agreement for Geotechnical Engineering Services. Please sign and return one copy of the attached Agreement for Geotechnical Engineering Services to our attention if this proposal meets with your approval. This proposal is deemed to be incorporated into and made part of the Agreement for Geotechnical Engineering Services.

We appreciate the opportunity to submit this proposal and look forward to working with you on this project. If you have any questions or need additional information, please contact the undersigned.

Sincerely,

NV5

Allison K. Hathon, P.E.
Senior Engineer

John K. Hudson, P.E., C.E.G.
Associate Engineer

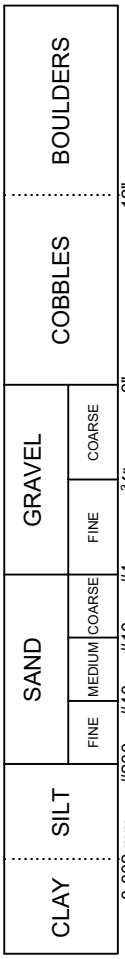
Attachment: Agreement for Geotechnical Engineering Services

APPENDIX B

Test Pit Logs

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

COARSE GRAINED SOIL More than 50% of the soil is retained on the No. 200 sieve	GRAVEL More than 50% coarse fraction is larger than the No. 4 sieve size	Clean Gravel with less than 5% fines*	GW		WELL GRADED GRAVEL, GRAVEL SAND MIXTURES
			GP		POORLY GRADED GRAVEL, GRAVEL SAND MIXTURES
		Gravel with more than 12% fines*	GM		SILTY GRAVEL, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
			GC		CLAYEY GRAVEL, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
	SAND More than 50% coarse fraction is smaller than the No. 4 sieve size	Clean Sand with less than 5% fines*	SW		WELL GRADED SAND, GRAVELY SAND
			SP		POORLY GRADED SAND, GRAVELY SAND
		Sand with more than 12% fines*	SM		SILTY SAND, POORLY GRADED SAND-SILT MIXTURE
			SC		CLAYEY SAND, POORLY GRADED SAND-SILT MIXTURE
FINE GRAINED SOIL More than 50% of the soil passes the No. 200 sieve	SILT AND CLAY Liquid limit less than 50		ML		INORGANIC SILT & VERY FINE SAND, ROCK FLOUR, SILTY OR CLAYEY FINE SAND, OR CLAYEY SILT WITH SLIGHT PLASTICITY
			CL		INORGANIC CLAY OF LOW TO MEDIUM PLASTICITY, GRAVELY CLAY, SANDY CLAY, SILTY CLAY, LEAN CLAY
			OL		ORGANIC CLAY AND ORGANIC SILTY CLAY OF LOW PLASTICITY
	SILT AND CLAY Liquid limit greater than 50		MH		INORGANIC SILT, MIMCACEOUS OR DIATOMACIOUS FINE SANDY OR SILTY SOIL, ELASTIC SILT
			CH		INORGANIC CLAY OF HIGH PLASTICITY, FAT CLAY
			OH		ORGANIC CLAY OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILT
HIGHLY ORGANIC SOIL			Pt		PEAT AND OTHER HIGHLY ORGANIC SOIL
ROCK			RX		ROCK



* Hybrid classifications are used when the fines content is between 5% and 12% (e.g, SP-SM, GP-GM, SW-SC, GW-GC, etc.)

SAMPLE DESIGNATION

- MODIFIED CALIFORNIA SAMPLER (3" OUTSIDE DIAMETER)
- MODIFIED CALIFORNIA SAMPLER (2-1/2" OUTSIDE DIAMETER)
- STANDARD PENETRATION SPLIT SPOON SAMPLER (2" OUTSIDE DIAMETER)
- BULK OR CLASSIFICATION SAMPLE
- SHELBY TUBE (3" OUTSIDE DIAMETER)

KEY TO SYMBOLS

▽	OBSERVED GROUNDWATER
▼	STABILIZED GROUNDWATER LEVEL
LL	LIQUID LIMIT
PL	PLASTIC LIMIT
PI	PLASTICITY INDEX
Gs	SPECIFIC GRAVITY
PERM	PERMEABILITY
CONSOL	CONSOLIDATION
SA	SIEVE ANALYSIS
-200	PERCENT PASSING NO. 200 SIEVE

NON-COHESIVE (GRANULAR) SOIL

RELATIVE DENSITY	SPT BLOWS PER FOOT (N)
VERY LOOSE	0 - 4
LOOSE	5 - 10
MEDIUM DENSE	11 - 30
DENSE	31 - 50
VERY DENSE	51 +

COHESIVE (CLAYEY) SOIL

COMPARATIVE CONSISTENCY	SPT BLOWS PER FOOT (N)	UNCONFINED COMPRESSIVE STRENGTH (TSF)
VERY SOFT	0 - 2	0 - 0.25
SOFT	3 - 4	0.25 - 0.50
MEDIUM STIFF	5 - 8	0.50 - 1.00
STIFF	9 - 15	1.00 - 2.00
VERY STIFF	16 - 30	2.00 - 4.00
HARD	31 +	4.00 +

BLOW COUNTS

BLOW COUNTS REPRESENT THE NUMBER OF BLOWS REQUIRED TO DRIVE THE SAMPLER EVERY 6 INCHES OF AN 18-INCH DRIVE OR FRACTION INDICATED. BLOW COUNTS PRESENTED ON LOGS HAVE NOT BEEN ADJUSTED.

SOIL CONTACTS

- ——— SOLID - WELL-DEFINED CHANGE
- - - - - DASHED - GRADATIONAL OR APPROXIMATE CHANGE

MOISTURE CONTENT

CLASSIFICATION	DESCRIPTION
DRY	FREE OF MOISTURE, DUSTY, DRY TO THE TOUCH
SLIGHTLY MOIST	BELOW THE SOIL'S OPTIMUM MOISTURE CONTENT, BUT NOT DRY
MOIST	NEAR THE SOIL'S OPTIMUM MOISTURE CONTENT
VERY MOIST	ABOVE THE SOIL'S OPTIMUM MOISTURE CONTENT, BUT NOT WET
WET	VISIBLE FREE WATER, USUALLY SOIL IS BELOW WATER TABLE

CEMENTATION

CLASSIFICATION	DESCRIPTION
WEAK	CRUMBLES OR BREAKS WITH HANDLING OR SLIGHT FINGER PRESSURE
MODERATE	CRUMBLES OR BREAKS WITH CONSIDERABLE FINGER PRESSURE
STRONG	WILL NOT CRUMBLE OR BREAK WITH FINGER PRESSURE

MINOR CONSTITUENT QUANTITIES

QUALIFIER	DESCRIPTION
TRACE	PARTICLES ARE PRESENT, BUT ESTIMATED TO BE LESS THAN 5%
SOME	5 to 12%
WITH	12 to 30%

NV5

SOIL CLASSIFICATION KEY
ROCKER MEMORIAL SKATEPARK
TRUCKEE, CALIFORNIA

PROJECT NO.: 42941.00
DATE: SEPTEMBER 2021
FIGURE NO.: B1

TEST PIT NO. TP-1

PROJECT NO.	PROJECT NAME	ELEVATION	DATE	PAGE
42941.00	ROCKER MEMORIAL SKATEPARK	~5860 FT	7/28/2021	1 OF 1

EXCAVATING CONTRACTOR	OPERATOR	EXCAVATING METHOD AND BUCKET SIZE
AM-X	CARLOS	DEERE 50D MINI-EXCAVATOR W/ 24 INCH BUCKET

LOGGED BY	SAMPLING METHOD	GROUNDWATER ENCOUNTERED	CAVED
NCM	BULK	NO	NO

SAMPLE NO.	POCKET PEN. (TSF)	PERCENT PASSING #200 SIEVE	DEPTH (FEET)	GRAPHIC LOG	USCS	DESCRIPTIONS/REMARKS
			0		SM (FILL)	GRAY BROWN SILTY SAND (SM); DRY, LOOSE TO DENSE, FINE TO COARSE SAND [EXISTING FILL]
			1		SM (FILL)	DARK BROWN SILTY SAND WITH GRAVEL (SM); MOIST, DENSE TO VERY DENSE, FINE TO COARSE GRAVEL, ABUNDANT COBBLES AND BOULDERS TO 3-FOOT DIAMETER, CONTAINS SOME DEBRIS AND TRASH [EXISTING FILL]
			2			
1-1		13.9	3			
			4			
			5		SP	GRAY BROWN POORLY GRADED SAND (SP); MOIST, DENSE, FINE SAND
			6		SM	DARK GRAY BROWN SILTY SAND WITH GRAVEL (SM); MOIST, DENSE, FINE SAND, FINE TO COARSE GRAVEL, FREQUENT COBBLES
1-2		--	7			
			8		CL	GRAY BROWN CLAY WITH SAND AND GRAVEL (CL); MOIST, VERY STIFF, FINE SAND ABUNDANT GRAVEL, ABUNDANT COBBLES AND BOULDERS TO 2-FOOT DIAMETER
1-3		--	9			
			10			TEST PIT TERMINATED AT 10 FEET BGS - DIFFICULTY EXCAVATING ON BOULDER AND MAXIMUM REACH OF MINI-EXCAVATOR
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

TEST PIT NO. TP-2

PROJECT NO.	PROJECT NAME	ELEVATION	DATE	PAGE
42941.00	ROCKER MEMORIAL SKATEPARK	~5860 FT	7/28/2021	1 OF 1

EXCAVATING CONTRACTOR	OPERATOR	EXCAVATING METHOD AND BUCKET SIZE
AM-X	CARLOS	DEERE 50D MINI-EXCAVATOR W/ 24 INCH BUCKET

LOGGED BY	SAMPLING METHOD	GROUNDWATER ENCOUNTERED	CAVED
NCM	BULK	NO	NO

SAMPLE NO.	POCKET PEN. (TSF)	PERCENT PASSING #200 SIEVE	DEPTH (FEET)	GRAPHIC LOG	USCS	DESCRIPTIONS/REMARKS
			1		SW-SM (FILL)	GRAY BROWN WELL GRADED SAND WITH SILT (SW-SM); DRY, TOP 2-INCHES LOOSE, BECOMING VERY DENSE, [EXISTING FILL]
2-1		--	2		SM (FILL)	DARK BROWN SILTY SAND WITH GRAVEL (SM); MOIST, DENSE TO VERY DENSE, FINE TO COARSE GRAVEL, FINE TO COARSE SAND, ABUNDANT COBBLES AND BOULDERS TO 3-FOOT DIAMETER, CONTAINS DEBRIS AND TRASH, PATCHES OF VERY MOIST SOIL AT CONTACT WITH NATIVE SOIL [EXISTING FILL]
			3			
			4			
			5		SC	DARK BROWN CLAYEY SAND (SC) MOIST, MEDIUM DENSE, CONTAINS ABUNDANT ORGANICS
			6		CL	GRAY BROWN CLAY WITH SAND AND GRAVEL (CL); MOIST, VERY STIFF, FREQUENT COBBLES AND BOULDERS TO 2-FOOT DIAMETER
			7			
2-2		--	8			
			9			TEST PIT TERMINATED AT 8.5 FEET BGS ON BOULDERS
			10			
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

TEST PIT NO. TP-3

PROJECT NO.	PROJECT NAME	ELEVATION	DATE	PAGE
42941.00	ROCKER MEMORIAL SKATEPARK	~5860 FT	7/28/2021	1 OF 1

EXCAVATING CONTRACTOR	OPERATOR	EXCAVATING METHOD AND BUCKET SIZE
AM-X	CARLOS	DEERE 50D MINI-EXCAVATOR W/ 24 INCH BUCKET

LOGGED BY	SAMPLING METHOD	GROUNDWATER ENCOUNTERED	CAVED
NCM	BULK	NO	NO

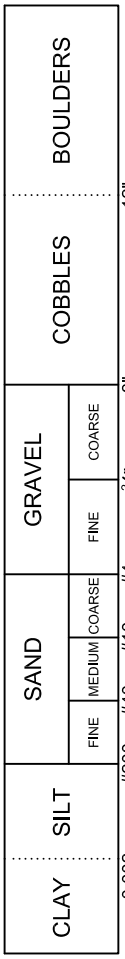
SAMPLE NO.	POCKET PEN. (TSF)	PERCENT PASSING #200 SIEVE	DEPTH (FEET)	GRAPHIC LOG	USCS	DESCRIPTIONS/REMARKS
			0		SM (FILL)	GRAY BROWN SILTY SAND (SM); DRY, TOP 3-INCHES LOOSE TO VERY DENSE, SOME FINE GRAVEL [FILL-TRASH, 12 INCHES]
			1		SM	BROWN SILTY SAND (SM); SLIGHTLY MOIST, VERY DENSE, FINE TO COARSE SAND, OCCASIONAL COBBLES AND BOULDERS TO 2-FOOT DIAMETER
			2			
			3			- BECOMES VERY DARK BROWN, MOIST, DENSE
3-1		40.7				
			4		CL	GRAY CLAY (CL), MOIST, STIFF, OCCASIONAL COBBLES AND BOULDERS TO 18-INCH DIAMETER
3-2		--				
			5			
			6			
			7		SW	ORANGE BROWN WELL GRADED SAND (SW), VERY MOIST, DENSE, FINE TO COARSE SAND, SOME FINE TO COARSE GRAVEL, OCCASIONAL COBBLES AND BOULDERS TO 12-INCH DIAMETER
3-3		--				
			8			TEST PIT TERMINATED AT 8 FEET BGS ON BOULDERS
			9			
			10			
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

APPENDIX C

Test Pit Logs – 10040 Estates Drive (Project No. 42769.00)

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

COARSE GRAINED SOIL More than 50% of the soil is retained on the No. 200 sieve	GRAVEL More than 50% coarse fraction is larger than the No. 4 sieve size	Clean Gravel with less than 5% fines*	GW		WELL GRADED GRAVEL, GRAVEL SAND MIXTURES
			GP		POORLY GRADED GRAVEL, GRAVEL SAND MIXTURES
		Gravel with more than 12% fines*	GM		SILTY GRAVEL, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
			GC		CLAYEY GRAVEL, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
	SAND More than 50% coarse fraction is smaller than the No. 4 sieve size	Clean Sand with less than 5% fines*	SW		WELL GRADED SAND, GRAVELY SAND
			SP		POORLY GRADED SAND, GRAVELY SAND
		Sand with more than 12% fines*	SM		SILTY SAND, POORLY GRADED SAND-SILT MIXTURE
			SC		CLAYEY SAND, POORLY GRADED SAND-SILT MIXTURE
FINE GRAINED SOIL More than 50% of the soil passes the No. 200 sieve	SILT AND CLAY Liquid limit less than 50		ML		INORGANIC SILT & VERY FINE SAND, ROCK FLOUR, SILTY OR CLAYEY FINE SAND, OR CLAYEY SILT WITH SLIGHT PLASTICITY
			CL		INORGANIC CLAY OF LOW TO MEDIUM PLASTICITY, GRAVELY CLAY, SANDY CLAY, SILTY CLAY, LEAN CLAY
			OL		ORGANIC CLAY AND ORGANIC SILTY CLAY OF LOW PLASTICITY
	SILT AND CLAY Liquid limit greater than 50		MH		INORGANIC SILT, MIMCACEOUS OR DIATOMACIOUS FINE SANDY OR SILTY SOIL, ELASTIC SILT
			CH		INORGANIC CLAY OF HIGH PLASTICITY, FAT CLAY
			OH		ORGANIC CLAY OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILT
HIGHLY ORGANIC SOIL			Pt		PEAT AND OTHER HIGHLY ORGANIC SOIL
ROCK			RX		ROCK



* Hybrid classifications are used when the fines content is between 5% and 12% (e.g, SP-SM, GP-GM, SW-SC, GW-GC, etc.)

SAMPLE DESIGNATION

- MODIFIED CALIFORNIA SAMPLER (3" OUTSIDE DIAMETER)
- MODIFIED CALIFORNIA SAMPLER (2-1/2" OUTSIDE DIAMETER)
- STANDARD PENETRATION SPLIT SPOON SAMPLER (2" OUTSIDE DIAMETER)
- BULK OR CLASSIFICATION SAMPLE
- SHELBY TUBE (3" OUTSIDE DIAMETER)

KEY TO SYMBOLS

▽	OBSERVED GROUNDWATER
▼	STABILIZED GROUNDWATER LEVEL
LL	LIQUID LIMIT
PL	PLASTIC LIMIT
PI	PLASTICITY INDEX
Gs	SPECIFIC GRAVITY
PERM	PERMEABILITY
CONSOL	CONSOLIDATION
SA	SIEVE ANALYSIS
-200	PERCENT PASSING NO. 200 SIEVE

NON-COHESIVE (GRANULAR) SOIL

RELATIVE DENSITY	SPT BLOWS PER FOOT (N)
VERY LOOSE	0 - 4
LOOSE	5 - 10
MEDIUM DENSE	11 - 30
DENSE	31 - 50
VERY DENSE	51 +

COHESIVE (CLAYEY) SOIL

COMPARATIVE CONSISTENCY	SPT BLOWS PER FOOT (N)	UNCONFINED COMPRESSIVE STRENGTH (TSF)
VERY SOFT	0 - 2	0 - 0.25
SOFT	3 - 4	0.25 - 0.50
MEDIUM STIFF	5 - 8	0.50 - 1.00
STIFF	9 - 15	1.00 - 2.00
VERY STIFF	16 - 30	2.00 - 4.00
HARD	31 +	4.00 +

BLOW COUNTS

BLOW COUNTS REPRESENT THE NUMBER OF BLOWS REQUIRED TO DRIVE THE SAMPLER EVERY 6 INCHES OF AN 18-INCH DRIVE OR FRACTION INDICATED. BLOW COUNTS PRESENTED ON LOGS HAVE NOT BEEN ADJUSTED.

SOIL CONTACTS

- _____ SOLID - WELL-DEFINED CHANGE
- ---------- DASHED - GRADATIONAL OR APPROXIMATE CHANGE

MOISTURE CONTENT

CLASSIFICATION	DESCRIPTION
DRY	FREE OF MOISTURE, DUSTY, DRY TO THE TOUCH
SLIGHTLY MOIST	BELOW THE SOIL'S OPTIMUM MOISTURE CONTENT, BUT NOT DRY
MOIST	NEAR THE SOIL'S OPTIMUM MOISTURE CONTENT
VERY MOIST	ABOVE THE SOIL'S OPTIMUM MOISTURE CONTENT, BUT NOT WET
WET	VISIBLE FREE WATER, USUALLY SOIL IS BELOW WATER TABLE

CEMENTATION

CLASSIFICATION	DESCRIPTION
WEAK	CRUMBLES OR BREAKS WITH HANDLING OR SLIGHT FINGER PRESSURE
MODERATE	CRUMBLES OR BREAKS WITH CONSIDERABLE FINGER PRESSURE
STRONG	WILL NOT CRUMBLE OR BREAK WITH FINGER PRESSURE

MINOR CONSTITUENT QUANTITIES

QUALIFIER	DESCRIPTION
TRACE	PARTICLES ARE PRESENT, BUT ESTIMATED TO BE LESS THAN 5%
SOME	5 to 12%
WITH	12 to 30%

NV5

SOIL CLASSIFICATION KEY
CASCADE HOUSING PROJECT
TRUCKEE, CALIFORNIA

PROJECT NO.: 42769.00
DATE: SEPTEMBER 2020
FIGURE NO.: C-1

TEST PIT NO. TP-1

PROJECT NO.	PROJECT NAME	ELEVATION	DATE	PAGE
42769.00	CASCADE HOUSING PROJECT	~5,850 FT MSL	09/03/2020	1 OF 1

EXCAVATING CONTRACTOR	OPERATOR	EXCAVATING METHOD AND BUCKET SIZE
CLAUSS EXCAVATION, INC.	MIKE CLAUSS	TAKEUCHI TB240 MINI-EXCAVATOR W/24" BKT

LOGGED BY	SAMPLING METHOD	GROUNDWATER ENCOUNTERED	CAVED
NCM	BULK	NO	NO

SAMPLE NO.	POCKET PEN. (TSF)	PERCENT PASSING #200 SIEVE	DEPTH (FEET)	GRAPHIC LOG	USCS	DESCRIPTIONS/REMARKS
			1		FILL	FILL: 4 TO 6 INCHES DARK BROWN SILTY SAND WITH GRAVEL (SM); DRY, LOOSE, WITH ORGANICS (FILL/TOPSOIL)
					FILL	FILL: BROWN SILTY SAND WITH GRAVEL (SM); DRY, MEDIUM DENSE, FREQUENT COBBLES AND BOULDERS TO 18 INCHES DIAMETER, EST. 30% FINES
1-1	--	--	2		GC	GRAY CLAYEY GRAVEL WITH SAND (GC); DRY, DENSE TO VERY DENSE, FINE TO COARSE GRAVEL
			3		CH	STRONG BROWN (MOTTLED REDDISH BROWN AND GRAY) GRAVELLY FAT CLAY WITH SAND (CH); SLIGHTLY MOIST, HARD, COARSE GRAVEL
1-2	+4.5	49.9	4			
			5			
			6			
			7		GC	STRONG BROWN CLAYEY GRAVEL WITH SAND (GC); MOIST TO VERY MOIST, VERY DENSE, FINE TO COARSE GRAVEL, ABUNDANT COBBLES TO 6 INCHES DIAMETER
			8			
			9			
1-3	--	21.6	10			TEST PIT TERMINATED AT 10 FEET BGS
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

TEST PIT NO. TP-2

PROJECT NO.	PROJECT NAME	ELEVATION	DATE	PAGE
42769.00	CASCADE HOUSING PROJECT	~5,850 FT MSL	09/03/2020	1 OF 1

EXCAVATING CONTRACTOR	OPERATOR	EXCAVATING METHOD AND BUCKET SIZE
CLAUSS EXCAVATION, INC.	MIKE CLAUSS	TAKEUCHI TB240 MINI-EXCAVATOR W/24" BKT

LOGGED BY	SAMPLING METHOD	GROUNDWATER ENCOUNTERED	CAVED
NCM	BULK	NO	NO

SAMPLE NO.	POCKET PEN. (TSF)	PERCENT PASSING #200 SIEVE	DEPTH (FEET)	GRAPHIC LOG	USCS	DESCRIPTIONS/REMARKS
			1		FILL	FILL: 4 TO 6 INCHES DARK BROWN SILTY SAND WITH GRAVEL (SM); DRY, LOOSE, WITH ORGANICS (FILL/TOPSOIL)
					FILL	FILL: BROWN SILTY SAND WITH GRAVEL (SM); DRY, MEDIUM DENSE, FREQUENT COBBLES AND BOULDERS TO 18 INCHES DIAMETER, EST. 30% FINES
2-1	--	46.6	2		GC	GRAY CLAYEY GRAVEL WITH SAND (GC); DRY, DENSE TO VERY DENSE, FINE TO COARSE GRAVEL
			3		CH	STRONG BROWN (MOTTLED REDDISH BROWN AND GRAY) GRAVELLY FAT CLAY WITH SAND (CH); SLIGHTLY MOIST TO VERY MOIST, HARD, COARSE GRAVEL, SOME BOULDERS TO 16 TO 18 INCHES
			4			
			5			
			6			
			7			
			8			TEST PIT TERMINATED AT 7.5 FEET BGS; REFUSAL ON VERY DENSE SOIL
			9			
			10			
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

TEST PIT NO. TP-3

PROJECT NO.	PROJECT NAME	ELEVATION	DATE	PAGE
42769.00	CASCADE HOUSING PROJECT	~5,850 FT MSL	09/03/2020	1 OF 1

EXCAVATING CONTRACTOR	OPERATOR	EXCAVATING METHOD AND BUCKET SIZE
CLAUSS EXCAVATION, INC.	MIKE CLAUSS	TAKEUCHI TB240 MINI-EXCAVATOR W/24" BKT

LOGGED BY	SAMPLING METHOD	GROUNDWATER ENCOUNTERED	CAVED
NCM	BULK	NO	NO

SAMPLE NO.	POCKET PEN. (TSF)	PERCENT PASSING #200 SIEVE	DEPTH (FEET)	GRAPHIC LOG	USCS	DESCRIPTIONS/REMARKS
					FILL	FILL: 4 TO 6 INCHES DARK BROWN SILTY SAND WITH GRAVEL (SM); DRY, LOOSE, WITH ORGANICS (FILL/TOPSOIL)
3-1	--	--	1		FILL	FILL: BROWN SILTY SAND WITH GRAVEL (SM); DRY, MEDIUM DENSE, FREQUENT COBBLES AND BOULDERS TO 18 INCHES DIAMETER, EST. 30% FINES
			2		GC	GRAY CLAYEY GRAVEL WITH SAND (GC); DRY, DENSE TO VERY DENSE, FINE TO COARSE GRAVEL
			3			
			4			TEST PIT TERMINATED AT 3.5 FEET BGS; REFUSAL ON COBBLES AND VERY DENSE SOIL
			5			
			6			
			7			
			8			
			9			
			10			
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

TEST PIT NO. TP-4

PROJECT NO.	PROJECT NAME	ELEVATION	DATE	PAGE
42769.00	CASCADE HOUSING PROJECT	~5,850 FT MSL	09/03/2020	1 OF 1

EXCAVATING CONTRACTOR	OPERATOR	EXCAVATING METHOD AND BUCKET SIZE
CLAUSS EXCAVATION, INC.	MIKE CLAUSS	TAKEUCHI TB240 MINI-EXCAVATOR W/24" BKT

LOGGED BY	SAMPLING METHOD	GROUNDWATER ENCOUNTERED	CAVED
NCM	BULK	NO	NO

SAMPLE NO.	POCKET PEN. (TSF)	PERCENT PASSING #200 SIEVE	DEPTH (FEET)	GRAPHIC LOG	USCS	DESCRIPTIONS/REMARKS
			1		FILL	FILL: 4 TO 6 INCHES DARK BROWN SILTY SAND WITH GRAVEL (SM); DRY, LOOSE, WITH ORGANICS (FILL/TOPSOIL)
					FILL	FILL: GRAYISH BROWN POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC); DRY, DENSE, FINE TO COARSE SAND, TRACE COBBLES TO 6 INCHES DIAMETER, EST. 10% TO 20% FINES
			2		CH	STRONG BROWN (MOTTLED BROWN AND GRAY) GRAVELLY FAT CLAY WITH SAND (CH), SLIGHTLY MOIST, VERY HARD, FINE TO COARSE GRAVEL
			3			
4-1	+4.5	50.2	4			
			5			
			6			
			7		GC	GRAYISH BROWN CLAYEY GRAVEL WITH SAND (GC); MOIST, VERY DENSE, FINE TO COARSE GRAVEL, SOME COBBLES TO 6 INCHES DIAMETER
			8			
			9			TEST PIT TERMINATED AT 9 FEET BGS
			10			
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

APPENDIX D

Laboratory Test Data

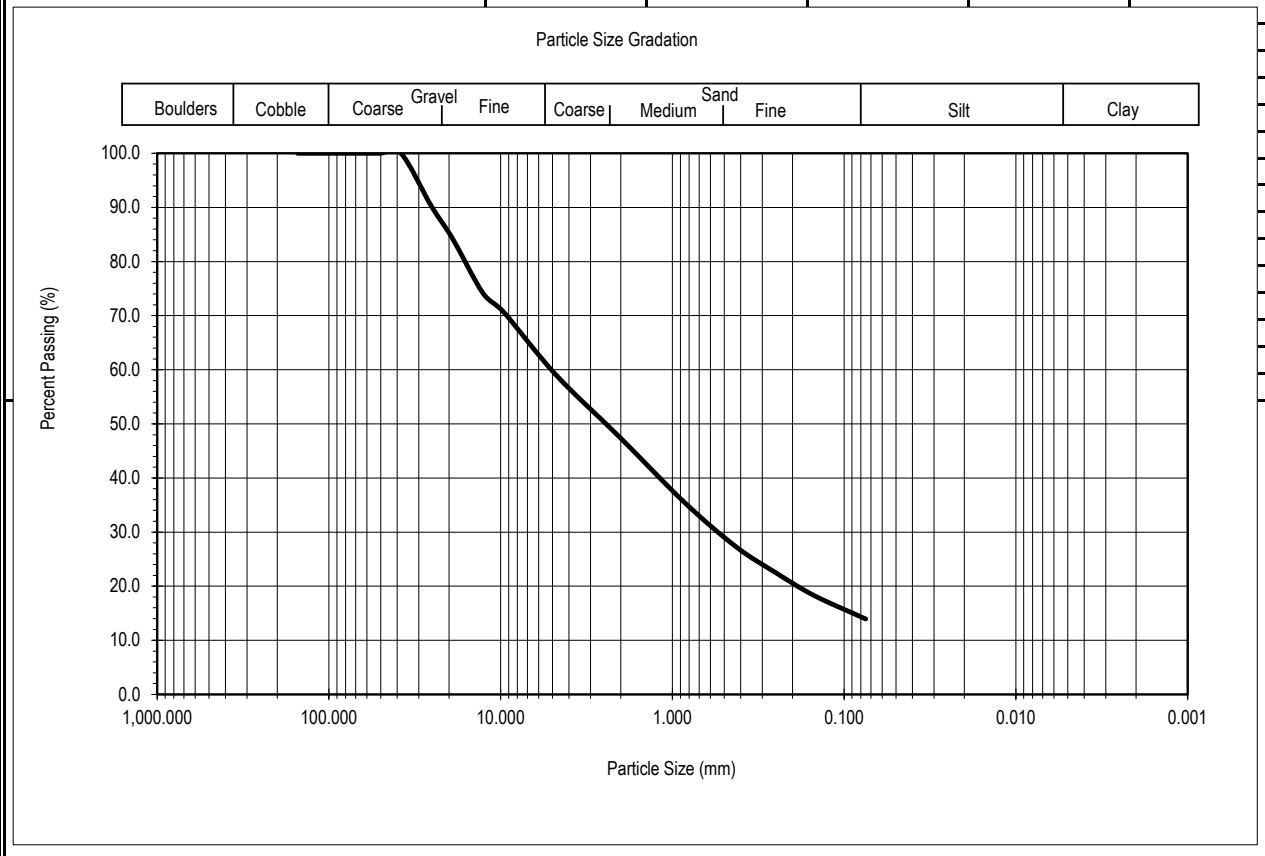
PARTICLE SIZE DISTRIBUTION

ASTM D422, C136

DSA LEA No.: 284

Project No.	**42941**	Project Name:	**Rocker Memorial**	Date:	**8/17/2021**
Sample No.	**1-1**	Boring/Trench:	**TP-1**	Depth, (ft.): **2.5-3'**	Tested By: **BJF**
Description:	**Dark Brown Silty Sand with Gravel (SM)**				Checked By: **AKH**
Sample Location:	**0**				Lab. No. **C21-186**

Sieve Size	Particle Diameter		Dry Weight on Sieve			Percent
	Inches	Millimeter	Retained On Sieve	Accumulated On Sieve	Passing Sieve	Passing
(U.S. Standard)	(in.)	(mm)	(gm)	(gm)	(gm)	(%)
6 Inch	6.0000	152.4	0.00	0.0	2,849.5	**100.0**
3 Inch	3.0000	76.2	0.00	0.0	2,849.5	**100.0**
2 Inch	2.0000	50.8	0.00	0.0	2,849.5	**100.0**
1.5 Inch	1.5000	38.1	0.00	0.0	2,849.5	**100.0**
1.0 Inch	1.0000	25.4	276.60	276.6	2,572.9	**90.3**
3/4 Inch	0.7500	19.1	173.20	449.8	2,399.7	**84.2**
1/2 Inch	0.5000	12.7	285.90	735.7	2,113.8	**74.2**
3/8 Inch	0.3750	9.5	104.30	840.0	2,009.5	**70.5**
#4	0.1870	4.7500	328.40	1,168.4	1,681.1	**59.0**
#10	0.0790	2.0066	330.61	1,499.0	1,350.5	**47.4**
#20	0.0335	0.8500	339.92	1,838.9	1,010.6	**35.5**
#40	0.0167	0.4250	233.99	2,072.9	776.6	**27.3**
#60	0.0098	0.2500	135.81	2,208.7	640.8	**22.5**
#100	0.0059	0.1500	119.52	2,328.3	521.2	**18.3**
#200	0.0030	0.0750	123.78	2,452.0	397.5	**13.9**



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CONSTRUCTION QUALITY ASSURANCE - INFRASTRUCTURE - ENERGY - PROGRAM MANAGEMENT - ENVIRONMENTAL

ATTERBERG INDICES

ASTM D4318

DSA LEA No. 284

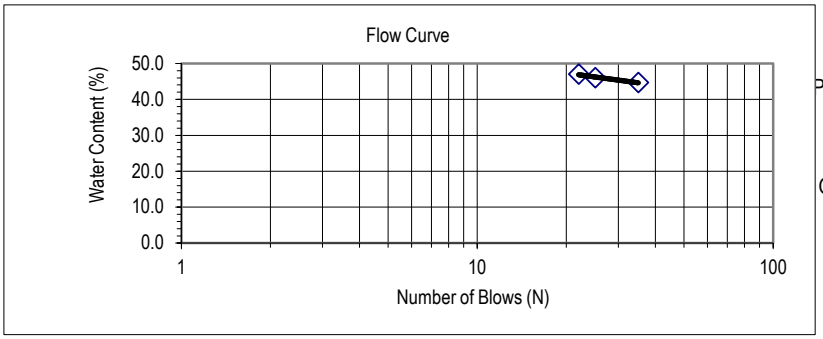
DSA File No. 0
DSA App No. 0

Project No.	42941	Project Name	Rocker Memorial Skatepark			Date:	08/17/21
Sample No.	1-3	Boring/Trench	TP-1	Depth, (ft.):	8-8.5'	Tested By:	BJF
Description:	Gray-Brown Lean Clay with Sand and Gravel (CL)					Checked By:	0
Sample Location:	0					Lab. No.	C21-186

Estimated % of Sample Retained on No. 40 Sieve: _____ Sample Air Dried: yes

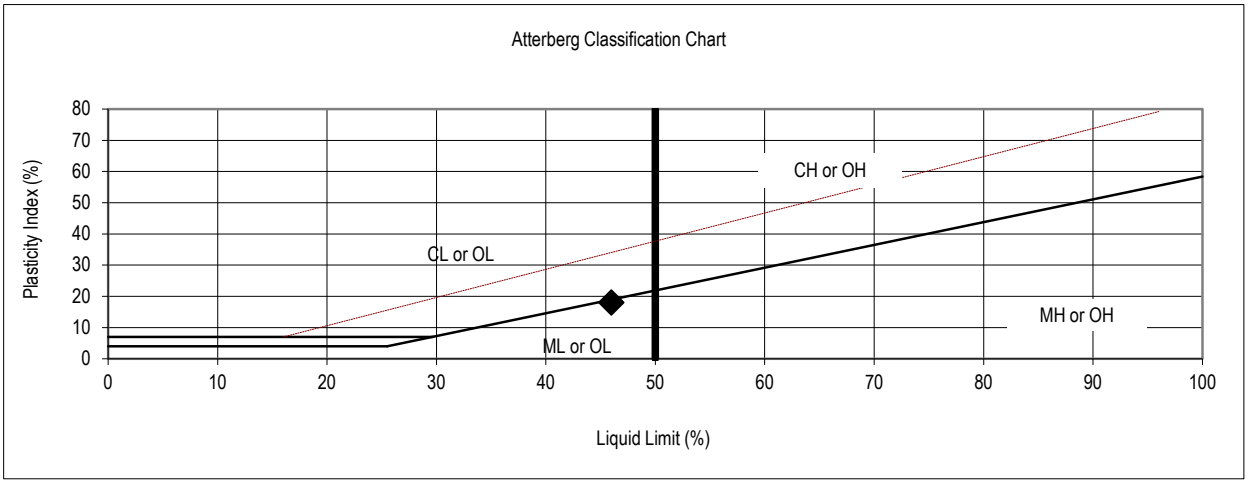
Test Method A or B: A

	LIQUID LIMIT:					PLASTIC LIMIT:		
Sample No.:	1	2	3	4	5	1	2	3
Pan ID:	B	V	D			C	Z	W
Wt. Pan (gr)	38.98	37.37	38.27			38.47	37.45	37.76
Wt. Wet Soil + Pan	49.31	47.27	47.18			47.20	46.56	46.02
Wt. Dry Soil + Pan (	46.12	44.15	44.33			45.13	44.54	44.20
Wt. Water (gr)	3.19	3.12	2.85			2.07	2.02	1.82
Wt. Dry Soil (gr)	7.14	6.78	6.06			6.66	7.09	6.44
Water Content (%)	44.7	46.0	47.0			31.1	28.5	28.3
Number of Blows, N	35	25	22					
				LIQUID LIMIT =	46		PLASTIC LIMIT =	28



Plasticity Index = 18

Group Symbol = CL



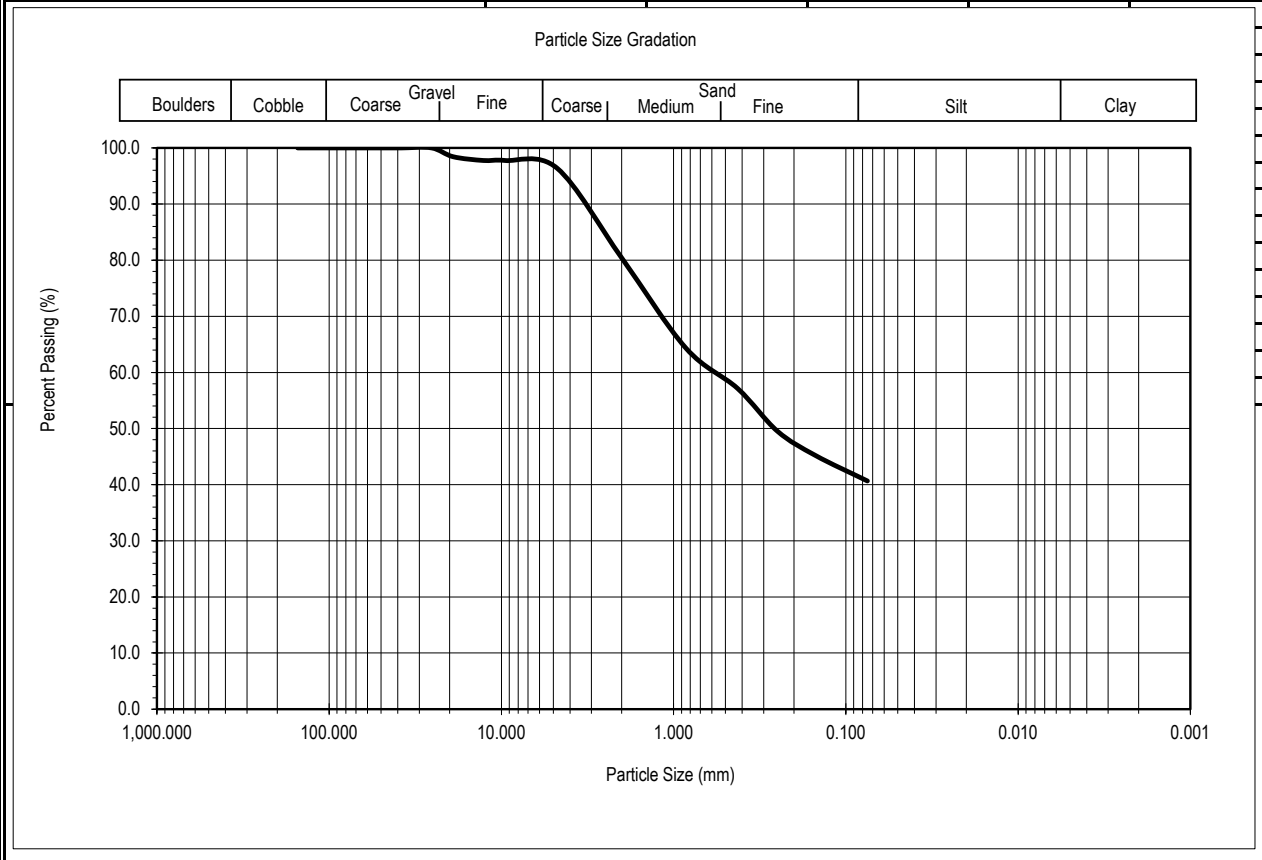
PARTICLE SIZE DISTRIBUTION

ASTM D422, C136

DSA LEA No.: 284

Project No.	**42941**	Project Name:	**Rocker Memorial Skatepark**	Date:	**8/17/2021**
Sample No.	**3-1**	Boring/Trench:	**TP-3**	Depth, (ft.): **3-3.5'**	Tested By: **BJF**
Description:	**Brown Silty Sand (SM)**				Checked By: **DJP**
Sample Location:					Lab. No. **C21-186**

Sieve Size	Particle Diameter		Dry Weight on Sieve			Percent
	Inches	Millimeter	Retained On Sieve	Accumulated On Sieve	Passing Sieve	Passing
(U.S. Standard)	(in.)	(mm)	(gm)	(gm)	(gm)	(%)
6 Inch	6.0000	152.4	0.00	0.0	999.4	**100.0**
3 Inch	3.0000	76.2	0.00	0.0	999.4	**100.0**
2 Inch	2.0000	50.8	0.00	0.0	999.4	**100.0**
1.5 Inch	1.5000	38.1	0.00	0.0	999.4	**100.0**
1.0 Inch	1.0000	25.4	0.00	0.0	999.4	**100.0**
3/4 Inch	0.7500	19.1	15.70	15.7	983.7	**98.4**
1/2 Inch	0.5000	12.7	6.70	22.4	977.0	**97.8**
3/8 Inch	0.3750	9.5	0.00	22.4	977.0	**97.8**
#4	0.1870	4.7500	13.70	36.1	963.3	**96.4**
#10	0.0790	2.0066	159.34	195.4	804.0	**80.4**
#20	0.0335	0.8500	160.85	356.3	643.1	**64.3**
#40	0.0167	0.4250	72.12	428.4	571.0	**57.1**
#60	0.0098	0.2500	75.89	504.3	495.1	**49.5**
#100	0.0059	0.1500	43.42	547.7	451.7	**45.2**
#200	0.0030	0.0750	45.31	593.0	406.4	**40.7**



ATTERBERG INDICES

ASTM D4318

DSA LEA No. 284

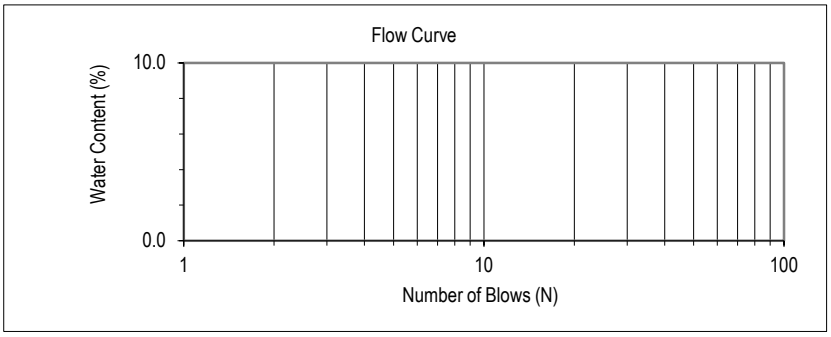
DSA File No. N/A
DSA App No. N/A

Project No.	42941	Project Name	Rocker Memorial Skatepark			Date:	08/17/21
Sample No.	3-1	Boring/Trench	TP-3	Depth, (ft.):	3-3.5'	Tested By:	BJF
Description:	Brown Silty Sand (SM)					Checked By:	DJP
Sample Location:						Lab. No.	C21-186

Estimated % of Sample Retained on No. 40 Sieve: _____ Sample Air Dried: yes

Test Method A or B: A

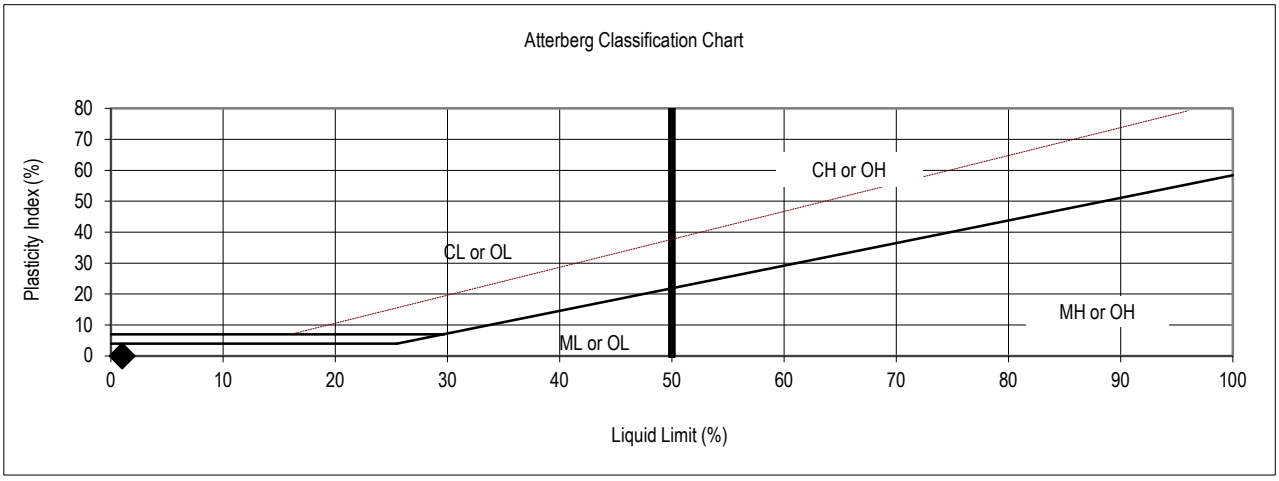
LIQUID LIMIT:						PLASTIC LIMIT:		
Sample No.:	1	2	3	4	5	1	2	3
Pan ID:								
Wt. Pan (gr)								
Wt. Wet Soil + Pan (gr)								
Wt. Dry Soil + Pan (gr)								
Wt. Water (gr)								
Wt. Dry Soil (gr)								
Water Content (%)								
Number of Blows, N								
			LIQUID LIMIT =	NP		PLASTIC LIMIT =	NP	



Plasticity Index = NP

Non-Plastic ☑

Group Symbol = NP



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APPENDIX F

Post-Construction Storm Water Quality Plan

Town of Truckee
Post-Construction Storm Water Quality Plan

Project Name	Rocker Memorial Skate Park	
Brief Project Description (add separate sheet if needed)	New Skate Park, Trail Addition, and Parking Lot	
Owner/Developer	Full Name	Colin Robinson
	Address	13100 Filly Lane
	City, State, Zip Code	Truckee, CA 96161
	Phone Number	847 - 287 - 0608
	Email Address	rockermemorialskatepark@gmail.com
Project Location	Street Address	10695 Brockway Road
	City, State, Zip Code	Truckee, CA 96161
	Assessor's Parcel Number	019-450-054
	Building Permit Number	
	Elevation (ft. above mean sea level)	5860
Prepared by:	Preparer's Name	Millennium Planning & Engineering
	Address	471 Sutton Way
	City, State, ZIP	Grass Valley, CA 95945
	Telephone No.	530 - 446 - 6765
	Email Address	michelle@millpe.com

The undersigned owner of the subject property, is responsible for ensuring that all storm water facilities are designed by an appropriately licensed and qualified professional, and for the full implementation of the provisions of this plan, including ongoing operations and maintenance (O&M), consistent with the requirements of the Town of Truckee and the State of California Phase II Small MS4 General Permit (Order No: 2013-0001-DWQ). If the undersigned transfers its interest in the property, its successors-in-interest shall bear the aforementioned responsibility to implement the SWQP.

The undersigned owner hereby grants access to all representatives of the Town of Truckee for the sole purpose of performing O&M inspections of the installed treatment system(s) and hydromodification control(s) if any.

A copy of the final signed and fully approved SWQP shall be available on the subject site for the duration of construction and then stored with the project approval documentation and improvement plans in perpetuity.

X:	
Signature	Date (MM/DD/YYYY)
Preparation Date:	
Approval Date:	

Section 1
General Project Information

Form 1-1 Project Categorization and Characteristics

[1]Does the project disturb more than 20 yds^3 of soil or 500 ft^2 of surface area? *If "Yes", complete all forms in Sections 1, 2, and complete Section 3 forms as needed.* *If "No", no additional information is required.*	**Yes**
[2]Does the project create and/or replace 1 acre or more of impervious surface? *If "Yes", complete Section 4 forms.* *If "No", no additional information is required.*	**No**
[3]Enter the total new and/or replaced impervious surface area (ft^2)	**38299**
[4]Is the project site located to the East or West of Hwy 89? *(Enter "East" or "West" w/out quotes)*	**West**
[5]85th Percentile, 24 Hour Design Storm Depth (in):	**1.1**
[6]Unit Water Quality Volume (WQV) (in):	**1.1**

For each Drainage Management Area (DMA), enter the impervious and pervious area sizes (add pages if necessary)

Drainage Management Area ID	[7]New and/or Replaced Impervious Area	[8]Pervious Area
1	25782	3779
2	12517	3774
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
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Section 2
Site Design Measures

Form 2-1 Runoff Reduction Calculator for Site Design Measures (SDMs)

(*The Municipal Storm Water Permit requires SDMs to be implemented to the extent technically feasible)*

			[1]DMA ID No.	1		2		3		4	
Site Design Measure	**Runoff Reduction Parameters**				**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers (SDM-1)	A_{imp} (ft^2)	*impervious drainage area*	0	0	0	0		0		0	
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	1.0		1.0		1.0		1.0		
[3] Rooftop and Impervious Area Disconnection (SDM-2)	A_{imp} (ft^2)	*impervious drainage area*	0	0	0	0		0		0	
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	1.0		1.0		1.0		1.0		
[4] Vegetated Swales (SDM-3)	A_{imp} (ft^2)	*impervious drainage area*	0	0	0	0		0		0	
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	1.0		1.0		1.0		1.0		
[5] Infiltration Trenches (SDM-4)	L (ft)	*trench length*		0		0		0		0	
	W (ft)	*trench width*									
	D (ft)	*trench depth*									
	n_{agg}	*porosity of aggregate (if used)*									
[6] Infiltration Facilities (Open Basins, and Subsurface Facilities) (SDM-4)	V (ft3)	*combined volume of all infiltration facilities (include supporting design documentation)*		0		0		0		0	
[7] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					**Yes**		**No**				
[8] Total Volume Reduction (ft^3)				**0**		**0**		**0**		**0**	
[9] Effective Treated Impervious Area (ft^2)				**0**		**0**		**0**		**0**	
[10] Is all new and/or replaced impervious area treated by SDMs? **If no, add SDMs, or use Forms 3-1 and 3-2 to design supplemental stormwater treatment.**											

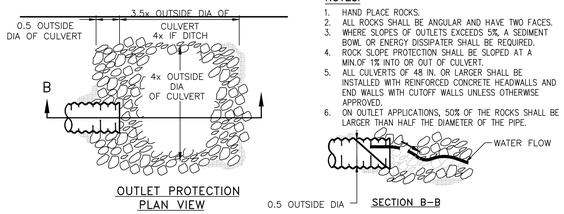
Section 3
Stormwater Treatment and Baseline Hydromodification Measures

Form 3-1 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures

DMA ID No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
[1] Impervious area untreated by Site Design Measures (ft^2) Form 1-1 Item 7 – *Form 2-1 Item 10*	25782	12517	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[2] Additional pervious area draining to BMP (ft^2)	3779	3774																				
[3] Composite DMA Runoff Coefficient (C) *Enter area weighted composite runoff coefficient representing entire DMA (from Standard Dwg #58, Truckee Eng. Stds.)*	0.82	0.75																				
[4] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 1 + Item 2) *Item 3] * Form 1-1 Item 6*	2222	1120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[5] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 1 + Item 2) * Item3]*	0.112	0.057	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

DMA ID No.	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
[1] Impervious area untreated by Site Design Measures (ft^2) Form 1-1 Item 8 – *Form 2-1 Item 13*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[2] Additional pervious area draining to BMP (ft^2)																						
[3] Composite DMA Runoff Coefficient (C) *Enter area weighted composite runoff coefficient representing entire DMA (from Standard Dwg #58, Truckee Eng. Stds.)*																						
[4] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 1 + Item 2) *Item 3] * Form 1-1 Item 6*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[5] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 1 + Item 2) * Item3]*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Form 3-2 Volume-Based Infiltrating Bioretention Measures				
[1]**DMA ID No.** *If combining multiple DMAs from Form 3-1, enter a new unique DMA ID No.*	1	2		
[2]WQV (ft^3) *Item 5 in Form 3-1* *If combining multiple DMAs from Form 3-1, enter the sum of their respective WQVs.*	2222	1120		
[3]Surface Loading Rate *Maximum 5.0 in/hr*	5	5		
[4]BMP Surface Area (ft^2) *Top of BMP*	1907	1038		
[5]Infiltration rate of underlying soils (in/hr) *Use 0.17 in/hr, unless otherwise supported by the geotechnical study*	0.17	0.17		
[6]Maximum ponding depth (ft) *BMP specific, see BMP design details*	0.5	0.5		
[7]Ponding Depth (ft) *d_{BMP} = Minimum of (1/12 * Item 5 * 48 hrs) or Item 6*	0.5	0.5	-	-
[8]Infiltrating surface area, *SA_{BMP}* (ft^2) *Bottom of BMP*	1312	726		
[9]Planting media depth, *d_{media}* (ft)	2.0	2.0		
[10]Planting media porosity	0.40	0.40		
[11]Gravel depth, *d_{media}* (ft) *Only included in certain BMP types*	1.0	1.0		
[12]Gravel porosity	0.40	0.40		
[13]Retention Volume (ft^3) *$V_{retention}$ = Item 8 * [Item7 + (Item 9 * Item 10) + (Item 11 * Item 12) + (1.5* (Item 5 / 12))]*	2,230.4	1,234.2	-	-
[14]Untreated Volume (ft^3) *$V_{untreated}$ = Item 2 – Item 13* *If greater than zero, adjust BMP sizing variables and re-compute retention volume*	0	0	0	0
[15] Treated Flow Rate (ft^3/s) *$Q_{treated}$ = 1/43,200*(Item 3 * Item 4)*	0.2207	0.1201	0.0000	0.0000
[16]Total Treated Flow Rate for Project (ft^3/s) *Q_{total} = Sum of Item 15 for all DMAs*	0.3409			
[17]Is the full WQV for each DMA treated on-site? *Check Yes if Item 14= 0 for all DMAs*	**Yes**	**X**	**No**	

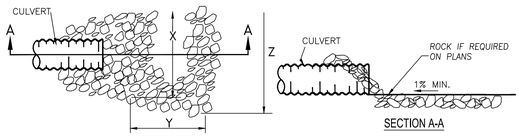


OUTLET PROTECTION PLAN VIEW

SECTION B–B

NOTES:

1. HAND PLACE ROCKS.
2. ALL ROCKS SHALL BE ANGULAR AND HAVE TWO FACES.
3. WHERE SLOPES OF OUTLETS EXCEEDS 5%, A SEDIMENT BOWL OR ENERGY DISSIPATER SHALL BE REQUIRED.
4. ROCK SLOPE PROTECTION SHALL BE SLOPED AT A MIN.OF 1% INTO OR OUT OF CULVERT.
5. ALL CULVERTS OF 48 IN. OR LARGER SHALL BE INSTALLED WITH REINFORCED CONCRETE HEADWALLS AND END WALLS WITH CUTOFF WALLS UNLESS OTHERWISE APPROVED.
6. ON OUTLET APPLICATIONS, 50% OF THE ROCKS SHALL BE LARGER THAN HALF THE DIAMETER OF THE PIPE.



INLET PROTECTION PLAN VIEW

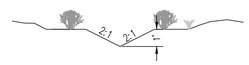
SECTION A-A

INLET PROTECTION MINIMUM DIMENSIONS

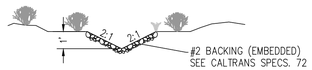
ROCK CLASS	PIPE ø IN.	X FEET	Y FEET	Z FEET
NO. 1 BACKING	12	3	4	5
NO. 1 BACKING	18	4.5	6	7.5
NO. 1 BACKING	24	6	8	10
NO. 1 BACKING	30	7.5	10	12.5
NO. 1 BACKING	36	9	12	15
NO. 1 BACKING	42	10.5	14	17.5
NO. 1 BACKING	48	12	16	20

1 OUTLET PROTECTION DETAIL

NTS



TYPE 1 V-DITCH



TYPE 1R V-DITCH

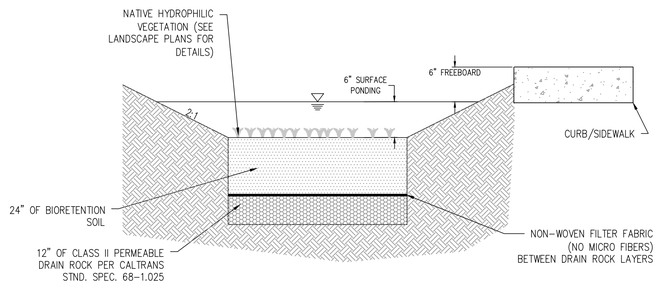
NOTE
#2 BACKING SHALL BE PLACED IN ALL DITCHES WITH A SLOPE OF 5% OR GREATER.

DITCH NOTE:

DITCH ALIGNMENT MAY VARY SLIGHTLY IN FIELD TO MEANDER AROUND EXISTING TREES, BUT MUST BE LOCATED WITHIN DRAINAGE EASEMENT AND MUST HAVE 1% MIN. SLOPE

2 V-DITCH

NTS

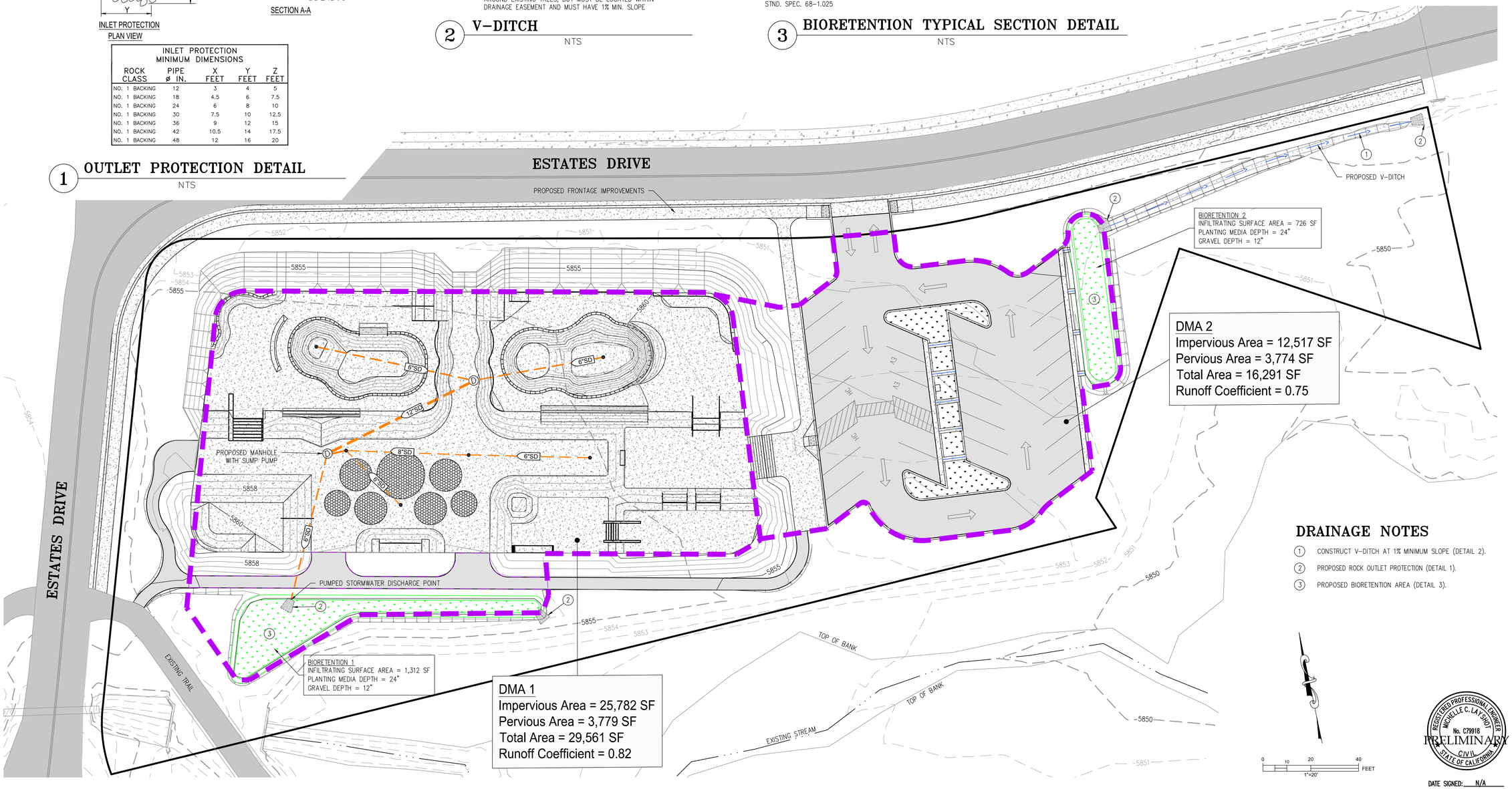


3 BIORETENTION TYPICAL SECTION DETAIL

NTS

LEGEND

6"SD	PROPOSED STORM DRAIN PIPE
D	PROPOSED STORM DRAIN MANHOLE
•	PROPOSED DRAINAGE INLET
	PROPOSED CONCRETE
	EXISTING CONCRETE
	PROPOSED ASPHALT
	EXISTING ASPHALT
	DRAINAGE AREA
	PROPOSED FLOWLINE
	PROPOSED BIORETENTION (DETAIL 3)
	PROPOSED ROCK OUTLET PROTECTION (DETAIL 1)



DRAINAGE NOTES

1. CONSTRUCT V-DITCH AT 1% MINIMUM SLOPE (DETAIL 2).
2. PROPOSED ROCK OUTLET PROTECTION (DETAIL 1).
3. PROPOSED BIORETENTION AREA (DETAIL 3).

0 10 20 40 FEET
1"=20'

REGISTERED PROFESSIONAL ENGINEER MICHELLE C. LAY-SHOT No. C79918 CIVIL STATE OF CALIFORNIA

PRELIMINARY

DATE SIGNED: N/A

MILLENNIUM
PLANNING & ENGINEERING
471 Station Way, Suite 230
Grass Valley, CA 95945
530-446-6765
www.millenniumpe.com

ROCKER MEMORIAL SKATEPARK
10695 & 10793 BROCKWAY ROAD
DRAINAGE MAP

TOWN OF TRUCKEE CALIFORNIA

REV.	DESCRIPTION	DATE

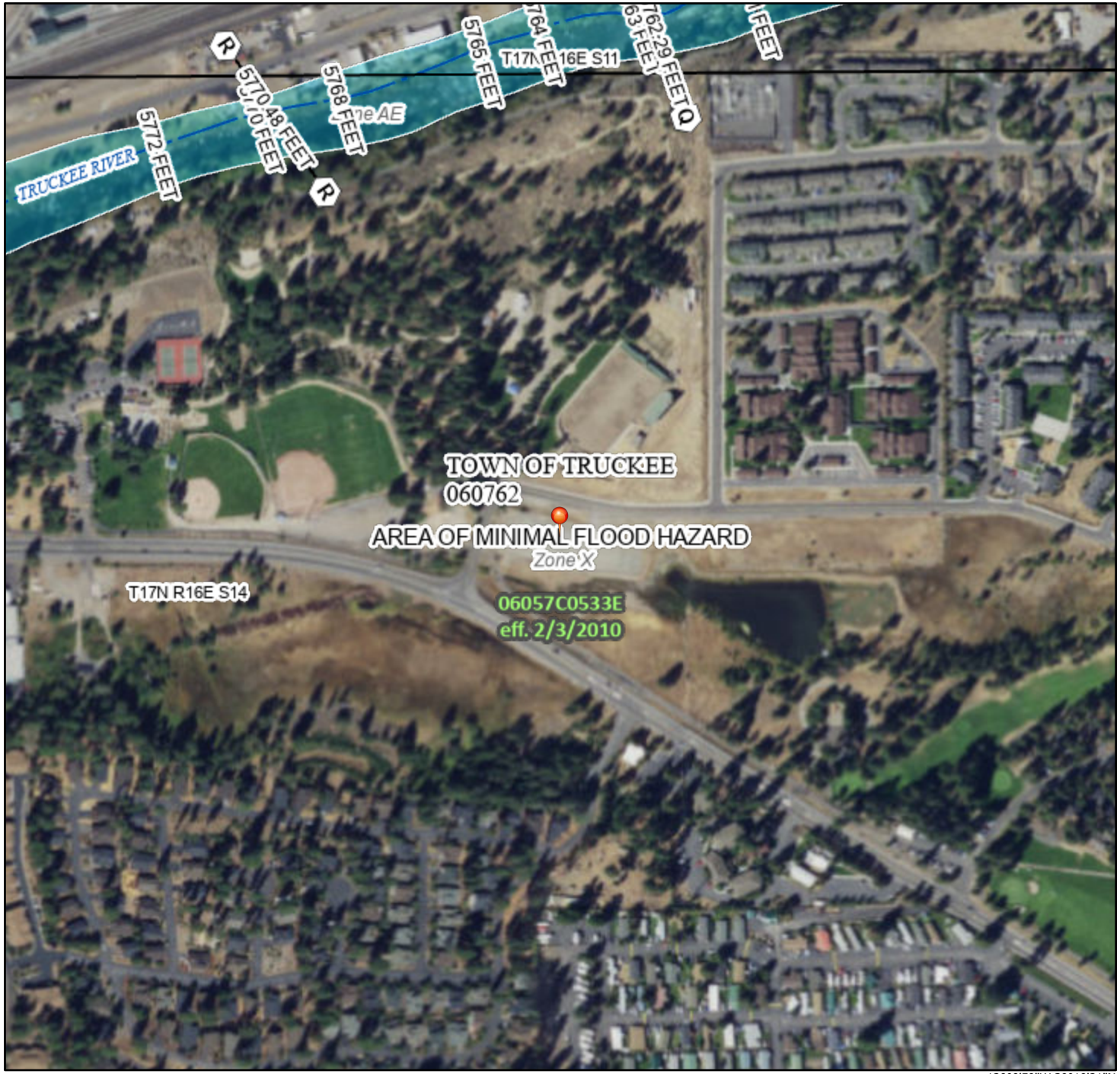
DESIGNED: LAS
DRAWN: WRA
PROJ. NO: 21-0507
DWG: SEE DAYSTAMP
DATE: SEPT 24, 2021

SHEET NUMBER
1 OF 1

National Flood Hazard Layer FIRMette

FEMA

120°10'36"W 39°19'49"N



120°9'59"W 39°19'21"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/22/2021 at 2:54 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX G

Environmental Noise Assessment

Environmental Noise Assessment

Rocker Memorial Skatepark

Town of Truckee, California

July 21, 2021

Project #210603

Prepared for:

Millennium Planning & Engineering
471 Sutton Way, Suite 210
Grass Valley, CA 95945

Prepared by:

Saxelby Acoustics LLC

Luke Saxelby, INCE Bd. Cert.
Principal Consultant
Board Certified, Institute of Noise Control Engineering (INCE)

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915 Highland Pointe Drive, Suite 250
Roseville, CA 95678

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INTRODUCTION

The Rocker Memorial Skatepark project is located in the Town of Truckee, California. The project will include the construction of a skatepark with an ADA accessible ramp. The surrounding land uses include the Truckee River Regional Park, the Truckee Skatepark, the Ponderosa Golf Course and residential uses.

Figure 1 shows the project site plan. **Figure 2** shows an aerial photo of the project site.

ENVIRONMENTAL SETTING

BACKGROUND INFORMATION ON NOISE

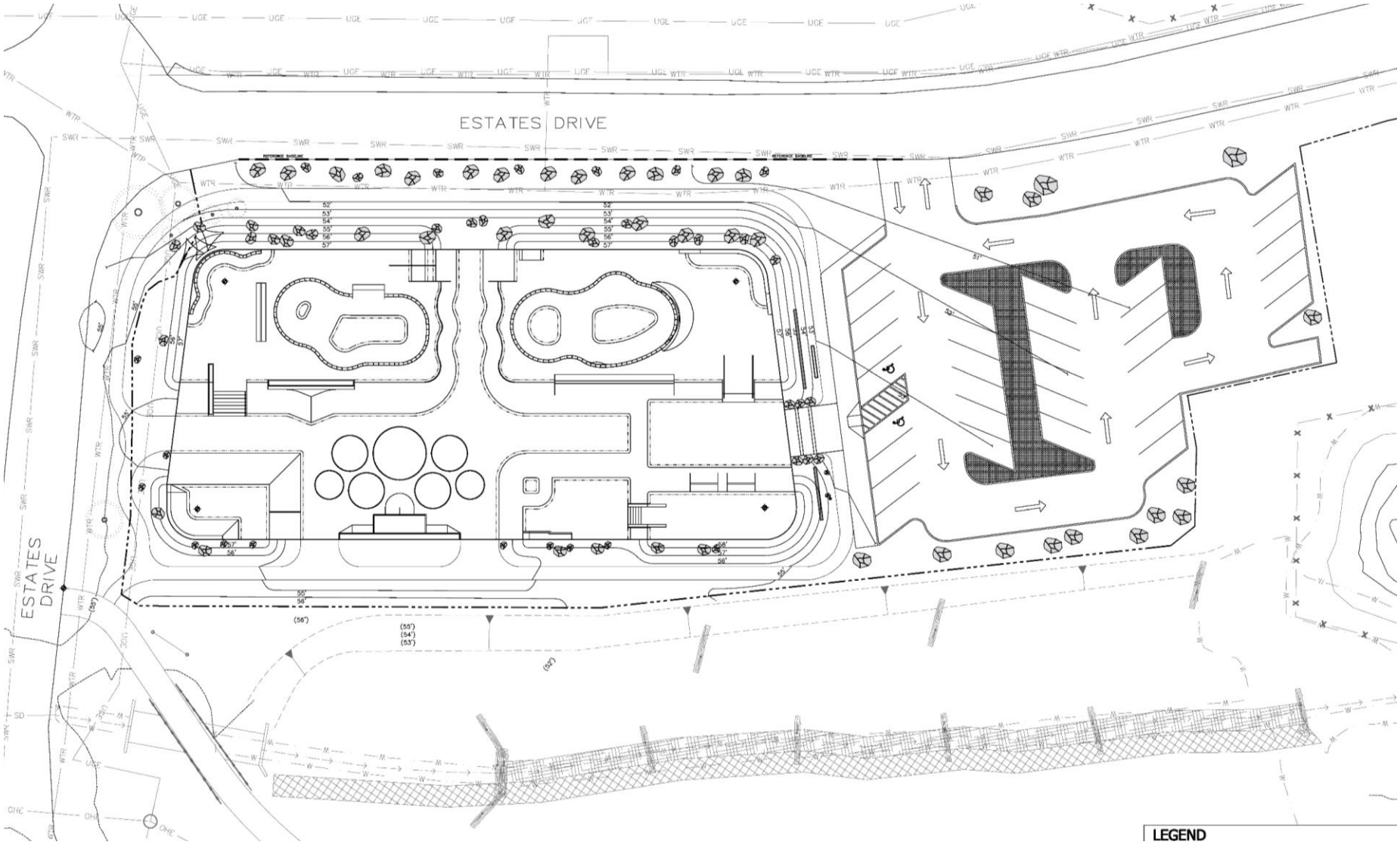
Fundamentals of Acoustics

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment.



Rocker Memorial Skatepark
Truckee, California

Figure 1
Project Site Plan

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Acoustics · Noise · Vibration

Rocker Memorial Skatepark

Truckee, California

Figure 2

Noise Measurement Sites

Legend

- Project Site
- Noise Measurement - Long Term

0 ft 500 ft 1000 ft 1500 ft 2000 ft 2500 ft

Projection: UTM Zone 10 / WGS84 / meters
Rev. Date: 07/12/2021

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The decibel scale is logarithmic, not linear. In other words, two sound levels 10-dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10-dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The day/night average level (DNL or L_{dn}) is based upon the average noise level over a 24-hour day, with a +10-decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Table 1 lists several examples of the noise levels associated with common situations. **Appendix A** provides a summary of acoustical terms used in this report.

TABLE 1: TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft.)	--100--	
Gas Lawn Mower at 1 m (3 ft.)	--90--	
Diesel Truck at 15 m (50 ft.), at 80 km/hr. (50 mph)	--80--	Food Blender at 1 m (3 ft.) Garbage Disposal at 1 m (3 ft.)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft.)	--70--	Vacuum Cleaner at 3 m (10 ft.)
Commercial Area Heavy Traffic at 90 m (300 ft.)	--60--	Normal Speech at 1 m (3 ft.)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: *Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol. September 2013.*

EFFECTS OF NOISE ON PEOPLE

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1-dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5-dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6-dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING NOISE AND VIBRATION ENVIRONMENTS

EXISTING NOISE RECEPTORS

Some land uses are considered more sensitive to noise than others. Land uses often associated with sensitive receptors generally include residences, schools, libraries, hospitals, and passive recreational areas. Sensitive noise receptors may also include threatened or endangered noise sensitive biological species, although many jurisdictions have not adopted noise standards for wildlife areas. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise.

Sensitivity is a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. In the vicinity of the project site, sensitive land uses include Rocky Point Charter School to the west of the project site, existing single-family residential uses to the south and east of the project site, and multi-family residential uses to the north of the project site across Lake Boulevard.

EXISTING GENERAL AMBIENT NOISE LEVELS

The existing noise environment in the project area is primarily defined by traffic on Old Brockway Road and Estates Drive, as well as surrounding recreational and residential uses. To quantify the existing ambient noise environment in the project vicinity, Saxelby Acoustics conducted continuous (24-hr.) noise level measurements at two locations on the project site. Noise measurement locations are shown on **Figure 2**. A summary of the noise level measurement survey results is provided in **Table 2**. **Appendix B** contains the complete results of the noise monitoring.

The sound level meters were programmed to record the maximum, median, and average noise levels at each site during the survey. The maximum value, denoted L_{max}, represents the highest noise level measured. The average value, denoted L_{eq}, represents the energy average of all the noise received by the sound level meter microphone during the monitoring period. The median value, denoted L_{50}, represents the sound level exceeded 50 percent of the time during the monitoring period.

Larson Davis Laboratories (LDL) model 812 and 820 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with a CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

TABLE 2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

Site	Location	Date	L_{dn}	Daytime L_{eq}	Daytime L_{50}	Daytime L_{max}	Nighttime L_{eq}	Nighttime L_{50}	Nighttime L_{max}
LT-1	Northeast of Project Site	7/10/2021	58	55	50	74	51	46	71
		7/11/2021	58	57	50	77	50	46	71
		7/12/2021	60	57	52	76	53	48	74
LT-2	South of Project Site	7/10/2021	56	54	52	69	49	46	64
		7/11/2021	55	53	52	69	48	45	65
		7/12/2021	58	55	53	69	51	47	68

Notes:
- All values shown in dBA
- Daytime hours: 7:00 a.m. to 10:00 p.m.
- Nighttime Hours: 10:00 p.m. to 7:00 a.m.

Source: *Saxelby Acoustics, 2021.*

FUTURE TRAFFIC NOISE ENVIRONMENT AT OFF-SITE RECEPTORS

Off-Site Traffic Noise Impact Assessment Methodology

To assess noise impacts due to project-related traffic increases on the local roadway network, traffic noise levels are predicted at sensitive receptors for existing and future, project and no-project conditions.

Existing and existing plus project noise levels due to traffic are calculated using the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108). The model is based upon the Calveno reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site.

The FHWA model was developed to predict hourly L_{eq} values for free-flowing traffic conditions. To predict traffic noise levels in terms of L_{dn}, it is necessary to adjust the input volume to account for the day/night distribution of traffic.

Existing traffic volumes along the local roadway network were obtained from the Town of Truckee Public Works Department. Project trip generation volumes were estimated based on the parking lot capacity. It is expected that during the peak hour of use, the parking lot would fill and empty completely, resulting in 60 total trips to the project site. Truck usage and vehicle speeds on the local area roadways were estimated from field observations. The predicted increases in traffic noise levels on the local roadway network for existing and existing plus project conditions which would result from the project are provided in terms of L_{dn}.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each project-area roadway segment. In some locations sensitive receptors may not receive full shielding from noise barriers or may be located at distances which vary from the assumed calculation distance.

Table 3 summarize the modeled traffic noise levels at the nearest sensitive receptors along each roadway segment in the Project area. **Appendix C** provides the complete inputs and results of the FHWA traffic modeling.

TABLE 3: BASELINE TRAFFIC NOISE LEVEL AND PROJECT-RELATED TRAFFIC NOISE LEVEL INCREASES

Roadway	Segment	Predicted Exterior Noise Level (dBA L_{dn}) at Closest Sensitive Receptors		
		Existing No Project	Existing + Project	Change
Old Brockway Road	Palisades Dr to SR 267	65.0	65.2	+0.2

Source: *Town of Truckee General Plan, Saxelby Acoustics, 2021*

EVALUATION OF PROJECT OPERATIONAL NOISE ON EXISTING SENSITIVE RECEPTORS

Project site skatepark and parking areas are the primary noise sources for this project. The following is a list of assumptions used for the noise modeling. The data used is based upon Saxelby Acoustics data from similar operations.

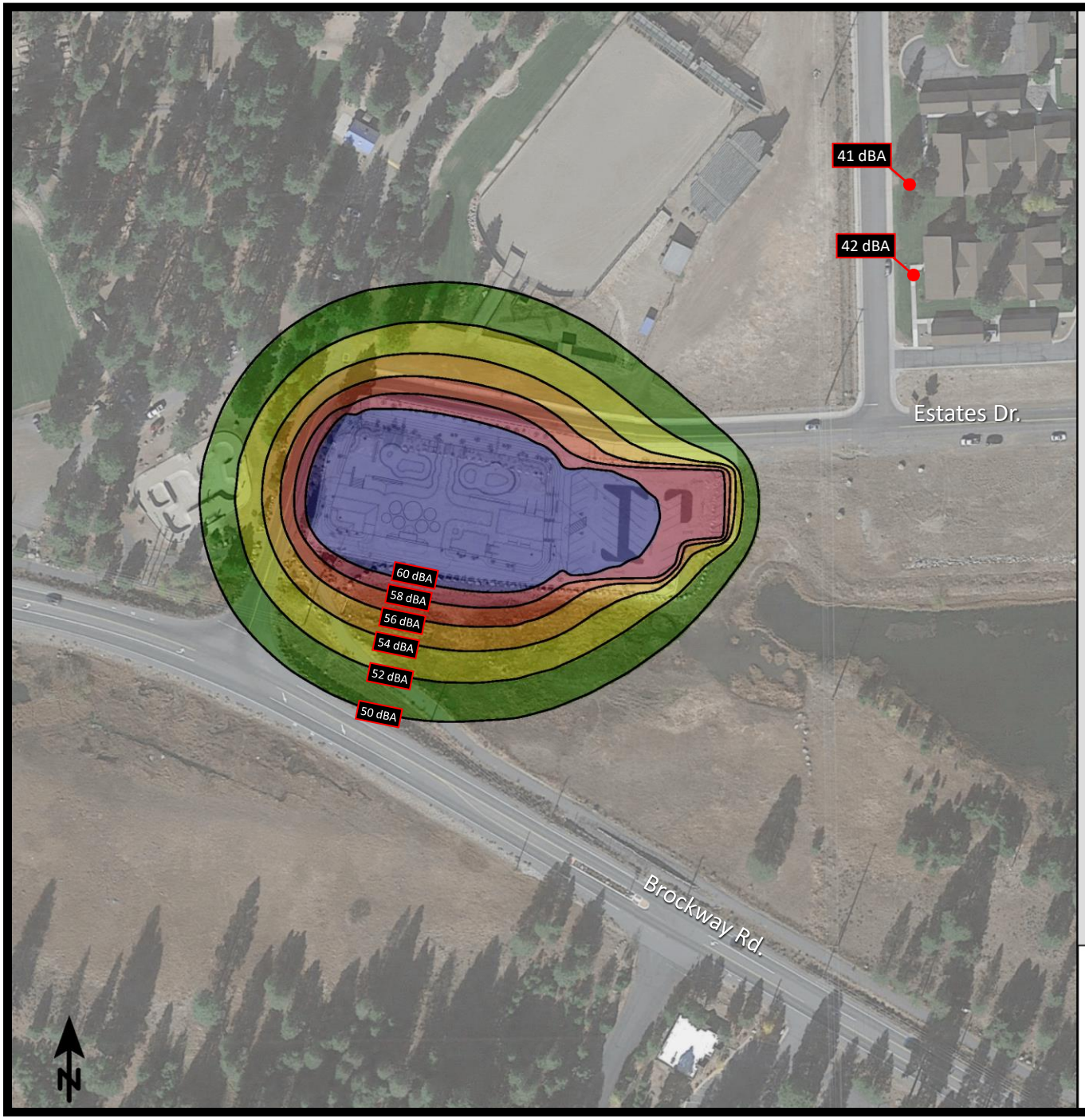
On-Site Circulation: Assumes up to 60 passenger auto trips during the peak hour. Parking lot movement for cars is predicted to generate a sound exposure level (SEL) of 71 dBA SEL at 50 feet. Nighttime (10:00 p.m. to 7:00 a.m.) trips to the project site are not expected to occur. Saxelby Acoustics data.

Skatepark Area: Recreational activity in center of skate park area at 55 dBA L50 at 150 feet. Assumes up to 20 individuals actively riding skateboards, scooters, or bicycles. Daytime (7:00 a.m. to 10:00 p.m.) use only. Saxelby Acoustics data.

Saxelby Acoustics used the SoundPLAN noise prediction model. Inputs to the model included sound power levels for the proposed amenities, existing and proposed buildings, terrain type, and locations of sensitive receptors. These predictions are made in accordance with International Organization for Standardization (ISO) standard 9613-2:1996 (Acoustics – Attenuation of sound during propagation outdoors). ISO 9613 is the most commonly used method for calculating exterior noise propagation.

TRUCKEE-TAHOE AIRPORT NOISE

The Truckee-Tahoe Airport is located approximately 0.5 miles east of the project site and aircraft overflights were observed during visits to the project site. **Figure 4** shows the noise contours for the airport as published in the Town of Truckee General Plan.



Rocker Memorial Skatepark

Truckee, California

Figure 3

Project Noise Contours (dBA L_{50})

Signs and symbols

Levels in dB(A)

<= 50
50 - 52
52 - 54
54 - 56
56 - 58
58 - 60
> 60

1 : 1800

0 10 20 40 60 80 m

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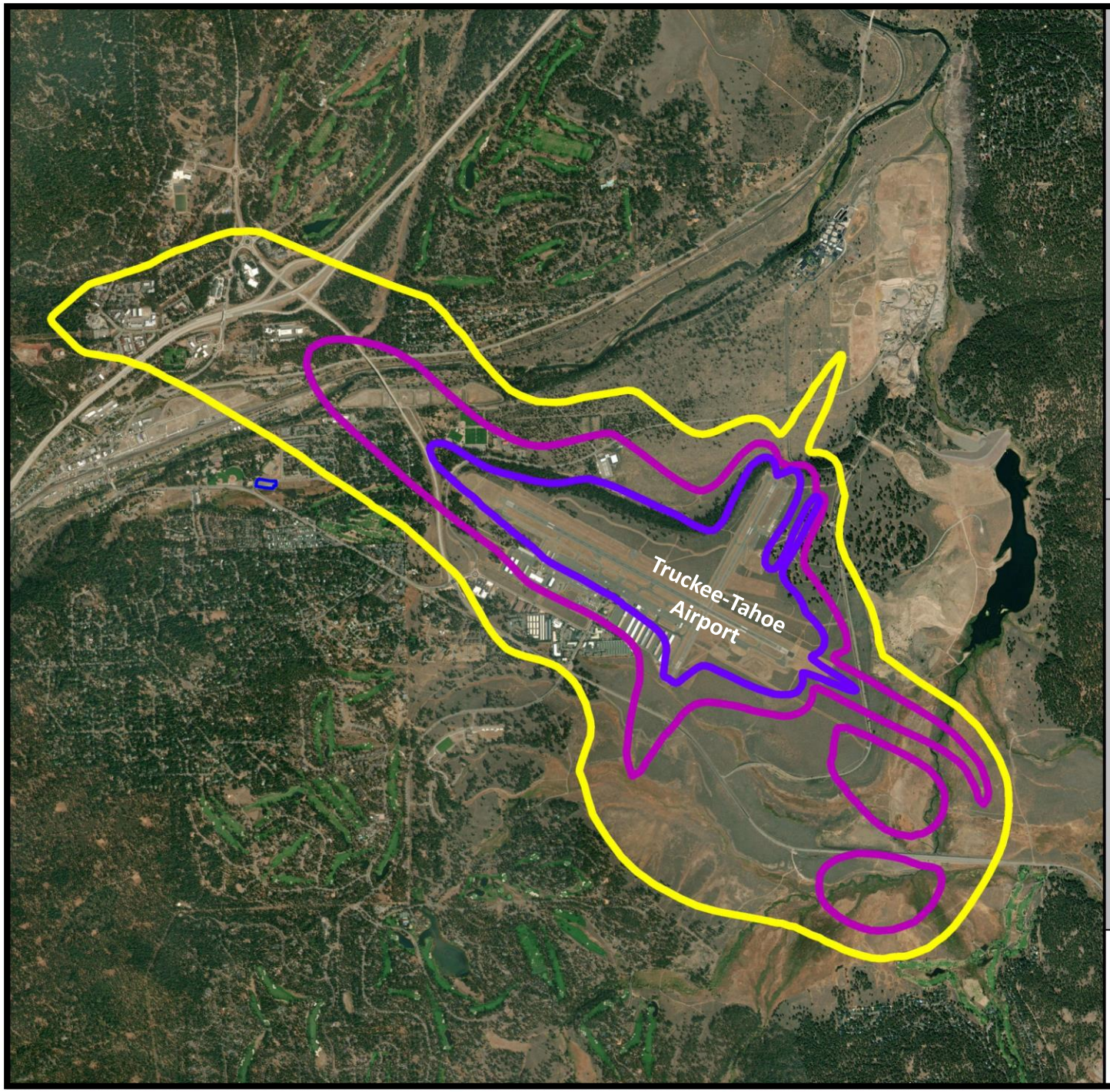

Rocker Memorial Skatepark

Truckee, California

Figure 4

Airport Noise Contours

Legend

- Project Site
- 55 dBA Contour
- 60 dBA Contour
- 65 dBA Contour

0 m 500 m 1000 m 1500 m

Projection: UTM Zone 10 / WGS84 / meters
Rev. Date: 07/15/2021

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CONSTRUCTION NOISE ENVIRONMENT

During the construction of the proposed project, noise from construction activities would temporarily add to the noise environment in the project vicinity. As shown in **Table 4**, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet.

TABLE 4: CONSTRUCTION EQUIPMENT NOISE

Type of Equipment	Maximum Level, dBA at 50 feet
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85

Source: *Roadway Construction Noise Model User's Guide*. Federal Highway Administration. FHWA-HEP-05-054. January 2006.

CONSTRUCTION VIBRATION ENVIRONMENT

The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading, utilities placement, and parking lot construction occur. **Table 5** shows the typical vibration levels produced by construction equipment.

TABLE 5: VIBRATION LEVELS FOR VARIOUS CONSTRUCTION EQUIPMENT

Type of Equipment	Peak Particle Velocity at 25 feet (inches/second)	Peak Particle Velocity at 50 feet (inches/second)	Peak Particle Velocity at 100 feet (inches/second)
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210 (Less than 0.20 at 26 feet)	0.074	0.026

Source: *Transit Noise and Vibration Impact Assessment Guidelines.* Federal Transit Administration. May 2006.

REGULATORY CONTEXT

FEDERAL

There are no federal regulations related to noise that apply to the Proposed Project.

STATE

There are no state regulations related to noise that apply to the Proposed Project.

LOCAL

Town of Truckee General Plan

Goal N-1 Minimize community exposure to excessive noise by ensuring compatible land uses relative to noise sources.

- **P1.1** Allow new development only if consistent with the ground transportation noise compatibility guidelines illustrated in Figure N-3 and the policies of this Element. Noise measurements used in

establishing compatibility shall be measured in dBA CNEL and based on worst-case noise levels, either existing or future, with future noise levels to be predicted based on projected 2025 levels.

- **P1.2** Require new development to mitigate exterior noise to "normally acceptable" levels in outdoor areas where quiet is a benefit, such as in the backyards of single-family homes.
- **P1.3** Enforce the California Noise Insulation Standards for interior noise levels attributable to exterior sources for all proposed new single- and multi-family residences.
- **P1.4** Support retrofitting of homes exposed to existing unacceptable interior noise levels, and those that become exposed to unacceptable interior noise in the future, with sound insulating features.
- **P1.5** Allow land uses within Normally Unacceptable categories only where the allowed use can be shown to serve the greater public interests of the citizens of Truckee.
- **P1.6** When considering development proposals in the environs of the Truckee Tahoe Airport, enforce the noise compatibility criteria and policies set forth in the adopted Truckee Tahoe Airport Land Use Compatibility Plan.
- **P1.7** Reduce potential impacts from ground borne vibration associated with rail operations by requiring that vibration-sensitive buildings (e.g., residences) are sited at least 100-feet from the centerline of the railroad tracks whenever feasible and that development of vibration-sensitive buildings within 100-feet from the centerline of the railroad tracks require a study demonstrating that ground borne vibration issues associated with rail operations have been adequately addressed (i.e., through building siting or construction techniques).

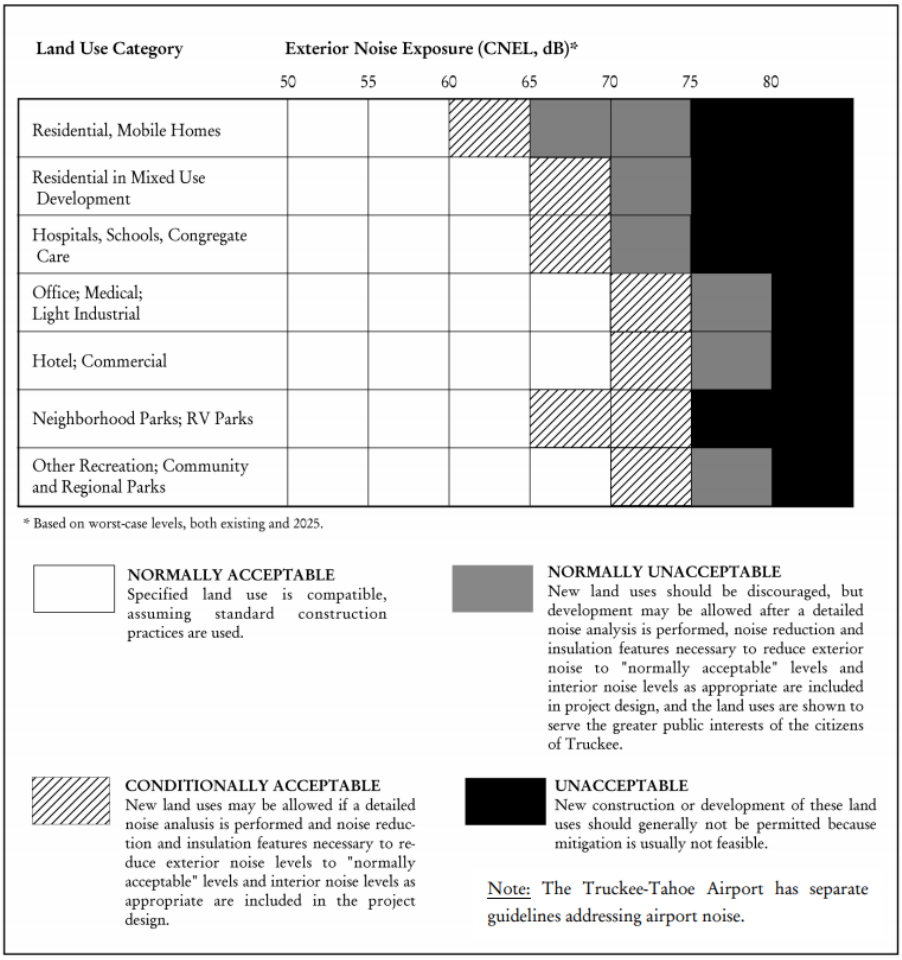

FIGURE 4.9-2 **2025 GENERAL PLAN NOISE COMPATIBILITY GUIDELINES**

FIGURE 5: MAXIMUM ALLOWABLE NOISE EXPOSURE COMPATIBILITY GUIDELINES

Town of Truckee Noise Ordinance

Chapter 18.44.040 Exterior Noise Standards

A. **Exterior levels.** Exterior noise levels, when measured at any receiving church, commercial, hospital, public library, residential or school property, do not conform to the provisions of this Section when they exceed the noise level standards established by Table 3-6 (**Table 6 below**).
B. **Ambient noise level adjustment.** In the event the measured ambient noise level exceeds the applicable noise level standard in any category above, the applicable standards shall be adjusted

to equal the ambient noise level. For example, if the applicable noise level standard is 60 dB(A) and the ambient noise level is 63 dB(A), the applicable noise level standard would be adjusted to 63 dB(A). In these cases, a use would not exceed the applicable noise level standard if it did not increase the ambient noise level by more than 3.0 dB(A) when the ambient noise level is between 60 and 65 dB(A) or by more than 1.5 dB(A) when the ambient noise level is greater than 65 dB(A).

C. **Simple tone noises**. Each of the noise level standards specified above shall be reduced by five dB(A) for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises.

D. **Intruding noise source.** If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period to allow measurement of the ambient noise level, the noise level measured while the source is in operation shall be compared directly to the applicable noise level standards in Table 3-6 (**Table 6 below**).

E. **Equipment noise.** The noise level standard applicable to the emission of sound from regulators, transformers and associated equipment in electrical substations shall be 60 dB(A).

F. **Commercial/Industrial exterior noise standard.** Whenever a new office, commercial, hotel/motel or light industrial use is proposed on a parcel where the existing ambient noise levels may exceed 70 dB(A) CNEL, the land use permit application shall include an acoustical analysis of the effect of noise sources on the use. The acoustical analysis shall identify appropriate mitigation measures that reduce noise levels to acceptable levels. These mitigation measures shall be incorporated into the design, construction and operation of the use. Office, commercial, hotel/motel and light industrial uses that cannot mitigate noise levels to "Normally Acceptable" levels as defined in General Plan Figure N-3 (Noise Compatibility Guidelines) shall not be approved.

G. **Public/Institutional exterior noise standard.** Whenever a hospital, library, school, congregate care, or similar public or institutional use is proposed on a parcel where the existing ambient noise levels may exceed 65 dB(A) CNEL, the land use permit application shall include an acoustical analysis of the effect of noise sources on the use. The acoustical analysis shall identify appropriate mitigation measures that reduce noise levels to acceptable levels. These mitigation measures shall be incorporated into the design construction and operation of the use. Public and institutional uses that cannot mitigate noise levels to "Normally Acceptable" levels as defined in General Plan Figure N-3 (Noise Compatibility Guidelines) shall not be approved.

H. **Sensitive land uses.** Whenever a use is proposed on a parcel where the expected noise levels generated by the use, when measured at any receiving church, hospital, public library, residential or school property may exceed the noise level standards established by Table 3-6 (**Table 6 below**), the land use permit application shall include an acoustical analysis of the effect of the noise generated by the use on the sensitive land use property. An acoustical analysis shall also be required when a commercial or industrial loading dock or area is located within 300 feet of a sensitive use. The acoustical analysis shall identify appropriate mitigation measures that reduce

exterior noise levels to acceptable levels established by Table 3-6 (**Table 6 below**). These mitigation measures shall be incorporated into the design, construction and operation of the use.

I. **Mitigation.** Reasonable noise mitigation measures including building setbacks, alternative site design techniques and alternative building orientation layouts shall be employed in lieu of sound walls, perimeter and/or barrier fencing, or earthen berms to mitigate noise impacts. Sound walls may only be used if the review authority finds that there are no other reasonable mitigation measures available and that the height, location, aesthetics and screening of the sound wall comply with all other applicable sections of this Development Code.

TABLE 6: PLACER COUNTY NOISE ORDINANCE NOISE LEVEL STANDARDS FOR SENSITIVE RECEPTORS

Noise Level Standards, dBA		
Cumulative Number of Minutes in Any Hour	**Day (7:00 a.m. to 10:00 p.m.)**	**Night (10:00 p.m. to 7:00 a.m.)**
Hospital, Library, Religious Institution, Residential, or School Uses		
30[1]	55	50
15	60	55
5	65	60
1	70	65
0	75	70
Commercial Uses		
30	65	60
15	70	65
5	75	70
1	80	75
0	85	80

Notes:

1. For example, this means the measured noise level may not exceed 55 dBA for more than 30 minutes out of any one hour time period.

Criteria for Acceptable Vibration

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. **Table 7**, which was developed by Caltrans, shows the vibration levels which would normally be required to result in damage to structures. The vibration levels are presented in terms of peak particle velocity in inches per second.

Table 7 indicates that the threshold for architectural damage to structures is 0.20 in/sec p.p.v. A threshold of 0.20 in/sec p.p.v. is considered to be a reasonable threshold for short-term construction projects.

TABLE 7: EFFECTS OF VIBRATION ON PEOPLE AND BUILDINGS

Peak Particle Velocity		Human Reaction	Effect on Buildings
mm/second	in/second		
0.15-0.30	0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10-15	0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: *Transportation Related Earthborne Vibrations.* Caltrans. TAV-02-01-R9601. February 20, 2002.

IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines states that a project would normally be considered to result in significant noise impacts if noise levels conflict with adopted environmental standards or plans or if noise generated by the project would substantially increase existing noise levels at sensitive receivers on a permanent or temporary basis. Significance criteria for noise impacts are drawn from CEQA Guidelines Appendix G (Items XI [a-c]).

Would the project:

a. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b. Generate excessive groundborne vibration or groundborne noise levels?

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The proposed project is not located within two miles of a public or private airport, therefore item "c" is not discussed any further in this study.

Noise Level Increase Criteria for Long-Term Project-Related Noise Level Increases

The California Environmental Quality Act (CEQA) guidelines define a significant impact of a project if it "increases substantially the ambient noise levels for adjoining areas." Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local project criteria or ordinances, or substantially increase noise levels at noise sensitive land uses. The potential increase in traffic noise from the project is a factor in determining significance. Research into the human perception of changes in sound level indicates the following:

- A 3-dB change is barely perceptible,
- A 5-dB change is clearly perceptible, and
- A 10-dB change is perceived as being twice or half as loud.

A limitation of using a single noise level increase value to evaluate noise impacts is that it fails to account for pre-project-noise conditions. **Table 8** is based upon recommendations made by the Federal Interagency Committee on Noise (FICON) to provide guidance in the assessment of changes in ambient noise levels resulting from aircraft operations. The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Although the FICON recommendations

were specifically developed to assess aircraft noise impacts, it has been accepted that they are applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the L_{dn}.

TABLE 8: SIGNIFICANCE OF CHANGES IN NOISE EXPOSURE

Ambient Noise Level Without Project, Ldn	Increase Required for Significant Impact
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

Source: Federal Interagency Committee on Noise (FICON)

Based on the **Table 8** data, an increase in the traffic noise level of 5 dB or more would be significant where the pre-project noise levels are less than 60 dB Ldn, or 3 dB or more where existing noise levels are between 60 to 65 dB Ldn. Extending this concept to higher noise levels, an increase in the traffic noise level of 1.5 dB or more may be significant where the pre-project traffic noise level exceeds 65 dB Ldn. The rationale for the **Table 8** criteria is that, as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause annoyance.

PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES

IMPACT 1: WOULD THE PROJECT GENERATE A SUBSTANTIAL TEMPORARY OR PERMANENT INCREASE IN AMBIENT NOISE LEVELS IN THE VICINITY OF THE PROJECT IN EXCESS OF STANDARDS ESTABLISHED IN THE LOCAL GENERAL PLAN OR NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES?

Operational Noise at Existing Sensitive Receptors

Based upon the nature of the sport, noise generated by skateparks may include impacts of riders or equipment against concrete or metal surfaces, as well as shouting or yelling. Therefore, skatepark noise may be considered impulsive under the Town of Truckee noise level standards and subject to a stricter noise level standard.

As shown on **Figure 3**, the project is predicted to expose nearby residences to daytime noise levels up to 42 dBA L_{50} during daytime (7:00 a.m. to 10:00 p.m.) hours. Nighttime operation of the proposed project is not expected to occur. This would meet the Town of Truckee daytime noise level standard of 50 dBA L_{50} for impulsive noise sources.

This is a **less-than-significant** impact, and no mitigation is required.

Construction Noise

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. As indicated in **Table 4**, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dBA L_{max} at a distance of 50 feet. Construction

activities would also be temporary in nature and are anticipated to occur during normal daytime working hours.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from the construction site. This noise increase would be of short duration and would occur during daytime hours.

Construction activities are conditionally exempt from the Development Code during certain hours. Section 18.44.070 of the Town of Truckee Development Code exempts construction from the Town's noise standards between the hours of 7:00 a.m. and 9:00 p.m. Monday through Saturday and 9:00 a.m. to 6:00 p.m. on Sundays.

Although construction activities are temporary in nature and would occur during normal daytime working hours, construction-related noise could result in sleep interference at existing noise-sensitive land uses in the vicinity of the construction if construction activities were to occur outside the normal daytime hours. Therefore, impacts resulting from noise levels temporarily exceeding the threshold of significance due to construction would be considered ***potentially significant***.

Mitigation Measure

MM-1 The Town shall establish the following requirement:

- Construction activities shall not take place before 7 a.m. or after 9 p.m. on any day except Sunday, or before 9 a.m. or after 6 p.m. on Sunday.
- When not in use, motorized construction equipment shall not be left idling for more than 5 minutes.
- Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.
- Stationary equipment (power generators, compressors, etc.) shall be located at the furthest practical distance from nearby noise-sensitive land uses or sufficiently shielded to reduce noise-related impacts.
- "Quiet" air compressors and other stationary noise-generating equipment shall be utilized where appropriate technology exists.
- The project sponsor shall designate a "disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint and will require that reasonable measures warranted to correct the problem be implemented. The project sponsor shall also post telephone number for excessive noise complaints in conspicuous locations in the vicinity of the project site. Additionally, the project sponsor shall send a notice to neighbors in the project vicinity with the information on the construction schedule and the telephone number for noise complaints.

Timing/Implementation: Implemented prior to approval of grading and/or building permits

Enforcement/Monitoring: Town of Truckee Community Development Department

Implementation of mitigation measure 1 would help to reduce construction-generated noise levels. With mitigation, this impact would be considered ***less-than-significant***.

IMPACT 2: WOULD THE PROJECT GENERATE EXCESSIVE GROUNDBORNE VIBRATION OR GROUNDBORNE NOISE LEVELS?

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural.

The **Table 5** data indicate that construction vibration levels anticipated for the project are less than the 0.2 in/sec threshold at distances of 26 feet. Sensitive receptors which could be impacted by construction related vibrations, especially vibratory compactors/rollers, are located further than 26 feet from typical construction activities. At distances greater than 26 feet construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours.

This is a **less-than-significant** impact and no mitigation is required.

IMPACT 3: 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?

Based upon **Figure 4**, the proposed project is located approximately 0.2 miles outside of the predicted 55 dBA CNEL noise contour. According to Figure 4.9-2 (**Figure 4**) of the Truckee 2025 General Plan Noise Compatibility Guidelines, residential land uses exposed to noise levels less than 60 dBA CNEL are "Normally Acceptable." Land use may be carried out with essentially no interference from the noise exposure.

This is a **less-than-significant** impact and no mitigation is required.

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Appendix A: Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
ASTC	Apparent Sound Transmission Class. Similar to STC but includes sound from flanking paths and correct for room reverberation. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by +5 dBA and nighttime hours weighted by +10 dBA.
DNL	See definition of Ldn.
IIC	Impact Insulation Class. An integer-number rating of how well a building floor attenuates impact sounds, such as footsteps. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz (Hz).
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
L(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one-hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
NIC	Noise Isolation Class. A rating of the noise reduction between two spaces. Similar to STC but includes sound from flanking paths and no correction for room reverberation.
NNIC	Normalized Noise Isolation Class. Similar to NIC but includes a correction for room reverberation.
Noise	Unwanted sound.
NRC	Noise Reduction Coefficient. NRC is a single-number rating of the sound-absorption of a material equal to the arithmetic mean of the sound-absorption coefficients in the 250, 500, 1000, and 2,000 Hz octave frequency bands rounded to the nearest multiple of 0.05. It is a representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption.
RT60	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 Sabin.
SEL	Sound Exposure Level. SEL is a rating, in decibels, of a discrete event, such as an aircraft flyover or train pass by, that compresses the total sound energy into a one-second event.
SPC	Speech Privacy Class. SPC is a method of rating speech privacy in buildings. It is designed to measure the degree of speech privacy provided by a closed room, indicating the degree to which conversations occurring within are kept private from listeners outside the room.
STC	Sound Transmission Class. STC is an integer rating of how well a building partition attenuates airborne sound. It is widely used to rate interior partitions, ceilings/floors, doors, windows and exterior wall configurations. The STC rating is typically used to rate the sound transmission of a specific building element when tested in laboratory conditions where flanking paths around the assembly don't exist. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Simple Tone	Any sound which can be judged as audible as a single pitch or set of single pitches.

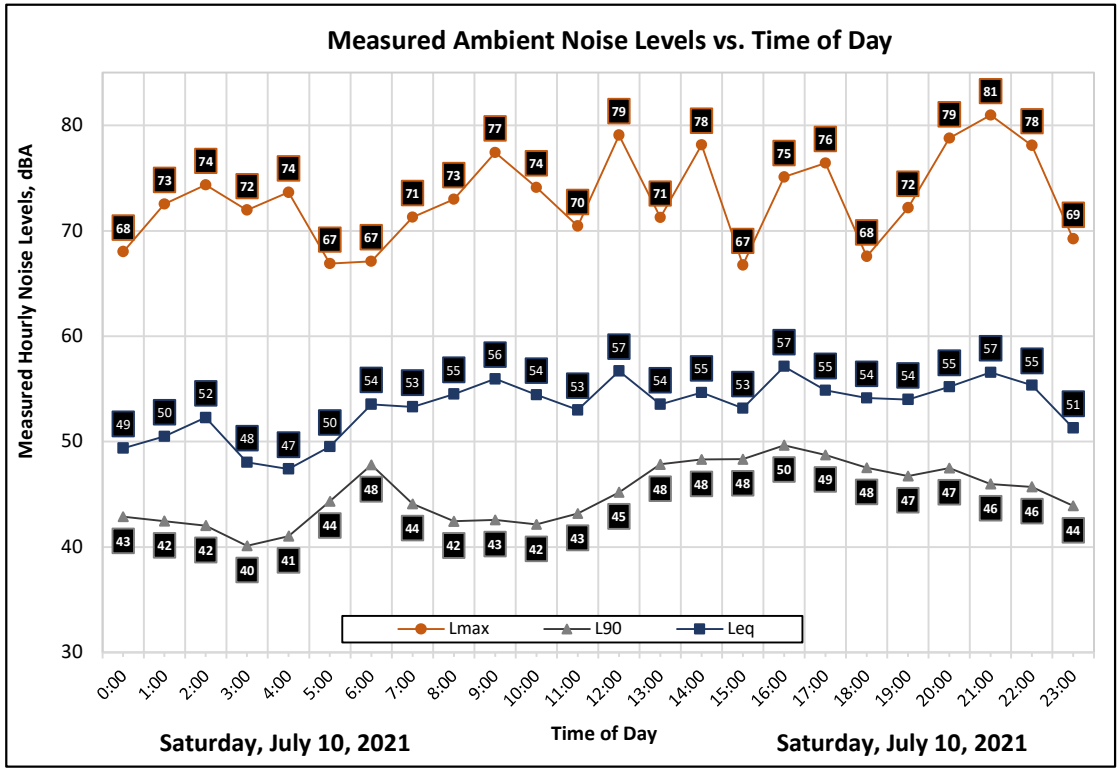
Appendix B: Continuous Ambient Noise Measurement Results

Appendix B1: Continuous Noise Monitoring Results

Site: LT-1
Project: Rocker Memorial Skatepark
Location: Northeast of Project Site
Coordinates: 39.3268638°, -120.1701944°
Meter: LDL 812-2
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Saturday, July 10, 2021	0:00	49	68	46	43
Saturday, July 10, 2021	1:00	50	73	45	42
Saturday, July 10, 2021	2:00	52	74	45	42
Saturday, July 10, 2021	3:00	48	72	43	40
Saturday, July 10, 2021	4:00	47	74	44	41
Saturday, July 10, 2021	5:00	50	67	48	44
Saturday, July 10, 2021	6:00	54	67	50	48
Saturday, July 10, 2021	7:00	53	71	47	44
Saturday, July 10, 2021	8:00	55	73	47	42
Saturday, July 10, 2021	9:00	56	77	48	43
Saturday, July 10, 2021	10:00	54	74	46	42
Saturday, July 10, 2021	11:00	53	70	47	43
Saturday, July 10, 2021	12:00	57	79	51	45
Saturday, July 10, 2021	13:00	54	71	51	48
Saturday, July 10, 2021	14:00	55	78	51	48
Saturday, July 10, 2021	15:00	53	67	51	48
Saturday, July 10, 2021	16:00	57	75	53	50
Saturday, July 10, 2021	17:00	55	76	52	49
Saturday, July 10, 2021	18:00	54	68	51	48
Saturday, July 10, 2021	19:00	54	72	50	47
Saturday, July 10, 2021	20:00	55	79	51	47
Saturday, July 10, 2021	21:00	57	81	50	46
Saturday, July 10, 2021	22:00	55	78	50	46
Saturday, July 10, 2021	23:00	51	69	47	44

Statistics	Leq	Lmax	L50	L90
Day Average	55	74	50	46
Night Average	51	71	46	43
Day Low	53	67	46	42
Day High	57	81	53	50
Night Low	47	67	43	40
Night High	54	78	50	48
Ldn	58	Day %		83
CNEL	58	Night %		17

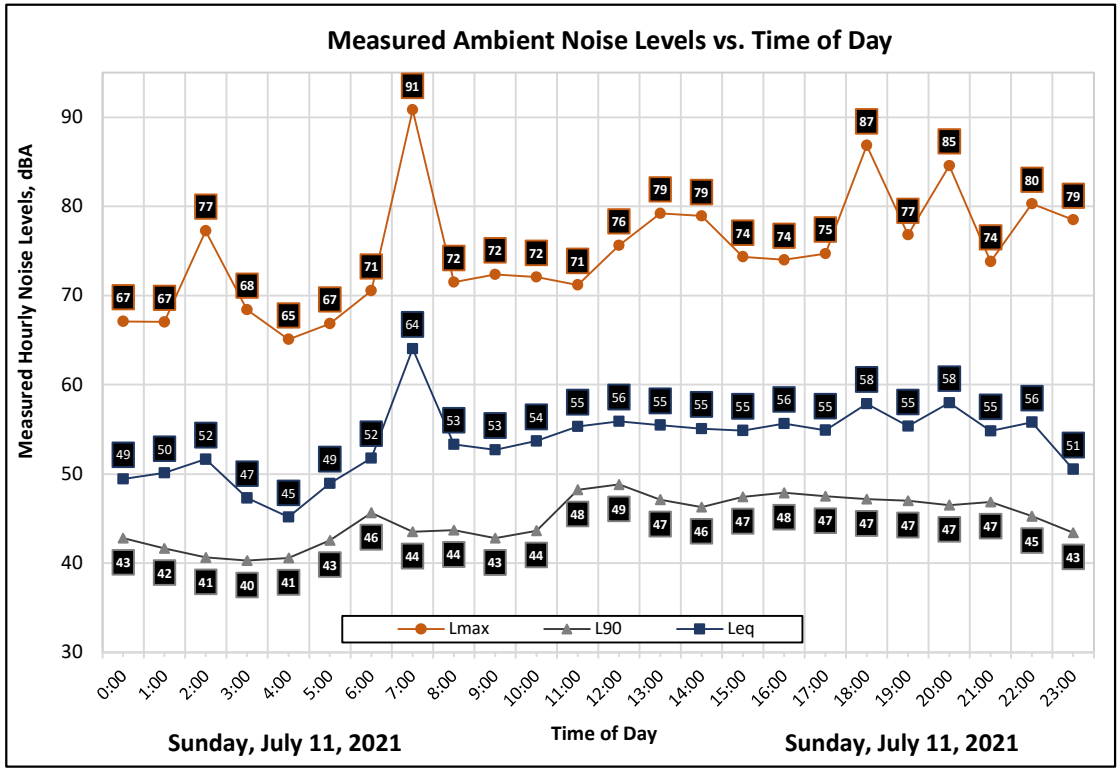


Appendix B2: Continuous Noise Monitoring Results

Site: LT-1
Project: Rocker Memorial Skatepark
Location: Northeast of Project Site
Coordinates: 39.3268638°, -120.1701944°
Meter: LDL 812-2
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Sunday, July 11, 2021	0:00	49	67	46	43
Sunday, July 11, 2021	1:00	50	67	45	42
Sunday, July 11, 2021	2:00	52	77	44	41
Sunday, July 11, 2021	3:00	47	68	43	40
Sunday, July 11, 2021	4:00	45	65	43	41
Sunday, July 11, 2021	5:00	49	67	46	43
Sunday, July 11, 2021	6:00	52	71	49	46
Sunday, July 11, 2021	7:00	64	91	47	44
Sunday, July 11, 2021	8:00	53	72	48	44
Sunday, July 11, 2021	9:00	53	72	46	43
Sunday, July 11, 2021	10:00	54	72	49	44
Sunday, July 11, 2021	11:00	55	71	52	48
Sunday, July 11, 2021	12:00	56	76	52	49
Sunday, July 11, 2021	13:00	55	79	51	47
Sunday, July 11, 2021	14:00	55	79	50	46
Sunday, July 11, 2021	15:00	55	74	51	47
Sunday, July 11, 2021	16:00	56	74	51	48
Sunday, July 11, 2021	17:00	55	75	51	47
Sunday, July 11, 2021	18:00	58	87	50	47
Sunday, July 11, 2021	19:00	55	77	51	47
Sunday, July 11, 2021	20:00	58	85	50	47
Sunday, July 11, 2021	21:00	55	74	51	47
Sunday, July 11, 2021	22:00	56	80	49	45
Sunday, July 11, 2021	23:00	51	79	47	43

Statistics	Leq	Lmax	L50	L90
Day Average	57	77	50	46
Night Average	50	71	46	43
Day Low	53	71	46	43
Day High	64	91	52	49
Night Low	45	65	43	40
Night High	52	80	49	46
Ldn	58	Day %		91
CNEL	59	Night %		9

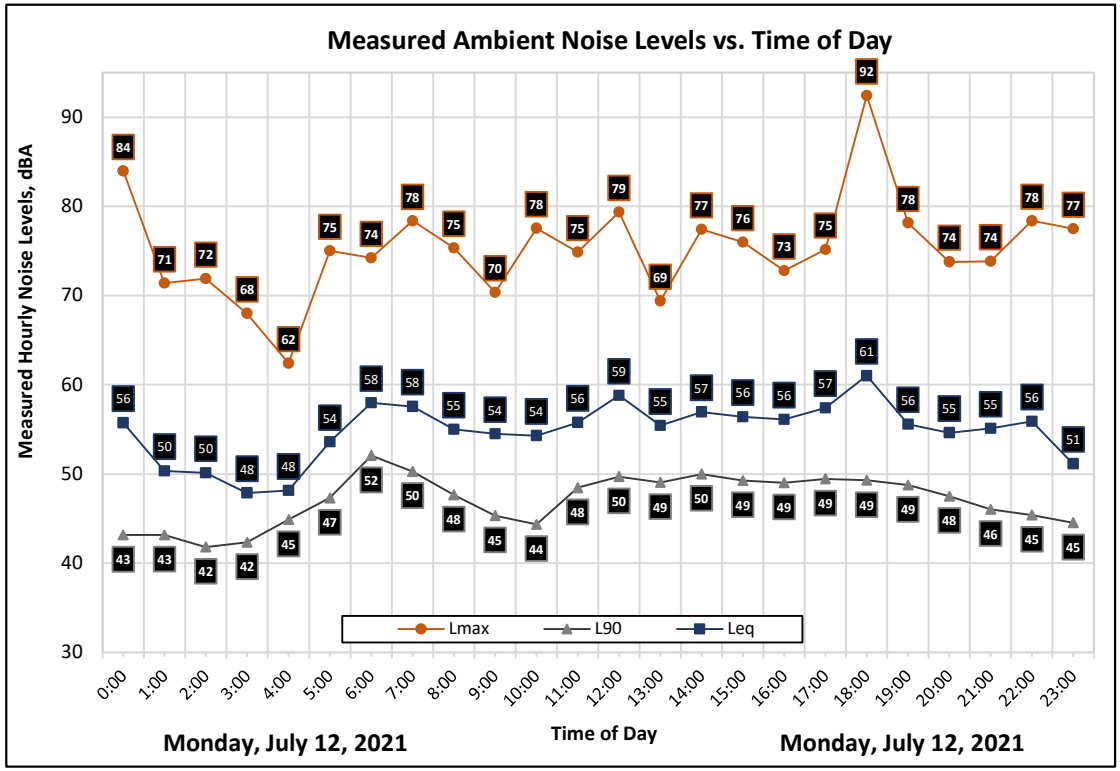


Appendix B3: Continuous Noise Monitoring Results

Site: LT-1
Project: Rocker Memorial Skatepark
Location: Northeast of Project Site
Coordinates: 39.3268638°, -120.1701944°
Meter: LDL 812-2
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Monday, July 12, 2021	0:00	56	84	46	43
Monday, July 12, 2021	1:00	50	71	46	43
Monday, July 12, 2021	2:00	50	72	44	42
Monday, July 12, 2021	3:00	48	68	46	42
Monday, July 12, 2021	4:00	48	62	47	45
Monday, July 12, 2021	5:00	54	75	50	47
Monday, July 12, 2021	6:00	58	74	55	52
Monday, July 12, 2021	7:00	58	78	53	50
Monday, July 12, 2021	8:00	55	75	51	48
Monday, July 12, 2021	9:00	54	70	49	45
Monday, July 12, 2021	10:00	54	78	49	44
Monday, July 12, 2021	11:00	56	75	52	48
Monday, July 12, 2021	12:00	59	79	53	50
Monday, July 12, 2021	13:00	55	69	53	49
Monday, July 12, 2021	14:00	57	77	53	50
Monday, July 12, 2021	15:00	56	76	53	49
Monday, July 12, 2021	16:00	56	73	53	49
Monday, July 12, 2021	17:00	57	75	53	49
Monday, July 12, 2021	18:00	61	92	52	49
Monday, July 12, 2021	19:00	56	78	51	49
Monday, July 12, 2021	20:00	55	74	51	48
Monday, July 12, 2021	21:00	55	74	50	46
Monday, July 12, 2021	22:00	56	78	49	45
Monday, July 12, 2021	23:00	51	77	47	45

Statistics	Leq	Lmax	L50	L90
Day Average	57	76	52	48
Night Average	53	74	48	45
Day Low	54	69	49	44
Day High	61	92	53	50
Night Low	48	62	44	42
Night High	58	84	55	52
Ldn	60	Day %		81
CNEL	60	Night %		19

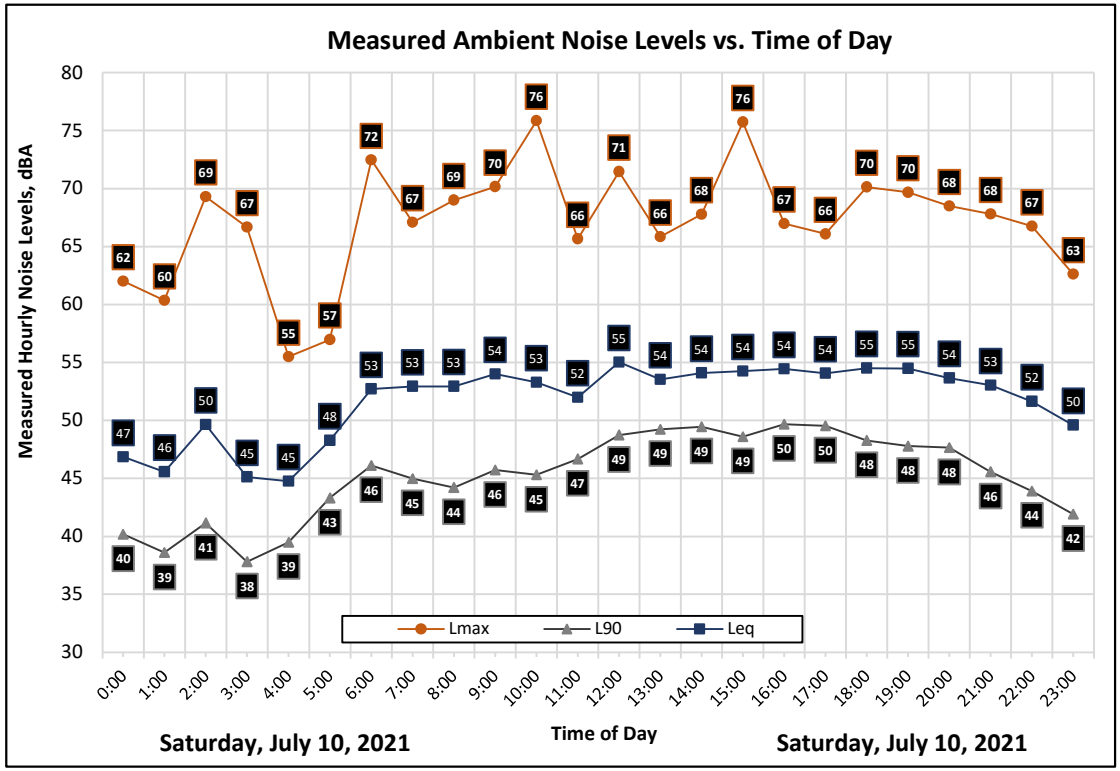


Appendix B4: Continuous Noise Monitoring Results

Site: LT-2
Project: Rocker Memorial Skatepark
Location: South of Project Site
Coordinates: 39.3245828°, -120.1713840°
Meter: LDL 820-2
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Saturday, July 10, 2021	0:00	47	62	44	40
Saturday, July 10, 2021	1:00	46	60	43	39
Saturday, July 10, 2021	2:00	50	69	45	41
Saturday, July 10, 2021	3:00	45	67	43	38
Saturday, July 10, 2021	4:00	45	55	43	39
Saturday, July 10, 2021	5:00	48	57	46	43
Saturday, July 10, 2021	6:00	53	72	50	46
Saturday, July 10, 2021	7:00	53	67	52	45
Saturday, July 10, 2021	8:00	53	69	51	44
Saturday, July 10, 2021	9:00	54	70	52	46
Saturday, July 10, 2021	10:00	53	76	51	45
Saturday, July 10, 2021	11:00	52	66	51	47
Saturday, July 10, 2021	12:00	55	71	53	49
Saturday, July 10, 2021	13:00	54	66	53	49
Saturday, July 10, 2021	14:00	54	68	53	49
Saturday, July 10, 2021	15:00	54	76	53	49
Saturday, July 10, 2021	16:00	54	67	54	50
Saturday, July 10, 2021	17:00	54	66	53	50
Saturday, July 10, 2021	18:00	55	70	53	48
Saturday, July 10, 2021	19:00	55	70	53	48
Saturday, July 10, 2021	20:00	54	68	53	48
Saturday, July 10, 2021	21:00	53	68	51	46
Saturday, July 10, 2021	22:00	52	67	51	44
Saturday, July 10, 2021	23:00	50	63	47	42

Statistics	Leq	Lmax	L50	L90
Day Average	54	69	52	47
Night Average	49	64	46	41
Day Low	52	66	51	44
Day High	55	76	54	50
Night Low	45	55	43	38
Night High	53	72	51	46
Ldn	56	Day %		86
CNEL	57	Night %		14

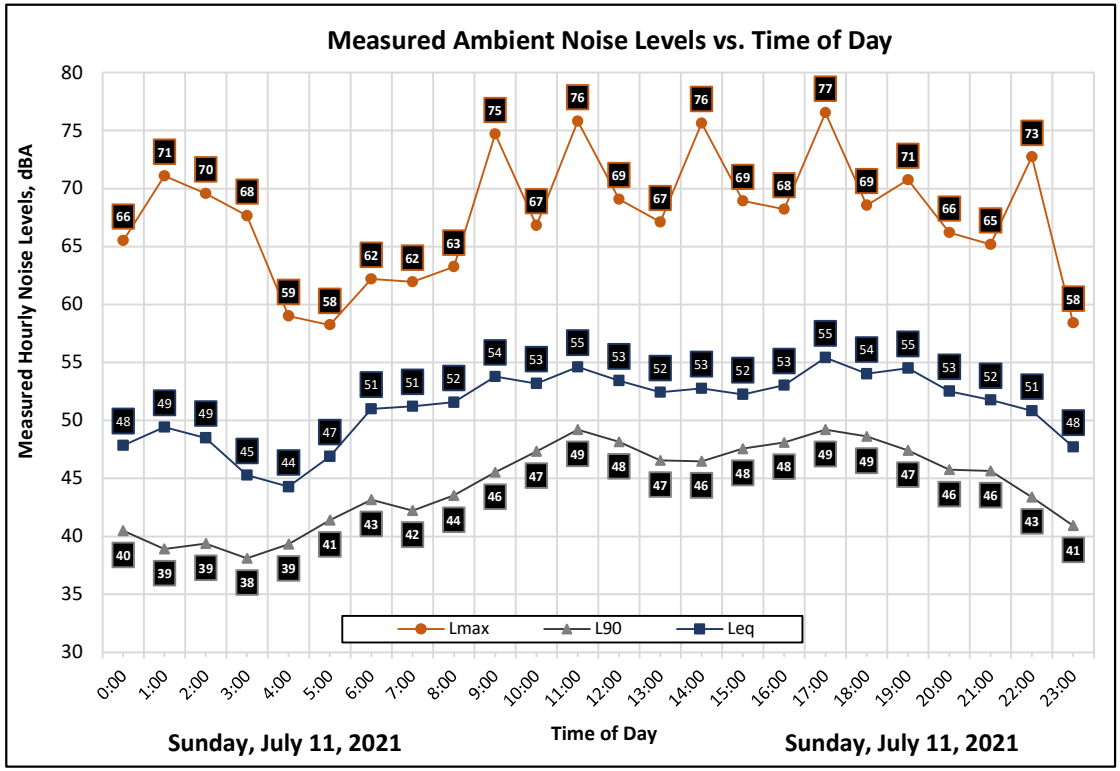


Appendix B5: Continuous Noise Monitoring Results

Site: LT-2
Project: Rocker Memorial Skatepark
Meter: LDL 820-2
Location: South of Project Site
Calibrator: CAL200
Coordinates: 39.3245828°, -120.1713840°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Sunday, July 11, 2021	0:00	48	66	45	40
Sunday, July 11, 2021	1:00	49	71	43	39
Sunday, July 11, 2021	2:00	49	70	43	39
Sunday, July 11, 2021	3:00	45	68	42	38
Sunday, July 11, 2021	4:00	44	59	42	39
Sunday, July 11, 2021	5:00	47	58	44	41
Sunday, July 11, 2021	6:00	51	62	48	43
Sunday, July 11, 2021	7:00	51	62	49	42
Sunday, July 11, 2021	8:00	52	63	50	44
Sunday, July 11, 2021	9:00	54	75	51	46
Sunday, July 11, 2021	10:00	53	67	52	47
Sunday, July 11, 2021	11:00	55	76	53	49
Sunday, July 11, 2021	12:00	53	69	52	48
Sunday, July 11, 2021	13:00	52	67	51	47
Sunday, July 11, 2021	14:00	53	76	50	46
Sunday, July 11, 2021	15:00	52	69	51	48
Sunday, July 11, 2021	16:00	53	68	52	48
Sunday, July 11, 2021	17:00	55	77	53	49
Sunday, July 11, 2021	18:00	54	69	53	49
Sunday, July 11, 2021	19:00	55	71	53	47
Sunday, July 11, 2021	20:00	53	66	51	46
Sunday, July 11, 2021	21:00	52	65	51	46
Sunday, July 11, 2021	22:00	51	73	49	43
Sunday, July 11, 2021	23:00	48	58	45	41

Statistics	Leq	Lmax	L50	L90
Day Average	53	69	52	47
Night Average	48	65	45	41
Day Low	51	62	49	42
Day High	55	77	53	49
Night Low	44	58	42	38
Night High	51	73	49	43
Ldn	55	Day %		86
CNEL	56	Night %		14

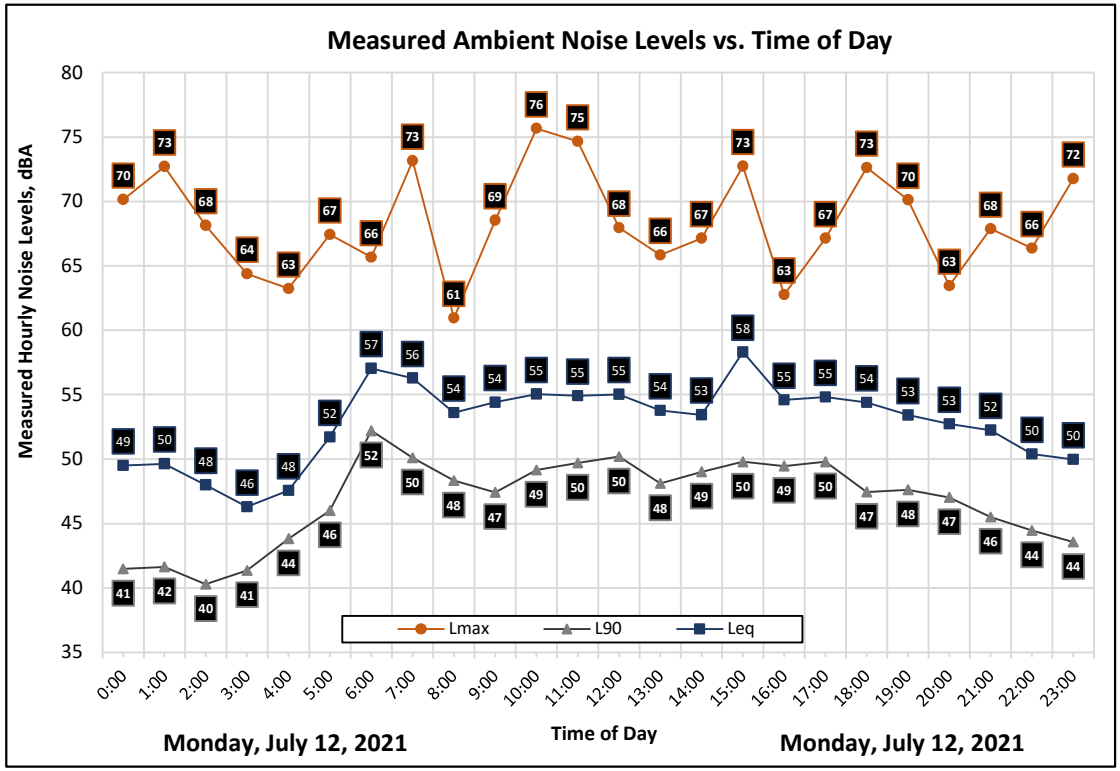


Appendix B6: Continuous Noise Monitoring Results

Site: LT-2
Project: Rocker Memorial Skatepark
Meter: LDL 820-2
Location: South of Project Site
Calibrator: CAL200
Coordinates: 39.3245828°, -120.1713840°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Monday, July 12, 2021	0:00	49	70	45	41
Monday, July 12, 2021	1:00	50	73	45	42
Monday, July 12, 2021	2:00	48	68	44	40
Monday, July 12, 2021	3:00	46	64	45	41
Monday, July 12, 2021	4:00	48	63	46	44
Monday, July 12, 2021	5:00	52	67	50	46
Monday, July 12, 2021	6:00	57	66	56	52
Monday, July 12, 2021	7:00	56	73	55	50
Monday, July 12, 2021	8:00	54	61	53	48
Monday, July 12, 2021	9:00	54	69	53	47
Monday, July 12, 2021	10:00	55	76	53	49
Monday, July 12, 2021	11:00	55	75	54	50
Monday, July 12, 2021	12:00	55	68	54	50
Monday, July 12, 2021	13:00	54	66	53	48
Monday, July 12, 2021	14:00	53	67	52	49
Monday, July 12, 2021	15:00	58	73	54	50
Monday, July 12, 2021	16:00	55	63	54	49
Monday, July 12, 2021	17:00	55	67	54	50
Monday, July 12, 2021	18:00	54	73	53	47
Monday, July 12, 2021	19:00	53	70	53	48
Monday, July 12, 2021	20:00	53	63	52	47
Monday, July 12, 2021	21:00	52	68	51	46
Monday, July 12, 2021	22:00	50	66	48	44
Monday, July 12, 2021	23:00	50	72	47	44

Statistics	Leq	Lmax	L50	L90
Day Average	55	69	53	49
Night Average	51	68	47	44
Day Low	52	61	51	46
Day High	58	76	55	50
Night Low	46	63	44	40
Night High	57	73	56	52
Ldn	58	Day %		80
CNEL	58	Night %		20



Appendix C: Traffic Noise Calculation Inputs and Results

Appendix C1

FHWA-RD-77-108 Highway Traffic Noise Prediction Model - Existing Conditions

Project #: 210603

Description: Rocker Memorial Skatepark

Segment	Roadway	Segment	ADT	Day %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Old Brockway Rd	Palisades Dr to SR 267	11,200	83	17	2.0%	1.0%	45	80	0	172	80	37	65.0

Appendix C2

FHWA-RD-77-108 Highway Traffic Noise Prediction Model - Existing Plus Project Conditions

Project #: 210603

Description: Rocker Memorial Skatepark

Segment	Roadway	Segment	ADT	Day %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Old Brockway Rd	Palisades Dr to SR 267	11,800	83	17	2.0%	1.0%	45	80	0	178	83	38	65.2

APPENDIX H

VMT and Transportation Analysis

LSC Transportation Consultants, Inc.
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March 7, 2022

Ms. Laura Dabe, AICP
Town of Truckee
10183 Truckee Airport Road
Truckee, CA 96161-3306

RE: Truckee Skate Park VMT and Local Transportation Analysis

Dear Ms. Dabe:

Per your request, LSC Transportation Consultants, has prepared a trip generation, a Vehicle Miles Traveled (VMT) analysis, as well as a local transportation analysis for the proposed expansion of the existing skate park located at the Truckee River Regional Park at 10050 Brockway Road in Truckee, California. The new portion of the skate park would be approximately 24,686 square feet. The project is located in the TransCAD model TAZ 59. First, the trip generation is calculated. Then, the VMT is estimated and compared to the Town of Truckee's *Proposed CEQA VMT Thresholds of Significance.* Finally, a local transportation analysis including a site distance and pedestrian crossing evaluation.

TRIP GENERATION

Trip generation is the evaluation of the number of vehicle-trips that will either have an origin or destination at the project site. Daily one-way vehicle-trips and peak-hour one-way vehicle-trips must be determined in order to analyze the potential impacts from the proposed project development.

Full buildout of the project includes construction of the additional 24,686 square feet of the skate park. The trip generation analysis for the proposed project land use is summarized in Table 1. Due to the skate park not being a standard land use, LSC completed a person trip analysis to determine trip generation.

As found in Table 1 of the *Truckee Regional Park – Parking Evaluation 2019 Update* by LSC Transportation (LSC, July 3, 2019), attached, the peak number of persons found at the skate park in the future as a whole is 35 persons. The expansion part of the skate park on a typical summer day would have about 26 persons at peak time based on the ratio of existing skate park square footage to expansion skate park square footage. A peak parking demand of 12 vehicles was determined (again the total parking demand for the skate park is estimated at 16 vehicles). Each vehicle was assumed to stay at the skate park for on average for 1.5 hours for a total of 16 PM Peak Hour vehicle trips at the site driveways.

To determine the number of daily trips, the peak hour parking demand was multiplied by the proportion of peak parking demand by hour for shared parking analysis percentages shown in Table 2 of the *Truckee Regional Park – Parking Evaluation 2019 Update.* Summing the total parking demand gives a total of 118 cars parked at the skate park over the course of a typical summer day. To be conservative, each vehicle again was assumed to stay at the skate park on average for 1.5 hours which results in 157 one-way daily vehicle trips at the skate park site driveways on a weekday.

VEHICLE-MILES OF TRAVEL (VMT)

The Town of Truckee has recently adopted the *Proposed California Environmental Quality Act VMT Thresholds of Significance* (Town of Truckee, June 2020). The thresholds identify some projects as being presumed to have a less than significant VMT impact. Projects that have a less than significant VMT impact do not require a full VMT analysis.

VMT Screening Review

The project is found to have a significant VMT impact if one or more of the following criteria is met.

- The project is inconsistent with the Truckee General Plan land use forecasts.
- The project's daily VMT per unit of development is greater than 85 percent of the town-wide average for the individual land use types. (In this case, we proposed that the unit of development be defined VMT per recreational attendee per day.)

After reviewing the Truckee General Plan, the project is found to be consistent with the land uses under existing and future model conditions. The project's daily VMT is calculated and compared to the threshold as described below.

VMT Calculation

The total average trip length in the model area for trips in TAZ 59 is 3.7 miles as shown in Table 2. Multiplying the trip length by the 157 daily vehicle trips gives an average daily VMT of 581.

VMT Threshold of Significance

The threshold of significance would be 85% of the average town-wide public-recreational area VMT. Public recreation areas in the Town of Truckee are shown in Table 2. If the skate park and its 157 daily trips were located in each of these recreation areas the associated VMT is shown. The average of these VMTs was then calculated to be 926 VMT. In order for the project to be below the threshold the project could only generate 85 percent of this average or 787 daily VMT. Since the project generates only 581 daily VMT, it is within the threshold and considered not to have a significant impact on VMT. This is qualitatively confirmed as VMT from centrally located projects generate less VMT than if they were located in remote areas of Truckee.

LOCAL TRANSPORTATION ANALYSIS

In addition to VMT analysis, a local transportation analysis was completed to address local Town of Truckee concerns. This analysis includes sight distance and an evaluation of the pedestrian crossing.

Estates Drive/Skate Park Proposed Driveway

LSC staff visited the site and conduct a sight distance analysis for the proposed driveway along Estates Drive. Given the 25 mile per hour speed limit, a sight distance of 335 feet is required. More than 355 feet of sight distance is provided to the west and east of the driveway, therefore sight distance at the proposed driveway is adequate.

Estates Drive/Estates Drive/Park Driveways

The Estates Drive/Estates Drive intersection is the 90-degree curve in estates Drive where two park driveways intersect. It is noted in the *Truckee River Regional Park Recreation Area Master Plan* as an Immediate Implementation Item as "Work with the Town of Truckee to improve the Estates Drive intersection with the driveway to the school site and baseball parking lot". At this time there is not a preferred or planned improvement at this location. Possible improvements for this

intersection including a mini roundabout with a diameter of 40 to 80 feet or consolidation of the two park driveways to one driveway that Ts into Estates drive. Note the proposed project would only add vehicle traffic along Estates Drive, in other words it would not add any conflicting traffic at the intersection. Therefore, improvements to the Estates Drive/Estates Drive intersection do not need to occur before implementation of this project.

Estates Drive Trail Crossing

The existing pedestrian and bike trail crossing across Estates Drive is located about 100 feet north of the stop bar at the Brockway Road/Estates Drive intersection. Currently, the crossing has minimal markings and signage. There is a sign indicating the trail crossing for northbound traffic but no existing sign marking the trail for southbound traffic. Sight distance was analyzed at this crossing. The required sight distance is the 'stopping sight distance' for vehicles traveling along Estates Drive at the posted speed limit of 25 miles per hour which would be 155 feet. Based on an LSC site visit there is more than 155 feet of sight distance north of this location. To the south, there is a clear line of sight to the intersection of Brockway Road.

In conformance with the California MUTCD 2014 Edition (CA MUTCD), because non-intersection pedestrian crossings are generally unexpected by the road user, warning signs should be installed for all marked crosswalks at non-intersection locations and adequate visibility should be provided by parking prohibitions. The warning signs should include the W11-2 or W11-15 at the crossing and perhaps the R1-5 sign 'Yield to Peds Here" sign placed approximately 20 feet before the crossing in both directions. Additionally, crosswalk striping was not observed on the roadway (possibly it has worn off) and should be added to the crossing.

Due to the increase of pedestrian traffic upon completion of the project, installation of a rectangular rapid-flashing beacon (RRFB) or standard flashing beacon with pedestrian activation is an option at the existing Estates Drive pedestrian crossing. There is not a threshold or warrant used for determining installation a pedestrian beacon. Instead, there is guidance on factors that should be considered for installation. The beacon would be considered appropriate at this location because the roadway has a speed of less than 40 miles per hour and there are no sight distance issues. Additionally, the beacon's main purpose is to address conflict between vehicles and non-auto users at roadway crossings and is therefore appropriate at this location. Final design of the beacon should be coordinated with the Town of Truckee similar to the other pedestrian-activated crossings in town.

CONCLUSION

The following conclusions are made based on this analysis:

- The net impact of the project would be approximately 157 new daily one-way vehicle trips at site driveways with 16 trips occurring in the PM peak hour (8 inbound and 8 outbound).
- The project will generate 581 daily VMT which is less than 85 percent below the town-wide average for public-recreation area and therefore the project is not found to have a significant impact on VMT.
- The sight distance at the proposed driveway is adequate.
- Planned improvements at Estates Drive/Estates Drive/Park Driveways can proceed with development of the Parks Master Plan. These improvements do not need to occur before the skate park is completed as the skate park only adds traffic along Estate Drive (not to/from Park driveways).

- It is recommended that the pedestrian crossing located on Estates Drive be upgraded with pedestrian crossing warning signs and crosswalk striping. Additionally, a pedestrian activated beacon would be considered appropriate at this location.

▲ ▲ ▲

Please contact our office at (530) 583-4053 with any questions or comments pertaining to this analysis.

Respectfully Submitted,
LSC Transportation Consultants, Inc.

by 

Leslie Suen, PE, Senior Engineer
LSC Transportation Consultants, Inc.

Enclosed: Table 1 -2
Truckee Regional Park – Parking Evaluation 2019 Update by LSC Transportation (LSC, July 3, 2019)

Table 1: Truckee Rocker Skate Park Trip Generation

Description	Quantity	Units	Trip Generation Rates[1]				Reduction for Non-Auto Access	Vehicle Trips at Site Driveways			
			Daily	PM Peak Hour				Daily	PM Peak Hour		
				In	Out	Total			In	Out	Total
Skate Park Expansion	24.686	KSF	person-trip analysis				10%	157	8	8	16

KSF = Thousand Square Feet
Note 1: Analysis based on *Truckee Regional Park - Parking Evaluation (LSC, July 3, 2019)*
Source: LSC Transportation Consultants, Inc.

Table 2: Truckee Rocker Skate Park VMT Comparison

Area	TAZ	Average Trip Length[1]	Daily Project Trips[2]	Daily Vehicle Miles Traveled (VMT)
Project Area				
Regional Park	59	3.7	157	**581**
Truckee Public Recreation Areas				
Regional Park	59	3.7	157	581
Riverview Sport Park	67	6.4	157	1005
Meadow Park	15	3.8	157	597
West End Beach	4	8.5	157	1335
Alder Creek Adventure Center	33	7.1	157	1115
Average		**5.9**		**926**
		85 Percent Below Average VMT		**787**

Note 1: Average Trip Length within the model area from Exsiting 2018 Truckee TransCAD model

Note 2: Daily trips from Table 1.

TAZ = Truckee TransCAD Traffic Analysis Zone

Source: LSC Transportation Consultants, Inc.

TRANSPORTATION CONSULTANTS, INC.

TRANSPORTATION PLANNING AND TRAFFIC ENGINEERING CONSULTANTS

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July 3, 2019

Hilary Hobbs, Management Analyst
Town of Truckee
10183 Truckee Airport Road
Truckee, CA 96161

RE: Truckee Regional Park - Parking Evaluation

Dear Ms. Hobbs:

Per your request, LSC has prepared an analysis of parking demand at the Truckee Donner Recreation and Parks District's (TDRPD) Regional Park, located at 10500 Brockway Road in Truckee, California. This report builds on the *Truckee Regional Parking – Parking Evaluation* (LSC, October 12, 2018) report. In this current report, updated use assumptions for the summer pavilion are used to calculate the parking demand. Note that land uses for the proposed Library and Skate Park are unchanged from the original report. Finally, shared parking is calculated for multiple scenarios in order to determine interim parking demand based on the possible project sequences.

Proposed New Uses

The potential future uses include an ice rink/summer pavilion, an expanded skate park and a public library. While each of the proposed uses is still in the planning phase and specific plans are not available, land use quantities currently under consideration are used. The one change in land uses from the original report is that the summer pavilion's estimated typical 'persons at peak time' increased from 75 to 125 persons. Parking demand generated by individual land uses and events are evaluated for both summer and winter.

Individual Land Uses Parking Demand

The parking demand of the individual land uses is calculated with all the same assumptions made in the original study. Please see the original 2018 study for details. The updated individual parking demand is shown in Table 1.

Shared Parking

The sum of the individual parking demands would overestimate the total parking demand of this project because the peak parking demand of each proposed use would not occur simultaneously. The hourly distribution of parking demand for the each land use was established in the original study and the same hourly percentages are applied in this analysis, as shown in Table 2. Applying these percentages to the individual parking demand yields the shared parking demand, as shown in Tables 3 and 4 for typical use and maximum events, respectively. Because it is unknown which of the three projects will be constructed first, several different scenarios were evaluated. Detailed shared parking calculations for each scenario are available upon request.

Summary

The results of this updated analysis can be summarized as follows:

- As shown in Table 3, the parking demand under typical use varies in the summer from 67 spaces with only the expanded skate park to 135 spaces with all three projects. In the winter, the parking demand would vary between 49 spaces with the ice rink only to 84 spaces with the ice rink and the library. Note these parking demands include the parking demand of existing park uses.

- As shown in Table 4, the parking demand during a maximum event varies widely depending on the location and the timing of the event.

- Minimal shared parking occurs under all of the scenarios, as peak usage times are similar. More parking may be shared during noon events than during late afternoon events.

▲ ▲ ▲

Please contact me at (530) 583-4053 if you have any questions or comments pertaining to this analysis.

Respectfully Submitted,

LSC Transportation Consultants, Inc.

By _____
Leslie Suen, PE

Enclosure: Tables 1-4

Table 1: Potential Land Use Parking Demand

Location	Season	Event Type	Persons at Peak Time	Non-Auto Percentage	Average Vehicle Occupancy	Total Peak Parking Demand
Ice Skating Rink / Summer Pavilion	Summer	Typical	125	5%	3.0	40
		Medium Event	300	5%	3.0	95
		Large Event	1,000	5%	3.0	319
		Max Event	2,000	5%	3.0	638
	Winter	Typical	75	3%	2.5	29
		Max Event	300	3%	3.0	98
Expansion of Skate Park [1]	Summer	Typical	35	10%	2.0	16
		Max Event	125	10%	3.0	38
	Winter	Typical	Closed			
		Max Event	Closed			
Public Library	Summer	Typical	Based on Town parking requirement [2]			39
		Max Event	230	5%	3.0	73
	Winter	Typical	Based on Town parking requirement [2]			39
		Max Event	230	3%	3.0	75

Note 1: Includes existing Skate Park parking demand

Note 2: Parking demand based on the Town of Truckee requirements of 1 parking space per 500 square feet and 19,250 square foot library.

Source: LSC Transportation Consultants Inc.

Table 2: Proportion of Peak Parking Demand by Hour for Shared Parking Analysis

Description	Proportion of Peak Parking Demand in Individual Hour																		
	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	Noon	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Mdnt
Existing Parking Demand	40%	40%	60%	70%	70%	60%	60%	70%	60%	80%	90%	100%	90%	70%	70%	10%	0%	0%	0%
Expanded Skate Park	40%	40%	40%	40%	70%	60%	60%	70%	60%	80%	90%	100%	90%	70%	70%	2%	0%	0%	0%
Summer Pavilion Noon Event	0%	0%	5%	5%	10%	30%	100%	100%	90%	90%	20%	10%	5%	0%	0%	0%	0%	0%	0%
Summer Pavilion 4PM Event	0%	0%	0%	0%	0%	5%	5%	5%	5%	25%	100%	100%	90%	80%	25%	2%	0%	0%	0%
Library	0%	0%	0%	5%	80%	100%	90%	60%	60%	90%	90%	60%	5%	0%	0%	0%	0%	0%	0%
New Ice Rink	0%	0%	0%	0%	0%	0%	0%	10%	60%	90%	100%	90%	80%	50%	50%	50%	10%	0%	0%

Source: LSC Transportation Consultants, Inc.

Table 3: Shared Parking Demand with Typical Use

	Shared Parking Demand with Typical Use
Summer	
Existing Uses	51
Existing plus Skate Park	67
Existing plus Pavilion	77
Existing plus Library	81
Existing plus Pavilion and Skate Park	90
Existing plus Library and Skate Park	95
Existing plus Pavilion and Library	112
Existing plus Library, Skate Park, and Pavilion (noon event)	125
Existing plus Library, Skate Park, and Pavilion (4PM event)	135
Winter	
Existing Uses	20
Existing plus Ice Rink	49
Existing plus Library	55
Existing plus Ice Rink and Library	84

Table 4: Shared Parking Demand with Maximum Event

	Event Location	Shared Parking Demand with Maximum Event	Shared Parking Demand with 300 person Pavilion Event	Shared Parking Demand with 1,000 person Pavilion Event
Summer				
Existing plus Library	Library	112	-	-
Existing plus Library and Skate Park	Library	126	-	-
Existing plus Pavilion and Library	Library	143	-	-
Existing plus Library, Skate Park, and Pavilion (Noon event)	Library	156	-	-
Existing plus Library, Skate Park, and Pavilion (4PM event)	Library	166	-	-
Existing plus Pavilion	Pavilion	674	131	355
Existing plus Pavilion and Skate Park	Pavilion	685	142	366
Existing plus Pavilion and Library	Pavilion	704	162	385
Existing plus Library, Skate Park, and Pavilion (Noon event)	Pavilion	714	175	395
Existing plus Library, Skate Park, and Pavilion (4PM event)	Pavilion	733	190	414
Existing plus Skate Park	Skate Park	89	-	-
Existing plus Pavilion and Skate Park	Skate Park	107	-	-
Existing plus Library and Skate Park	Skate Park	115	-	-
Existing plus Library, Skate Park, and Pavilion (Noon event)	Skate Park	142	-	-
Existing plus Library, Skate Park, and Pavilion (4PM event)	Skate Park	155	-	-
Winter				
Existing plus Library	Library	95	-	-
Existing plus Ice Rink and Library	Library	116	-	-
Existing plus Ice Rink	Ice Rink	118	-	-
Existing plus Ice Rink and Library	Ice Rink	153	-	-