Public Review Mitigated Negative Declaration

Hoyt Event Center

CUP-21-004

March 10, 2025

Prepared by

EMC Planning Group

PUBLIC REVIEW MITIGATED NEGATIVE DECLARATION

HOYT EVENT CENTER

CUP 21-004

PREPARED FOR

County of Merced

Mark Hamilton, Planner III

2222 M Street 2nd Floor

Merced CA 95340

Tel (209) 385-7654 x4419

Mark.Hamilton@countyofmerced.com

PREPARED BY

EMC Planning Group Inc.

601 Abrego Street

Monterey, CA 93940

Tel 831.649.1799

Fax 831.649.8399

www.emcplanning.com

March 10, 2025

MITIGATED NEGATIVE DECLARATION

In Compliance with the California Environmental Quality Act (CEQA)

Project Name	Hoyt Event Center
Lead Agency	County of Merced
Project Proponent	Lee Hoyt PO Box 227 Winton, CA 95388
Project Location	5197 Eucalyptus Avenue Winton, CA 95388 Unincorporated Merced County
Project Description	The project site consists of approximately 3.6 acres within a 16-acre parcel. Existing uses on the site include a barn, single-family residence, and ancillary structures, all of which will remain. The proposed project involves repurposing the existing 72-foot by 64-foot barn into a private event center on approximately 1.9 acres. An adjacent area of approximately 1.7 acres will be used for event parking. No new structures are proposed for the project. Physical improvements include grading and paving 1.7 acres to develop a driveway and an event parking lot to accommodate 60 spaces, including two ADA-compliant spaces. Additionally, the Merced County Department of Public Works Road Division requires the proposed project to dedicate a 10-foot right-of-way along the Eucalyptus Avenue and Buhach Road frontages of the property (Gerardo Elias, Engineering Associate, Department of Public Works, March 11, 2021), although no improvements are currently proposed within that right-of-way.
Public Review Period	Begins – March 13, 2025 Ends – April 14, 2025
Written Comments To	County of Merced Mark Hamilton, Planner III 2222 M Street, Merced, CA 95340 Email: Mark.Hamilton@countyofmerced.com

Proposed Findings

The County of Merced is the custodian of the documents and other material that constitute the record of proceedings upon which this decision is based.

The initial study indicates that the proposed project has the potential to result in significant adverse environmental impacts. However, the mitigation measures identified in the initial study would reduce the impacts to a less than significant level. There is no substantial evidence, in light of the whole record before the lead agency, County of Merced, that the project, with mitigation measures incorporated, may have a significant effect on the environment. See the following project-specific mitigation measures:

Mitigation Measures

Biological Resources

BIO-1 Swainson's Hawk. The following measures shall be implemented to avoid loss of or harm to Swainson's hawk:

a. Road paving shall be completed outside of the nesting season for Swainson's hawk (September 16–March 14).

b. If paving cannot be timed outside of nesting season, to avoid, minimize, and mitigate potential impacts on Swainson's hawk nesting on or adjacent to the project site, a qualified biologist shall be contracted to conduct preconstruction surveys and identify active nests on and within 0.5 mile of the project site for construction activities conducted before and during the breeding season (February 1–September 15). The surveys shall be conducted no less than 14 days and no more than 30 days before the beginning of construction. Guidelines, provided in Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in the Central Valley (Swainson's Hawk Technical Advisory Committee 2000) or updated, current guidance, shall be followed for surveys for Swainson's hawk. If no nests are found, a report documenting the results of the survey will be submitted to the Merced County Community and Economic Development Department and no further mitigation will be required.

c. If found, impacts to nesting Swainson's hawks shall be avoided by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. No project activity shall commence within the buffer areas until a qualified biologist has determined, in coordination with California Department of Fish and Wildlife, the young have fledged, the nest is no longer active, or reducing the buffer would not result in nest abandonment. California Department of Fish and Wildlife guidelines recommend implementation of 0.25- or 0.5-mile-wide

buffers for Swainson's hawk nests, but the size of the buffer may be decreased if a qualified biologist, in consultation with California Department of Fish and Wildlife, determine that such an adjustment would not be likely to adversely affect the nest.

d. Monitoring of all Swainson hawk nests by a qualified biologist during construction activities will be required if the activity has potential to adversely affect the nest. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the no-disturbance buffer shall be increased until the agitated behavior ceases. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined appropriate by a qualified biologist.

e. If impacts to Swainson's hawk cannot be avoided, consultation with the California Department of Fish and Wildlife will be conducted, and an Incidental Take Permit will be obtained. Compliance with permit conditions shall be required prior to the start of disturbance activities.

BIO-2 Protected Nesting Birds. To avoid impacts to mountain plover and other nesting birds during the nesting season (January 15 through September 15), all construction activities should be conducted between September 16 and January 14, which is outside of the bird nesting season. If construction or project-related work is scheduled during the nesting season (February 15 to August 30 for small bird species such as passerines; January 15 to September 15 for owls; and February 15 to September 15 for other raptors), a qualified biologist shall conduct nesting bird surveys.

a. Two surveys for active bird nests shall occur within 14 days prior to start of paving activities, with the final survey conducted within 48 hours prior to ground disturbance. Appropriate minimum survey radii surrounding each work area are typically 250 feet for passerines, 500 feet for smaller raptors, and 1,000 feet for larger raptors. Surveys shall be conducted at the appropriate times of day to observe nesting activities. Locations off the site to which access is not available may be surveyed from within the site or from public areas. If no nesting birds are found, a letter report confirming absence will be prepared and submitted to the Merced County Community and Economic Development Department and no further mitigation is required.

b. If the qualified biologist documents active nests within the project site or in nearby surrounding areas, an appropriate buffer between each nest and active construction shall be established. The buffer shall be clearly marked and maintained until the young have fledged and are foraging independently. Prior to construction, the qualified biologist will conduct baseline monitoring of each nest to characterize "normal" bird behavior and establish a buffer distance, which allows the birds to exhibit normal behavior. The qualified biologist shall monitor the nesting birds daily during construction activities and increase the buffer if

birds show signs of unusual or distressed behavior (e.g., defensive flights and vocalizations, standing up from a brooding position, and/or flying away from the nest). If buffer establishment is not possible, the qualified biologist or construction foreman shall have the authority to cease all construction work in the area until the young have fledged and the nest is no longer active. Once the absence of nesting birds has been confirmed, a letter report will be prepared by the biologist and submitted to the Merced County Community and Economic Development Department, where it will be kept on file, and no further measures are required.

BIO-3 Special-Status Bats. The following measures shall be implemented to avoid loss of or harm to special-status bat species:

a. Approximately 14 days prior to paving activities, a qualified biologist shall conduct a habitat assessment for bats and potential roosting sites in trees or buildings within 50 feet of construction activities. These surveys shall include a visual inspection of potential roosting features (bats need not be present) and a search for presence of guano within the project site, construction access routes, and 50 feet around these areas. Cavities, crevices, exfoliating bark, and bark fissures that could provide suitable potential nest or roost habitat for bats shall be surveyed. Assumptions can be made on what species is present due to observed visual characteristics along with habitat use, or the bats can be identified to the species level with the use of a bat echolocation detector such as an "Anabat" unit. Potential roosting features found during the survey shall be flagged or marked.

b. If no roosting sites or bats are found, a letter report shall be prepared by the biologist and submitted to the Merced County Community and Economic Development Department, where it shall be kept on file, and no further measures are required.

c. If bats or roosting sites are found, bats shall not be disturbed without specific notice to and consultation with California Department of Fish and Wildlife.

d. The nursery season is typically from May 1 to October 1. If bats are found roosting outside of the nursery season, California Department of Fish and Wildlife shall be consulted prior to any eviction or other action. If avoidance or postponement is not feasible, a Bat Eviction Plan shall be submitted to California Department of Fish and Wildlife for written approval prior to project implementation. A request to evict bats from a roost includes details for excluding bats from the roost site and monitoring to ensure that all bats have exited the roost prior to the start of activity and are unable to re-enter the roost until activity is completed. Any bat eviction shall be timed to avoid lactation and young-rearing. If bats are found roosting during the nursery season, they shall be monitored to determine if the roost site is a maternal roost. This could occur by either visual inspection of the roost bat pups, if possible, or by monitoring the

roost after the adults leave for the night to listen for bat pups. Because bat pups cannot leave the roost until they are mature enough, eviction of a maternal roost cannot occur during the nursery season. Therefore, if a maternal roost is present, a 50-foot buffer zone (or different size if determined in consultation with the California Department of Fish and Wildlife) shall be established around the roosting site within which no construction activities including tree removal or structure disturbance shall occur until after the nursery season.

Cultural Resources

CR-1 The following language shall be incorporated into any plans associated with tree removal, grading, and construction, "In the event that archaeological resources are encountered during ground disturbing activities, contractor shall temporarily halt or divert excavations within a 50 meter (165 feet) of the find until it can be evaluated. All potentially significant archaeological deposits shall be evaluated to demonstrate whether the resource is eligible for inclusion on the California Register of Historic Resources, even if discovered during construction. If archaeological deposits are encountered, they will be evaluated and mitigated simultaneously in the timeliest manner practicable, allowing for recovery of materials and data by standard archaeological procedures. For prehistoric archaeological sites, this data recovery involves the hand-excavated recovery and non-destructive analysis of a small sample of the deposit. Historic resources shall also be sampled through hand excavation, though architectural features may require careful mechanical exposure and hand excavation.

Any previously undiscovered resources found during construction activities shall be recorded on appropriate California Department of Parks and Recreation (DPR) forms and evaluated for significance by a qualified Archaeologist. Significant cultural resources consist of but are not limited to stone, bone, glass, ceramics, fossils, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites."

CR-2 The following language shall be incorporated into any plans associated with tree removal, grading, and construction, "In the event that human remains (or remains that may be human) are discovered at the project site, Public Resource Code Section 5097.98 must be followed. All grading or earthmoving activities shall immediately stop within 50 meters (165 feet) of the find. The Merced County Coroner will be notified immediately, and the coroner shall be permitted to examine the remains as required by California Health and Safety Code Section 7050.5(b).

Section 7050.5 requires that excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If human remains are determined as those of Native American origin, the project proponent shall comply with the state relating to the disposition of Native American burials that fall within the jurisdiction of the NAHC (Public Resource Code [PRC] § 5097). The coroner shall contact the Native American Heritage Commission (NAHC) to determine the most likely descendant(s) (MLD). The MLD shall complete his

or her inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The MLD will determine the most appropriate means of treating the human remains and associated grave artifacts, and shall oversee the disposition of the remains. In the event the NAHC is unable to identify an MLD or the MLD fails to make a recommendation within 48 hours after being granted access to the site, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity within the project area in a location not subject to further subsurface disturbance if: a) the Native American Heritage Commission is unable to identify the MLD or the MLD failed to make a recommendation within 48 hours after being allowed access to the site; b) the descendent identified fails to make a recommendation; or c) the landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner."

Geology and Soils

GEO-1 Prior to issuance of a grading permit, the applicant shall prepare an erosion control plan indicating proposed methods for the control of runoff, erosion, and sediment control, subject to review and approval by the county. The erosion control plan will be implemented during grading and construction activities.

Greenhouse Gase Emissions

GHG-1 The proposed project shall be designed to include electric vehicle support improvements consistent with the latest adopted version of the CALGreen Tier 2 voluntary standards. Inclusion of these design elements in the final project plans shall be verified by the Merced County Building and Safety Official prior to issuance of a building permit.

Hydrology and Water Quality

HYD-1 Prior to issuance of a grading permit, the applicant shall prepare a drainage plan that complies with the Merced County Best Management Practices and standards established for compliance with non-point discharge emissions for storm water. The drainage plan shall incorporate Low Impact Development strategies and Best Management Practices to reduce storm water runoff, encourage infiltration, and reduce pollutant transmission. The drainage plan shall be subject to review and approval by the county and be implemented with development of the project.

PUBLIC REVIEW INITIAL STUDY

HOYT EVENT CENTER

CUP 21-004

PREPARED FOR

County of Merced

Mark Hamilton, Planner III

2222 M Street 2nd Floor

Merced CA 95340

Tel (209) 385-7654 x4419

Mark.Hamilton@countyofmerced.com

PREPARED BY

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601 Abrego Street

Monterey, CA 93940

Tel 831.649.1799

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March 10, 2025

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A. BACKGROUND

Project Title	Hoyt Event Center IS/MND
Lead Agency Contact Person and Phone Number	County of Merced Mark Hamilton, Planner III Community & Economic Development 209-385-7654
Date Prepared	March 2025
Study Prepared by	EMC Planning Group Inc. 601 Abrego Street Monterey, CA 93940
Project Location	5197 Eucalyptus Avenue Winton, CA 95388 Unincorporated Merced County
Project Sponsor Name and Address	Lee Hoyt P.O. Box 227 Winton, CA 95388
General Plan Designation	Agricultural (A)
Zoning	General Agricultural (A-1)

Setting

The project site is located at 5197 Eucalyptus Avenue on the northwest corner of Eucalyptus Avenue and North Buhach Road in Merced County, identified as Assessor's Parcel Number (APN) 052-110-018. Winton is located along Santa Fe Drive, and is approximately two miles north of Atwater and 10 miles northwest of Merced.

The project site is approximately two miles northeast of the unincorporated area of Winton and ½ mile north of Castle Airport. The project site is surrounded by agricultural uses to the north, east, and south. West of the project site are residential and agricultural uses. Historical wetlands are located to the east and northeast of the project site.

Figure 1, Location Map, presents the regional and vicinity location of the project site. Figure 2, Aerial Photograph, presents an aerial view of the project site and immediate surroundings. Figure 3, Site Photographs, presents photographs taken at the project site on November 8, 2024, and Figure 4, Adjacent Uses, presents photographs taken of existing uses in the immediate vicinity of the project site.

The project site has a *2030 Merced County General Plan* land use designation of Agriculture (A). The Agriculture (A) designation permits cultivated agricultural practices and agricultural commercial uses. The project is zoned General Agriculture (A-1), which is intended for farming operations

but permits a mix of land uses, including commercial. Recreational events and weddings are conditionally permitted within the A-1 Zone. The proposed project would require approval of a conditional use permit (CUP) to allow for proposed uses.

Description of Project

The project site consists of approximately 3.6 acres within a 16-acre parcel. Existing uses on the site include a barn, single-family residence, and ancillary structures, all of which will remain. The 3.6-acre project area is fenced off from the remaining 12.4 acres of the property. The proposed project involves repurposing the existing 72-foot by 64-foot barn into a private event center on approximately 1.9 acres. An adjacent area of approximately 1.7 acres will be used for event parking. No new structures are proposed for the project.

Physical Improvements

Physical improvements, as shown in Figure 5, Site Plan, include grading and paving 1.7 acres to develop a driveway and an event parking lot to accommodate 60 spaces, including two ADA-compliant spaces. Additionally, the Merced County Department of Public Works Road Division requires the proposed project to dedicate a 10-foot right-of-way along the Eucalyptus Avenue and Buhach Road frontages of the property (Gerardo Elias, Engineering Associate, Department of Public Works, March 11, 2021), although no improvements are currently proposed within that right-of-way.

Proposed Operational Activities

The proposed event center would host a maximum capacity of 200 guests and would operate without permanent staff, with organizers responsible for catering and cleanup. The event center would host events up to 20 days during peak months (April, May, September, October, and November) and up to 10 days during slower months (January, February, March, June, July, and August). Up to five private family gatherings per year may take place inside the event center. On average, the event center would host 35 events per year. Site visits for private events would be scheduled one day per week from 1:00 pm to 5:00 pm, with event hours from 9:00 am to 12:00 am.

Other Public Agencies Whose Approval is Required

U.S. Fish and Wildlife Services
California Department of Fish and Wildlife

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

No tribes have requested consultation in this area of Merced County.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

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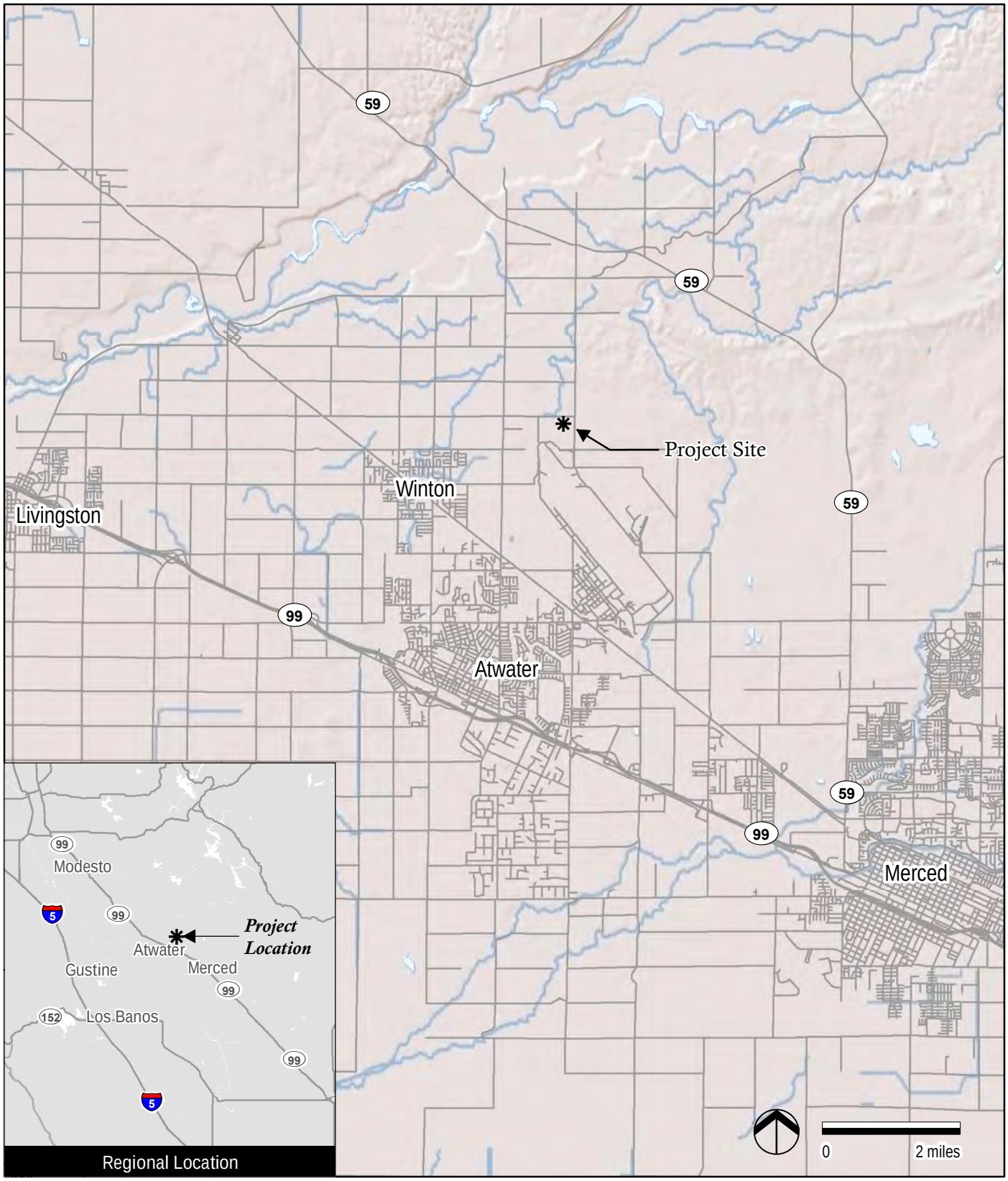

Source: ESRI 2024

Figure 1

Location Map

Hoyt Event Center IS/MND

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0 300 feet

Project Site

Project Parcel

Source: Merced County GIS 2024, Google Earth 2024

Figure 2

Aerial Photograph

Hoyt Event Center IS/MND

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1 View of event center (barn) from event lawn.

2 Westerly view of event lawn and structures.

Project Parcel

Source: Google Earth 2024
Photographs: EMC Planning Group 2024

3 Northwest view of event gravel parking area.

4 Southwest view of event center (barn) from parking area.

Figure 3
Site Photographs

Hoyt Event Center IS/MND

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① View of adjacent grazing area located east of project site.

② View of adjacent pond located south of project site.

Project Parcel

Source: Google Earth 2024
Photographs: EMC Planning Group 2024

③ Westerly view of project site from adjacent grazing field located east of project site.

④ Northerly view of project site from south end of project parcel.

Figure 4
Adjacent Uses

Hoyt Event Center IS/MND

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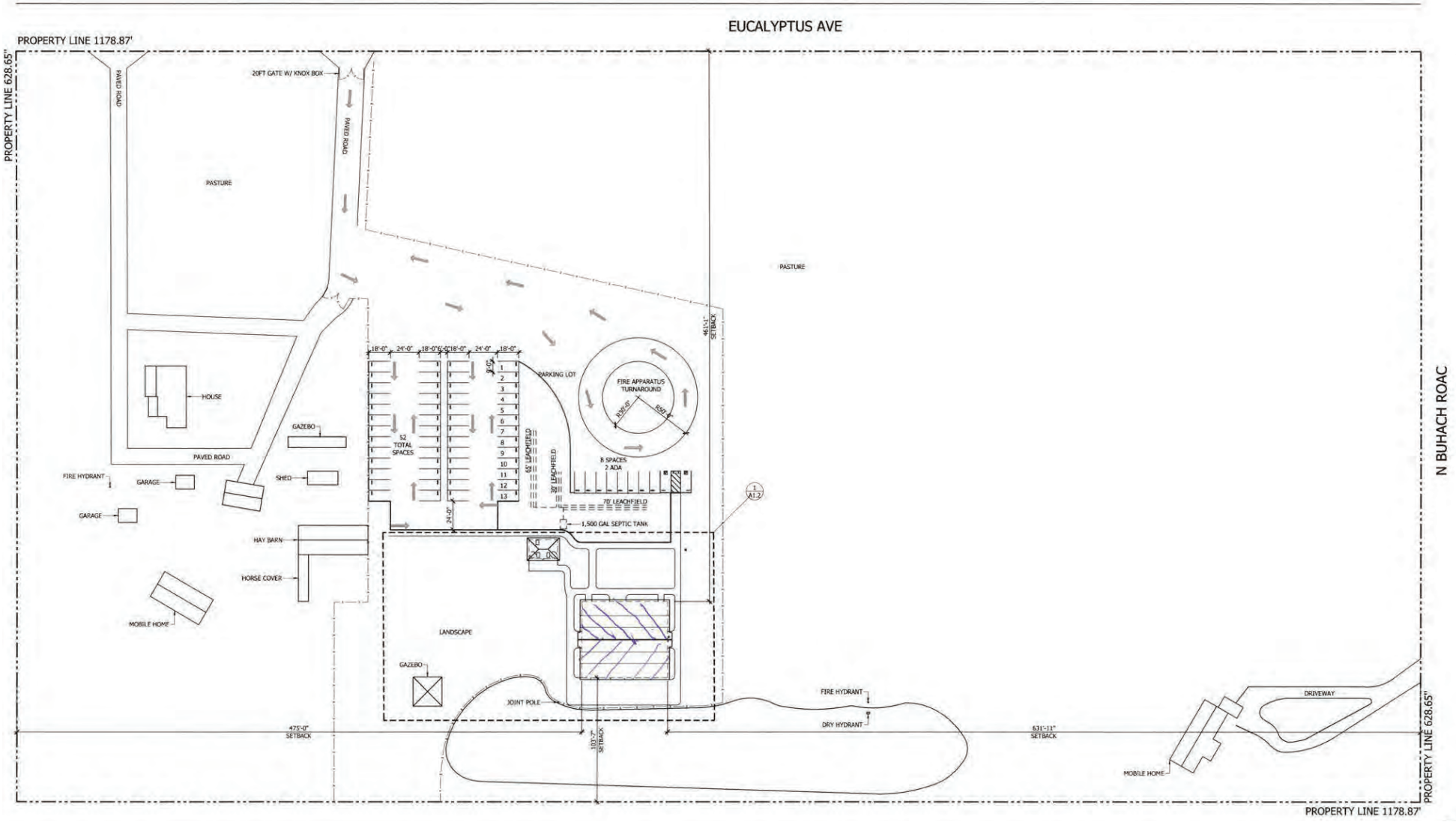

0 120 feet

Source: Kuop Designs 2024

Figure 5
Site Plan

Hoyt Event Center IS/MND

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B. Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

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

C. DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "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.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (1) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (2) 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.

Mark E. Hamilton

Mark Hamilton, Planner III
Community & Economic Development

March 10, 2025

Date

D. EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a) Earlier Analyses Used. Identify and state where they are available for review.
    b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
    a) the significance criteria or threshold, if any, used to evaluate each question; and
    b) the mitigation measure identified, if any, to reduce the impact to less than significance

1. AESTHETICS

Except as provided in Public Resources Code Section 21099 (Modernization of Transportation Analysis for Transit-Oriented Infill Projects), would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
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 non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
d.	Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Comments:

a-c. According to the 2030 Merced County General Plan, Merced County has many scenic vistas, such as the Coastal and Sierra Nevada Mountain ranges and the Los Banos Creek, Merced, San Joaquin, and Bear Creek River corridors (Merced County 2013, p. NR-8).

According to the Caltrans Scenic Highway System Map, the project site is not located in the immediate vicinity of any designated or eligible scenic highways. The nearest officially designated scenic highway is Interstate 5, which is approximately 30 miles from the project site.

The proposed project involves repurposing an existing barn as a private event center, and does not include new construction. No physical adjustments to the barn are anticipated that would obstruct views or have a substantial adverse effect on a scenic vista. Adjacent outdoor space would be paved for event parking.

Therefore, the proposed project would not have an adverse effect on a scenic vista, nor would it damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway. Further, the project would not alter the existing visual character or public views of the site and its surroundings.

d. Although no new lighting is identified in the project application materials, use of the existing barn with an event center could introduce new sources of nighttime lighting at the project site. New light sources could include, but are not limited to, interior building lighting and outdoor property lighting. These new light sources could result in adverse effects to adjacent land uses due to light trespass and glare. Section 18.40.070 of the Merced County Municipal Code regulates outdoor lighting facilities within the county and outlines the types of lighting that are acceptable. The proposed project would be subject to conformance with provisions outlined in the county's municipal code. Further, the Airport Land Use Commission (ALUC) has recommended conditions of approval, including prohibiting the use of bright lights (including search lights or laser light displays) or distracting lights that could be mistaken for airport lights (Steve Maxey, ALUC Secretary, application comment letter, March 19, 2021). Therefore, light and glare impacts associated with the proposed would be less than significant.

2. AGRICULTURE AND FOREST RESOURCES

In determining whether impacts on agricultural resources are significant environmental effects and in assessing impacts on agriculture and farmland, 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:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
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 nonagricultural use?	☐	☐	☐	☒
b.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Comments:

a-d. According to the California Department of Conservation Important Farmland Finder, the project site is designated Rural Residential Land and is not under a Williamson Act contract. The project site has a general plan land use designation of Agriculture (A) and is zoned General Agriculture (A-1), neither of which permit forestland or timberland uses. There are currently no forest resources on or adjacent to the project site. Therefore, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of

Statewide Importance to nonagricultural use. Nor would it conflict with existing zoning for agricultural use or Williamson Act Contract, or cause rezoning of forest land or timberland, or result in the loss or conversion of forest land to non-forest use.

e. The project site encompasses approximately 3.6 acres, currently developed with a barn, a single-family residence, and ancillary structures, while the remaining 16.4 acres of the parcel are used for animal grazing. All existing uses will be retained. The site is not designated as farmland and, therefore, the project will not result in the conversion of farmland to non-agricultural use or forest land to non-forest use.

3. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
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 nonattainment 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?	☐	☐	☐	☒

The project is located in Merced County in the San Joaquin Valley Air Basin, which is within the jurisdiction of the San Joaquin Valley Air Pollution Control District ("air district"). The discussion in this section is based primarily on the air district's *Guidance for Assessing and Mitigating Air Quality Impacts* (2015) (GAMAQI), *Guidance for Assessing and Mitigating Air Quality Impacts* and the *2018 PM2.5 Plan for the San Joaquin Valley* ("air quality plan"), and on the results of emissions modeling using the California Emission Estimation Model (CalEEMod) version 2022.1.

Comments:

a. The air district has the primary responsibility for assuring that federal and state ambient air quality standards are attained and maintained in the air basin. An air quality plan describes air pollution control strategies to be implemented by a city, county, or region classified as a non-attainment area. The main purpose of an air quality plan is to bring the area into compliance with the requirements of federal and state ambient air quality standards. CEQA requires the analysis of proposed projects to ensure future development is consistent with applicable air quality plans.

The air district provides guidance on determining potential significant impacts in the GAMAQI. Table 2, Air Quality Thresholds of Significance for Criteria Pollutants, on page 80 of the GAMAQI, can be used to determine if a project's operational emissions would violate ambient air quality standards. Projects that do not exceed the screening thresholds or criteria pollutant emissions volume thresholds would not conflict with or obstruct implementation of the air quality plan. Projects with emissions that exceed the thresholds have the potential to exceed ambient air quality standards. Such exceedances

would be considered a potentially significant impact, as well as a conflict with the air quality plan. As described in greater detail under item "b" below, the proposed project would generate criteria air pollutant emissions during construction and operations that are well below the air district standards. Therefore, the proposed project would not conflict with or obstruct implementation of the air quality plan.

b. The six most common and widespread air pollutants of concern, or "criteria pollutants," are ground-level ozone, nitrogen dioxide, particulate matter, carbon monoxide, sulfur dioxide, and lead. In addition, reactive organic gases (ROG) also referred to as volatile organic gases (VOC) are a key contributor to the criteria air pollutants because they react with other substances to form ground-level ozone. Health effects of from prolonged exposures to criteria air pollutants include asthma, bronchitis, chest pain, coughing, and heart diseases.

The air district is responsible for monitoring air quality in the air basin, which is designated under state criteria as a nonattainment area for ozone and fine particulate matter ($PM_{2.5}$). Under federal criteria, the air basin is at nonattainment for (8-hour standard) for ozone, and both $PM_{2.5}$ and suspended particulate matter (PM_{10}). The air district has developed criteria pollutant emissions thresholds which are used to determine whether or not a proposed project would violate an air quality standard or contribute to an existing violation during operations and/or construction. The cumulative contribution of criteria pollutants generated during the construction and operations of the project are evaluated relative to the thresholds established by the air district.

Air quality modeling using CalEEMod, was conducted to quantify criteria air pollutant emissions that would be generated during project construction and operation. An "unmitigated" model run was completed to yield estimates of emissions values in the absence of mitigation measures that otherwise might be required. The model accounts for uniformly applied existing regulatory measures that reduce emissions. The CalEEMod results are included in Appendix A. Model inputs include the type and size of proposed use by applying CalEEMod default land uses as shown in Table 3-1, Project Characteristics.

Table 3-1 Project Characteristics

Proposed Land Use	CalEEMod Land Use Subtype[1]	Size Metric
Event Center	Arena	1.9 Acres
Parking Lot	Parking Lot	1.7 Acres

SOURCE: CalEEMod version 2022.1, Kuop Designs 2022
NOTES:
1. CalEEMod default land use subtype. Descriptions of the model default land use categories and subtypes are found in the User's Guide for CalEEMod Version 2022.1 available online at: https://caleemod.com/user-guide.

Unless otherwise noted, other data inputs to CalEEMod are based on the following primary assumptions:

- Construction start date will be April 2025;
- Operational date is 2026;
- No demolition of existing structures is required;
- No new buildings will be constructed to support the proposed operations;
- Daily trip rates are consistent with the transportation impact study prepared for the project (Kittleson and Associates 2024); and
- Wastewater will be treated by on-site treatment facilities.

Construction Emissions: Construction activities are temporary sources of potential air quality impacts that, depending on the size and type of the project, commonly occur in limited time periods. Construction emissions have the potential to impact local air quality and/or pose localized health risks. Localized health risks are discussed under item "c" of this section. Construction emissions include equipment exhaust and fugitive dust emissions generated during grading, and ozone precursor emissions generated during the application of architectural coatings and paving material.

Neither demolition of existing structures nor the construction of new buildings will be required to support the proposed operations of the event center. Consequently, site preparation, grading, and paving of the 1.7-acre parking lot will be the only source of construction emissions. As shown in Table 3-2, Unmitigated Construction Criteria Air Pollutant Emissions, construction emissions would be well below the established thresholds of significance. Therefore, the proposed project's contribution to regional air quality impacts from construction emissions would be less than significant.

Table 3-2 Unmitigated Construction Criteria Air Pollutant Emissions

	Reactive Organic Gases (ROG)	Nitrogen Oxides (NOx)	Sulfur Oxides (SO_2)	Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Carbon Monoxide (CO)
Annual Construction[1]	0.03	0.06	>0.01	0.04	0.02	0.07
Air District Thresholds[1]	10.0	10.0	27.0	15	15	100.0
Exceeds Threshold?	No	No	No	No	No	No

SOURCE: EMC Planning Group 2024, CalEEMod version 2022.1, GAMAQI 2015
NOTES:
1. Expressed in tons per year.

Operational Emissions: Air district guidance on determining potentially significant impacts and potential mitigation of significant impacts is described in the 2015 GAMAQI. The air district provides thresholds of significance for operational criteria air pollutant emissions that can be used to assess whether a project would have significant adverse effects on air quality. Table 3-3, Unmitigated Operational Criteria Air Pollutant Emissions, indicates that proposed project emissions would not exceed the air district thresholds of significance. Therefore, the project would have a less-than-significant impact and would not result in a cumulatively considerable net increase in criteria air pollutants.

Table 3-3 Unmitigated Operational Criteria Air Pollutant Emissions

	Reactive Organic Gases (ROG)	Nitrogen Oxides (NOx)	Sulfur Oxides (SO_2)	Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Carbon Monoxide (CO)
Annual Operational[1]	0.23	0.33	>0.01	0.36	0.10	1.66
Air District Thresholds[1]	10.0	10.0	27.0	15	15	100.0
Exceeds Threshold?	No	No	No	No	No	No

SOURCE: EMC Planning Group 2024, CalEEMod version 2022.1, GAMAQI 2015
NOTES:
1. Expressed in tons per year.

c. Sensitive receptors refer to those segments of the population most susceptible to poor air quality. Children, the elderly, and the chronically or acutely ill are the most sensitive population groups that are more susceptible to adverse effects of air pollution than others. These sensitive receptors are commonly associated with specific land uses such as residential areas, elementary schools, retirement homes, and hospitals.

Toxic air contaminants (TACs) are pollutants that may be expected to result in an increase in mortality or serious illness or may pose a present or potential hazard to human health. Health effects include cancer, birth defects, neurological damage, damage to the body's natural defense system, and diseases that lead to death. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuels combustion, and commercial operations (e.g., dry cleaners). Construction equipment and associated heavy-duty truck traffic generates diesel exhaust and $PM_{2.5}$ that poses health risks for sensitive receptors. Diesel particulate matter (DPM), which is a known TAC, is a component of diesel exhaust, which is the predominant TAC in urban air and represents about two-thirds of the cancer risk from TACs.

The location of a development project is a major factor in determining whether the project will result in localized air quality impacts. The potential for adverse air quality impacts increases as the distance between the source of emissions and receptors

decreases. From a health risk perspective there are basically two types of land use projects that have the potential to cause long-term public health risk impacts; (1) Land use projects that will place new toxic sources in the vicinity of existing receptors, and (2) Land use projects that will place new receptors in the vicinity of existing toxics sources.

TACs, such as DPM, are commonly produced during construction related activities, generally resulting from projects that generate a significant volume of diesel truck traffic. The emissions generated by construction are considered to be "short-term" in the sense that they would be limited to the actual periods of site development and construction. The proposed project is expected to generate minimal TAC emissions due to its minimal construction requirements and operational traffic that might otherwise be a source of operational TACs from mobile source emissions. Furthermore, the project site is located in a rural unincorporated area of Merced County with no nearby sensitive receptors. Consequently, the project would have a less-than-significant impact from exposing sensitive receptors to substantial pollutant concentrations.

d. The most common sources of odors identified in complaints received by local air districts are sewage treatment plants, landfills, recycling facilities, waste transfer stations, petroleum refineries, biomass operations, autobody shops, coating operations, fiberglass manufacturing, foundries, rendering plants, and livestock operations. The proposed project would not produce these types or other significant objectionable odors that would affect a substantial number of people. Therefore, the project would have no associated impact.

4. BIOLOGICAL RESOURCES

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
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, regulations, or by the California Department of Fish and Wildlife or US 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 US 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, filing, 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?	☐	☐	☒	☐

Comments:

A reconnaissance-level biological field survey of the project site was conducted by EMC Planning Group biologist Rose Ashbach, M.S., on November 8, 2024, to document existing plant communities/wildlife habitats and assess the suitability of the site to support special-status species. Biological resources were documented in field notes, including plant and wildlife species observed, dominant plant communities, wildlife habitat quality, disturbance levels, and aquatic resources. This section assesses impacts to potential special-status species due to the proposed paving activities.

Prior to conducting the survey, EMC Planning Group biologists reviewed the project site plan and project description, aerial photographs, natural resource database accounts, and other relevant scientific literature. This included searching the U.S. Fish and Wildlife Service (USFWS) Endangered Species Database (USFWS 2024a), California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CDFW 2024a, CDFW 2024b), and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2024a) to identify special-status plants, wildlife, and habitats known to occur in the vicinity of the project. A review of the USFWS National Wetlands Inventory (NWI) database was also conducted to identify jurisdictional aquatic features (wetlands, drainages, and/or riparian areas) on or adjacent to the project site (USFWS 2024b).

Existing Conditions. The proposed project is located on approximately 3.6 acres within the 16-acre project parcel (APN 052-110-018) located at 5197 Eucalyptus Avenue, in the unincorporated area of Winton, California. It is approximately one mile north of the Castle Airport. The project parcel contains four distinct uses: a residential area; a field used for grazing; an excavated pond; and a developed event area (barn, parking, and lawn area). The proposed project involves changing the existing uses of the barn, parking, and lawn area to host private events. The parking area is currently compacted soil and gravel with paved areas. The parking area and driveway will be paved. No other development is proposed. The project will host group events on the property approximately 30 days per year with a maximum of 200 guests per event.

Plant and Wildlife Habitat. The two-acre event space includes a gravel and paved parking entrance area, existing structures (barn, bathrooms, pergola), and lawn areas. Outside of the event space uses include single family residential structures to the west, a perennial pond to the south, and grazing pasture to the east. The grazing pasture and pond are fenced to prevent trespass, and disturbance from foot and vehicle traffic. Additionally, the pond is fenced around the event space with a small opening, welded wire fencing (hog wire) that extends to the soil surface. Figure 6, Habitat Map, shows developed and open space areas on the parcel.

A paved entrance opens to a gravel event parking area with space for a turnaround loop. The area is compacted with gravel to reduce dust. Several paved parking spaces are located in front of the barn. Few plants and no burrows were observed within this area. There were several volunteer cottonwood trees (*Populus* sp.) and alder trees (*Alnus* sp.) and planted pampas grass (*Cortaderia selloana*) along the entrance road. Approximately ten cypress trees (*Cupressus* sp.) are planted along the boundary of the compacted gravel parking pad and the adjacent grazing field.

The bulk of the project site included irrigated lawn space and ornamental trees. Bermuda grass (*Cynodon dactylon*) lawn covers the majority of the lawn. The lawn is regularly mowed and irrigated. Approximately ten fan palms (*Washingtonian* sp.) are located within this area in addition to other ornamental trees: weeping willow (*Salix babylonica*), black lotus trees (*Robinia speudocacia*), golden rain tree (*Koelreuteria paniculata*), alder tree (*Alnus* sp.), hibiscus shrub (*Hibuscus* sp.), eucalyptus (*Eucalyptus* sp.), pomegranate (*Punica granatum*), lycinanthus bush (*Lycianthus* sp.), rose bush (*Rosa* sp.), and Chinese pistache (*Pistacia chinensis*). A fence surrounds the parcel. The western fence between the event space and the residential property is lined with ornamental shrubs and flowering vines. Volunteer rushes (*Juncus* sp.) are growing along the southern portion of this

fence. On the south side of the lawn, the grass is not irrigated and the soil is dry with weedy plants including mustard (*Brassica* sp.), horseweed (*Erigeron* sp.), loosestrife (*Lythrum* sp.), toad rush (*Juncus bufonius*), and spurry (*Spergula* sp.).

Many birds were observed and heard within the proposed event space, including house finch (*Haemorhous mexicanus*), northern mockingbird (*Mimus polyglottos*), black phoebe (*Sayornis nigricans*), house sparrow (*Passer domesticus*), ruby crowned kinglet (*Regulus calendula*), Say's phoebe (*Sayornis saya*), Nuttall's woodpecker (*Picoides nuttallii*), white crowned sparrow (*Zonotrichia leucophrys*), European starling (*Sturnus vulgaris*), ring necked dove (*Streptopelia capicola*), scrub jay (*Aphelocoma californica*), and turkey vulture (*Cathartes aura*) was observed flying over the site.

South of the barn is a fenced off, excavated perennial pond. The pond is surrounded in places by emergent vegetation: broadleaf cattail (*Typha latifolia*.), rushes (*Juncus* sp.), tall flatsedge (*Cyperus eragrostis*), swamp smartweed (*Persicaria hydropiperoides*), dallis grass (*Paspalum dilatatum*), curly dock (*Rumex cripsus*), parrot's feather (*Myrophyllum aquaticum*), duckweed (*Lemnoidaea* sp.); and riparian trees and shrubs: cottonwood (*Populus* sp.), willow (*Salix* sp.), mule fat (*Baccharis salicifolia*). Fish were observed within the pond. Although not heard or observed, frogs (*Rana* sp). bullfrogs (*Lithobates catesbeianus*)), toads (American toad (*Anaxyrus americanus*)), snakes (species unknown), and turtles (species unknown) have been observed by the owner within the pond. Domesticated ducks (*Anas platyrhynchos domesticus*) utilize the pond, in addition to other birds including but not limited to Say's phoebe, black phoebe, and house finch.

The barn and bathroom structures do not appear to provide habitat for wildlife, although they may provide nesting opportunities for birds or bats.

Wildlife species that could be expected to utilize the project site include striped skunk (*Mephitis mephitis*), coyote (*Canis latrans*), desert cottontail (*Sylviagus audubonii*), and one or more species of small rodents, including deer mice (*Peromyscus* spp.), harvest mice (*Reithrodontomys* spp.), and California meadow vole (*Microtus californicus*). Common reptiles that could occur on the project site include western fence lizard (*Sceloporus occidentalis*), Pacific gopher snake (*Pituophis catenifer catenifer*), common garter snake (*Thamnophis sirtalis*), American toad, and Sierran treefrog (*Pseudacris sierra*) (Jameson and Peeters 2004, Nafis 2023).

Aquatic/Wetland. The NWI identifies a large excavated pond (identified on the NWI as a 13.75-acre "freshwater pond" habitat (PUBFx) located throughout the entire project parcel. No large wetland feature within the project site was observed during the time of the site visit aside from the fenced pond. No other aquatic features are identified in the National Wetland Inventory.

a. **Special-Status Species**. Special-status species are those listed as Endangered, Threatened, or Rare, or as candidates for listing by the USFWS and/or CDFW; as Species of Special Concern or Fully Protected species by the CDFW; or as Rare Plant Rank 1B or 2B species by CNPS. Appendix B, Special-Status Species in the Project Vicinity, presents tables with database search results, and lists special-status species documented within the project vicinity, their listing status and suitable habitat description, and their potential to occur on the project site. Figure 7, Special-Status Species in the Project Vicinity, presents a map of California Natural Diversity Database results.

Source: ESRI 2024, EMC Planning Group 2024

Figure 6

Habitat Map

Hoyt Event Center IS/MND

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Source: ESRI 2024, CDFW CNDDB 2024

Figure 7

Special-Status Species in the Project Vicinity

Hoyt Event Center IS/MND

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Special-Status Plant Species. No special-status plants were observed during the biological survey. Suitable habitat for special-status plant species recorded as occurring in the vicinity of the project site was not found at the project site. Succulent owl's clover (*Castilleja campestris ssp. succulenta*) was recorded as occurring in the vicinity of the project site. Suitable habitat for succulent owl's clover is present within the adjacent grazing field-. However, suitable habitat for succulent owl's clover was not found at the within the proposed event space. No work is proposed within the adjacent grazing field, as such impacts to special-status plants are not expected to occur.

Special-Status Wildlife Species. Special-status wildlife species with the potential to occur on the project site include San Joaquin kit fox (*Vulpes macrostis mutica*), western pond turtle (*Emys marmorata*), giant garter snake (*Thamnophis gigas*), Swainson's hawk (*Buteo swainsoni*), burrowing owl (*Athene cunicularia*), tricolored blackbird (*Agelaius tricolor*), mountain plover (*Charadrius montanus*), and northern harrier (*Cicus cyaneus*). Additionally, nesting birds and raptors and special-status bats may occur on or in the immediate project vicinity. These species are addressed below.

San Joaquin Kit Fox. The San Joaquin kit fox is a federally-listed endangered species and a state-listed threatened species. The present range of the San Joaquin kit fox extends from the southern end of the San Joaquin Valley, north to Tulare County, and along the interior Coast Range valleys and foothills to central Contra Costa County. San Joaquin kit foxes typically inhabit annual grasslands or grassy open spaces with scattered shrubby vegetation but can also be found in some agricultural habitats and urban areas. This species needs loose-textured sandy soils for burrowing, and they also need areas that provide a suitable prey base, including black-tailed hare, desert cottontails, and California ground squirrels, as well as birds, reptiles, and carrion.

San Joaquin kit foxes have become established in urban settings of the Central Valley, such as Bakersfield, Taft, and Coalinga (Harrison et. al 2011). When kit foxes have easy access to trash and pet food, they often lose fear of people and urban environments. Observations of this species have been documented approximately 2.4 miles south of the project site (Occurrence No. 23, CNDDB 2024b).

The San Joaquin kit fox has a low probability of occurring on the adjacent grazing fields or passing through the project site. Dens are unlikely within the project site. Impacts to San Joaquin kit fox are not expected as a result of paving as no ground disturbance in potential den habitat is planned, therefore no mitigation measures are required.

Western Pond Turtle. Western pond turtle is a California Species of Special Concern and a candidate species for federal listing. It is uncommon to common in suitable aquatic habitat throughout California including freshwater marshes, stock ponds, lakes, rivers, and streams. This species is considered omnivorous. Aquatic plant material, including pond lilies, beetles and a variety of aquatic invertebrates as well as fishes, frogs, and even carrion have been reported among their food. Pond turtles require basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks. Turtles slip from basking sites to underwater retreats at the approach of humans or potential predators.

Western pond turtle was not observed during the reconnaissance-level biological field survey. However, CNDDB records indicate occurrences of western pond turtle 3.2 miles south of the project parcel (Occurrence No. 321, CDFW 2024b). Anecdotal observations of turtles in the pond on the subject property, south of the project site, were reported by the parcel owner, however no turtles were observed during the site visit and it is unknown if the turtles were native or non-native. Paving is not expected result in impacts to western pond turtle as the area is already graded and compacted and outside of potential turtle habitat; no mitigation measures are required.

Giant Garter Snake. The federally- and state-listed threatened giant garter snake (*Thamnophis gigas*), is an aquatic garter snake that resides in freshwater marshes and low gradient streams, sometimes habituating drainage canals and irrigation ditches, as well as rice fields. They prefer aquatic habitats with wetland vegetation such as cattails and bulrushes which provide cover from predators. Upland habitats are used for cover during active seasons and refuge from flood waters during their dormant season (winter). The giant garter snake is active during the daytime in early spring to late fall. They are dormant from November to mid-March. The snake will breed from March to April and gives birth to live young (USFWS 2024d, USACE no date).

CNDDB records indicate that the closest occurrence of giant garter snake is seven miles south of the project site (Occurrence No. 144 CNDDB 2024b): Suitable habitat for the giant garter snake is present around the freshwater pond, emergent vegetation, and within the upland buffer. Project paving is not expected to result in impacts to the giant garter snake as the parking area is already developed and does not provide upland habitat. No mitigation measures are required.

Burrowing Owl. Burrowing owl (*Athene cunicularia*) is a California Species of Special Concern and is a candidate for state listing. Burrowing owls live and breed in burrows in the ground, especially in abandoned California ground squirrel burrows. Optimal habitat conditions include large open, dry and nearly level grasslands or prairies with short to moderate vegetation height and cover, areas of bare ground, and populations of burrowing mammals. This species has been observed approximately 1.6 miles southeast of the project site (Occurrence No. 2013, CNDDB 2024a). The grazing field immediately east of the existing parking area provides marginally suitable nesting and foraging habitat for burrowing owl, although no burrows were observed. Paving activities are proposed outside of the grazing field and are not likely to impact burrowing owls, if present. No mitigation measures are required.

Swainson's Hawk. Swainson's hawk is a state-listed threatened. Swainson's hawk is a long-distance migrator. Their nesting grounds occur in northwestern Canada, the western U.S., and Mexico and most populations migrate to wintering grounds in the open pampas and agricultural areas of South America (Argentina, Uruguay, southern Brazil). This

round-trip journey may exceed 14,000 miles. The birds return to the nesting grounds and establish nesting territories in early March.

Swainson's hawk nests in the Central Valley of California are generally found in scattered trees or along riparian systems adjacent to agricultural fields or pastures. These open fields and pastures are their primary foraging areas. Suitable foraging habitat for Swainson's hawk is found in the grazing fields and the adjacent agricultural fields, with potential nesting habitat in the tall eucalyptus tree found along Eucalyptus Road at the project site entrance. Three observations of this species have been recorded within five and a half miles of the project site (Occurrence No. 1560, 1690, 1760, CNDDB 2024b).

Paving activities at the project site could result in the temporary disturbance of nesting sites occupied by Swainson's hawk adjacent to the project site, if present. There will be no decline in foraging habitat due to proposed project. The *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California* (CDFG 1994) provides guidance on how temporary impacts on Swainson's hawk are to be mitigated.

Loss or harm to nesting Swainson's hawk is considered a significant adverse impact. Implementation of the following mitigation measure would reduce the potential, temporary impact to Swainson's hawk to a less-than-significant level.

Mitigation Measure

BIO-1 Swainson's Hawk. The following measures shall be implemented to avoid loss of or harm to Swainson's hawk:

a. Road paving shall be completed outside of the nesting season for Swainson's hawk (September 16–March 14).

b. If paving cannot be timed outside of nesting season, to avoid, minimize, and mitigate potential impacts on Swainson's hawk nesting on or adjacent to the project site, a qualified biologist shall be contracted to conduct preconstruction surveys and identify active nests on and within 0.5 mile of the project site for construction activities conducted before and during the breeding season (February 1–September 15). The surveys shall be conducted no less than 14 days and no more than 30 days before the beginning of construction. Guidelines, provided in *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in the Central Valley* (Swainson's Hawk Technical Advisory Committee 2000) or updated, current guidance, shall be followed for surveys for Swainson's hawk. If no nests are found, a report documenting the results of the survey will be submitted to the Merced County Community and Economic Development Department and no further mitigation will be required.

c. If found, impacts to nesting Swainson's hawks shall be avoided by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. No project activity shall commence within the buffer areas until a qualified biologist has determined, in coordination

with California Department of Fish and Wildlife, the young have fledged, the nest is no longer active, or reducing the buffer would not result in nest abandonment. California Department of Fish and Wildlife guidelines recommend implementation of 0.25- or 0.5-mile-wide buffers for Swainson's hawk nests, but the size of the buffer may be decreased if a qualified biologist, in consultation with California Department of Fish and Wildlife, determine that such an adjustment would not be likely to adversely affect the nest.

d. Monitoring of all Swainson hawk nests by a qualified biologist during construction activities will be required if the activity has potential to adversely affect the nest. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the no-disturbance buffer shall be increased until the agitated behavior ceases. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined appropriate by a qualified biologist.

e. If impacts to Swainson's hawk cannot be avoided, consultation with the California Department of Fish and Wildlife will be conducted, and an Incidental Take Permit will be obtained. Compliance with permit conditions shall be required prior to the start of disturbance activities.

Nesting Birds. Protected nesting bird species and raptors, including special status species tricolored blackbird, mountain plover, northern harrier, have the potential to nest within the project site. Nesting birds may nest on open ground, or in any type of vegetation, including trees (tricolored blackbirds within the wetland vegetation, mountain plover and northern harrier on the ground within the grazing field), during the nesting bird season (January 15 through September 15). The project parcel and surrounding properties contain a variety of wetland vegetation, open ground, and trees, and shrubs suitable for nesting. Paving activities may impact nesting birds protected under the federal Migratory Bird Treaty Act and California Fish and Game Code, should nesting birds be present during construction. If protected bird species are nesting adjacent to the project site during the bird nesting season, then noise-generating construction activities could result in the loss of fertile eggs, nestlings, or otherwise lead to the abandonment of nests. Impacts to nesting birds are considered significant. Implementation of the following mitigation measure would reduce the potential impact to nesting birds to a less-than-significant level.

Mitigation Measure

BIO-2 Protected Nesting Birds. To avoid impacts to mountain plover and other nesting birds during the nesting season (January 15 through September 15), all construction activities should be conducted between September 16 and January 14, which is outside of the bird nesting season. If construction or project-related work is scheduled during the nesting season (February 15 to August 30 for small

bird species such as passerines; January 15 to September 15 for owls; and February 15 to September 15 for other raptors), a qualified biologist shall conduct nesting bird surveys.

a. Two surveys for active bird nests shall occur within 14 days prior to start of paving activities, with the final survey conducted within 48 hours prior to ground disturbance. Appropriate minimum survey radii surrounding each work area are typically 250 feet for passerines, 500 feet for smaller raptors, and 1,000 feet for larger raptors. Surveys shall be conducted at the appropriate times of day to observe nesting activities. Locations off the site to which access is not available may be surveyed from within the site or from public areas. If no nesting birds are found, a letter report confirming absence will be prepared and submitted to the Merced County Community and Economic Development Department and no further mitigation is required.

b. If the qualified biologist documents active nests within the project site or in nearby surrounding areas, an appropriate buffer between each nest and active construction shall be established. The buffer shall be clearly marked and maintained until the young have fledged and are foraging independently. Prior to construction, the qualified biologist will conduct baseline monitoring of each nest to characterize "normal" bird behavior and establish a buffer distance, which allows the birds to exhibit normal behavior. The qualified biologist shall monitor the nesting birds daily during construction activities and increase the buffer if birds show signs of unusual or distressed behavior (e.g., defensive flights and vocalizations, standing up from a brooding position, and/or flying away from the nest). If buffer establishment is not possible, the qualified biologist or construction foreman shall have the authority to cease all construction work in the area until the young have fledged and the nest is no longer active. Once the absence of nesting birds has been confirmed, a letter report will be prepared by the biologist and submitted to the Merced County Community and Economic Development Department, where it will be kept on file, and no further measures are required.

Special-Status Bats. Bats were not observed during the reconnaissance-level biological field survey. However, trees and/or buildings or structures on or adjacent to the project site could provide roosting habitat for special-status bat species known to occur in the vicinity of the project site, including the California Species of Special Concern hoary bat (*Lasiurus cinereus*) and western mastiff bat (*Eumops perotis californicus*).

Bat species inhabit a wide variety of habitats, including grasslands, woodlands, and forests. Western mastiff bat utilizes buildings and cervices in cliff faces or rocky outcrops. Hoary bats utilize trees with a medium to dense canopy for roosting and forests and woodlands for bearing young. Paving activities could result in the disturbance of roost

sites occupied by hoary bats or western mastiff bats on or adjacent to the project site, if present. Loss or harm to special-status bats is considered a significant adverse impact. Implementation of the following mitigation measure will reduce the potential impact to special-status bats to a less-than-significant level.

Mitigation Measure

BIO-3 Special-Status Bats. The following measures shall be implemented to avoid loss of or harm to special-status bat species:

a. Approximately 14 days prior to paving activities, a qualified biologist shall conduct a habitat assessment for bats and potential roosting sites in trees or buildings within 50 feet of construction activities. These surveys shall include a visual inspection of potential roosting features (bats need not be present) and a search for presence of guano within the project site, construction access routes, and 50 feet around these areas. Cavities, crevices, exfoliating bark, and bark fissures that could provide suitable potential nest or roost habitat for bats shall be surveyed. Assumptions can be made on what species is present due to observed visual characteristics along with habitat use, or the bats can be identified to the species level with the use of a bat echolocation detector such as an "Anabat" unit. Potential roosting features found during the survey shall be flagged or marked.

b. If no roosting sites or bats are found, a letter report shall be prepared by the biologist and submitted to the Merced County Community and Economic Development Department, where it shall be kept on file, and no further measures are required.

c. If bats or roosting sites are found, bats shall not be disturbed without specific notice to and consultation with California Department of Fish and Wildlife.

d. The nursery season is typically from May 1 to October 1. If bats are found roosting outside of the nursery season, California Department of Fish and Wildlife shall be consulted prior to any eviction or other action. If avoidance or postponement is not feasible, a Bat Eviction Plan shall be submitted to California Department of Fish and Wildlife for written approval prior to project implementation. A request to evict bats from a roost includes details for excluding bats from the roost site and monitoring to ensure that all bats have exited the roost prior to the start of activity and are unable to re-enter the roost until activity is completed. Any bat eviction shall be timed to avoid lactation and young-rearing. If bats are found roosting during the nursery season, they shall be monitored to determine if the roost site is a maternal roost. This could occur by either visual inspection of the roost bat pups, if possible, or by monitoring the roost after the adults leave for the night to listen for bat pups. Because bat pups cannot leave the roost until they are mature enough, eviction of a maternal roost cannot occur during the nursery

season. Therefore, if a maternal roost is present, a 50-foot buffer zone (or different size if determined in consultation with the California Department of Fish and Wildlife) shall be established around the roosting site within which no construction activities including tree removal or structure disturbance shall occur until after the nursery season.

b. **Riparian Habitat or Sensitive Natural Communities**. CDFW maintains a regularly updated list of *California Sensitive Natural Communities* based on the best available information on habitat distribution (CDFW 2024c). Sensitive natural communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special-status plants or their habitat. The onsite pond and associated wetland and riparian vegetation is considered protected. However, the use of the barn and lawn for events is not expected to impact this habitat. The pond and associated vegetation are fenced with signs indicating not to throw rocks. No additional sensitive natural communities were observed within the project site.

c. **Wetlands and Waters of the U.S**. A review of the National Wetland Inventory (NWI) online database was conducted to identify potential jurisdictional aquatic features on or adjacent to the project site (USFWS 2024b). The results show a large excavated pond identified on the NWI as a 13.75 acre "freshwater pond" habitat (PUBFx) located throughout the entire project parcel. No large wetland feature within the project site was observed during the time of the site visit aside from the fenced pond. Wetlands may be present in the adjacent field east of the project site. The proposed project will not impact pond or the adjacent field.

d. **Wildlife Movement.** Wildlife movement corridors provide connectivity between habitat areas, enhancing processes like nutrient flow, gene flow, seasonal migration, pollination, and predator-prey relationships. Increasing connectivity is a critical strategy for addressing habitat loss and fragmentation, a top threat to biodiversity.

The project parcel is not located within any previously defined essential connectivity areas as mapped by the *California Essential Habitat Connectivity Project* (CDFW 2024c). Additionally, the project parcel is adjacent to developed agricultural lands. The project parcel and project site are not likely to facilitate major wildlife movement due to current active disturbance from agricultural activities. As such, the proposed project would have a less-than-significant impact on wildlife movement.

e. **Local Biological Resource Policies/Ordinances**

Merced County General Plan. The Natural Resources Element of the 2030 Merced County General Plan contains the following policies associated with biological resources that are applicable to the proposed project:

- Policy NR-1.1 - Habitat Protection. Identify areas that have significant long-term habitat and wetland values including riparian corridors, wetlands, grasslands, rivers

and waterways, oak woodlands, vernal pools, and wildlife movement and migration corridors, and provide information to landowners.

- Policy NR-1.15 - Urban Forest Protection and Expansion. Protect existing trees and encourage the planting of new trees in existing communities. Adopt an Oak Woodland Ordinance that requires trees larger than a specified diameter that are removed to accommodate development be replaced at a set ratio.
- Policy NR-1.21 - Special Status Species Surveys and Mitigation. Incorporate the survey standards and mitigation requirements of state and federal resource management agencies for use in the County's review processes for both private and public projects.

Trees. There are no policies in the Merced County General Plan, or regulations in the Merced County Code that pertain to the damage to or loss of trees at the site. Therefore, no further discussion of conflicts with tree protection guidance is necessary.

Mitigation measures contained in this section will mitigate impacts to biological resources to a less-than-significant level. With these considerations, the proposed project would not conflict with local regulations related to biological resources.

f. **Conservation Plans.** Conservation fairy shrimp critical habitat is located within the northeast corner of the project parcel east of the project site (USFWS 2024c) (Figure 6, Habitat Map). There are no other critical habitat boundaries, habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans applicable to the proposed project site (CDFW 2024d). Impacts to potential conservation fairy shrimp habitat as a result of the proposed paving activities are not anticipated and no additional mitigation measures are required.

5. CULTURAL RESOURCES

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Cause a substantial adverse change in the significance of a *historical resource* pursuant to section 15064.5?	☐	☒	☐	☐
b.	Cause a substantial adverse change in the significance of a *unique archaeological resource* pursuant to section 15064.5?	☐	☒	☐	☐
c.	Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Comments:

a-b. An archival database search was conducted through the Central California Information Center (CClC) (13044I), of the California Historical Resources Information System (CHRIS) affiliated with the State of California Office of Historic Preservation in Sacramento. The CClC was provided with a location map and coordinates of the project area, with a request of the archaeological and non-archaeological resources within one-quarter mile radius of the project site boundary. No known cultural resources were located within the project area or within the quarter mile radius. One non-archaeological resource was noted. The Merced Irrigation District (P-24-001909) is comprised of numerous individual water conveyance, storage structures, and features Also, there were no reports written that were based within the project area. An archaeological survey was not conducted due to the disturbed nature of the project site with the only adjustment to the property being paving an existing dirt driveway.

However, unknown buried significant historic or unique archaeological resources could be present at the project site. Such resources, if present, could be damaged or destroyed by ground disturbing construction activities associated with the project. This would be a significant impact. Implementation of the following mitigation measure would ensure that potential impacts would be less than significant.

Mitigation Measure

CR-1 The following language shall be incorporated into any plans associated with tree removal, grading, and construction, "In the event that archaeological resources are encountered during ground disturbing activities, contractor shall temporarily halt or divert excavations within a 50 meter (165 feet) of the find until it can be evaluated. All potentially significant archaeological deposits shall be evaluated to demonstrate whether the resource is eligible for inclusion on the California Register of Historic Resources, even if discovered during construction. If archaeological deposits are encountered, they will be evaluated and mitigated

simultaneously in the timeliest manner practicable, allowing for recovery of materials and data by standard archaeological procedures. For prehistoric archaeological sites, this data recovery involves the hand-excavated recovery and non-destructive analysis of a small sample of the deposit. Historic resources shall also be sampled through hand excavation, though architectural features may require careful mechanical exposure and hand excavation.

Any previously undiscovered resources found during construction activities shall be recorded on appropriate California Department of Parks and Recreation (DPR) forms and evaluated for significance by a qualified Archaeologist. Significant cultural resources consist of but are not limited to stone, bone, glass, ceramics, fossils, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites."

c. With no evidence of prehistoric or historic sites within the immediate project area or in a quarter mile buffer, the likelihood of the project disturbing Native American human remains is low. However, there remains the possibility that ground disturbing activities associated with the proposed project could damage or destroy previously undiscovered Native American human remains. Disturbance of Native American human remains would be a significant impact. The following mitigation would reduce this potential impact to a less-than significant level.

Mitigation Measure

CR-2 The following language shall be incorporated into any plans associated with tree removal, grading, and construction, "In the event that human remains (or remains that may be human) are discovered at the project site, Public Resource Code Section 5097.98 must be followed. All grading or earthmoving activities shall immediately stop within 50 meters (165 feet) of the find. The Merced County Coroner will be notified immediately, and the coroner shall be permitted to examine the remains as required by California Health and Safety Code Section 7050.5(b).

Section 7050.5 requires that excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If human remains are determined as those of Native American origin, the project proponent shall comply with the state relating to the disposition of Native American burials that fall within the jurisdiction of the NAHC (Public Resource Code [PRC] § 5097). The coroner shall contact the Native American Heritage Commission (NAHC) to determine the most likely descendant(s) (MLD). The MLD shall complete his or her inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The MLD will determine the most appropriate means of treating the human remains and associated grave artifacts, and shall oversee the disposition of the remains. In the event the NAHC is unable to identify an MLD or the MLD fails to make a recommendation within 48 hours after being granted access to the site, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity within the project area in a location not subject to further subsurface disturbance if: a) the Native American Heritage Commission is unable to identify the MLD or the MLD failed to make a recommendation within 48 hours

after being allowed access to the site; b) the descendent identified fails to make a recommendation; or c) the landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner."

6. ENERGY

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Result in a 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?	☐	☐	☐	☒

Comments:

a. Energy impacts are assessed based on the proposed project energy demand profile and on its relationship to state energy efficiency regulations. The primary sources of energy consumption will be fuel use in vehicles traveling to and from the project site, as well as natural gas and electricity used during operations. Each of these energy consumption sources is described below.

Transportation Fuel. The California Air Resources Board 2021 Emissions Factor model (EMFAC), version 1.0.2, was developed to estimate emissions from on-road vehicles including cars, trucks, and buses in California, and to support related state regulatory and air quality planning efforts to meet the Federal Highway Administration's transportation planning requirements. As detailed in the EMFAC results in Appendix A, total annual fuel demand is projected to be approximately 55,952 gallons.

Electricity. The California Energy Commission Energy Consumption Data Management System reports that in 2022, total electricity consumption in Merced County was 318,5454,578 kilowatt-hours (kWh). Table 5.11. Operational Energy Consumption – Electricity, in the CalEEMod results included in Appendix A, shows that projected electricity demand would be 111,109 kWh per year. The project demand accounts for about 0.003 percent of the countywide 2022 total energy demand.

Natural Gas. According to the California Energy Commission Energy Consumption Data Management System, in 2022, total natural gas consumption in Merced County was 131,220,520 therms. Table 5.11. Operational Energy Consumption – Natural Gas, in the CalEEMod results included in Appendix A, shows that projected natural gas demand would be about 169,717,000 BTU per year or approximately 1,697 therms per year. The project demand accounts for about 0.001 percent of the countywide 2022 total natural gas demand.

A project could be considered to result in significant wasteful, inefficient, or unnecessary energy consumption if its energy demand is extraordinary relative to common land use

types. An event cent is a common land use type and not considered to be extraordinarily energy consumptive relative to similar land use types in the county. The project energy demand is not considered to be wasteful or unnecessary.

Regulatory Requirements. A multitude of State regulations and legislative acts are aimed at reducing electricity/natural gas demand, improving energy efficiency in new construction, promoting alternative energy production and use efficiency, and enhancing vehicle fuel efficiency. Required compliance with many of the regulations is not within the direct control of local agencies or individual project developers, but their implementation can reduce energy demand from land use projects both directly and indirectly. For example, the Pavley I standards focus on transportation fuel efficiency. The gradual increased use of electric cars powered with cleaner electricity will reduce consumption of fossil fuel. vehicle miles traveled are expected to decline with the continuing implementation of Senate Bill 743, resulting in less vehicle travel and less fuel consumption. In the renewable energy sector, the California Renewables Portfolio Standard aims to increase the percentage of electricity derived from renewable sources by requiring utility providers to supply 60 percent of electricity from renewable sources by 2030 and 100 percent by 2045 (California Energy Commission 2017).

Given the considerations summarized above, the proposed project would have a less-than-significant energy impact.

b. At this time, there are no regulations at the State or local level that would mandate that the proposed project include on-site renewable energy sources. The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

7. GEOLOGY AND SOILS

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	(1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
	(2) Strong seismic ground shaking?	☐	☐	☐	☒
	(3) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
	(4) 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, creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

Comments:

A geotechnical report titled *Geotechnical Investigation Report Proposed Barn Bathroom Addition, 5197 Eucalyptus Avenue, Winton, California* (hereinafter "geotechnical report") was prepared by Technicon Engineering Services, Inc., and is included as Appendix C The report was prepared for a bathroom addition to the barn, which has already been implemented and is not a part of

this project. The report does however, present the results of the geotechnical investigation to evaluate subsurface conditions at the project site and provide geotechnical engineering recommendations for future project design and construction.

a. **(1) Surface Fault Rupture.** The project site is not located within an Alquist-Priolo Earthquake Fault Zone. There are no known faults that traverse the project site. Therefore, the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving 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.

(2) Ground Shaking. Merced County is a region of low seismic activity. According to the geotechnical report, the primary sources of seismic shaking at the project site are anticipated to be the Foothill Fault System, the Ortigalita Fault, and the San Andreas Fault, which are located approximately 24, 37, and 64 miles, respectively, from the project site. However, the only construction associated with the proposed project is paving the existing unpaved parking area. Therefore, the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving strong seismic ground shaking.

(3) Liquefaction. Soil liquefaction is a state of soil particles suspension caused by a complete loss of strength when the effective stress drops to zero. Liquefaction usually occurs under vibratory conditions such as those induced by seismic event. The geotechnical report evaluated the potential for soil liquefaction at the project site during a seismic event and found that seismically induced settlement or bearing loss is considered unlikely, and therefore, mitigation measures for liquefaction are not warranted.

(4) Landslides. The geotechnical report states the project site is relatively flat. According to the California Department of Conservation Earthquake Zones of Required Investigation Map, the project site is not located in a landslide zone. Therefore, the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

b. Construction activities involving excavation and grading expose soils to wind, water, and other eroding elements. According to the geotechnical report, the project site soil consists of sandy silt in the upper five feet underlain by layers of clay and sandy silt. The proposed project includes grading at the project site to develop a paved parking lot, which could result in soil erosion. Implementation of the following mitigation measure would reduce impacts associated with soil erosion to a less-than-significant level.

Mitigation Measure

GEO-1 Prior to issuance of a grading permit, the applicant shall prepare an erosion control plan indicating proposed methods for the control of runoff, erosion, and sediment control, subject to review and approval by the county. The erosion control plan will be implemented during grading and construction activities.

c-d. According to the geotechnical report, soils at the project site are primarily comprised of sandy silt, which have low expansion potential and the project site is not located on a geologic unit or soil that is unstable. Groundwater was not encountered in any soil boring tests (maximum depth explored nine feet). Therefore, paving the parking lot would not result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse; or be located on expansive soil, creating substantial direct or indirect risks to life or property.

e. The proposed project does not include any new bathroom or kitchen facilities.

f. There are no known paleontological resources on the project site; however, the general plan EIR states that there is evidence to suggest that paleontological resources may be encountered virtually anywhere within Merced County (Merced County 2030 General Plan EIR, 2012, p. 9-14).

However, the proposed project land disturbance includes only the paving of an existing gravel parking lot and would not require grading to any depth that could directly or indirectly destroy a unique paleontological site.

8. Greenhouse Gas Emissions

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
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?	☐	☐	☐	☒

Comments:

a. The County of Merced has not adopted a plan for reducing greenhouse gas (GHG) emissions, nor has the County adopted a threshold of significance for GHGs. The air district has not developed or adopted a threshold of significance for GHGs from land use development projects, such as the proposed project. In lieu of an available qualified plan, guidance from the Sacramento Metropolitan Air Quality Management District (SMAQMD) was utilized for evaluating project impacts.

Construction GHG Emissions. The SMAQMD threshold of significance for construction emissions is 1,100 metric tons of GHG equivalent (MT CO_2e) per year. The CalEEMod results, included in Appendix A, show that over the construction period, the highest annual GHG emissions volume is projected at 10.6 MT CO_2e. This is substantially below the threshold of significance, and therefore, construction GHG impacts would be less than significant.

Operational GHG Emissions. The SMAQMD guidance for assessing significance of operational GHG emissions impacts is performance based. Projects that are consistent with the guidance are assumed to have a less-than-significant operational GHG emissions impact. All projects must implement two performance measures or best management practices (BMPs):

- BMP 1 - No natural gas: Projects shall be designed and constructed without natural gas infrastructure; and
- BMP 2 - Electric vehicle (EV) ready: Projects shall meet the current California Green Building Code (CALGreen) Tier 2 standards.

Each of these BMPs is summarized below for reference.

BMP 1 - No Natural Gas: Energy used in nonresidential buildings in California comes primarily from natural gas and electricity, the generation and consumption, which can result in GHG emissions. Natural gas usage emits GHGs directly when it is burned for

space heating, cooking, hot water heating and similar uses, whereas electricity usage emits GHGs indirectly to the extent that it is generated by burning carbon-based fuels. For the building sector to achieve carbon neutrality, natural gas usage will need to be phased out and replaced with electricity usage, and electrical generation will need to shift to 100-percent carbon-free sources. To support these shifts, future projects should be required to be built without natural gas infrastructure, and instead, constructed as all electric. Using electric instead of natural gas-powered appliances and end uses replaces a more emissions-intensive fossil fuel source of energy with a less emissions-intensive source of energy, electricity from the grid that is increasingly transitioning to renewable sources.

Operations for the proposed project will take place within an existing 72-foot by 64-foot barn and will not require the construction of new structures supported by natural gas infrastructure. The only construction that will take place involves site preparation and paving to develop the driveway and event parking lot. Therefore, the project is consistent BMP 1.

BMP 2 - Electric vehicle (EV) ready: The requirements for electric vehicle (EV) charging infrastructure in new land use development projects are governed by the CALGreen standards. These standards are set forth in Title 24 of the California Code of Regulations, and they are regularly updated on a three-year cycle. The CALGreen standards consist of a set of mandatory standards for new development, as well as two sets of voluntary standards known as Tier 1 and Tier 2. Although the Tier 1 and Tier 2 standards are voluntary, they often form the basis of future mandatory standards adopted in subsequent updates. The voluntary standards outline more aggressive actions than do the mandatory standards. As noted above, SMAQMD BMP 2 requires conformance with Tier 2 voluntary standards.

Providing EV charging infrastructure per Tier 2 standards increases fuel redundancy for electric vehicles even if an extreme weather event disrupts other fuel sources, in addition to reducing GHG emissions. This will enable drivers of electric and hybrid (electric and gasoline) vehicles to drive a larger share of miles, thereby displacing GHG emissions from gasoline consumption with a lower volume indirect emission from renewable electricity.

There is not sufficient information available in the current project design to verify that EV infrastructure will be provided to meet the CALGreen Tier 2 standards. Therefore, the following mitigation measure is required to ensure the project meets this performance standard.

Mitigation Measure

GHG-1 The proposed project shall be designed to include electric vehicle support improvements consistent with the latest adopted version of the CALGreen Tier 2 voluntary standards. Inclusion of these design elements in the final project plans shall be verified by the Merced County Building and Safety Official prior to issuance of a building permit.

The SMAQMD has established a quantified threshold of significance for operational GHG emissions of 1,100 MT CO_2e. As stated in the SMAQMD guidance, if a projects annual emissions volume is below 1,100 MT CO_2e after subtracting the GHG reductions from implementing BMPs 1 and 2, the project can be found to have a less-than-significant impact and no further analysis is required.

GHG emissions from construction and operation of the proposed project were estimated using CalEEMod. Refer to Section 3, Air Quality, for modeling methodology and assumptions. The detailed CalEEMod modeling results are included as Appendix A. Construction activity, including operation of off-road construction equipment, would generate approximately 18.0 MT CO_2e per year. Construction emissions are amortized over an assumed 30-year operational timeframe; amortized annual emissions equal 0.6 MT CO_2e. Project operations would generate GHG emissions from transportation, energy use, waste generation, and water use. Projected unmitigated emissions from these sources are summarized in Table 8-1, Unmitigated GHG Emissions.

Table 8-2 Unmitigated GHG Emissions

Emission Sources	GHG Emissions[1,2]
Mobile	414.87
Area	0.07
Energy	31.97
Water	16.81
Waste	0.05
Refrigerant	<0.01
Construction	0.60
Total	464.37

SOURCE: EMC Planning Group 2024
NOTE:
1. Expressed in MT CO_2e.
2. Results may vary due to rounding.

The total annual construction and operational unmitigated GHG emissions would be 464.37 MT CO_2e. The annual operational emissions would not exceed the 1,100 MT CO_2e threshold of significance. Therefore, with the implementation of mitigation measure GHG-1, the project would have a less-than-significant impact and no further BMPs are required.

b. Given that the County does not have an adopted plan for assessing the impact of GHG emissions, the SMAQMD's guidance is considered to be the applicable plan for reducing GHG emissions. The proposed project would, after implementation of mitigation measure GHG-1, be consistent with the SMAQMD guidance. Therefore, it would have no impact from conflict with the applicable plan for reducing GHG emissions.

9. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
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, 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 a public-use airport, result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
f.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g.	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

Comments:

a. The proposed project (event center) will not consist of routine transport, use, or disposal of hazardous materials. Hazardous materials used during construction may include fuels, oils, mechanical fluids, and other chemicals. Hazardous materials associated with operation of the proposed project may include typical solvents, paints, chemicals used for cleaning and building maintenance, and landscaping supplies. Transportation, storage, use and disposal of hazardous materials during construction and operation of the proposed project would be required to comply with applicable federal, state, and local statutes and regulations. Therefore, the proposed project would not create a significant hazard to the

public or the environment through the routine transport, use, or disposal of hazardous materials.

b. Existing uses on the project site includes a barn, single-family residence, and ancillary structures. Based on historical aerial photographs, the project site appears to have been developed with residential and agricultural uses in 1989. The existing barn, proposed to be used as an event center, appears to have been constructed in 2019. The barn has since been utilized for private gatherings/events by the property owners. Therefore, the proposed project would not 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. No schools are located within one-quarter mile of the project site. The nearest school is Winfield Elementary School located approximately 2.5 miles southwest from the project site in Winton. Therefore, the proposed project would not emit or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d. The project site is not located on or adjacent to sites identified on any of the following lists compiled pursuant to Government Code section 65962.5. Therefore, the proposed project would not create a significant hazard to the public or the environment.

- Hazardous Materials Waste and Substances Sites from the Department of Toxic Substances Control EnviroStor Database (Department of Toxic Substances Control 2024;
- Leaking Underground Storage Tank Sites from the State Water Board's GeoTracker Database (State Water Resources Board 2024);
- Solid Waste Disposal Sites Identified by Water Board with Waste Constituents Above Hazardous Waste Levels Outside the Waste Management Unit (California Environmental Protection Agency 2024);
- "Active" Cease and Desist Order and Cleanup and Abatement Orders from Water Board (California Environmental Protection Agency 2024); and
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by the Department of Toxic Substances Control (California Environmental Protection Agency 2024).

e. The proposed project is located approximately ½ mile north of Castle Airport and is subject to the provisions of the Castle Airport Land Use Compatibility Plan (hereinafter "plan"). The Merced County Airport Land Use Commission (ALUC) reviewed the conditional use permit application (CUP21-004) and outlined additional conditions to ensure compatibility with the plan (Steve Maxey, ALUC Secretary, application comment letter, March 19, 2021). These conditions include:

- Limiting events to a maximum of 300 people, including staff and vendors; and
- Prohibiting bright or distracting lights, such as searchlights or lasers, that could be mistaken for airport lights.

With these conditions, the Airport Land Use Commission determined the proposed project would be consistent with the plan's compatibility criteria. Compliance with these requirements would reduce safety hazard impacts to a less-than-significant level. Further, as described in Section 13. Noise, checklist item (c), the project site is outside the projected noise contour zones of Castle Airport, indicating it will not expose residents or workers to excessive airport operations noise. Therefore, the impact from exposure to excessive airport operations noise would be less than significant.

f. The project site is located on the south side of Eucalyptus Avenue and west of Buhach Road in unincorporated Merced County. State Route 59 to the east and State Route 99 to the south provide regional access to the project site. Freeways and major county roads would be used as primary evacuation routes in the event of a natural hazard, technological hazard, or domestic security threat. State Route 59 is the nearest designated arterial roadway; Eucalyptus Avenue is designated as a collector roadway. The proposed project would not add significant amounts of traffic that would interfere with emergency response or evacuation, and therefore, would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

g. According to the California Department of Forestry and Fire's Fire Hazard Severity Zone Viewer, the project site is not located within or near a fire hazard severity zone in a state responsibility area. The nearest fire hazard severity zone in a state responsibility area is located approximately five miles east of the project site. Therefore, the proposed project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

10. HYDROLOGY AND WATER QUALITY

Would the project:

	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☐	☒
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(1) Result in substantial erosion or siltation on- or off-site;	☐	☒	☐	☐
(2) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
(3) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or	☐	☒	☐	☐
(4) 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?	☐	☐	☐	☒

Comments:

a. **Water Quality Standards or Waste Discharge Requirements Associated with Construction.** The State Water Resources Control Board has implemented a National Pollutant Discharge Elimination System (NPDES) Program to control and enforce storm water pollutant discharge reduction per the Clean Water Act. The Central Valley Regional Water Quality Control Board issues and enforces the NPDES permits for discharges to water bodies in Merced County.

Projects disturbing more than one acre of land during construction are required to file a notice of intent to be covered under the State NPDES Construction General permit for discharges of storm water associated with construction activities. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that details how water quality would be protected during construction activities. The SWPPP must contain a site map(s) that shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography (both before and after construction), and drainage patterns across the project. Best Management Practices, which are detailed within each permit, are to be implemented to protect water quality.

Physical impacts of the proposed project involve grading and paving 1.7 acres to develop a driveway and a 60-vehicle parking area, which has the potential to increase discharge of storm water pollutants during construction due to ground disturbance. The project applicant would be required to obtain a State NPDES Construction General Permit for development on the project site. By complying with the Construction General Stormwater Permit requirements, the proposed project would not violate any water quality standards or degrade water quality.

b. **Groundwater Supplies.** Water service to the project site is currently provided by two on-site domestic wells. The proposed project entails operating an event center with a maximum capacity of 200 guests and no residential component. The event center would operate up to 20 days per month during peak months (April, May, September, October, and November) and up to 10 days per month during slower months (January, February, March, June, July, and August). Water use for events include kitchen operations and restrooms. There is no indication that this limited water use would have a significant effect on groundwater supplies.

Groundwater Recharge. According to the Groundwater Basin Boundary Assessment Tool by the Department of Water Resources, the project site lies within the San Joaquin Valley-Merced Groundwater Subbasin, which includes approximately 512,959 acres. Development of the proposed project (grading and paving 1.7 acres) would minimally increase the amount of impervious surface and therefore, would not substantially interfere with groundwater recharge. This impact would be less than significant.

c. **(1) Erosion.** Development of the proposed project may lead to significant siltation and/or erosion on- or off-site due to the proposed grading. Implementation of Mitigation Measure GEO-1 presented in Section 7, Geology and Soils, would reduce this potentially significant impact to a less-than-significant level.

(2) Flooding. According to the geotechnical report (included as Appendix C, the project site is located within FEMA Flood Zone X, indicating minimal risk of flooding. The proposed project involves the paving of a 60-vehicle parking area which would introduce additional impervious surfaces. However, the presence of an adjacent 6-acre grazing field provides a natural buffer for water absorption and runoff management. Given these site

conditions and the existing minimal flood hazard classification, project impacts associated with flooding would be less than significant.

(3) Runoff. Development of the proposed project would create storm water runoff. To ensure that the proposed project does not provide additional sources of polluted runoff, the following mitigation measure shall be required.

Mitigation Measure

HYD-1 Prior to issuance of a grading permit, the applicant shall prepare a drainage plan that complies with the Merced County Best Management Practices and standards established for compliance with non-point discharge emissions for storm water. The drainage plan shall incorporate Low Impact Development strategies and Best Management Practices to reduce storm water runoff, encourage infiltration, and reduce pollutant transmission. The drainage plan shall be subject to review and approval by the county and be implemented with development of the project.

(4) Flood Flows. As discussed under checklist item "d" below, the project site is located within an area of minimal flood hazard. Therefore, development of the proposed project would not impede or redirect flood flows.

d. According to the geotechnical report (included as Appendix C, the project site is located within FEMA Flood Zone X, indicating minimal risk of flooding. Additionally, the California Department of Conservation does not identify the project site within a tsunami hazard area, nor a seiche zone. Therefore, development of the proposed project would not risk the release of pollutants due to project inundation.

e. **Water Quality.** The project site is located within the San Joaquin Valley Groundwater Basin. The Water Quality Control Plan for the California Regional Water Quality Control Board Central Valley Region (hereinafter "basin plan") shows how the quality of the surface and ground waters in the Central Valley Region should be managed to provide the highest water quality reasonably possible. The Regional Water Quality Control Board implements the basin plan by issuing and enforcing waste discharge requirements to individuals, communities, or businesses whose waste discharges can affect water quality. These requirements can be either State Waste Discharge Requirements for discharges to land, or federally delegated NPDES permits for discharges to surface water. As discussed under checklist item "a" above, the project applicant would be required to obtain a State NPDES Construction General Permit for development on the project site. By complying with the Construction General Stormwater Permit requirements, the proposed project would not conflict with the basin plan.

Groundwater Sustainability. The proposed project involves using an existing barn as a private event center which would create additional demand for groundwater. The Sustainable Groundwater Management Act is a State law requiring groundwater basins to be sustainable. The act enables eligible local agencies to form groundwater sustainability

agencies, develop groundwater sustainability plans for designated basins in their jurisdiction by 2020, and achieve groundwater sustainability within 20 years of plan implementation.

The project site is located within the San Joaquin Valley-Merced Groundwater Subbasin, managed by three Groundwater Sustainability Agencies (GSAs): the Merced Subbasin GSA, the Merced Irrigation-Urban GSA, and the Turner Island Water District GSA. These agencies collaboratively developed the Merced Groundwater Subbasin Groundwater Sustainability Plan, which was adopted in November 2019. A public draft update to the plan has been developed (October 2024). The plan details how the Merced Subbasin will become sustainable over a 20-year timeframe through a combination of projects and management of groundwater pumping.

To achieve the sustainability goals for the subbasin, and to avoid undesirable results over the remainder of a 50-year planning horizon, multiple projects and management actions have been identified and considered in the plan to ensure subbasin sustainability. The proposed project would not interfere with implementation of the projects identified in the plan.

11. LAND USE AND PLANNING

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Physically divide an established community?	☐	☐	☐	☒
b.	Cause any 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?	☐	☐	☐	☒

Comments:

a. The project site is surrounded by agricultural uses to the north, south, and east. Scattered rural residential and commercial uses are present west of the project site; however, an established community is not present in the vicinity of the project site. Therefore, the proposed project would not physically divide an established community.

b. The project site has a *2030 Merced County General Plan* land use designation of Agriculture (A) and is zoned General Agriculture (A-1). Recreational events/weddings are a permitted use in the A-1 zone upon obtaining a conditional use permit (CUP). Conditional use permits are discretionary permits that require special review and control to ensure that a use of land is compatible with the neighborhood and surrounding residences.

The proponents of the proposed project (Hoyt Event Center) have made application to the County of Merced for a conditional use permit (CUP21-004) to operate as an event venue and make necessary upgrades for event parking. With approval of the proposed project, the two-acre event venue would operate to host events and gatherings, including weddings, receptions, seasonal events, etc. No feature of the proposed project would conflict with the existing agricultural land use and zoning designations, nor would it cause an 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.

12. MINERAL RESOURCES

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Result in 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 in a local general plan, specific plan, or other land-use plan?	☐	☐	☐	☒

Comments:

a-b. According to Figure 10-3 of the General Plan EIR, the project site is not located within an area that has a high likelihood of known significant sand and gravel resources (Merced County 2012, p. 10-6). Therefore, implementation of the project would not 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 nor would the project result in the loss of availability of a locally important mineral resource recovery site delineated in a local general plan, specific plan, or other land-use plan.

13. NOISE

Would the project result in:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
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 in applicable standards of other agencies?	☐	☐	☐	☒
b.	Generation of excessive ground-borne vibration or ground borne noise levels?	☐	☐	☒	☐
c.	For a project located within the vicinity of a private airstrip or an airport land-use plan or, where such a plan has not been adopted, within two miles of a public airport or public-use airport, expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

Comments:

The following discussion is based on the *Hoyt Event Center, Merced County, California Acoustical Analysis* (hereinafter "acoustical analysis") prepared by WJV Acoustics Inc. to assess the potential noise impacts associated with the proposed project. The acoustical analysis is included as Appendix D.

a. The Health and Safety Element of the *Merced County 2030 General Plan* (hereinafter "general plan") establishes land use compatibility criteria for transportation and non-transportation noise sources. Table HS-1 of the general plan outlines maximum allowable exterior and interior noise exposure levels for various land uses. For residential areas, the exterior noise level standard is 65 dB Ldn for outdoor activity areas, while the interior noise level standard is 45 dB Ldn (general plan, page HS-10).

Table HS-2 of the general plan specifies noise level standards for non-transportation (stationary) sources. Daytime hours are defined as 7:00 a.m. to 10:00 p.m., with a residential exterior noise standard of 55/75 dB, and nighttime (10:00 p.m. to 7:00 a.m.) at 50/70 dB Ldn. Interior noise level standards remain consistent at 35/55 dB Ldn for both daytime and nighttime (general plan, page HS-11).

The Merced County Code of Ordinances outlines additional noise standards relevant to the project. According to Section 10.60.030 (Sound Level Limitations), the following restrictions apply to sound sources on private property when measured at or within the property line of the receiving property:

1. Sound levels must not exceed the background level by 10 dBA during daytime hours (7:00 a.m. to 10:00 p.m.) or by 5 dBA during nighttime hours (10:00 p.m. to 7:00 a.m.).
2. Sound levels must not exceed 65 dBA Ldn on residential properties or 70 dBA Ldn on non-residential properties.
3. Maximum sound levels (Lmax) must not exceed 75 dBA on residential properties or 80 dBA on nonresidential properties.

Construction Noise

The only construction activity associated with the proposed project would be paving the driveway and parking lot, and will occur more than 450 feet from nearby noise-sensitive land uses (residences). While construction noise may temporarily increase ambient noise levels, Section 10.60.030(B5) of the Merced County Municipal Code exempts construction-related noise from sound level limits of Section 10.60.030(A) if activities are limited to daytime hours (7:00 a.m. to 6:00 p.m.) and equipment is properly muffled and maintained. Compliance with these requirements would ensure noise-related impacts do not exceed standards established in Section 10.60.030(A) of the Merced County Municipal Code.

Operational Noise

Amplified Speech and Music

The proposed project involves using an existing barn as a private event center, which would include amplified speech and music. All amplified music would be played indoors within the barn. During warmer months, the barn doors would typically remain open for airflow, while in cooler months, they would be closed. All amplified music would end by 10:00 p.m.

The area surrounding the project site is predominantly agricultural and rural residential land uses. Figure 8, Project Vicinity and Analyzed Receptors, illustrates the receptors located within the vicinity of the proposed project. As detailed in the acoustical analysis, the nearest off-site residential land uses (sensitive receptors) are located approximately 1,400 feet to the north (R-2), 675 feet to the northwest (R-3), and 575 feet to the west (R-4) of the event center barn (acoustical analysis, page 13). Additionally, WJVA analyzed noise levels at an on-site residence approximately 500 feet east (R-1) of the barn. Although the on-site residence is not considered a sensitive receptor, this analysis provides context for on-site noise levels.

On October 15, 2024, WJVA staff measured noise levels at the project site with amplified music played through a speaker system in the proposed location for events. Measurements were taken at the four locations described above (R-1 through R-4). Noise level measurements with the barn doors open ranged from 57 to 81 dB L_{max} and 40 to 49 dB L_{50} (acoustical analysis, page 9, Table IV). Noise level measurements with the barn

doors closed ranged from 59 to 79 dB L_{max} and 40 to 44 dB L_{50} (acoustical analysis, page 10, Table V).

At all measurement locations, with barn doors open and closed, L_{50} noise levels did not exceed 50 dB, meeting standards for nearby residential properties. The L_{50} metric, representing noise levels exceeded 50 percent of the time, is a reliable indicator for assessing the consistent noise produced by amplified music. The acoustical analysis confirmed that project-related noise levels remained within Merced County acceptable limits (general plan, pages HS-10 – 11).

The proposed project would be required to comply with Merced County daytime noise standards (7:00 a.m. to 10:00 p.m.) at all nearby sensitive receptor locations. Compliance with the Merced County sound level limitations would ensure noise related impacts would not exceed standards established in Municipal Code Section 10.60.030(A). Therefore, the proposed project would not 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 in applicable standards of other agencies.

Vehicle Movements

Noise from vehicle movements and activity in parking lots is typically low due to limited speeds and is generally not considered significant. Common sources of noise in parking lots include voices, car stereo systems, and the opening/closing of doors and trunks. These noise levels can vary based on factors such as the number of vehicle movements and time of day. A passing car in a parking lot typically generates noise levels of 60 to 65 dB at 50 feet, similar to a raised voice. For this project, the nearest vehicle movement area is approximately 350 feet from the closest residential area, resulting in noise levels of 43 to 48 dB at the closest residence. These levels are below Merced County's daytime and nighttime maximum noise standards and are not expected to exceed County noise regulations. Parking lot vehicle movement and human activity noise would not be considered a significant impact.

b. Vibration from construction activities could be detected at the closest sensitive land uses, especially during movements by heavy equipment or loaded trucks and during some paving activities. The closest existing residences to construction activities within the project site are generally located at a distance of 350 feet or greater. Construction activities of the proposed project are limited to grading and paving 1.7 acres to develop a driveway and an event parking lot. Vibration levels, if any, would be minimal during construction are not expected to cause damage to any buildings. Therefore, this impact would be less than significant.

Ongoing operations activities are not expected to result in any vibration impacts at nearby sensitive uses.

c. As illustrated in Map CAS 1 of the Merced County Airport Land Use Compatibility Plan (hereinafter "plan"), the project site is within the Airport Influence Area and subject to the plan's provisions. As discussed in Section 9, Hazards and Hazardous Materials, the Airport Land Use Commission (ALUC) reviewed the conditional use permit application (CUP21-004) and specified additional conditions to ensure compatibility with the plan (Steve Maxey, ALUC Secretary, March 19, 2021).

The project site is outside the projected noise contour zones of Castle Airport, indicating it will not expose residents or workers to excessive airport operations noise. Therefore, the impact from exposure to excessive airport operations noise would be less than significant.

0 300 feet

Source: WJV Acoustics

Figure 8

Project Vicinity & Analyzed Receptors

Hoyt Event Center IS/MND

14. POPULATION AND HOUSING

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	☒
b.	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Comments:

a. The proposed project site is located in a region primarily developed with agricultural uses, including orchards, field crops, and animal confinement operations. It would not result in a new or different type of use for the area, nor would the project create or improve any infrastructure serving the site or region. The proposed project is consistent with Merced County land use plans, and no modification of land use or development policies would be necessary to accommodate the proposed project.

The proposed event center would operate without permanent staff. As a result, the proposed project is not anticipated to result in a net increase of labor needs but could be accommodated by the existing workforce within Merced County. Implementation of the project would not result in the exceedance of population projections or result in any growth inducing effects. Therefore, the proposed project would not result in substantial direct or indirect growth inducement, and no adverse impacts would occur.

b. The proposed project would not displace substantial numbers of people or existing housing units.

15. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of or 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 following public services:

	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a. Fire protection?	☐	☐	☐	☒
b. Police protection?	☐	☐	☐	☒
c. Schools?	☐	☐	☐	☒
d. Parks?	☐	☐	☐	☒
e. Other public facilities?	☐	☐	☐	☒

Comments:

The Merced County Fire Department serves the unincorporated areas of Merced County. The Merced County Fire Station 63 is located at 6825 Winton Way, approximately four miles southwest of the project site. The Merced County Sheriff's Department provides police protection in the unincorporated areas of Merced County. The Merced Main Office located at 700 W 22nd Street in Merced is approximately 10 miles southeast of the project site. There are public schools located in Winton served by the Winton School District and in Merced served by the Merced City Elementary and Merced Union High School Districts. Merced County library services are available in Winton, Atwater, and Merced. The nearest parks are located approximately three miles southwest in Winton, including Winton Park and Osborne Park. Park services are discussed in more detail in Section 16, Recreation.

a-e. The proposed project involves repurposing an existing barn as a private event center and does not include construction of new buildings. As discussed in Section 14, Population and Housing, the proposed event center would operate without permanent staff and would be accommodated by the existing workforce within Merced County. Since the project does not include construction of residences, and needed employees would be accommodated from the existing workforce, no increase in population is expected to result from the proposed project.

The proposed events have the potential to require emergency fire and/or sheriff's service; however, no physical improvements to public facilities would be required to serve the project. Therefore, there would be no impact associated with the construction of new facilities or physically altered facilities.

16. RECREATION

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
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?	☐	☐	☐	☒

Comments:

a-b. No existing public recreational facilities are located on the project site or in the vicinity, and implementation of the project would not directly affect the provision or demand for any recreation. There would be no increase in the use of existing neighborhood or regional parks or other recreational facilities that would cause or accelerate the physical deterioration of such facilities. Further, the proposed project does not require the construction or expansion of such facilities. Therefore, no significant adverse impacts to recreation would occur with implementation of the proposed project.

17. TRANSPORTATION

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures 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?	☐	☐	☐	☒

Comments:

This section is based on the traffic impact study, titled "Hoyt Event Center Transportation Impact Study" (hereinafter "traffic impact study") prepared for the proposed project by Kittelson and Associates on February 7, 2025. The traffic impact analysis is included as Appendix E.

a. The proposed project involves repurposing an existing barn as a private event center, and is estimated to generate approximately 146 daily vehicle trips on 34 weekends annually (traffic impact study, Table 1, page 4). Given the area's low traffic volumes, these additional trips are not expected to significantly impact roadway performance.

The project aligns with the Circulation policies in the Merced County General Plan. There are no transit, bicycle, or pedestrian facilities in the immediate vicinity of the project site, and the 2022 Merced County Association of Governments (MCAG) Regional Transportation Plan does not identify planned improvements in the project area. The project will not alter public road configurations or prevent future additions of pedestrian, bicycle, or transit facilities. Therefore, the project would not conflict with circulation-related programs, plans, or policies.

b. Section 15064.3(b) of the CEQA Guidelines describes criteria for analyzing transportation impacts based on Vehicle Miles Traveled (VMT), measured by the number of daily trips and their travel distances. Senate Bill (SB) 743 requires the use of VMT for assessing transportation impacts under CEQA.

The Merced County Association of Governments (MCAG) adopted VMT Thresholds and Implementation Guidelines to assist member jurisdictions. Under these guidelines, projects consistent with the lead agency's General Plan and generating fewer than 1,000

daily trips are presumed to have less-than-significant VMT impacts. For projects not consistent with the General Plan, the threshold is 500 average daily trips.

Based on applicant-provided information, Table 1 outlines the project's daily trip generation (traffic impact study, Table 1, page 4). With an 85 percent average utilization rate, the project is expected to host 170 attendees per event, generating 136 daily trips (68 trips each way, assuming 2.5 guests per vehicle). Additionally, staff and vendor trips are conservatively estimated at 10 daily trips, resulting in a total of 146 trips per event. Over 34 annual events, this totals 4,964 trips, averaging 14 daily trips annually.

The project meets MCAG's screening criteria, with an annual daily average of 14 trips, well below the 500-trip threshold. Therefore, the project's VMT impact is considered less than significant.

c. The proposed event center will exclusively utilize the easternmost driveway on Eucalyptus Avenue, a 20-foot-wide gated access with a Knox Box, which also serves on-site residences. The project site includes two additional driveways, one on Buhach Road and another on Eucalyptus Avenue, which will not be used for event center access.

Prior to obtaining building permits, the applicant must submit detailed plans demonstrating compliance with state and local standards. The County engineering department will review and approve the driveway design as part of the development process. This includes a sight distance assessment to ensure compliance with the California Department of Transportation (Caltrans) Highway Design Manual and County standards. Adequate sight distance will be ensured by maintaining clear lines of sight, free from obstructions such as vegetation or parked vehicles.

The project does not propose permanent modifications to public roadways or the construction of new roads. Compliance with standard conditions, including sight distance reviews, would ensure the project would not introduce hazards related to geometric design features or incompatible uses. Therefore, the impact is considered less than significant.

d. The Merced County Fire Department enforces standards for project driveways to ensure adequate emergency access. The project's 20-foot-wide driveway complies with the access requirements outlined in CFC 503.2.1. Additionally, a Knox Box will be installed in accordance with CFC 506.1 to facilitate emergency access to the site. The project will also include fire lane markings to ensure fire apparatus can efficiently access the property. As a result, the proposed project would not lead to inadequate emergency access.

18. TRIBAL CULTURAL RESOURCES

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, or 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:				
(1)	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources code section 5020.1(k), or	☐	☐	☐	☒
(2)	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	☒

Comments:

a. The CEQA statute as amended by Assembly Bill 52 (Public Resources Code Sections 21073 and 21074) define "California Native American tribe" and "tribal cultural resources." A California Native American tribe is defined as a Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission. "Public Resources Code Section 21080.3.1 outlines procedures for tribal consultation as part of the environmental review process.

County staff (email message, December 5, 2024) stated that the project site is not located in an area that has been requested for tribal consultation by California Native American tribes pursuant to Public Resources Code section 21080.3.1.

19. UTILITIES AND SERVICE SYSTEMS

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Require or result in the relocation or construction of new or expanded water, wastewater treatment, 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, single-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 inadequate 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?	☐	☐	☐	☒

Comments:

a. The proposed project would be served by existing infrastructure at the property and would not require the relocation or construction of new or expanded water, electric power, natural gas, or telecommunication facilities.

b. The property is served by two existing on-site domestic wells, that would provide water for the proposed project events. No additional water supplies are proposed or expected.

c. The proposed project would be served by existing wastewater facilities at the property and no new wastewater facilities are proposed or required.

d-e. The proposed project would result in the use of the existing on-site barn as a private event center with a maximum capacity of 200 guests and would operate without permanent staff, with organizers responsible for catering and cleanup. All dishware, glassware, and utensils will be transported and cleaned off-site. Any recyclable materials

will be recycled, and remaining trash will be sent to Waste Management Inc., which serves the unincorporated area of Winton.

Furthermore, the event center would operate up to 20 days per month during peak months (April, May, September, October, and November) and up to 10 days per month during slower months (January, February, March, June, July, and August). As operations would not be constant, the project's impact on solid waste would be minimal.

Therefore, the proposed project would 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, recycle opportunities would be made available at the event center, complying with federal, state, and local management and reduction statutes and regulations related to solid waste.

20. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
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 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?	☐	☐	☐	☒

Comments:

a-d. According to the California Department of Forestry and Fire's Fire Hazard Severity Zone Viewer, the project site is not located within or near a fire hazard severity zone in a state responsibility area. The nearest fire hazard severity zone in a state responsibility area is located approximately five miles east of the project site.

21. MANDATORY FINDINGS OF SIGNIFICANCE

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures 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 an endangered, rare, or threatened species; 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?	☐	☐	☒	☐

Comments:

a. As discussed in Section 4.0, Biological Resources, the proposed project has the potential to have substantial adverse effects associated with nesting birds and roosting bats. Implementation of Mitigation Measures BIO-1 through BIO-3 would reduce potential impacts to a less-than-significant level. As discussed in Section 5.0, Cultural Resources, the proposed project has a small potential to impacts historic and/or unique archaeological resources. Implementation of Mitigation Measures CR-1 and CR-2 would reduce potential impacts to a less-than-significant level.

b. The proposed project has the potential to result in construction-related impacts in the areas of biological resources, cultural resources, erosion, and water quality. However, with the implementation Mitigation Measures BIO-1 through BIO-3; CR-1 through CR-2; GEO-1; and HYD-1, impacts of the proposed project would not be cumulatively considerable. The proposed project also would result in greenhouse gas emissions impact; however, with implementation of Mitigation Measure GHG-1, the impact would not be cumulatively considerable.

c. Based upon the analysis in this initial study, the proposed project does not have the potential to result in environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

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Air Quality Modeling Results

A

APPENDIX

Hoyt Event Center Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Hoyt Event Center
Construction Start Date	5/1/2025
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	23.4
Location	5197 Eucalyptus Ave, Winton, CA 95388, USA
County	Merced
City	Unincorporated
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2324
EDFZ	14
Electric Utility	Merced Irrigation District
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Arena	1.90	Acre	1.90	4,608	0.00	0.00	—	—

Parking Lot	1.70	Acre	1.70	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Unmit.	4.32	31.7	31.3	0.05	21.2	11.4	5,465
Daily, Winter (Max)	—	—	—	—	—	—	—
Unmit.	4.32	6.32	9.70	0.01	0.41	0.28	1,506
Average Daily (Max)	—	—	—	—	—	—	—
Unmit.	0.15	0.35	0.37	< 0.005	0.20	0.11	63.7
Annual (Max)	—	—	—	—	—	—	—
Unmit.	0.03	0.06	0.07	< 0.005	0.04	0.02	10.6

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—
2025	3.41	31.7	31.3	0.05	21.2	11.4	5,465
2026	4.32	0.86	1.13	< 0.005	0.02	0.02	134
Daily - Winter (Max)	—	—	—	—	—	—	—
2025	—	—	—	—	—	—	0.00
2026	4.32	6.32	9.70	0.01	0.41	0.28	1,506

Average Daily	—	—	—	—	—	—	—
2025	0.04	0.35	0.37	< 0.005	0.20	0.11	63.7
2026	0.15	0.20	0.30	< 0.005	0.01	0.01	45.1
Annual	—	—	—	—	—	—	—
2025	0.01	0.06	0.07	< 0.005	0.04	0.02	10.6
2026	0.03	0.04	0.05	< 0.005	< 0.005	< 0.005	7.46

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Unmit.	1.38	1.68	10.9	0.03	1.98	0.52	2,942
Daily, Winter (Max)	—	—	—	—	—	—	—
Unmit.	1.23	1.90	8.92	0.02	1.98	0.52	2,751
Average Daily (Max)	—	—	—	—	—	—	—
Unmit.	1.25	1.80	9.12	0.02	1.95	0.52	2,801
Annual (Max)	—	—	—	—	—	—	—
Unmit.	0.23	0.33	1.66	< 0.005	0.36	0.09	464
Exceeds (Annual)	—	—	—	—	—	—	—
Threshold	10.0	10.0	100	27.0	15.0	14.0	—
Unmit.	No	No	No	No	No	No	—

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Mobile	1.23	1.64	10.6	0.03	1.98	0.52	2,646
Area	0.15	< 0.005	0.20	< 0.005	< 0.005	< 0.005	0.83

Energy	< 0.005	0.05	0.04	< 0.005	< 0.005	< 0.005	193
Water	—	—	—	—	—	—	102
Waste	—	—	—	—	—	—	0.31
Refrig.	—	—	—	—	—	—	0.03
Total	1.38	1.68	10.9	0.03	1.98	0.52	2,942
Daily, Winter (Max)	—	—	—	—	—	—	—
Mobile	1.11	1.85	8.88	0.02	1.98	0.52	2,456
Area	0.12	—	—	—	—	—	—
Energy	< 0.005	0.05	0.04	< 0.005	< 0.005	< 0.005	193
Water	—	—	—	—	—	—	102
Waste	—	—	—	—	—	—	0.31
Refrig.	—	—	—	—	—	—	0.03
Total	1.23	1.90	8.92	0.02	1.98	0.52	2,751
Average Daily	—	—	—	—	—	—	—
Mobile	1.12	1.75	8.98	0.02	1.95	0.51	2,506
Area	0.13	< 0.005	0.10	< 0.005	< 0.005	< 0.005	0.41
Energy	< 0.005	0.05	0.04	< 0.005	< 0.005	< 0.005	193
Water	—	—	—	—	—	—	102
Waste	—	—	—	—	—	—	0.31
Refrig.	—	—	—	—	—	—	0.03
Total	1.25	1.80	9.12	0.02	1.95	0.52	2,801
Annual	—	—	—	—	—	—	—
Mobile	0.20	0.32	1.64	< 0.005	0.36	0.09	415
Area	0.02	< 0.005	0.02	< 0.005	< 0.005	< 0.005	0.07
Energy	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	32.0
Water	—	—	—	—	—	—	16.8
Waste	—	—	—	—	—	—	0.05
Refrig.	—	—	—	—	—	—	< 0.005

Total	0.23	0.33	1.66	< 0.005	0.36	0.09	464

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	3.31	31.6	30.2	0.05	1.37	1.26	5,314
Dust From Material Movement	—	—	—	—	19.7	10.1	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.17	0.17	< 0.005	0.01	0.01	29.1
Dust From Material Movement	—	—	—	—	0.11	0.06	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	4.82
Dust From Material Movement	—	—	—	—	0.02	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.10	0.07	1.11	0.00	0.13	0.03	152
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.76
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.13
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	1.74	16.3	17.9	0.03	0.72	0.66	2,970
Dust From Material Movement	—	—	—	—	7.08	3.42	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.20	< 0.005	0.01	0.01	32.5
Dust From Material Movement	—	—	—	—	0.08	0.04	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.04	< 0.005	< 0.005	< 0.005	5.39
Dust From Material Movement	—	—	—	—	0.01	0.01	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.08	0.06	0.95	0.00	0.11	0.03	130
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005	1.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Paving (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.68	6.23	8.81	0.01	0.26	0.24	1,355
Paving	0.45	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.17	0.24	< 0.005	0.01	0.01	37.1
Paving	0.01	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.04	< 0.005	< 0.005	< 0.005	6.14
Paving	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.09	0.09	0.89	0.00	0.15	0.04	151
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	< 0.005	< 0.005	4.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Architectural Coating (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.86	1.13	< 0.005	0.02	0.02	134
Architectural Coatings	4.20	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.86	1.13	< 0.005	0.02	0.02	134
Architectural Coatings	4.20	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.03	< 0.005	< 0.005	< 0.005	3.67
Architectural Coatings	0.11	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.61
Architectural Coatings	0.02	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Arena	1.23	1.64	10.6	0.03	1.98	0.52	2,646
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.23	1.64	10.6	0.03	1.98	0.52	2,646
Daily, Winter (Max)	—	—	—	—	—	—	—
Arena	1.11	1.85	8.88	0.02	1.98	0.52	2,456
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.11	1.85	8.88	0.02	1.98	0.52	2,456
Annual	—	—	—	—	—	—	—
Arena	0.20	0.32	1.64	< 0.005	0.36	0.09	415
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.20	0.32	1.64	< 0.005	0.36	0.09	415

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—

Arena	—	—	—	—	—	—	57.7
Parking Lot	—	—	—	—	—	—	80.9
Total	—	—	—	—	—	—	139
Daily, Winter (Max)	—	—	—	—	—	—	—
Arena	—	—	—	—	—	—	57.7
Parking Lot	—	—	—	—	—	—	80.9
Total	—	—	—	—	—	—	139
Annual	—	—	—	—	—	—	—
Arena	—	—	—	—	—	—	9.55
Parking Lot	—	—	—	—	—	—	13.4
Total	—	—	—	—	—	—	22.9

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Arena	< 0.005	0.05	0.04	< 0.005	< 0.005	< 0.005	54.5
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	< 0.005	0.05	0.04	< 0.005	< 0.005	< 0.005	54.5
Daily, Winter (Max)	—	—	—	—	—	—	—
Arena	< 0.005	0.05	0.04	< 0.005	< 0.005	< 0.005	54.5
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	< 0.005	0.05	0.04	< 0.005	< 0.005	< 0.005	54.5
Annual	—	—	—	—	—	—	—
Arena	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	9.03
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	9.03

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Consumer Products	0.10	—	—	—	—	—	—
Architectural Coatings	0.01	—	—	—	—	—	—
Landscape Equipment	0.03	< 0.005	0.20	< 0.005	< 0.005	< 0.005	0.83
Total	0.15	< 0.005	0.20	< 0.005	< 0.005	< 0.005	0.83
Daily, Winter (Max)	—	—	—	—	—	—	—
Consumer Products	0.10	—	—	—	—	—	—
Architectural Coatings	0.01	—	—	—	—	—	—
Total	0.12	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Consumer Products	0.02	—	—	—	—	—	—
Architectural Coatings	< 0.005	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	0.07
Total	0.02	< 0.005	0.02	< 0.005	< 0.005	< 0.005	0.07

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Arena	—	—	—	—	—	—	102
Parking Lot	—	—	—	—	—	—	0.00

Total	—	—	—	—	—	—	102
Daily, Winter (Max)	—	—	—	—	—	—	—
Arena	—	—	—	—	—	—	102
Parking Lot	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	102
Annual	—	—	—	—	—	—	—
Arena	—	—	—	—	—	—	16.8
Parking Lot	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	16.8

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Arena	—	—	—	—	—	—	0.31
Parking Lot	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	0.31
Daily, Winter (Max)	—	—	—	—	—	—	—
Arena	—	—	—	—	—	—	0.31
Parking Lot	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	0.31
Annual	—	—	—	—	—	—	—
Arena	—	—	—	—	—	—	0.05
Parking Lot	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	0.05

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Arena	—	—	—	—	—	—	0.03
Total	—	—	—	—	—	—	0.03
Daily, Winter (Max)	—	—	—	—	—	—	—
Arena	—	—	—	—	—	—	0.03
Total	—	—	—	—	—	—	0.03
Annual	—	—	—	—	—	—	—
Arena	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	< 0.005

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

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

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	5/30/2025	6/1/2025	5.00	2.00	—
Grading	Grading	6/2/2025	6/7/2025	5.00	4.00	—
Paving	Paving	3/16/2026	3/30/2026	5.00	10.0	—
Architectural Coating	Architectural Coating	3/31/2026	4/14/2026	5.00	10.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	6.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	10.9	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.27	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	10.9	LDA,LDT1,LDT2
Grading	Vendor	—	8.27	HHDT,MHDT

Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	10.9	LDA,LDT1,LDT2
Paving	Vendor	—	8.27	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	10.9	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.27	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	6,912	2,304	4,443

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	3.00	0.00	—
Grading	—	—	4.00	0.00	—

Paving	0.00	0.00	0.00	0.00	1.70

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Arena	0.00	0%
Parking Lot	1.70	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	453	0.03	< 0.005
2026	0.00	453	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Arena	277	277	277	101,251	2,723	2,723	2,723	993,816
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	6,912	2,304	4,443

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Arena	46,239	453	0.0330	0.0040	169,717
Parking Lot	64,870	453	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Arena	2,557,698	0.00
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Arena	0.16	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Arena	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Arena	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Arena	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit

Temperature and Extreme Heat	26.2	annual days of extreme heat
Extreme Precipitation	1.30	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

6.3. Adjusted Climate Risk Scores

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	74.1
AQ-PM	62.3
AQ-DPM	10.7
Drinking Water	79.0
Lead Risk Housing	73.7
Pesticides	93.7
Toxic Releases	14.7

Traffic	2.34
Effect Indicators	—
CleanUp Sites	83.9
Groundwater	98.4
Haz Waste Facilities/Generators	22.0
Impaired Water Bodies	43.8
Solid Waste	96.9
Sensitive Population	—
Asthma	45.2
Cardio-vascular	43.0
Low Birth Weights	25.4
Socioeconomic Factor Indicators	—
Education	82.9
Housing	34.2
Linguistic	80.2
Poverty	66.3
Unemployment	71.7

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	36.160657
Employed	0.153984345
Median HI	40.38239446
Education	—
Bachelor's or higher	7.827537534
High school enrollment	100

Preschool enrollment	4.670858463
Transportation	—
Auto Access	87.47593995
Active commuting	32.91415373
Social	—
2-parent households	92.1852945
Voting	39.31733607
Neighborhood	—
Alcohol availability	97.0101373
Park access	5.41511613
Retail density	5.00449121
Supermarket access	8.238162453
Tree canopy	30.06544335
Housing	—
Homeownership	45.22006929
Housing habitability	73.48902862
Low-inc homeowner severe housing cost burden	69.38277942
Low-inc renter severe housing cost burden	73.6173489
Uncrowded housing	56.30694213
Health Outcomes	—
Insured adults	16.01437187
Arthritis	0.0
Asthma ER Admissions	47.8
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0

Diagnosed Diabetes	0.0
Life Expectancy at Birth	23.8
Cognitively Disabled	24.2
Physically Disabled	28.8
Heart Attack ER Admissions	53.4
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	83.2
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	88.7
Elderly	68.4
English Speaking	32.0
Foreign-born	54.1
Outdoor Workers	1.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	97.0
Traffic Density	2.4
Traffic Access	0.0
Other Indices	—

Hardship	61.5
Other Decision Support	—
2016 Voting	78.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	72.0
Healthy Places Index Score for Project Location (b)	8.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Adjusted to match project description
Construction: Construction Phases	No demolition of building construction required
Operations: Water and Waste Water	Wastewater will be treated by onsite facilities.
Operations: Vehicle Data	Adjusted to match VMT analysis

EMFAC2021 Hoyt
Event Center 2026
Fuel Demand

Vehicle Class	Fuel	Process	Kgal/day
All Other Buses	Dsl	IDLEX	4.60E-07
All Other Buses	Dsl	RUNEX	4.27E-05
LDA	Dsl	RUNEX	4.91E-05
LDT1	Dsl	RUNEX	4.70E-07
LDT2	Dsl	RUNEX	3.56E-05
LHD1	Dsl	IDLEX	1.48E-05
LHD1	Dsl	RUNEX	0.00251
LHD2	Dsl	IDLEX	8.29E-06
LHD2	Dsl	RUNEX	0.00111
MDV	Dsl	RUNEX	0.000257
MH	Dsl	RUNEX	5.39E-05
Motor Coach	Dsl	IDLEX	8.35E-06
Motor Coach	Dsl	RUNEX	0.000184
PTO	Dsl	RUNEX	0.000384
SBUS	Dsl	IDLEX	2.19E-05
SBUS	Dsl	RUNEX	0.000241
T6 CAIRP Class 4	Dsl	IDLEX	9.02E-08
T6 CAIRP Class 4	Dsl	RUNEX	1.13E-05
T6 CAIRP Class 5	Dsl	IDLEX	1.20E-07
T6 CAIRP Class 5	Dsl	RUNEX	1.55E-05
T6 CAIRP Class 6	Dsl	IDLEX	4.01E-07
T6 CAIRP Class 6	Dsl	RUNEX	3.94E-05
T6 CAIRP Class 7	Dsl	IDLEX	6.56E-07
T6 CAIRP Class 7	Dsl	RUNEX	0.000234
T6 Instate Delivery Class 4	Dsl	IDLEX	2.54E-06
T6 Instate Delivery Class 4	Dsl	RUNEX	4.76E-05
T6 Instate Delivery Class 5	Dsl	IDLEX	1.72E-06
T6 Instate Delivery Class 5	Dsl	RUNEX	3.28E-05
T6 Instate Delivery Class 6	Dsl	IDLEX	5.24E-06
T6 Instate Delivery Class 6	Dsl	RUNEX	9.71E-05
T6 Instate Delivery Class 7	Dsl	IDLEX	1.58E-06
T6 Instate Delivery Class 7	Dsl	RUNEX	4.32E-05
T6 Instate Other Class 4	Dsl	IDLEX	1.56E-05
T6 Instate Other Class 4	Dsl	RUNEX	0.000329
T6 Instate Other Class 5	Dsl	IDLEX	2.45E-05
T6 Instate Other Class 5	Dsl	RUNEX	0.000533
T6 Instate Other Class 6	Dsl	IDLEX	1.98E-05
T6 Instate Other Class 6	Dsl	RUNEX	0.000414
T6 Instate Other Class 7	Dsl	IDLEX	1.60E-05
T6 Instate Other Class 7	Dsl	RUNEX	0.000305
T6 Instate Tractor Class 6	Dsl	IDLEX	6.38E-07
T6 Instate Tractor Class 6	Dsl	RUNEX	1.61E-05

Fuel Type	Demand
Diesel	
Kgal/day	0.07
KGal/yr	25.31
Gas	
Kgal/day	0.08
KGal/yr	30.36
Hybrid	
kgal/day	0.001
Kgal/yr	0.28
TOTAL	
KGal/yr	56
Gal/yr	55952
Mileage Check:	
VMT/yr	993,816
mpg	18

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Hoyt Event Center
2026 Fuel Demand

T6 Instate Tractor Class 7	Dsl	IDLEX	1.49E-05
T6 Instate Tractor Class 7	Dsl	RUNEX	0.000368
T6 OOS Class 4	Dsl	IDLEX	5.32E-08
T6 OOS Class 4	Dsl	RUNEX	6.57E-06
T6 OOS Class 5	Dsl	IDLEX	7.03E-08
T6 OOS Class 5	Dsl	RUNEX	9.04E-06
T6 OOS Class 6	Dsl	IDLEX	2.36E-07
T6 OOS Class 6	Dsl	RUNEX	2.30E-05
T6 OOS Class 7	Dsl	IDLEX	3.54E-07
T6 OOS Class 7	Dsl	RUNEX	0.000158
T6 Public Class 4	Dsl	IDLEX	2.30E-06
T6 Public Class 4	Dsl	RUNEX	2.91E-05
T6 Public Class 5	Dsl	IDLEX	3.83E-06
T6 Public Class 5	Dsl	RUNEX	4.90E-05
T6 Public Class 6	Dsl	IDLEX	5.86E-06
T6 Public Class 6	Dsl	RUNEX	7.96E-05
T6 Public Class 7	Dsl	IDLEX	9.26E-06
T6 Public Class 7	Dsl	RUNEX	0.000158
T6 Utility Class 5	Dsl	IDLEX	1.86E-06
T6 Utility Class 5	Dsl	RUNEX	5.20E-05
T6 Utility Class 6	Dsl	IDLEX	3.51E-07
T6 Utility Class 6	Dsl	RUNEX	9.78E-06
T6 Utility Class 7	Dsl	IDLEX	3.94E-07
T6 Utility Class 7	Dsl	RUNEX	1.35E-05
T7 CAIRP Class 8	Dsl	IDLEX	0.001229
T7 CAIRP Class 8	Dsl	RUNEX	0.01579
T7 NNOOS Class 8	Dsl	IDLEX	0.001326
T7 NNOOS Class 8	Dsl	RUNEX	0.018447
T7 NOOS Class 8	Dsl	IDLEX	0.000577
T7 NOOS Class 8	Dsl	RUNEX	0.006822
T7 Other Port Class 8	Dsl	IDLEX	8.74E-06
T7 Other Port Class 8	Dsl	RUNEX	0.000335
T7 POAK Class 8	Dsl	IDLEX	3.81E-05
T7 POAK Class 8	Dsl	RUNEX	0.00078
T7 POLA Class 8	Dsl	IDLEX	4.78E-05
T7 POLA Class 8	Dsl	RUNEX	0.001226
T7 Public Class 8	Dsl	IDLEX	2.15E-05
T7 Public Class 8	Dsl	RUNEX	0.000543
T7 Single Concrete/Transit Mix Class 8	Dsl	IDLEX	7.37E-06
T7 Single Concrete/Transit Mix Class 8	Dsl	RUNEX	0.000189
T7 Single Dump Class 8	Dsl	IDLEX	1.44E-05
T7 Single Dump Class 8	Dsl	RUNEX	0.000297
T7 Single Other Class 8	Dsl	IDLEX	5.53E-05
T7 Single Other Class 8	Dsl	RUNEX	0.00098

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EMFAC2021
Hoyt Event Center
2026 Fuel Demand

T7 SWCV Class 8	Dsl	IDLEX	5.53E-06
T7 SWCV Class 8	Dsl	RUNEX	0.000392
T7 Tractor Class 8	Dsl	IDLEX	0.000835
T7 Tractor Class 8	Dsl	RUNEX	0.011061
T7 Utility Class 8	Dsl	IDLEX	1.35E-06
T7 Utility Class 8	Dsl	RUNEX	6.45E-05
UBUS	Dsl	RUNEX	0.000117
LDA	Gas	RUNEX	0.036365
LDA	Gas	STREX	0.000939
LDT1	Gas	RUNEX	0.002916
LDT1	Gas	STREX	9.80E-05
LDT2	Gas	RUNEX	0.016958
LDT2	Gas	STREX	0.000485
LHD1	Gas	IDLEX	1.34E-05
LHD1	Gas	RUNEX	0.003696
LHD1	Gas	STREX	4.22E-05
LHD2	Gas	IDLEX	2.03E-06
LHD2	Gas	RUNEX	0.000531
LHD2	Gas	STREX	5.56E-06
MCY	Gas	RUNEX	0.000144
MCY	Gas	STREX	1.45E-05
MDV	Gas	RUNEX	0.0186
MDV	Gas	STREX	0.000569
MH	Gas	RUNEX	0.000242
MH	Gas	STREX	4.22E-08
OBUS	Gas	IDLEX	7.44E-07
OBUS	Gas	RUNEX	0.000252
OBUS	Gas	STREX	1.25E-06
SBUS	Gas	IDLEX	3.55E-06
SBUS	Gas	RUNEX	0.000106
SBUS	Gas	STREX	3.34E-07
T6TS	Gas	IDLEX	3.60E-06
T6TS	Gas	RUNEX	0.000978
T6TS	Gas	STREX	6.33E-06
T7IS	Gas	RUNEX	3.30E-06
T7IS	Gas	STREX	2.17E-08
UBUS	Gas	RUNEX	0.00021
UBUS	Gas	STREX	4.99E-07
LDA	Phe	RUNEX	0.000618
LDA	Phe	STREX	2.26E-05
LDT1	Phe	RUNEX	2.88E-06
LDT1	Phe	STREX	1.29E-07
LDT2	Phe	RUNEX	6.82E-05
LDT2	Phe	STREX	3.31E-06

MDV	Phe	RUNEX	5.43E-05
MDV	Phe	STREX	3.13E-06

Special-Status Species in the Project Vicinity

B

APPENDIX

Appendix B Special-Status Plant Species with the Potential to Occur in the Project Vicinity

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on the Project Site
Alkali milk-vetch *(Astragalus tener* var. *tener)*	--/--/1B.2	Alkaline sites in playas, valley and foothill grassland (on adobe clay), and vernal pools; elevation 1-60m. Blooming Period: March - June	Unlikely. No suitable alkaline playas present within project site.
Alkali -sink goldfields *(Lasthenia chrysantha)*	--/--/1B.1	Vernal pools. Alkaline. 0-200 m. Blooming Period: February - June	Unlikely. No suitable vernal pools present within the project site.
Beaked clarkia *(Clarkia rostrata)*	--/--/1B.3	Cismontane woodland, and valley and foothill grassland. North-facing slopes, sometimes on sandstone; elevation 60-460m. Blooming Period: April - May	Unlikely. No suitable north facing slopes in woodlands or grasslands present within project site.
California alkali grass *(Puccinellia simplex)*	--/--/1B.2	Meadows and seeps, chenopod scrub, valley and foothill grasslands, vernal pools. Alkaline, vernally mesic. Sinks, flats,and lake margins; elevation 1-915m. Blooming Period: March - May	Unlikely. No suitable meadow seeps or vernal pools within chenopod scrub or valley grasslands present within project site.
Colusa grass *(Neostapfia colusana)*	FT/SE/1B.1	Vernal pools, usually in large or deep vernal pool bottoms, adobe soils; elevation 5-110m. Blooming Period: May - August	Unlikely. No suitable large or deep vernal pools present within project site.
Coulter's goldfields *(Lasthenia glabrata* ssp. *coulteri)*	--/--/1B.1	Coastal salt marshes and swamps, playas, and vernal pools; elevation 1-1220m.	Unlikely. No suitable coastal salt marsh, playas or vernal pools present within project site.
Delta button-celery *(Eryngium racemosum)*	--/SE/1B.1	Riparian scrub; prefers seasonally inundated floodplain on clay soils; elevation 3-75m. Blooming Period: June - August	Unlikely. No suitable riparian scrub present within project site.
Dwarf downingia *(Downingia pusilla)*	--/--/2B.2	Valley and foothill grassland (mesic sites), and vernal pools; elevation 1-485m. Blooming Period: March - May	Unlikely. No suitable mesic sites within valley grasslands or vernal pools present within project site.
Forked hare-leaf *(Lagophylla dichotoma)*	--/--/1B.1	Cismontane woodland, and valley and foothill grassland; sometimes on clay substrates; elevation 45-335m.	Unlikely. No suitable woodlands or valley grasslands present within project site.
Greene's tuctoria *(Tuctoria greenei)*	FE/SR/1B.1	Vernal pools, valley and foothill grassland. Dry bottoms of vernal pools in open grasslands, 30-1065m. Blooming Period: May - September	Unlikely. No suitable vernal pools within valley grasslands present within project area.
Hairy orcutt grass *(Orcuttia pilosa)*	FE/SE/1B.1	Vernal pools; elevation 25-125m. Blooming Period: May - September	Unlikely. No suitable vernal pools present within project site.
Hartweg's golden sunburst *(Psudobahia bahiifolia)*	FE/SE/1B.1	Valley and foothill grassland, cismontane woodland.Clay soils, often acidic. Predominantly on the northern slopes of knolls, but also along shady creeks or near vernal pools. 60-170 m. Blooming Period: March - April	Unlikely. No suitable valley grasslands or cismontane woodlands on north slopes, shady creeks or near vernal pools present within project site.
Heartscale *(Atriplex cordulata* var. *cordulata)*	--/--/1B.2	Chenopod scrub, valley and foothill grassland, and meadows. Prefers alkaline flats and scalds in the Central Valley, on sandy soils; elevation 1-150m. Blooming Period: April - October	Unlikely. No suitable chenopod scrub, valley grassland, or meadow present within project site.

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on the Project Site
Heckard's pepper-grass *(Lepidium latipes* var. *heckardii)*	--/--/1B.2	Alkaline flats in valley and foothill grassland; elevation 2-200m.	Unlikely. No suitable alkaline flats in valley grassland present within project site.
Hoover's calycadenia *(Calycadenia hooveri)*	--/--/1B.3	Cismontane woodland, valley and foothill grassland. On exposed, rocky, barren soil; elevation 65-260m. Blooming Period: July - September	Unlikely. No suitable cismontane woodland or valley grassland with exposed rocky barren soil present within project site.
Hoover's spurge *(Chamaesyce hooveri)*	FT/--/1B.2	Vernal pools, and valley and foothill grassland; pools on volcanic mudflow or clay substrates; elevation 25-140m. Blooming Period: July - August	Unlikely. No suitable vernal pools in valley grassland present within project site.
Keck's checkerbloom *(Sidalcea keckii)*	FE/--/1B.1	Cismontane woodland, and valley and foothill grassland. Prefers grassy slopes in blue oak woodland; elevation 180-425m. Blooming Period: April - May	Unlikely. No suitable cismontane (blue oak) woodlands or valley grassland with grassy slopes within project site. Outside of elevation range.
Lesser saltscale *(Atriplex minuscula)*	--/--/1B.1	Chenopod scrub, playas, and valley and foothill grassland. In alkali sinks in sandy, alkaline soils; elevation 20-100m. Blooming Period: May - October	Unlikely. No suitable alkali sink in chenopod scrub playas or valley grassland present within project site.
Merced phacelia *(Phacelia cillata* var. *opaca)*	--/--/3.2	Valley and foothill grassland. Adobe or clay soils of valley floors, open hills, or alkaline flats; elevation 60-150m. Blooming Period: February - May	Unlikely. No suitable valley grassland present within project site.
Prostrate vernal pool navarretia *(Navarretia prostrata)*	--/--/1B.1	Coastal scrub, valley and foothill grassland, and vernal pools. Alkaline soils in grassland, or in vernal pools; elevation 15-700m. Blooming Period: April - July	Unlikely. No suitable vernal pools in coastal scrub or valley grassland present within project site.
Peruvian dodder *(Cuscuta obtusiflora var. glandulosa)*	--/--/2B.2	Marshes and swamps (freshwater). Freshwater marsh. 15-280 m. Blooming Period: July - October	Unlikely. No suitable marshes or swamps present within project site.
San Joaquin spearscale *(Atriplex joaquinana)*	--/--/1B.2	Alkaline sites in chenopod scrub, meadows and seeps, playas, and valley and foothill grassland; elevation 1-320m. Blooming Period: April - October	Unlikely. No suitable alkaline sited in chenopod scrub, meadows, seeps, playas or valley grassland present within project site.
San Joaquin Valley Orcutt grass *(Orcuttia inaequalis)*	FT/SE/1B.1	Vernal pools, endemic to the San Joaquin Valley; elevation 30-755m. Blooming Period: April - September	Unlikely. No vernal pools within project site. Species extirpated in developed vernal pools. Present to the east in undeveloped foothills.
Sanford's arrowhead *(Sagittaria sanfordii)*	--/--/1B.2	Marshes and swamps. Found in standing or slow-moving freshwater ponds, marshes, and ditches; elevation 0-610m. Blooming Period: May - October	Unlikely. No suitable marsh or swamp habitat within project site. Possible in adjacent pond within project parcel.
Shining navarretia *(Navarretia nigelliformis* ssp. *radians)*	--/--/1B.2	Cismontane woodland, valley and foothill grassland, and vernal pools; elevation 200-1000m. Blooming Period: May - July	Unlikely. No suitable cismontane woodland, valley grasslands, or vernal pools within project site. Outside of elevation range.

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on the Project Site
Spiny-sepaled button-celery *(Eryngium spinosepalum)*	--/--/1B.2	Vernal pools within valley and foothill grassland. Some sites on clay soils of granitic origin; elevation 100-420m. Blooming Period: April - May	Unlikely. No suitable vernal pools in valley grasslands within project site. Outside of elevation range.
Succulent owl's-clover *(Castilleja campestris* var. *succulenta)*	FT/SE/1B.2	Vernal pools, and valley and foothill grassland. Moist places, often in acidic soils; elevation 25-750m. Blooming Period: April - May	Unlikely. No suitable vernal pools within valley grasslands within project site. Possible in adjacent grazing pasture.
Vernal pool smallscale *(Atriplex persistens)*	--/--/1B.2	Vernal pools on alkaline soils; elevation 10-115m. Blooming Period: July - October	Unlikely. No suitable vernal pools within project site. Species records from undeveloped areas.
Watershield *(Brasenia schreberi)*	--/--/2B.3	Freshwater marshes and swamps. Aquatic known from water bodies both natural and artificial in California. 1-2180 m. Blooming Period: June - September	Unlikely. No suitable marshes and swamps within project site. Possible in adjacent pond within project parcel.

SOURCE: CDFW 2024, CNPS 2024

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Appendix B Special-Status Wildlife Species with the Potential to Occur in the Project Vicinity

Species	Status (Federal/State)	Suitable Habitat Description	Potential to Occur on Project Site
American badger *(Taxidea taxus)*	--/SSC	Most abundant in drier, open stages of most shrub, forest, and herbaceous habitats. Need sufficient food and open, uncultivated ground with friable soils to dig burrows. Prey on burrowing rodents.	Unlikely. No suitable shrub or herbaceous uncultivated habitats.
Bald eagle *(Haliaeetus leucocephalus)*	FD/SE	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within one mile of water. Nests in large, old-growth, or dominant live tree with open branches.	Unlikely. No suitable large old growth dominant trees.
Burrowing owl *(Athene cunicularia)*	--/SSC	Open, dry, annual or perennial grasslands, desert, or scrubland, with available small mammal burrows.	Low probability. Marginal habitat present within adjacent grazing field. No suitable habitat within proposed event space.
California linderiella *(Linderiella occidentalis)*	FSC/--	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools typically has very low alkalinity, conductivity, and total dissolved solids.	Unlikely. No suitable vernal pool habitats present.
California tiger salamander *(Ambystoma californiense)*	FT/ST	Grasslands and oak woodlands near seasonal pools and stock ponds in central and coastal California. Needs upland habitat to aestivate (remain dormant during dry months) in small mammal burrows, cracks in the soil, or moist leaf litter. Requires seasonal water sources that persist into late March for breeding habitat.	Unlikely. While marginal breeding habitat exists within grazing field within parcel and north east of parcel in seasonal wetlands, no suitable upland present. No burrows found within proposed event space.
Coast horned lizard *(Phrynosoma blainvillii)*	--/SSC	Arid grassland and scrubland habitats; prefers lowlands along sandy washes with scattered low bushes. Requires open areas for sunning, bushes for cover, patches of loose soil for burrowing, and abundant supply of ants and other insects for feeding.	Unlikely. No Suitable grassland and scrubland habitats present.
Conservancy fairy shrimp *(Branchinecta conservatio)*	FE/--	Endemic to the grasslands of the northern two-thirds of the central valley; found in large, turbid pools. Also occurs in swales formed by old, braided alluvium filled by winter/spring rains.	Unlikely. No suitable vernal pools present.
Ferruginous hawk *(Buteo regalis)*	--/SSC	(Wintering) Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon-juniper habitats. Mostly consumes flat lagomorphs, ground squirrels, and mice.	Unlikely. No suitable open grassland, sagebrush, or desert scrub habitat.
Giant garter snake *(Thamnophis gigas)*	FT/ ST	Prefers freshwater marsh and low gradient streams. Adapted to drainage canals and irrigation ditches. The most aquatic garter snake in California.	Low probability. Suitable freshwater pond within the property south of the project site provides marginal habitat.
Hardhead *(Mylopharodon conocephalus)*	--/SSC	Low to mid-elevation streams in the Sacramento-San Joaquin drainage. Also present in the Russian River. Clear, deep pools with sand-gravel-boulder bottoms and slow water velocity.	Unlikely. No suitable streams within the project parcel.
Hoary bat *(Lasiurus cinereus)*	--/SSC	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	Moderate probability. Suitable trees for roosting, habitat edges, and water on project site.

Species	Status (Federal/State)	Suitable Habitat Description	Potential to Occur on Project Site
Least Bell's vireo *(Vireo bellii pusillus)*	FE/SE	Summer resident of southern and central California in riparian habitats below 2,000 feet in elevation. Often nests in large shrubs, along margins of bushes or on twigs projecting into pathways.	Unlikely. No suitable shrubby vegetation adjacent to riparian habitats.
Merced kangaroo rat *(Dipodomys heermanni dixoni)*	FSC/--	Grassland and savannah communities in eastern Merced and Stanislaus Counties. Needs fine, deep, well-drained soil for burrowing. Granivorous, but also eats forbs and green grasses.	Unlikely. No grassland and savannah communities. Not within project vicinity.
Midvalley fairy shrimp *(Branchinecta mesovallensis)*	--/--	Vernal pools in the Central Valley.	Unlikely. No suitable vernal pools within the project parcel.
Monarch butterfly *(Danaus plexippus)*	FC/--	Winter roost sites. Wind protected tree groves (Eucalyptus, Monterey pine, cypress) with nectar and water sources nearby.	Unlikely. No suitable Eucalyptus, Monterey pine or cypress groves within the project parcel.
Mountain plover *(Charadrius montanus)*	--/SSC	Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Prefers short vegetation, bare ground, and flat topography, such as grazed areas and areas with burrowing rodents.	Low probability within adjacent grazed field. No suitable habitat within the proposed event area.
Northern california legless lizard *(Anniella pulchra)*	--/SSC	Sandy or loose loamy soils under sparse vegetation, moist soils. *Anniella pulchra* is traditionally split into two subspecies: *A. pulchra pulchra* (silvery legless lizard) and *A. pulchra nigra* (black legless lizard), but these subspecies are typically no longer recognized.	Unlikely. No suitable sandy soil under sparse vegetation.
Northern harrier *(Circus cyaneus)*	--/SSC	Found near coastal salt and freshwater marshes. Nests and forages in grasslands. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Moderate probability. Suitable forage habitat. No suitable nesting area.
Pallid bat *(Antrozous pallidus)*	--/SSC	Deserts, grasslands, scrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures.	Unlikely. Suitable forage habitat present. No suitable roosting habitat in caves, rocks, snags, or buildings observed
San Joaquin kit fox *(Vulpes macrotis mutica)*	FE/ST	Annual grasslands or grassy open stages with scattered shrubby vegetation. Needs loose-textured sandy soils for burrowing, and suitable prey base.	Low probability. No suitable habitat within proposed event space. However, marginal habitat may exist for San Juaquin kit fox in adjacent parcels.
San Joaquin pocket mouse *(Perognathus inornatus inornatus)*	--/--	Typically found in grasslands and blue oak savannas. Needs friable soils.	Unlikely. No suitable grasslands and blue oak savannas present.
Steelhead *(Oncorhynchus mykiss irideus)*	FT/--	Coastal stream with clean spawning gravel. Requires cool water and pools. Needs migratory access between natal stream and ocean.	Unlikely. No suitable coastal streams with spawning gravel.
Swainson's hawk *(Buteo swainsoni)*	--/ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas, such as grasslands or agricultural fields supporting rodent populations.	Low probability. Suitable forage habitat in adjacent grazing field. Suitable nesting offsite in tall street trees.

Species	Status (Federal/State)	Suitable Habitat Description	Potential to Occur on Project Site
Tricolored blackbird *(Agelaius tricolor)*	--/SE	Areas adjacent to open water with protected nesting substrate, which typically consists of dense, emergent freshwater marsh vegetation.	Low probability. Marginal suitable habitat around the pond. Known occurrences within 2.5-mile of the project parcel (Occurrence No. 451).
Valley elderberry longhorn beetle *(Desmocerus californicus dimorphus)*	FT/--	Elderberry shrubs, usually in Central Valley riparian habitats.	Unlikely. No elderberry observed within the project area.
Vernal pool fairy shrimp *(Branchinecta lynchi)*	FT/--	Endemic to the grasslands of the Central Valley, Central Coast Mtns., and South Coast Mtns. in astatic rain-filled pools. Inhabits small, clear-water sandstone depression pools and grass swale, earth slump, or basalt-flow depression pools.	Unlikely. No suitable vernal pools within the event space.
Vernal pool tadpole shrimp *(Lepidurus packardi)*	FE/--	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in swales of unplowed grasslands.	Unlikely. No suitable vernal pools within the event space.
Western mastiff bat *(Eumops perotis californicus)*	--/SSC	Many open, semi-arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Low probability. Buildings and trees in and adjacent to the project site provide marginal habitat for roosting.
Western pond turtle *(Emys marmorata)*	FC/SSC	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Needs basking sites (such as rocks or partially submerged logs) and suitable upland habitat for egg-laying (sandy banks or grassy open fields).	Low probability. Marginal habitat within the pond and adjacent uplands. Not suitable within event space due to existing management and exclusion fence. Closest observation is 3.2 miles south (occurrence No. 321).
Western red bat *(Lasiurus blossevillii)*	--/SSC	Roosts primarily in trees, 2-40 feet above the ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	Unlikely. No suitable mixed conifer forest within the project site.
Western spadefoot *(Spea hammondii)*	--/SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands, breeds in winter and spring (January - May) in quiet streams and temporary pools.	Unlikely. No suitable streams and pools within the proposed event space and adjacent uses.
Yellow-breasted chat *(Icteria virens)*	--/SSC	Summer resident. Inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian vegetation consisting of willow, blackberry, and wild grape. Forages and nests within 10 feet off the ground.	Unlikely. No suitable riparian thickets with low dense riparian vegetation.
Yuma myotis *(Myotis yumanensis)*	--/--	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings, or crevices.	Unlikely. No suitable forests or woodlands within project vicinity.

SOURCE: CDFW 2024, CNPS 2024

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Geotechnical Investigation Report

C

APPENDIX

TECHNICON
ENGINEERING SERVICES, INC.

GEOTECHNICAL INVESTIGATION REPORT
PROPOSED BARN BATHROOM ADDITION
5197 EUCALYPTUS AVENUE
WINTON, CALIFORNIA

Prepared for:

Mr. Doug Hoyt
5197 Eucalyptus Avenue
Winton, California 95388

August 5, 2021

TES No. 210374.001

GEOTECHNICAL & ENVIRONMENTAL ENGINEERING – CONSTRUCTION TESTING & INSPECTION

Prepared For:

Mr. Doug Hoyt
5197 Eucalyptus Avenue
Winton, California 95388

GEOTECHNICAL INVESTIGATION REPORT
PROPOSED BARN BATHROOM ADDITION
5197 EUCALYPTUS AVENUE
WINTON, CALIFORNIA

TECHNICON PROJECT
TES No. 210374.001

Prepared by:

Jim Vue, GIT
Staff Geologist

Salvador Alvarez, PE
Geotechnical Engineering Manager

REGISTERED PROFESSIONAL ENGINEER
SALVADOR ALVAREZ
No. 83957
CIVIL
STATE OF CALIFORNIA

TECHNICON Engineering Services, Inc.
4539 North Brawley Avenue, Suite 108
Fresno, California 93711
559.276.9311

August 5, 2021

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GEOTECHNICAL INVESTIGATION REPORT
PROPOSED BARN BATHROOM ADDITION
5197 EUCALYPTUS AVENUE
WINTON, CALIFORNIA

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1 INTRODUCTION

1.1 GENERAL

This report presents the results of a geotechnical investigation for future developments in the vicinity of the existing barn and bathroom located at 5197 Eucalyptus Avenue in Winton, California. The purpose of the investigation was to explore and evaluate the subsurface conditions at the site and develop geotechnical engineering recommendations to aid in future project design and construction. As part of this investigation, percolation testing was also conducted and is further discussed below.

The Vicinity Map, presented on Figure 1, shows the location of the project and the Site Map, presented on Figure 2, shows the existing structures, the approximate boring location, and percolation test locations.

1.2 PROPOSED CONSTRUCTION

It is understood that the existing barn (64 x 72 feet) and bathroom (16 x 24 feet) were constructed prior to the start of this geotechnical investigation. It is **TECHNICON's** opinion that any future developments in the vicinity of the existing structures should follow the recommendations discussed below.

1.3 PURPOSE AND SCOPE OF SERVICES

The purpose of this investigation was to explore the site subsurface conditions to allow for development of recommendations regarding design and preparation of construction plans and specifications. The report includes the following:

- A description of the proposed project including a Vicinity Map showing the location of the site, and a Site Map showing the existing structures and the exploration points for this investigation;
- A description of the site surface and subsurface conditions encountered during the field investigation, including boring logs;
- A summary of the field exploration and laboratory testing program;

- ❑ Discussion of regional and local geology including faults, seismicity, and liquefaction potential and associated effects;
- ❑ Recommended seismic design criteria;
- ❑ Recommendations for site preparation and earthwork, including the use of on-site soils for engineered fill and recommended import fill specifications;
- ❑ Recommendations for conventional spread footing design including bearing capacity of foundation soil for sustained loading, total combined loading, and anticipated settlement;
- ❑ Modulus of subgrade reaction for design of foundations as a beam on an elastic foundation;
- ❑ Resistance of lateral loads, including passive pressure and coefficient of friction;
- ❑ Design of concrete slabs-on-grade for buildings, including modulus of subgrade reaction;
- ❑ Comments on the corrosion potential of on-site soils to buried metal and concrete;
- ❑ Comments on general site drainage;
- ❑ Summary of Percolation test results for proposed onsite wastewater treatment system.

2 FIELD EXPLORATION AND LABORATORY TESTING

2.1 FIELD EXPLORATION

The field exploration, conducted on June 9, 2021 consisted of drilling one (1) exploratory test boring, and a site reconnaissance by a staff geologist. The test boring was drilled with a SIMCO 2800 truck-mounted drill rig using 4-inch diameter solid stem auger. The boring extended to a depth of 15 feet below existing ground surface (bgs). The location of the test boring is indicated on the Site Map, Figure 2.

The soils encountered in the boring was visually classified in the field and a continuous log was recorded. Relatively undisturbed samples were collected from the test boring at selected depths by driving a 2.5-inch I.D. split barrel sampler containing brass liners into the undisturbed soil with a 140-pound automatic hammer free falling a distance of 30 inches. In addition, samples of the subsurface material were obtained using a 1.4-inch I.D. standard penetrometer, driven 18 inches in accordance with ASTM D1586 test procedures. The sampler was used without liners. Resistance to sampler penetration was noted as the number of blows per foot over the last 12 inches of sampler penetration on the boring log. The blow counts listed on the boring log have not been corrected for the effects of overburden pressure, boring diameter, rod length, sampler size, or hammer efficiency.

2.2 LABORATORY TESTING

Laboratory tests were performed on selected near surface samples to evaluate their physical characteristics. The following laboratory tests were used to develop the design geotechnical parameters:

- Unit weight (ASTM D2937)
- Moisture Content (ASTM D2216)
- Sieve Analysis (ASTM C136)
- Soluble Sulfate and Soluble Chloride Contents (California Test Method No. 417 & 422)
- pH and Minimum Resistivity (California Test Method No. 643)

The dry density and moisture content test results are shown on the boring log in Appendix A. The soluble sulfate, soluble chloride, pH, and minimum resistivity test results are discussed in Section 6.4, “Corrosion Potential”. The remaining test results are provided in Appendix B.

3 SITE CONDITIONS

3.1 SURFACE CONDITIONS

The project site is generally bounded by Eucalyptus Avenue to the north, North Buhach Road to the east, and rural residences and undeveloped/agricultural land in all other directions. The project site is occupied with a barn, bathroom, landscaping, and gravel parking lot. The existing topography was relatively flat with an approximate elevation of 200 feet above mean sea level. Mr. Doug Hoyt, the representative of the project stated that approximately two (2) feet of sand was placed underneath the barn building pad. Mr. Hoyt also indicated that native soil was underneath the sand layer.

3.2 FEMA FLOOD ZONE

According to the Federal Emergency Management Agency (FEMA), the site is in a Zone X flood designation (Map Number 06047C0225G, dated December 2, 2008), indicating that the project area is in an area of minimal flood hazard. The civil designer should design site grades accordingly.

3.3 EARTH MATERIALS

According to a geologic map of California the site consists of Holocene Quaternary alluvium formations. The general earth material profile depicted by the subsurface exploration consisted of sandy silt in the upper 5 feet underlain by layers of clay and sandy silt to the depth explored. The fine-grained soils had a consistency of very stiff. During the percolation investigation, debris was encountered in the upper five (5) feet at test pit P4 (Figure 2).

The above is a general description of the earth material profile. A more detailed representation of the stratigraphy at the specific exploration locations is provided on the boring log in Appendix A.

3.4 GROUNDWATER CONDITIONS

Groundwater was not encountered within the maximum depth of exploration 15 feet below existing ground surface. The California Department of Water Resources “Groundwater Information Center Interactive Map Application” Spring 2020, indicates the depth to groundwater exceeds 125 feet below grade within the vicinity of the project. It is possible that

groundwater conditions at the site could vary between boring locations or could change at some time in the future due to variations in the rainfall, groundwater withdrawal, construction activities, or other factors not apparent at the time of the field reconnaissance. Based on the boring data collected for this investigation, groundwater is not anticipated to impact design or construction.

4 GEOLOGIC CONDITIONS

4.1 FAULTS LOCAL TO THE PROPOSED SITE

The project sites and its vicinity are located in an area traditionally characterized by relatively low seismic activity. The site is not located in an Alquist-Priolo Earthquake Fault Zone as established by the Alquist-Priolo Fault Zoning Act (Section 2622 of Chapter 7.5, Division 2 of the California Public Resources Code).

Based on review of published data and current understanding of the geologic framework and tectonic setting of the project, the primary sources of seismic shaking at this site are anticipated to be the Foothill Fault System, the Ortigalita Fault, and the San Andreas Fault, which are located approximately 24, 37, and 64 miles, respectively, from the site.

4.2 SEISMIC DESIGN CRITERIA

Use of the 2019 CBC and ASCE 7-16 is considered appropriate for structural design. Based on the field exploration the standard penetration tests (SPT) the site soil is classified as Site Class D according to ASCE 7-16. Table 4.2-1 below provides the mapped seismic design values. These seismic design parameters are based on the assumption that a site-specific ground motion analysis is not required based on the exceptions provided in Section 11.4.8 of ASCE 7-16. Otherwise, a site-specific ground motion hazard analysis should be performed to obtain the seismic design values for this project. The structural engineer should evaluate the exceptions to determine if they are applicable.

TABLE 4.2-1
2019 CBC/ASCE 7-16 SEISMIC DESIGN PARAMETERS

Seismic Item	Value	Reference
Site Class	D	Table 20.3-1, ASCE 7-16
S_S	0.557	USGS Mapped Values based on Figures 1613.2.1(1) and 1613.2.1(2), 2019 CBC
S_1	0.234	
Site Coefficient, F_a	1.355	Tables 1613.2.3(1) and 1613A.2.3(2), 2019 CBC
Site Coefficient, F_v	2.132*	
S_{MS}	0.754	Section 1613.2.3, 2019 CBC
S_{M1}	0.499	
S_{DS}	0.503	Section 1613.2.4, 2019 CBC
S_{D1}	0.333	
Seismic Design Category (SDC)	D	Section 1613.2.5, 2019 CBC
PGA_M	0.32	Section 11.8.3, ASCE 7-16
Site Short Period T_S (seconds)	0.662	$T_S = S_{D1}/S_{DS}$

*This value of F_v should only be used for calculation of T_s. See Section 11.4.8 of ASCE 7-16

4.3 LIQUEFACTION POTENTIAL AND SEISMIC SETTLEMENT

In order for liquefaction due to ground shaking, and possible associated effects to occur, it is generally accepted that four conditions will exist:

- The subsurface soils are in a relatively loose state;
- The soils are saturated;
- The soils are fine, granular, and uniform; and
- Ground shaking of sufficient intensity should occur to act as a triggering mechanism.

The absence of groundwater in the upper 50 feet of the site would preclude the occurrence of liquefaction. Based on the ground shaking which may be expected at this site, the relative density and geologic age of the sediments, analysis utilizing Youd (2001) indicates liquefaction, seismically induced settlement, or bearing loss is considered unlikely. Therefore, mitigation measures for liquefaction are not warranted.

5 EARTHWORK

5.1 GENERAL

It is understood that the existing barn and bathroom were constructed prior to the start of this geotechnical investigation. It is **TECHNICON's** opinion that any future developments in the vicinity of the existing structures should follow the recommendations discussed below.

Based on the laboratory data, field exploration, and geotechnical analyses conducted for this investigation, it is geotechnically feasible to construct future developments in the vicinity of the existing structures. Provided that the recommendations presented in this report are incorporated into the project design and construction, use of shallow spread and continuous reinforced concrete footings bearing on undisturbed native soil or approved engineered fill are considered appropriate for structural support.

Recommendations regarding site grading are presented in subsequent sections of this report. All reference to relative compaction, maximum density, and optimum moisture is based on ASTM Test Method D1557. Earthwork should extend a minimum distance of 5 feet beyond the perimeter of the future developments.

5.2 SITE PREPARATION

5.2.1 Stripping

All surface vegetation and any miscellaneous surface obstructions should be removed from the project area, prior to any site grading. Moderate vegetation was observed on site, and stripping of vegetation could involve the upper 1 to 3 inches of the site. Surface strippings should not be incorporated into fill unless they can be sufficiently blended to result in an organic content less than 3 percent by weight (ASTM D2974). Stripped topsoil, with an organic content between 3 and 12 percent by weight, may be stockpiled and used as non-structural fill (i.e. landscaped areas). If used in landscape areas, soil with an organic content between 3 and 12 percent should be placed within 2 feet of finished grade and at least 5 feet outside of building perimeters. Soil with an organic content greater than 12 percent by weight should be excluded from fill.

5.2.2 Disturbed Soil, Undocumented Fill and Subsurface Obstructions

Initial site grading should include a reasonable search to locate and remove any undocumented fill soils, abandoned underground structures, existing utilities, etc., that may exist within the area of construction. All underground utilities should be rerouted beyond the perimeter of the future development and all previous trench backfill and any loose soils generated by the utility removal should be removed to expose undisturbed native soil. Any subsurface obstructions should be removed from the project area. Any areas or pockets of soft or loose soils, void spaces made by burrowing animals, undocumented fill, or other disturbed soil that is encountered, should be excavated to expose firm native material. Care should be taken during site grading to mitigate (e.g. excavate and recompact) all soil disturbed by stripping and demolition. Excavations for removal of any unsuitable conditions should be dish-shaped and backfilled with engineered fill (see Section 5.4).

5.2.3 Over-excavation

Over-excavation is typically reserved for soils that, in their natural state, will not provide adequate bearing for structures. The native soils at the project site should provide adequate bearing for the future developments. Therefore, provided the recommendations in Section 5.3.1 and 5.3.2 are followed, no general over-excavation is required.

5.2.4 Scarification and Compaction

Following the required stripping, and any other removals, the exposed subgrade soil in areas to receive engineered fill or to support future developments should be scarified to a minimum depth of 8 inches, uniformly moisture conditioned to at, or above optimum moisture, proof rolled to detect soft or pliant areas, and compacted to the requirements for engineered fill (Section 5.4). Soft or pliant areas should be mitigated in accordance with Section 5.2.2.

5.2.5 Construction Considerations

Should site grading be performed during or subsequent to wet weather, near-surface site soils may be significantly above optimum moisture content. These conditions could hamper equipment maneuverability and efforts to compact site soils to the recommended compaction criteria. Disking to aerate, chemical treatment, replacement with drier material, stabilization with a geotextile fabric or grid, or other methods may be required to mitigate the effects of

excessive soil moisture and facilitate earthwork operations. Any consideration of chemical treatment (e.g. lime) to facilitate construction would require additional soil chemistry evaluation and could affect landscape areas and some construction materials.

5.3 ENGINEERED FILL

5.3.1 Materials

All engineered fill soils should be nearly free of organic or other deleterious debris and less than 3 inches in maximum dimension. The on-site soil exclusive debris may be used as engineered fill, provided it contains less than 3 percent organics by weight (ASTM D2974).

Should any imported material be used for engineered fill, it should be sampled and tested by a representative of the project Geotechnical Engineer prior to being transported to the site. Table 5.3-1 provides general criteria for imported soil.

TABLE 5.3-1
IMPORT FILL CRITERIA

Gradation (ASTM C136)			
Sieve Size		**Percent Passing**	
76 mm (3-inch)		100	
19 mm (¾-inch)		80 – 100	
No. 4		60 – 100	
No. 200		20 – 50	
Expansion Index (ASTM D4829)		**Plasticity (ASTM D4318)**	
		Liquid Limit	**Plasticity Index**
< 20		< 25	< 9
Organic Content (ASTM D 2974)			
< 3% by dry weight			
Corrosivity			
pH	**Minimum Resistivity (ohm-cm)**	**Soluble Sulfate (ppm)**	**Soluble Chloride (ppm)**
6 to 8	> 2,000	< 2,000	< 500

The import criteria for corrosion are typical threshold limits for non-corrosive soil. Should corrosion concentrations of import soils fall outside of the threshold limits indicated above, revised protection measures will be necessary.

5.3.2 Compaction Criteria

Soils used as engineered fill should be uniformly moisture-conditioned to at least optimum moisture, placed in horizontal lifts less than 8 inches in loose thickness, and compacted to at least 90 percent relative compaction. Disking and/or blending may be required to uniformly moisture condition soils used for engineered fill.

The upper 12 inches of pavement subgrade should be compacted to at least 95 percent relative compaction. Relative compaction can be determined by Caltrans No. 216 (dry weight determination) or ASTM D1557 test procedures.

5.4 TEMPORARY EXCAVATIONS

5.4.1 General

All excavations must comply with applicable local, State, and Federal safety regulations including the current OSHA Excavation and Trench Safety Standards. Construction site safety generally is the responsibility of the Contractor, who shall also be solely responsible for the means, methods, and sequencing of construction operations. The information provided is a service to the client. Under no circumstances should the information provided be interpreted to mean that **TECHNICON** is assuming responsibility for construction site safety or the Contractor's activities; such responsibility is not being implied and should not be inferred.

5.4.2 Excavations and Slopes

The Contractor should be aware that slope height, slope inclination, or excavation depths (including utility trench excavations) should in no case exceed those specified in local, State, and/or Federal safety regulations (e.g., OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations).

All excavations should be constructed and maintained in conformance with current OSHA requirements (29 CFR Part 1926) for a Type C soil. If excavations encounter saturated soils or groundwater, temporary excavations will have to be laid back or shored and the trench dewatered to maintain stability.

5.4.3 Construction Considerations

Heavy construction equipment, building materials, excavated soil, and vehicular traffic should be kept sufficiently away from the top of any excavation to prevent any unanticipated surcharging. If it is necessary to encroach upon the top of an excavation, **TECHNICON** can provide comments on slope gradients or loads on shoring to address surcharging, if provided with the geometry. Shoring, bracing, or underpinning required for the project (if any), should be designed by a professional engineer registered in the State of California.

During wet weather, earthen berms or other methods should be used to prevent runoff water from entering all excavations. All runoff should be collected and disposed of outside the construction limits.

5.5 TRENCH BACKFILL

5.5.1 Materials

Pipe zone backfill (i.e., material beneath and in the immediate vicinity of the pipe) should consist of soil compatible with design requirements for the specific types of pipes. It is recommended that the project designer or pipe supplier develop the material specifications based on planned pipe types, bedding conditions, and other factors beyond the scope of this investigation. Randomly excavated near surface soil will likely be Class III material per ASTM D2321.

Trench zone backfill (i.e., material placed between the pipe zone backfill and finished subgrade) may consist of native soil which meets the requirements for engineered fill.

5.5.2 Compaction Criteria

All trench backfill should be placed and compacted in accordance with recommendations provided for engineered fill. Mechanical compaction is recommended; ponding or jetting should not be used.

6 DESIGN RECOMMENDATIONS

6.1 GENERAL

It is understood that the existing barn and bathroom were constructed prior to the start of this geotechnical investigation. It is **TECHNICON's** opinion that any future developments in the vicinity of the existing structures should follow the recommendations discussed below.

The future developments may be supported by shallow spread or continuous reinforced concrete footings bearing on undisturbed native soil or approved engineered fill within a minimum embedment depth of 12 inches. The following recommendations are based on the assumption that the recommendations in Section 5, "Earthwork," have been implemented. Recommendations regarding the geotechnical aspects of design are presented in subsequent sections. Based on our findings, the existing slab on grade and foundation has been constructed to meet or exceed the following recommendations.

6.2 SPREAD FOUNDATIONS

6.2.1 Vertical Bearing and Settlements

Generally, two geotechnical issues determine the design bearing pressure for conventional spread footing foundations: strength of the foundation soil, and tolerable settlement. For lightly loaded structures, design bearing may be determined by constructability considerations or code-required minimum dimensions.

The bearing capacity, based only on the shear strength of the soil, will be dependent upon the footing geometry. Table 6.2-1 presents the values for the bearing capacity for static loading which includes dead load plus live load (D.L. + L.L.) and total combined loading (D.L. + L.L. + transient loading, such as wind or seismic).

TABLE 6.2-1
BEARING CAPACITY

	Bearing Capacity (psf)
Static Loading	2,210 + 135 B + 440 D
Total Combined Loading	3,315 + 205 B + 660 D
Unfactored Ultimate Bearing	6,635 + 410 B + 1,320 D

Note: 1) B is the footing width (ft), D is the footing depth (ft)

The above values are appropriate for design using the Basic and Alternative Load Combinations in Section 1605.3 of the 2019 CBC. To simplify design, an allowable bearing pressure of 2,000 psf (static loading, D.L. + L.L.) could be considered. The bearing pressure could be increased 50 percent for evaluating transient loads, such as, wind or seismic.

Analysis, based on methods by Schmertmann, determined the following estimated static settlement based on a range of assumed design bearing and estimated structural loads. Settlement is expected to occur rapidly with load application. The estimated settlements presented in Table 6.2-2 are based on the assumption that the sustained load of footings is equal to 80 percent of the total load.

TABLE 6.2-2
ESTIMATED SETTLEMENT

Footing Type	Loading (DL +LL)	Design Bearing (psf)	Estimated Settlement (inch)
Strip	2 kips/ft	2,000	< 0.25
Square	10 kips	2,000	< 0.50

The differential settlement between similarly loaded footings is anticipated to be less than 50 percent of the total settlement. If deemed necessary by the design engineer, **TECHNICON** can provide the estimated settlement for other loading conditions.

If evaluating the foundation as a beam on an elastic foundation, a modulus of subgrade reaction, K_p (B_p = 1 foot), of 100 pci can be used for undisturbed on-site soil. The subgrade modulus is most appropriately applicable to consideration of static loads with deformations within an elastic range.

6.2.2 Lateral Resistance

Lateral loads applied to foundations can be resisted by a combination of passive lateral bearing and base friction. The allowable and ultimate passive pressures and frictional coefficients for the footings are presented in Table 6.2-3.

TABLE 6.2-3
PASSIVE PRESSURES AND FRICTIONAL COEFFICIENTS

	Allowable		Ultimate
	Static	Total Combined	
Frictional Coefficient	0.30	0.36	0.45
Passive Pressure	190 psf/ft + 515 psf	255 psf/ft + 685 psf	380 psf/ft + 1,025 psf
Lateral Translation Needed to Develop Passive Pressure	0.001 D	0.002 D	0.0055 D

Note: 1) D is the footing depth (ft)

If the deflection resulting from the strain necessary to develop the passive pressure is beyond structural tolerance, additional passive pressure values could be provided based on tolerable deflection. The passive pressure and frictional resistance can be used in combination. The allowable values already incorporate a factor of safety and, as such, would be compared directly to the driving loads. If analytical approaches require the input of a safety factor, the ultimate values would be used.

6.2.3 Design and Construction Considerations

Prior to placing steel or concrete, footing excavations should be cleaned of all debris, loose or soft soil, and water. All footing excavations should be observed by a representative of the project Geotechnical Engineer immediately prior to placing steel or concrete. The purpose of these observations is to check that the bearing soils encountered in the foundation excavations are similar to those assumed in analysis and to verify the recommendations contained herein are implemented during construction.

6.3 CONCRETE SLABS-ON-GRADE

6.3.1 Subgrade Preparation

Slabs-on-grade should be supported on recompacted soils or engineered fill placed as described in Section 5 of this report. Subgrade soil within 12 inches of pad grade should have a moisture content of at least 4 percent above optimum, immediately prior to placing the slab concrete or placing the vapor retarding membrane.

6.3.2 Capillary and Moisture/Vapor Break

In areas to receive moisture-sensitive floor coverings, it is recommended that the subgrade be covered by a vapor retarding membrane meeting the specifications of ASTM E1745, (Class C with minimum puncture resistance of 475 grams), such as Fortifiber Building Systems Group 10 Mil, “Moistop Ultra®”, Stego Industries 10 mil “Stego Wrap™”, W.R. Meadows Sealtight 10 mil “Perminator®”, or equivalent. The subgrade surface should be smooth and care should be exercised to avoid tearing, ripping, or otherwise puncturing the vapor retarding membrane. If the vapor retarding membrane becomes torn or disturbed, it should be removed and replaced or properly patched. All laps, splices, and utility penetrations should be properly sealed according to the manufacturer specifications. Considering the groundwater depth and soil types, a capillary break (i.e. clean sand or gravel layer) is considered unnecessary.

The vapor retarding membrane could be covered with approximately 1 to 2 inches of saturated surface dry (SSD) sand to protect it during construction. Concrete should not be placed if sand overlying the membrane has been allowed to attain a moisture content greater than about 5 percent (due to precipitation or excessive moistening). In addition, penetrations through the concrete slab shall be sealed or protected to prevent inadvertently introducing excess water into the sand cushion layer due to curing water, wash-off water, rainfall, etc. Excessive water beneath interior floor slabs could result in future significant vapor transmission through the slab, adversely affecting moisture-sensitive floor coverings and could inhibit proper concrete curing.

According to American Concrete Institute ACI 302.2R-06, concrete could be placed directly on the vapor retarding membrane to minimize the potential for developing a reservoir of moisture in the sand layer that could lead to future moisture entrapment and potential moisture and flooring problems. If concrete is placed directly on the membrane, care shall be taken to not damage the membrane and special concrete curing methods implemented to minimize potential slab

curing problems. If the protective sand layer is not used, the building designer should be in agreement. Many slab designers feel the sand cushion is important to proper concrete curing as well as minimizing slab curling issues.

It should be noted that, although the slab support discussed above is currently the industry standard, this system might not be completely effective in preventing floor slab moisture vapor transmission problems. This system will not necessarily assure that floor slab moisture transmission rates will meet floor-covering manufacturer standards and that indoor humidity levels will not inhibit mold growth. A qualified specialist(s) with knowledge of slab moisture protection systems, flooring design and other potential components that may be influenced by moisture, should address these post-construction conditions separately. The purpose of a geotechnical investigation is to address subgrade conditions only, and consequently, it does not evaluate future potential conditions.

6.3.3 Conventional Slab Design

Slab thickness and reinforcement should satisfy structural considerations and should be designed by the project structural engineer or building designer. A modulus of subgrade reaction, K_p (B_p = 1 foot), of 100 pci may be used for elastic analysis of slabs on properly compacted subgrade. Slab concrete should have good density, a low water/cement ratio, and proper curing to promote a low porosity.

6.4 CORROSION POTENTIAL

A soil sample obtained from the near surface site soil was tested to evaluate pH, minimum electrical resistivity, and soluble sulfate and chloride content.

The pH of the soil tested was 7.06 and the minimum electrical resistivity was 1,331 ohm-cm. These values are generally representative of an environment that could be mildly to moderately corrosive to buried unprotected metals. An example of the potential soil corrosion is provided by utilizing methods provided in Caltrans California Test 643, “Method for Estimating the Service Life of Steel Culverts”. The method indicates an 18-gauge steel zinc-coated culvert is estimated to have a maintenance-free service life (years to perforation) of 20 years. If future developments will involve metal that comes into contact with the on-site soil, the design should consider the potential soil corrosiveness described.

Test results suggest that low levels of soluble sulfates (32.3 ppm) and low levels of soluble chlorides (5.3 ppm) are present in on-site soils. Normal cement (Type II) should be adequate for foundation concrete that comes in contact with the onsite soils. Reinforcement cover need not be increased for concrete that comes in contact with the on-site soil.

Corrosion is dependent upon a complex variety of conditions, which are beyond the geotechnical practice. Consequently, a qualified corrosion engineer should be consulted if the owner desires more specific recommendations.

6.5 SITE DRAINAGE

Providing and maintaining adequate site drainage to prevent entrapment and ponding of surface water and excessive moisture migration into the subgrade soil is very important. Poor perimeter or surface drainage could cause reduced subgrade support. The design and construction needs to provide the basis for good drainage. This includes:

- Sufficient pad height to allow for proper drainage
- Defined drainage gradients away from the structure to points of conveyance, such as drainage swales and/or area drains and discharge pipe
- Roof drainage connected to proper areas of discharge

The established drainage must be maintained by not blocking or obstructing gradients away from structures without providing some alternative drainage means (e.g. area drains and subsurface pipes). If planter areas are established near the structures, it is important to prevent surface run-off from entering the planter. Where planted areas are adjacent to the structures, care must be taken not to over irrigate and to maintain a leak-free sprinkler piping system. Consideration should be given to use of low volume emitter irrigation systems for planters. Well-maintained low-volume emitter irrigation (drip system) is best suited for planters adjacent to structures. Watering practices must strive to promote a uniform moisture condition year around.

6.6 PERCOLATION

It is understood the project involves readjusting the existing onsite wastewater treatment system (OWTS). The site map (Figure 2) shows the location of our testing based on information provided about the location of the proposed system. A test pit was necessary to determine the current and the historically high groundwater depth. Percolation tests were also necessary to assess the subsurface infiltration characteristic to aid in septic system design approval.

6.6.1 Test Pit Observation

TECHNICON observed the excavation of one (1) test pit at the project site on June 21, 2021. The location of the test pit was within the area of the proposed OWTS. The soils encountered were observed to be sandy silt from the surface to approximately 4 feet below ground surface (bgs), underlain by clay with traces of sand extending to a depth of 8 feet bgs, and further underlain by brown sandy silt to the depths explored of 9 feet bgs. Debris was encountered from approximately 2 to 5 feet bgs. At test pit TP-1, groundwater was not encountered within the depth explored of 9 feet bgs. Additionally we did not observe signs of historical groundwater within the test pit.

TABLE 6.6-1

SUMMARY OF TEST PIT

Depth (ft)	Soil Description	Symbol	Color
0-4	Sandy silt	ML	Brown
2-5	Debris		
4-8	Clay with trace sand	CL	Dark Brown
8-9	Sandy silt	ML	Brown

6.6.2 Percolation Tests

Three (3) test borings (P-1, P-2, and P-3) were drilled and one (1) test pit (P-4) was excavated for percolation testing. Percolation test P-1 was performed at a depth of 4.5 feet bgs within the clay with trace sand layer. P-2 was performed in the clay with trace sand layer at a depth of 2 feet bgs. The next test, P-3 was performed in sandy silt layer at a depth of 2 feet bgs. The last

test, P-4 was performed in sandy silt layer at a depth of 9 feet bgs. The test borings were setup within an 8-inch diameter hole with a 2-inch slotted pvc casing. The test pit was setup within a 8-inch diameter hole with a 6-inch casing. Pea gravel (approximately ⅜-inch in diameter) was then placed to cover the bottom 2 inches of the test holes before the placement of the casings. The annulus of the casing was filled with ⅜-inch diameter pea gravel to prevent caving of the test holes. The locations of the percolation tests are shown on the Site Map, Figure 2. A summary of the percolation test results is presented below.

TABLE 6.6-2

SUMMARY OF PERCOLATION TESTS

Location	Soil Tested	Depth (ft)	Percolation Rate (min/in.)
P-1	Clay with trace sand (CL)	4.5	480
P-2	Clay with trace sand (CL)	2.0	200
P-3	Sandy SILT (ML)	2.0	25
P-4	Sandy SILT	9.0	50

7 ADDITIONAL SERVICES

7.1 DESIGN REVIEW AND CONSULTATION

It is recommended that **TECHNICON** be retained to review those portions of the contract drawings and specifications that pertain to earthwork, and foundations prior to finalization to determine whether they are consistent with our recommendations.

7.2 CONSTRUCTION OBSERVATION AND TESTING

It is recommended that a representative of **TECHNICON** observe the excavation, earthwork, and foundation phases of work to determine that the subsurface conditions are compatible with those used in the analysis and design. **TECHNICON** can conduct the necessary field testing and provide results on a timely basis so that action necessary to remedy indicated deficiencies can be taken in accordance with the plans and specifications. Upon completion of the work, a written summary of our observations, field testing, and conclusions regarding the conformance of the completed work to the intent of the plans and specifications will be provided. This additional service is not part of this current contractual agreement. **TECHNICON** will not be responsible for establishing or confirming building or foundations depths or locations unless retained to do so.

8 LIMITATIONS

The conclusions and recommendations presented in this report are based on the information provided regarding the proposed construction, and the results of our field and laboratory investigation, combined with interpolation of the subsurface conditions between boring locations. The nature and extent of the variations between borings may not become evident until construction. If variations or undesirable conditions are encountered during construction, our firm should be notified promptly so that these conditions can be reviewed and our recommendations reconsidered where necessary. The unexpected conditions frequently require additional expenditures for proper construction of the project. **TECHNICON Engineering Services, Inc.** will not assume any responsibility for errors or omissions if the final extent and depth of earthwork is not determined by our firm at the time of construction due to said variations or undesirable conditions encountered.

If the proposed construction is relocated or redesigned, or if there is a substantial lapse of time between the submission of our report and the start of work at the site, or if conditions have changed due to natural causes, or construction operations at or adjacent to the site, the conclusions and recommendations contained in this report should be considered invalid unless the changes are reviewed and our conclusions and recommendations modified or approved in writing. Such conditions may require additional field and laboratory investigations to determine if our conclusions and recommendations are applicable considering the changed conditions or time lapse.

It is the responsibility of the contractor to provide safe working conditions with respect to excavation slope stability. This report does not relieve the contractors of responsibility for temporary excavation construction, bracing and shoring in accordance with CAL OSHA requirements.

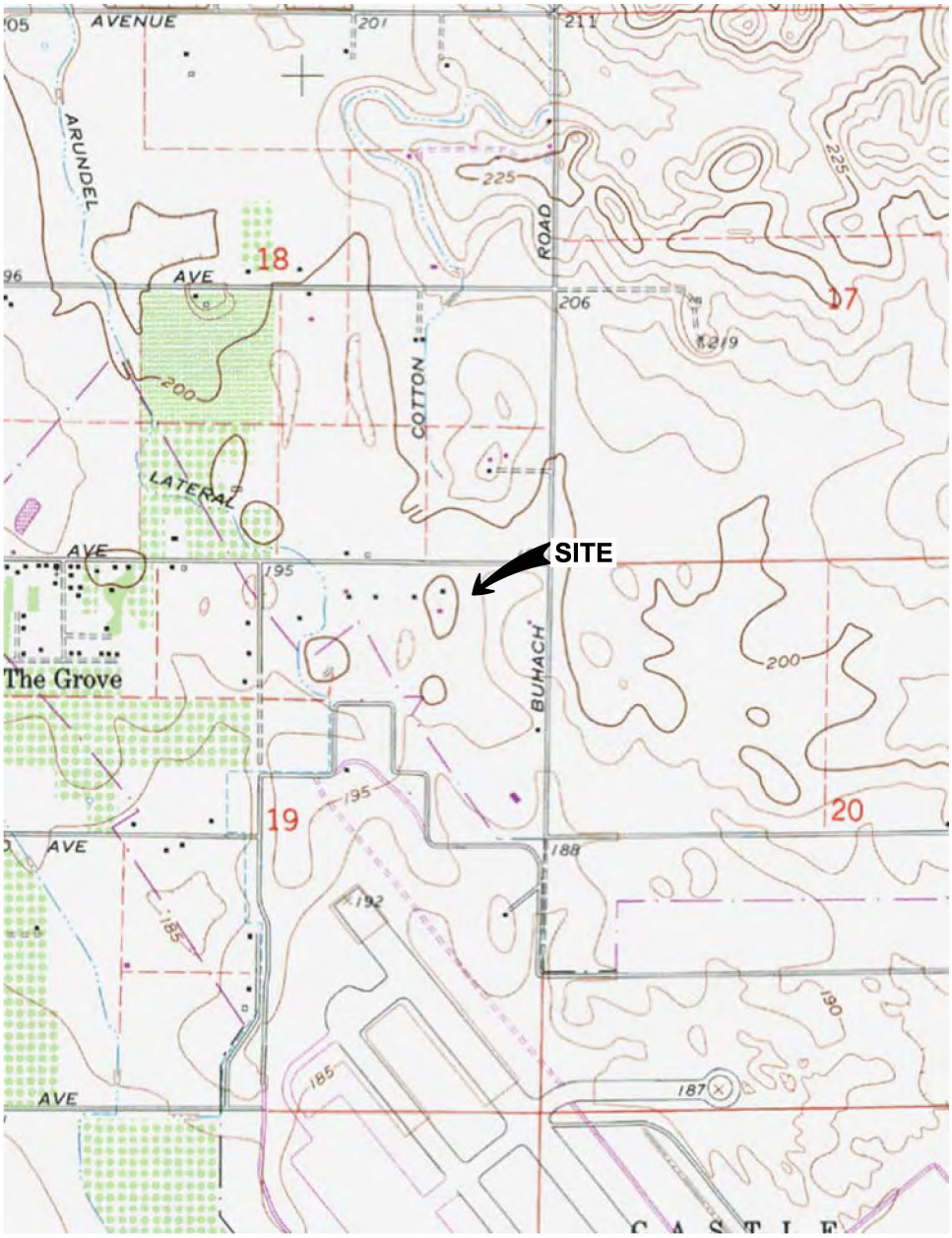
Our professional services were performed, our findings obtained, and our recommendations prepared in accordance with generally accepted engineering principles and practices. This warranty is in lieu of all other warranties either expressed or implied. This report should not be construed as an environmental audit or study.

This report has been prepared for the sole use by Mr. Doug Hoyt and any designated consultants for future developments to be located at 5197 Eucalyptus Avenue in Winton, California. Recommendations presented in this report should not be extrapolated to other areas or used for other projects without prior review. This report has been prepared with the intent that the firm of **TECHNICON** will be performing the construction testing and observation for the complete project. If, however, another firm or individual(s) should be retained or employed to use this geotechnical investigation report for the purpose of construction testing and observation, notice is hereby given that **TECHNICON** will not assume any responsibility for errors or omissions, if any, which may occur and which could have been avoided, corrected, or mitigated if **TECHNICON**, had performed the work. This notice also applies to the misuse or misinterpretation of the conclusions and recommendations outlined in this report. Furthermore, the other firm or individual(s) performing construction testing and observation should accept transfer of responsibility of the work, as required by the California Building Code, in writing to the project owner and **TECHNICON**. The firm accepting transfer of responsibility should perform additional investigation(s) as may be necessary to develop their own conclusions, evaluations, and recommendations for design and construction.

FIGURE 1

&

FIGURE 2



LAT.: 37.4028°N, LONG.: 120.5787°W, 19-T6S-R13E, MDB&M, USGS MAP: WINTON, DATE: 1961, PHOTO REV.: 1987

NORTH

TECHNICON
ENGINEERING SERVICES, INC.

PROJECT: 210374

SOURCE: USGS TOPOGRAPHIC MAPS

VICINITY MAP
PROPOSED BARN BATHROOM ADDITION
APN: 052-110-018
5197 EUCALYPTUS AVENUE
WINTON, CALIFORNIA

FIGURE 1

NTS

=SOIL BORING LOCATION

=PERCOLATION TEST LOCATIONS

NORTH

SCALE: 1"=100'

0' 50' 100'

TECHNICON
ENGINEERING SERVICES, INC.

PROJECT:
210374

SOURCE:
GOOGLE EARTH

SITE MAP
PROPOSED BARN BATHROOM ADDITION
APN: 052-110-018
5197 EUCALYPTUS AVENUE
WINTON, CALIFORNIA

FIGURE
2

BORING LOGS AND LOG KEY

APPENDIX A

TECHNICON Engineering Services, Inc.
4539 N Brawley Ave
Fresno, CA
Telephone: 559-276-9311

KEY TO SYMBOLS

PROJECT NAME Barn Bathroom Addition **DATE OF EXPLORATION** 6/9/2021

PROJECT LOCATION 5197 Eucalyptus Avenue, Winton, California **PROJECT NUMBER** 210374

LITHOLOGIC SYMBOLS (Unified Soil Classification System)

		FILL
	SW	WELL GRADED SAND
	SP	POORLY GRADED SAND
	SM	SILTY SAND
	SC	CLAYEY SAND
	PT	PEAT
	OL	LOW PLASTICITY ORGANIC SILT
	OH	HIGH PLASTICITY ORGANIC SILT
	ML	LOW PLASTICITY SILT
	MH	HIGH PLASTICITY SILT
	GW	WELL GRADED GRAVEL
	GP	POORLY GRADED GRAVEL
	GM	SILTY GRAVEL
	GC	CLAYEY GRAVEL
	CL	LOW PLASTICITY CLAY
	CH	HIGH PLASTICITY CLAY

SAMPLER SYMBOLS

- STANDARD PENETRATION TEST
- CALIFORNIA SAMPLER
- MODIFIED CALIFORNIA SAMPLER
- SHELBY TUBE SAMPLER
- ROCK CORE BARREL
- BULK SAMPLE

- Water Level at Time of Drilling
- Water Level at End of Drilling
- Water Level After 24 Hours
- Assumed stratum line
- Observed stratum line

Note 1: The degree of saturation shown on the boring logs is based on an assumed specific gravity of 2.65. The actual degree of saturation may vary.

Note 2: The stratum lines shown on the logs represent the approximate boundary between soil types; the actual in-situ transition may be gradual.

ABBREVIATIONS

LL	- LIQUID LIMIT (%)
PI	- PLASTIC INDEX (%)
W	- MOISTURE CONTENT (%)
DD	- DRY DENSITY (PCF)
S	- DEGREE OF SATURATION (%)
NP	- NON PLASTIC
200	- PERCENT PASSING NO. 200 SIEVE
PP	- POCKET PENETROMETER (TSF)
ND	- NOT DETECTED
TV	-TORVANE
PID	-PHOTOIONIZATION DETECTOR
UC	-UNCONFINED COMPRESSION
ppm	-PARTS PER MILLION
TPH-d	-TOTAL PETROLEUM HYDROCARBON AS DIESEL
TPH-mo	-TOTAL PETROLEUM HYDROCARBON AS MOTOR OIL

TECHNICON Engineering Services, Inc.
4539 N Brawley Ave
Fresno, CA
Telephone: 559-276-9311

BORING 1

PROJECT NAME Barn Bathroom Addition
PROJECT NUMBER 210374
PROJECT LOCATION 5197 Eucalyptus Avenue, Winton, California
SURFACE DESCRIPTION Flat, landscape area with gravel
DATE STARTED 6/9/21 **COMPLETED** 6/9/21
GROUND ELEVATION
DRILLING CONTRACTOR TECHNICON Engineering Services, Inc.
GROUND WATER LEVEL No groundwater encountered.
DRILL RIG TYPE SIMCO 2800
BORING DEPTH 16.5 ft
DRILLING METHOD 4-inch Solid Flight Auger
LOGGED BY J. Vue **CHECKED BY** S. Alvarez

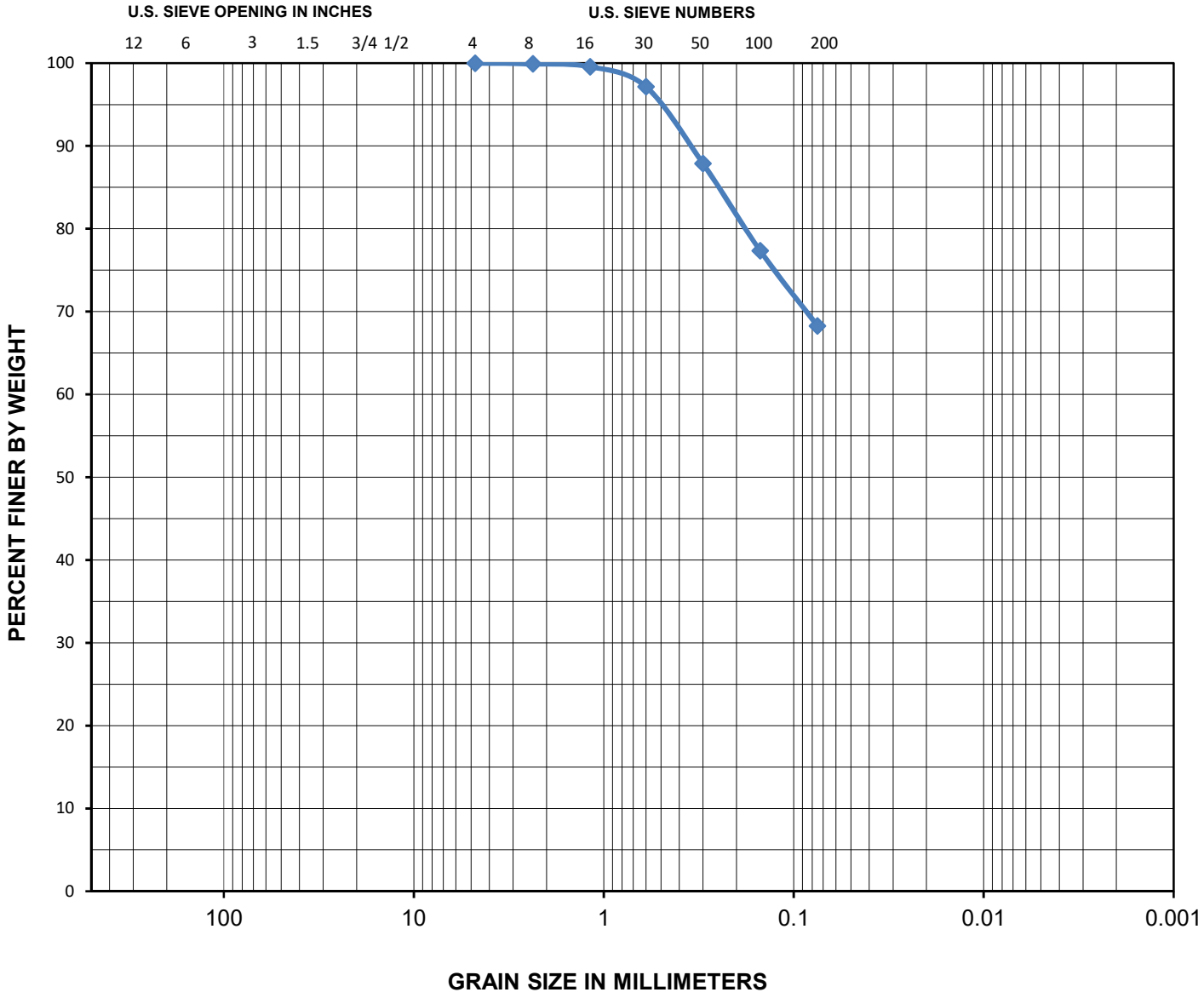
DEPTH (ft)	SAMPLE TYPE	BLOWS/ft	GRAPHIC LOG	MATERIAL DESCRIPTION	DRY DENSITY (pcf)	MOISTURE (%)	OTHER TESTS	REMARKS
0				**Poorly Graded GRAVEL (GP)** - gray, dry, coarse grained				
	CAL	6-4-4 (8)		**Sandy SILT (ML)** - brown, moist, fine to medium grained, weak cementation	99.8	16.3	S = 66 %	
5				**CLAY (CL)** - dark brown, moist, fine to medium grained, trace sand, moderate cementation				
	SPT	4-5-7 (12)						
10	CAL	5-13-30/5"			104.6	12.5	S = 57 %	
				Sandy SILT (ML) - brown, moist, fine to medium grained, moderate cementation				
15	SPT	8-10-18 (28)						

NOTES:
1. Bottom of boring at 16.5 feet.
2. No groundwater encountered.
3. Boring backfilled with soil cuttings 6/9/21.

LABORATORY TESTS

APPENDIX B

BOULDER	COBBLE	GRAVEL		SAND			SILT	CLAY
		coarse	fine	coarse	medium	fine		



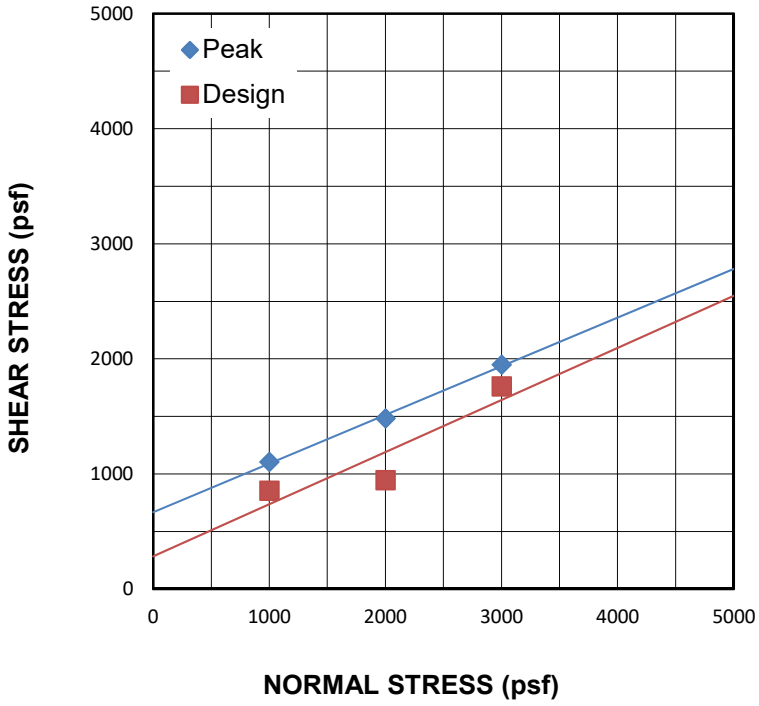
Boring	Depth (ft.)	Sample Description	Passing 3/4"	Passing #4	Passing #200
B-1	2	Sandy SILT (ML)	100.0	100.0	68.3

PROJECT NO.:	210374
LAB TECH:	
INPUT BY:	JV
CHECKED BY:	SA
DATE:	7/23/2021
REVISED:	-

SIEVE ANALYSIS

Barn Bathroom Addition
5197 Eucalyptus Avenue
Winton, California

TECHNICON
ENGINEERING SERVICES, INC.



	Depth (ft.)	Sample Description
B-1	2	Sandy SILT (ML)

	Specimen No.	Dry Unit Weight (pcf)	Water Content (%)	Saturation (%)	Area (in^2)	Height (in)
Initial	1	99.81	16.34	65.9	4.60	1.00
	2	99.81	16.34	65.9	4.60	1.00
	3	99.81	16.34	65.9	4.60	1.00
At Test	Specimen No.	Dry Unit Weight (pcf)	Water Content (%)	Saturation (%)	Area (in^2)	Height (in)
	1	100.2	17.1	69.6	4.60	0.996
	2	101.3	24.3	101.7	4.60	0.986
	3	100.8	16.9	70.0	4.60	0.990

Specimen No.	Peak Shear Stress (psf)	Design Shear Stress (psf)	Normal Stress (psf)	Strain Rate (in/min)
1	1106.7	856.9	1000	0.002
2	1483.4	947.8	2000	0.002
3	1951.5	1762.4	3000	0.002

Results	Cohesion (psf)	Friction ϕ (deg)
Peak	669	22.9
Design	284	24.4

PROJECT NO	210374
LAB TECH:	
INPUT BY:	JV
CHECKED BY	SA
DATE:	7/23/2021
REVISED:	-

DIRECT SHEAR

Barn Bathroom Addition
5197 Eucalyptus Avenue
Winton, California

TECHNICON
ENGINEERING SERVICES, INC.

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Method for Estimating the Service Life of Steel Culverts
Caltrans California Test 643

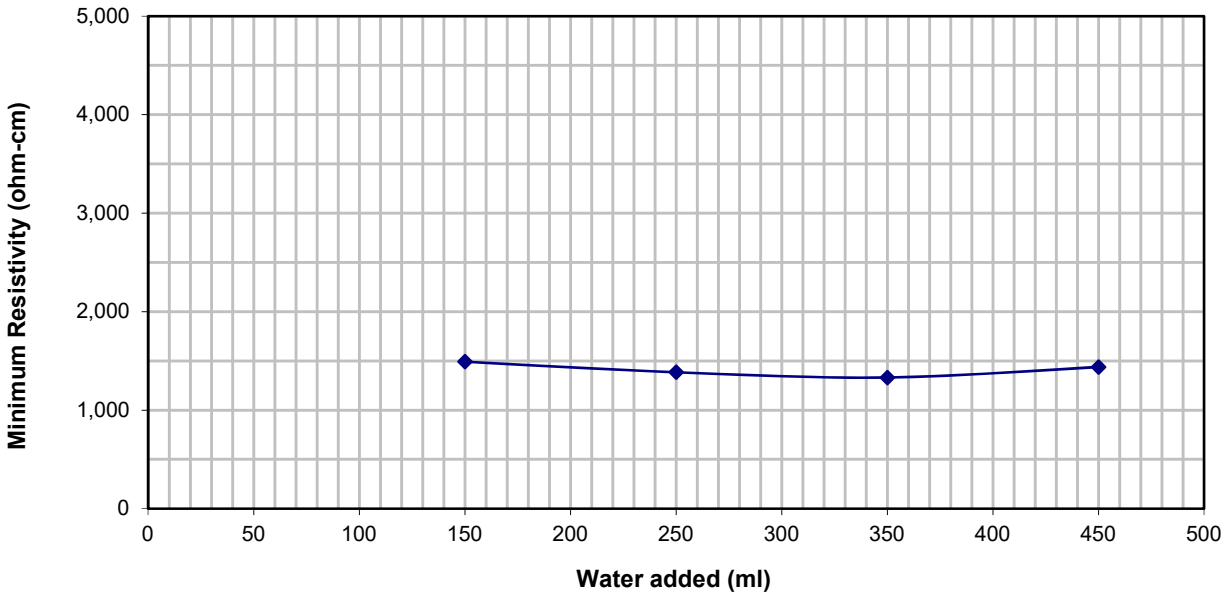
Project Name	Barn Bathroom Addition	Sample Location	B-1 @ 2' & 5'
Project Number	210374	Test Date	6/29/2021
Sample Date	6/9/2021	Tested By	WJD
Sampled By	JV	Material Description	Sandy SILT (ML)

Sample Condition	**As Received**	**Minimum Resistivity**					
Water Added (ml)	0	150	250	350	450		
Resistance (ohm)	10,300	1,400	1,300	1,250	1,350		
Resistivity (ohm-cm)	10,970	1,491	1,385	1,331	1,438		

Minimum Resistivity (ohm-cm)	**1,331**	**Field Resistivity (ohm-cm)**

pH = 7.06 **EC =**

Box Constant=1.065



Years to perforation*	20

* Caltrans California Test 643 - Method for Estimating the Service Life of Steel Culverts

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Chemical Analysis

SO_4 - Modified Caltrans 417 & CL - Modified Caltrans 417/422

Project	Barn Bathroom Addition	Technician	J. Vazquez
	Winton, California	Date	7/23/2021
TES No.	210374	Remarks	Sandy SILT (ML)

Sample Location	Soluble Sulfate SO_4-S		Soluble Chloride Cl	
Bulk 1	32.3	mg/Kg	5.3	mg/Kg
Bulk 1	32.7	mg/Kg	5.3	mg/Kg
Bulk 1	31.9	mg/Kg	5.3	mg/Kg
Average	**32.30**	**mg/Kg**	**5.30**	**mg/Kg**

4539 N. Brawley Avenue, #108, Fresno, CA 93722
Phone (559) 276-9311 Fax (559) 276-9344

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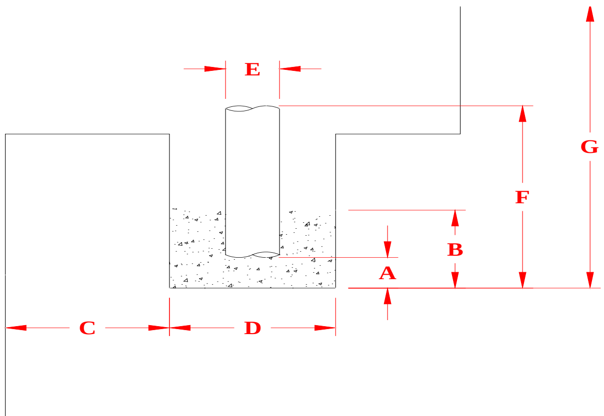
Construction Testing & Inspection * *Geotechnical & Environmental Engineering*

PERCOLATION TEST DATA SHEET

Project Name:	Barn Bathroom Addition	Project No.:	210374
Project Location:	Winton, California	Pit No.:	P-1



A.	Gravel Layer Depth, in.	2
B.	Total Gravel Thickness, in.	10
C.	Distance from Shelf, ft.	
D.	Hole Diameter, in.	8
E.	Casing Diameter, in.	2
F.	Reference Depth, in.	88
G	Hole Depth, ft.	4.5
	Depth to Groundwater	
Soil Type	CL	

Date & Time Saturated 6/9/21 10:00 AM
Depth of Water after 24-hour Saturation 0

Begin Test	Initial Depth to Water*, in.	Refilled	End Test	Final Depth to Water*, in.	Duration min.	Water Drop, in.	Perc Rate min./in.	Corr Rate min./in.**
8:45	82.2	Yes	12:45	82.7	240.0	0.5	480.0	

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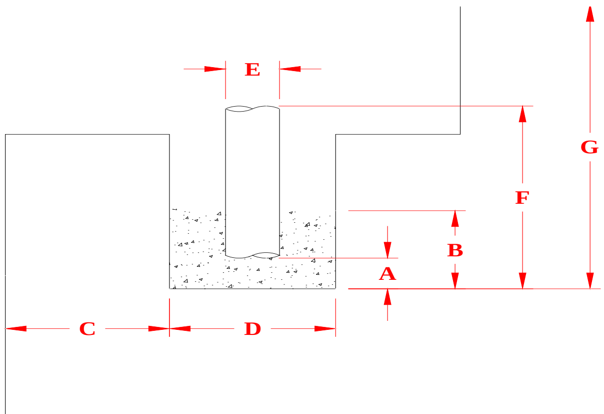
PERCOLATION TEST DATA SHEET

Project Name:	Barn Bathroom Addition	Project No.:	210374
Project Location:	Winton, California	Pit No.:	P-2



A.	Gravel Layer Depth, in.	2
B.	Total Gravel Thickness, in.	12
C.	Distance from Shelf, ft.	
D.	Hole Diameter, in.	8
E.	Casing Diameter, in.	2
F.	Reference Depth, in.	50
G	Hole Depth, ft.	2
	Depth to Groundwater	
Soil Type	CL	

Date & Time Saturated 6/9/21 10:30 AM

Depth of Water after 24-hour Saturation 0

Begin Test	Initial Depth to Water*, in.	Refilled	End Test	Final Depth to Water*, in.	Duration min.	Water Drop, in.	Perc Rate min./in.	Corr Rate min./in.**
8:45	45.6	Yes	10:45	46.2	120.0	0.6	**200.0**	
10:45	46.2		12:45	46.8	120.0	0.6	**200.0**	

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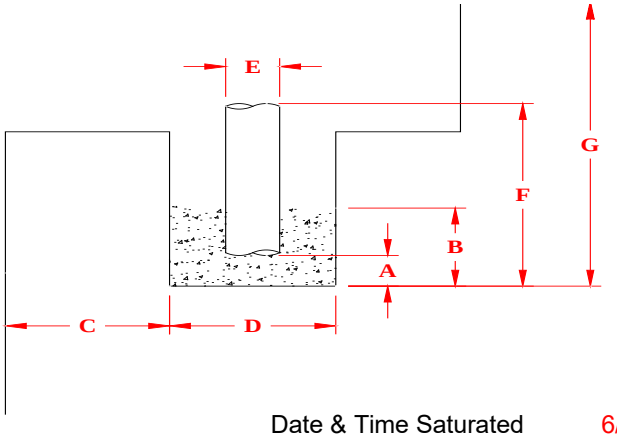
PERCOLATION TEST DATA SHEET

Project Name:	Barn Bathroom Addition	Project No.:	210374
Project Location:	Winton, California	Pit No.:	P-3



A.	Gravel Layer Depth, in.	2
B.	Total Gravel Thickness, in.	7
C.	Distance from Shelf, ft.	
D.	Hole Diameter, in.	8
E.	Casing Diameter, in.	2
F.	Reference Depth, in.	48
G	Hole Depth, ft.	2
	Depth to Groundwater	
Soil Type	ML	

Date & Time Saturated 6/19/21 11:00 AM

Depth of Water after 24-hour Saturation 0

Begin Test	Initial Depth to Water*, in.	Refilled	End Test	Final Depth to Water*, in.	Duration min.	Water Drop, in.		Perc Rate min./in.
9:30	38.4	Yes	9:45	39.6	15.0	1.2		12.5
9:45	39.6		10:00	40.2	15.0	0.6		25.0
10:00	40.2		10:15	40.8	15.0	0.6		25.0
10:15	40.8		10:30	42.0	15.0	1.2		12.5
10:30	42.0		10:45	42.6	15.0	0.6		25.0
10:45	42.6		11:00	43.2	15.0	0.6		25.0
11:02	38.4	Yes	11:15	39.0	13.0	0.6		21.7
11:15	39.0		11:30	40.2	15.0	0.6		25.0
11:30	40.2		11:45	41.4	15.0	1.2		12.5
11:45	41.4		12:00	42.0	15.0	0.6		25.0
12:00	42.0		12:15	42.6	15.0	0.6		25.0
12:15	42.6		12:30	43.2	15.0	0.6		25.0
12:30	43.2		12:45	43.8	15.0	0.6		25.0

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ENGINEERING SERVICES, INC.

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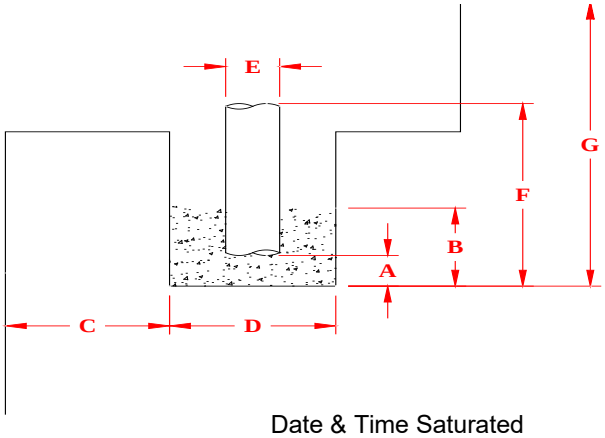
PERCOLATION TEST DATA SHEET

Project Name:	Barn Bathroom Addition	Project No.:	210374
Project Location:	Winton, California	Pit No.:	P-4



A.	Gravel Layer Depth, in.	2
B.	Total Gravel Thickness, in.	8
C.	Distance from Shelf, ft.	
D.	Hole Diameter, in.	7
E.	Casing Diameter, in.	6
F.	Reference Depth, in.	14
G	Hole Depth, ft.	9
	Depth to Groundwater	
Soil Type	ML	

Date & Time Saturated 6/9/21 12:00 PM

Depth of Water after 24-hour Saturation 0

Begin Test	Initial Depth to Water*, in.	Refilled	End Test	Final Depth to Water*, in.	Duration min.	Water Drop, in.	Perc Rate min./in.	Perc Rate min./in.
8:23	6.0	Yes	8:48	7.0	25.0	1.0		**25.0**
8:48	7.0		9:13	7.5	25.0	0.5		**50.0**
9:13	7.5		9:38	8.0	25.0	0.5		**50.0**
9:38	6.0	Yes	10:03	6.5	25.0	0.5		**50.0**
10:03	6.5		10:28	7.0	25.0	0.5		**50.0**

Acoustical Analysis

D

APPENDIX

ACOUSTICAL ANALYSIS

HOYT EVENT CENTER
MERCED COUNTY, CALIFORNIA

WJVA Report No. 24-55

PREPARED FOR

EMC PLANNING GROUP, INC.
601 ABREGO STREET
MONTEREY, CA 93940

PREPARED BY

WJV ACOUSTICS, INC.
VISALIA, CALIFORNIA

NOVEMBER 24, 2024

1. INTRODUCTION

Project Description:

The project is a proposed event center facility to be utilized for gatherings, weddings, parties, and similar events. The events would generally take place within an existing on-site barn structure. The Barn is a rectangle wood structure measuring approximately 72' x 64', totaling approximately 4,900 square feet. The barn has a large 9' x 12' barn door on each side of the structure, with a total of 4 sliding doors and a 5th emergency door at the back of the structure. The Barn has two windows that open, one window in the front and one in the back of the lower part of the building.

The Event/Barn area has an adjacent gravel parking of 1.7acres – both areas equal 3.6 acres of used space. The 3.6 acres is completely fenced off from the other acreage on property and is not accessible to the public. Ortega Ranch would host a maximum of 200 people, leaving optimal space for seating and the center of the room as a dance floor. Space encompassing the outside of the Barn is cement walkways, rock landscape, grass, and a well-lit gravel parking lot with a paved entrance from the street.

According to the project applicant, days of operation would vary. It is anticipated that the busiest months would typically include April, May, September, October, and November, for a total estimated usage of twenty (20) events during this window. The applicant estimates an additional ten (10) events would occur during the slower months of January, February, March, June, July, and August. Hours of operation for day of event would be between 9:00 a.m. to 12:00 p.m., with all amplified music concluding by 10:00 pm.

Environmental Noise Assessment:

Merced County has required an acoustical analysis to determine if noise generated by the proposed activities will comply with applicable Merced County noise standards. This acoustical analysis, prepared by WJV Acoustics Inc. (WJVA), is based on the site plan provided by the project applicant (dated 12/21/22), facility operations data provided by the project applicant and noise level data obtained by WJVA at the project site. Revisions to the site plan or other project-related information available to WJVA at the time the analysis was prepared may require a reevaluation of the findings and/or recommendations of the report. The project site plan is provided as Figure 1.

Appendix A provides definitions of the acoustical terminology used in this report. Unless otherwise stated, all sound levels reported in this analysis are A-weighted sound pressure levels in decibels (dB). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighted sound levels, as they correlate well with public reaction to noise. Appendix B provides examples of sound levels for reference.

In terms of human perception, a 5 dB increase or decrease is considered to be a noticeable change in noise levels. Additionally, a 10 dB increase or decrease is perceived by the human ear as half as loud or twice as loud. In terms of perception, generally speaking the human ear cannot perceive an increase (or decrease) in noise levels less than 3 dB.

2. THRESHOLDS OF SIGNIFICANCE

The CEQA Guidelines apply the following questions for the assessment of significant noise impacts for a project:

a. Would the project result in 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. Would the project result in 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?

a. Noise Level Standards

Merced County

General Plan

The Merced County Health and Safety Element of the General Plan (adopted December 10, 2013) establishes noise level criteria for both transportation and non-transportation (stationary) noise sources. For transportation noise sources, the General Plan establishes noise level criteria in terms of the Day-Night Average Level (L_{dn}/DNL) metric. The L_{dn} is the time-weighted energy average noise level for a 24-hour day, with a 10 dB penalty added to noise levels occurring during the nighttime hours (10:00 p.m.-7:00 a.m.).

Table HS-1 (provided below as Table I) of the Merced County General Plan provides the maximum allowable exterior and interior noise exposure levels for various land use types. For residential land uses, the noise level standards typically apply to outdoor activity areas. Outdoor activity areas generally include backyards of single-family residences and individual patios or decks and outdoor common use areas of multi-family residential developments. The intent of the exterior noise level requirement is to provide an acceptable noise environment for outdoor activities and recreation.

Table I also provides interior noise level standards. For residential land uses, and interior noise level standard 45 dB L_{dn} is applied. The intent of the interior noise level standard is to provide an acceptable noise environment for indoor communication and sleep.

TABLE I

MERCED COUNTY GENERAL PLAN NOISE LEVEL STANDARDS
TRANSPORTATION NOISE SOURCES

New Land Use	Sensitive Outdoor Area[1] -L_{dn}	Sensitive Interior Area[2] - L_{dn}	Notes
All Residential	65	45	3
Transient Lodging	65	45	3,4
Hospitals & Nursing Homes	65	45	3,4,5
Theaters & Auditoriums	--	35	4
Churches, Meeting Halls	65	40	4
Schools, Libraries, etc.	65	40	4
Office Buildings	65	45	4
Commercial Buildings	--	50	4
Playgrounds, Parks, etc.	70	--	--
Industry	65	50	4

1. Sensitive Outdoor Areas include primary outdoor activity areas associated with any given land use at which noise-sensitivity exists and the location at which the County's exterior noise level standards are applied.

2. Sensitive Interior Areas includes any interior area associated with any given land use at which noise sensitivity exists and the location at which the County's interior noise level standards are applied. Examples of sensitive interior spaces include, but are not limited to, all habitable rooms of residential and transient lodging facilities, hospital rooms, classrooms, library interiors, offices, worship spaces, theaters. Interior noise level standards are applied within noise-sensitive areas of the various land uses with windows and doors in the closed positions.

3. Railroad warning horn usage shall not be included in the computation of Ldn.

4. Only the interior noise level standard shall apply if there are no sensitive exterior spaces proposed for these uses.

5. Since hospitals are often noise-generating uses, the exterior noise level standards are applicable only to clearly identified areas designated for outdoor relaxation by either hospital staff or patients.

Source: Merced County General Plan

Table HS-2 (provided below as Table II) of the Merced County General Plan provides the maximum allowable exterior and interior noise level standards for non-transportation (stationary) noise sources. Daytime is considered 7:00 a.m. to 10:00 p.m., and nighttime is considered 10:00 p.m. to 7:00 a.m.

TABLE II

MERCED COUNTY GENERAL PLAN NOISE LEVEL STANDARDS
NON-TRANSPORTATION NOISE SOURCES
MEDIAN (L_{50}) / MAXIMUM (L_{MAX})[1]

Outdoor Area[2]			Interior[3]	Notes
Receiving Land Use	Daytime	Nighttime	Day or Night	
All Residential	55 / 75	50 / 70	35 / 55	
Transient Lodging	55 / 75	---	35 / 55	4
Hospitals & Nursing Homes	55 / 75	---	35 / 55	5,6
Theaters & Auditoriums	---	---	30 / 50	6
Churches, Meeting Halls	55 / 75	---	35 / 60	6
Schools, Libraries, etc.	60 / 75	---	35 / 60	6
Office Buildings	55 / 75	---	45 / 65	6
Commercial Buildings	55 / 75	---	45 / 65	6
Playgrounds, Parks, etc.	65 / 75	---	---	6
Industry	60 / 80	---	50 / 70	6

1. These standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards in this table, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.

2. Sensitive Outdoor Areas include primary outdoor activity areas associated with any given land use at which noise-sensitivity exists and the location at which the County's exterior noise level standards are applied.

3. Sensitive Interior Areas includes any interior area associated with any given land use at which noise sensitivity exists and the location at which the County's interior noise level standards are applied. Examples of sensitive interior spaces include, but are not limited to, all habitable rooms of residential and transient lodging facilities, hospital rooms, classrooms, library interiors, offices, worship spaces, theaters. Interior noise level standards are applied within noise-sensitive areas of the various land uses with windows and doors in the closed positions.

4. Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.

5. Since hospitals are often noise-generating uses, the exterior noise level standards are applicable only to clearly identified areas designated for outdoor relaxation by either hospital staff or patients.

6. The outdoor activity areas of these uses (if any) are not typically used during nighttime hours.

7. Where median (L50) noise level data is not available for a particular noise source, average (Leq) values may be substituted for the standards of this table provided the noise source operates for at least 30 minutes. If the source operates less than 30 minutes the maximum noise level standards shown shall apply.

Source: Merced County General Plan

Code of Ordinances

The Merced County Code of Ordinances provides additional noise level standards applicable to the project. Section 10.60.030 (sound level limitations) of the Merced County Code of Ordinances states the following:

No person shall cause, suffer, allow, or permit the operation of any sound source on private property in such a manner as to create a sound level that results in any of the following, when measured at or within the real property line of the receiving property:

1. Exceeds the background sound level by at least ten (10) dBA during daytime hours (seven a.m. to ten p.m.) and by at least five dBA during nighttime hours (ten p.m. to seven a.m.).

2. Exceeds sixty-five (65) dBA L_{dn} on residential real property or seventy (70) dBA L_{dn} on nonresidential real property; or

3. Exceeds seventy-five (75) dBA Lmax on residential real property or eighty (80) dBA Lmax on nonresidential real property.

State of California

There are no state noise standards that are applicable to the project.

Federal Noise Standards

There are no federal noise standards that are applicable to the project.

3. SETTING

The project site is located at 5197 Eucalyptus Avenue, in an unincorporated portion of Merced County. The area surrounding the project site is predominately agricultural and rural residential land uses. The closest off-site residential land uses (sensitive receptors) are approximately 1,400 feet to the north (R-2), approximately 675 feet to the northwest (R-3) and approximately 575 feet to the west (R-3) of the project site (described distances represent the distance from the proposed location of the event center barn to the closest residential land uses). Additionally, WJVA analyzed noise levels at an on-site residential land use (R-1) located approximately 500 east of the project site. While R-1 is on-site and not considered a sensitive receptor, this analysis provides noise levels at the R-1 location. The project vicinity and locations of the closest residential land uses to the project site are provided as Figure 2.

a. Existing Noise Environment

WJVA staff conducted background (ambient) noise level measurements within and near the project site on October 15, 2024. Short-term ambient noise levels were measured at four (4) locations (ST-1 through ST-4). The measurement sites were generally located in the vicinity and direction of the closest residential land uses (as indicated on Figure 2), to determine existing (without project) noise levels. The noise measurement sites are indicated on Figure 3.

Noise monitoring equipment utilized for the measurements consisted of Larson-Davis Laboratories Model LDL-820 sound level analyzers equipped with a B&K Type 4176 1/2" microphones. The equipment complies with the specifications of the American National Standards Institute (ANSI) for Type I (Precision) sound level meters. The meters were calibrated in the field prior to use with a B&K Type 4230 acoustic calibrator to ensure the accuracy of the measurements. The microphones were located on a tripod at 5 feet above the ground. Ambient noise levels were measured simultaneously over a thirty-minute interval at the four (4) locations.

Table III summarizes the ambient noise measurement results. Noise sources contributing to the ambient noise levels included agricultural activities, vehicle traffic, and aircraft overflights (Merced Castle Airport). The noise level data summarized by Table III are representative of afternoon conditions in the project area.

TABLE III

SUMMARY OF AMBIENT NOISE LEVEL MEASUREMENTS
5197 EUCALYPTUS AVENUE, MERCED COUNTY
OCTOBER 15, 2024

Location	A-weighted Decibels, dBA	
	L_{max}	L_{50}
ST-1	54	39
ST-2	85	38
ST-3	70	42
ST-4	70	43

Source: WJV Acoustics, Inc.

4. PROJECT RELATED NOISE LEVELS

a. Amplified Speech and Music

The project applicant proposes to operate private events with the inclusion of amplified speech and music. According to the project applicant, all amplified music would occur indoor, within the existing on-site barn facility. The applicant indicated that during warmer weather the four barn doors would typically be opened to allow for air flow, while during cooler weather the barn doors would remain closed. All amplified music would conclude by 10:00 p.m.

During the hours of 7:00 a.m. to 10:00 p.m., the County's applicable noise standard is 50 dB L_{50} and 70 dB L_{max}, when the source consists of speech or music. If the existing ambient noise level exceeds the noise standards, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.

On October 15, 2024 WJVA staff measured noise levels at the project site while music was being amplified through a speaker system (operated by the applicant) located within the barn. According to the applicant, amplified noise levels during the simulated event were comparable to that which would be experienced during a wedding or banquet event. WJVA staff also agreed with this assessment. The sound system was located in the same location where the applicant proposes to locate the sound system during on-site events utilizing amplified speech and music.

WJVA staff conducted noise measurements at the same four (4) locations described above, in the direction and vicinity of the closest nearby off-site residential land uses, while amplified music was being played within the project site. Measurements were taken simultaneously at each of the four noise measurement sites. Noise measurements were conducted for a period of thirty minutes with all barn doors open and with all barn doors closed. Table IV provides the results of the noise measurements conducted with all barn doors open and Table V provides the results of the noise measurements conducted with all barn doors closed. The noise levels described in Table IV and Table V are provided in terms of the County's applicable standards.

TABLE IV

SUMMARY OF PROJECT-RELATED NOISE LEVEL MEASUREMENTS
WITH BARN DOORS OPEN
5197 EUCALYPTUS AVENUE, MERCED COUNTY
OCTOBER 15, 2024

Location	A-weighted Decibels, dBA	
	L_{max}	L_{50}
R-1	57	49
R-2	81	40
R-3	63	40
R-4	61	47

Source: WJV Acoustics, Inc.

TABLE V

SUMMARY OF PROJECT-RELATED NOISE LEVEL MEASUREMENTS WITH BARN DOORS CLOSED 5197 EUCALYPTUS AVENUE, MERCED COUNTY OCTOBER 15, 2024

Location	A-weighted Decibels, dBA	
	L_{max}	L_{50}
R-1	59	42
R-2	79	40
R-3	60	42
R-4	66	44

Source: WJV Acoustics, Inc.

Noise levels provided in Table IV (with barn doors open) and in Table V (with barn doors closed) indicate that measured noise levels did not exceed 50 dB L_{50} at any of the four measurement sites, in the vicinity and direction of nearby residential land uses. The L_{50} noise metric represents the noise level that is exceeded for at least 50% of the time during the sample period. Because the amplified music represents a somewhat constant noise source, the L_{50} is a reasonable indicator of noise levels associated with the amplified music.

In regards to the Merced County L_{max} (maximum) noise level standard of 70 dB L_{max} (when the noise source is primarily speech and music), a comparison of the measured L_{max} values in Table III, Table IV and Table V indicates that the measured L_{max} levels were not influenced by the amplified music, as the measured maximum values during each of the three sample periods (no amplified music, amplified music with barn doors open, and amplified music with barn doors closed) showed little variation, with often higher measured maximum noise levels occurring during the sample period without amplified music. This indicates that the source of the measured maximum noise levels was not-project related noise, but rather due to an aircraft overflight (the project site is north of the flight path of Merced Castle Airport) or vehicle drive-by.

b. Parking Lot Vehicle Movements

Noise due to vehicle movements and traffic in parking lots is typically limited by low speeds and is not usually considered to be significant. Human activity in parking lots that can produce noise includes voices, stereo systems and the opening and closing of car doors and trunk lids. Such activities can occur at any time. The noise levels associated with these activities cannot be precisely defined due to variables such as the number of parking movements, time of day and other factors. It is typical for a passing car in a parking lot to produce a maximum noise level of 60 to 65 dB at a distance of 50 feet, which is comparable to the level of a raised voice. For this project, the closest proposed vehicle movement area would be located approximately 350 feet from the closest existing off-site residential land use, resulting in vehicle movement noise levels of approximately 43 to 48 dB at the closest residential land use. Such levels are below the County's daytime and nighttime maximum (L_{max}) noise level standards. Vehicle movement noise would not be expected to exceed Merced County noise level standards.

5. IMPACT SUMMARY

- Noise levels associated with amplified speech and music would not exceed Merced County daytime (7:00 a.m. to 10:00 p.m.) noise level standards at any nearby sensitive receptor location. Noise levels measured by WJVA while amplified music was played within the barn indicated that project-related noise levels would not exceed Merced County noise standards with the barn doors open or with the barn doors closed. In order to maintain compliance with Merced County noise standards, all amplified speech and music must conclude by 10:00 p.m.

- Noise levels associated with on-site vehicle movements would not exceed any Merced County daytime or nighttime noise level standards at any nearby sensitive receptor location.

FIGURE 1: PROJECT SITE PLAN

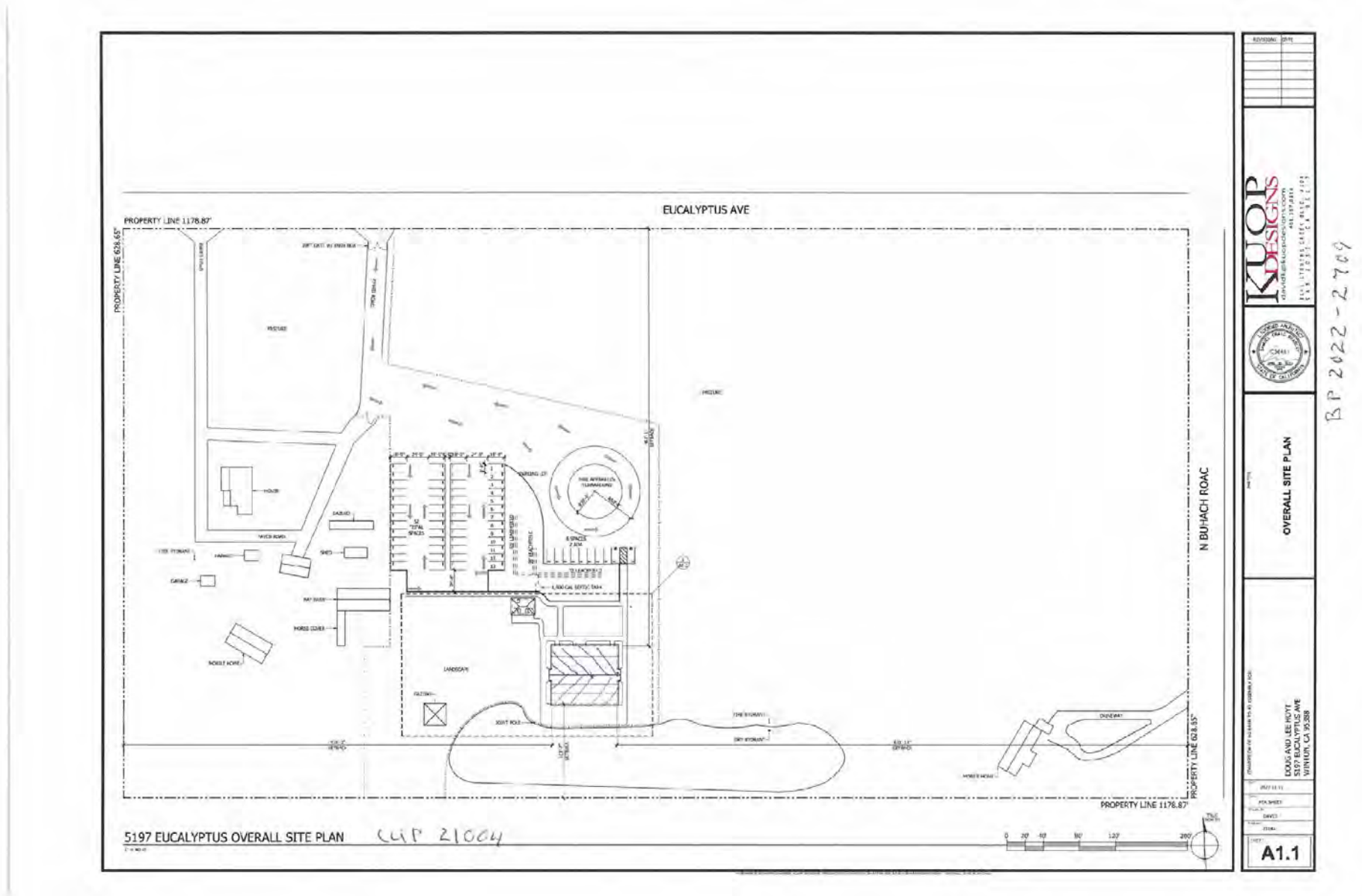


FIGURE 2: PROJECT VICINITY & ANALYZED RECEPTORS

FIGURE 3: PROJECT VICINITY & AMBIENT NOISE MEASUREMENT LOCATIONS

APPENDIX A-1

ACOUSTICAL TERMINOLOGY

AMBIENT NOISE LEVEL: The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

CNEL: Community Noise Equivalent Level. The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.

DECIBEL, dB: A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

DNL/L_{dn}: Day/Night Average Sound Level. The average equivalent sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.

L_{eq}: Equivalent Sound Level. The sound level containing the same total energy as a time varying signal over a given sample period. L_{eq} is typically computed over 1, 8 and 24-hour sample periods.

NOTE: The CNEL and DNL represent daily levels of noise exposure averaged on an annual basis, while L_{eq} represents the average noise exposure for a shorter time period, typically one hour.

L_{max}: The maximum noise level recorded during a noise event.

L_n: The sound level exceeded "n" percent of the time during a sample interval (L_{90}, L_{50}, L_{10}, etc.). For example, L_{10} equals the level exceeded 10 percent of the time.

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ACOUSTICAL TERMINOLOGY

NOISE EXPOSURE CONTOURS: Lines drawn about a noise source indicating constant levels of noise exposure. CNEL and DNL contours are frequently utilized to describe community exposure to noise.

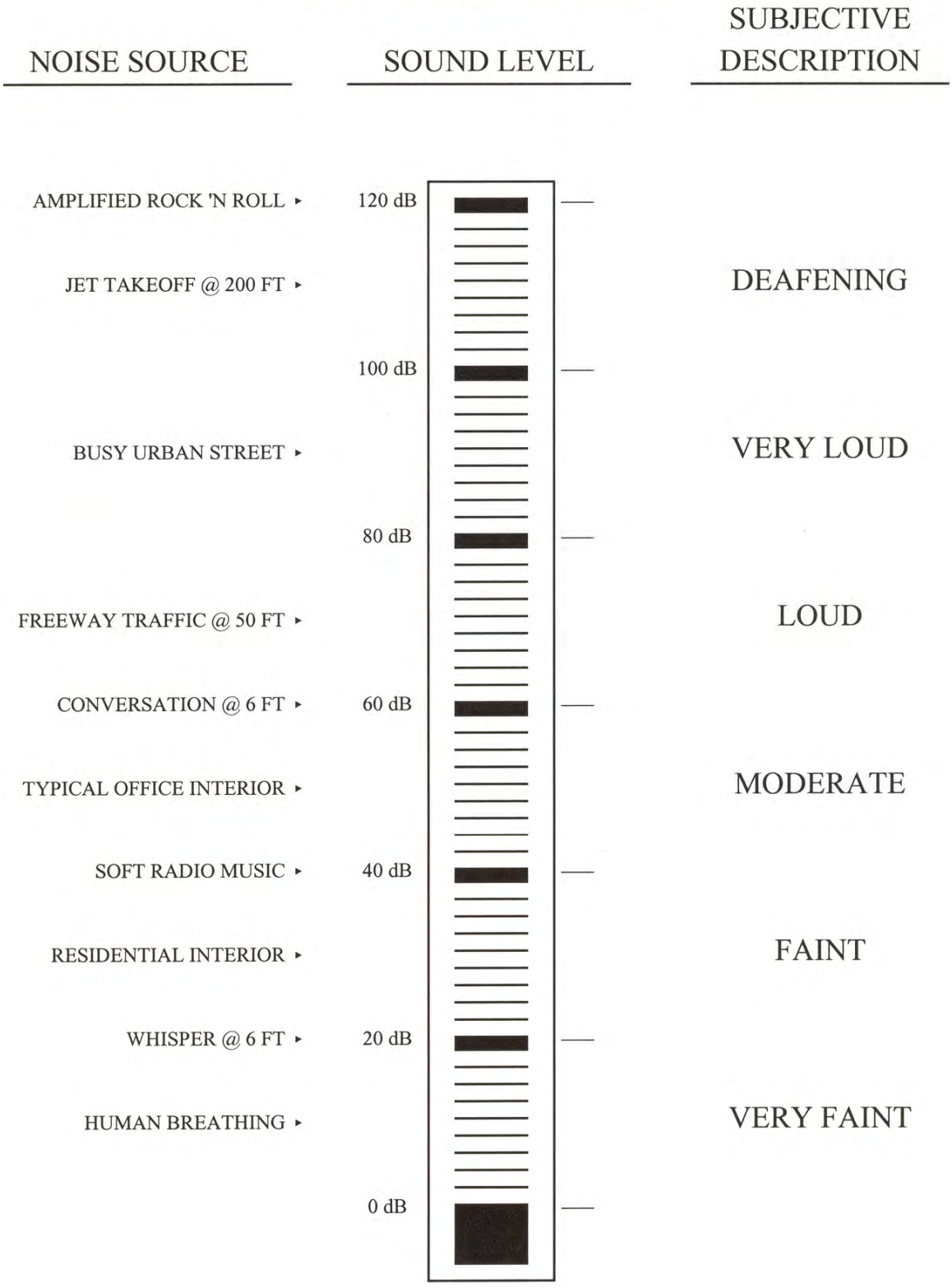
NOISE LEVEL REDUCTION (NLR): The noise reduction between indoor and outdoor environments or between two rooms that is the numerical difference, in decibels, of the average sound pressure levels in those areas or rooms. A measurement of Anoise level reduction" combines the effect of the transmission loss performance of the structure plus the effect of acoustic absorption present in the receiving room.

SEL or SENEL: Sound Exposure Level or Single Event Noise Exposure Level. The level of noise accumulated during a single noise event, such as an aircraft overflight, with reference to a duration of one second. More specifically, it is the time-integrated A-weighted squared sound pressure for a stated time interval or event, based on a reference pressure of 20 micropascals and a reference duration of one second.

SOUND LEVEL: The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.

SOUND TRANSMISSION CLASS (STC): The single-number rating of sound transmission loss for a construction element (window, door, etc.) over a frequency range where speech intelligibility largely occurs.

APPENDIX B
EXAMPLES OF SOUND LEVELS



Transportation Impact Study

E

APPENDIX

KITTELSON & ASSOCIATES
155 Grand Avenue, Suite 505
Oakland, CA 94612
P 510.839.1742

TRANSPORTATION IMPACT STUDY

February 7, 2025 Project# 30435

To: Teri Wissler Adam, Senior Principal
EMC Planning group

From: Dhawal Kataria, AICP and Fernando Sotelo, TE, Kittelson & Associates, Inc.

CC: Mark Hamilton, Couty of Merced

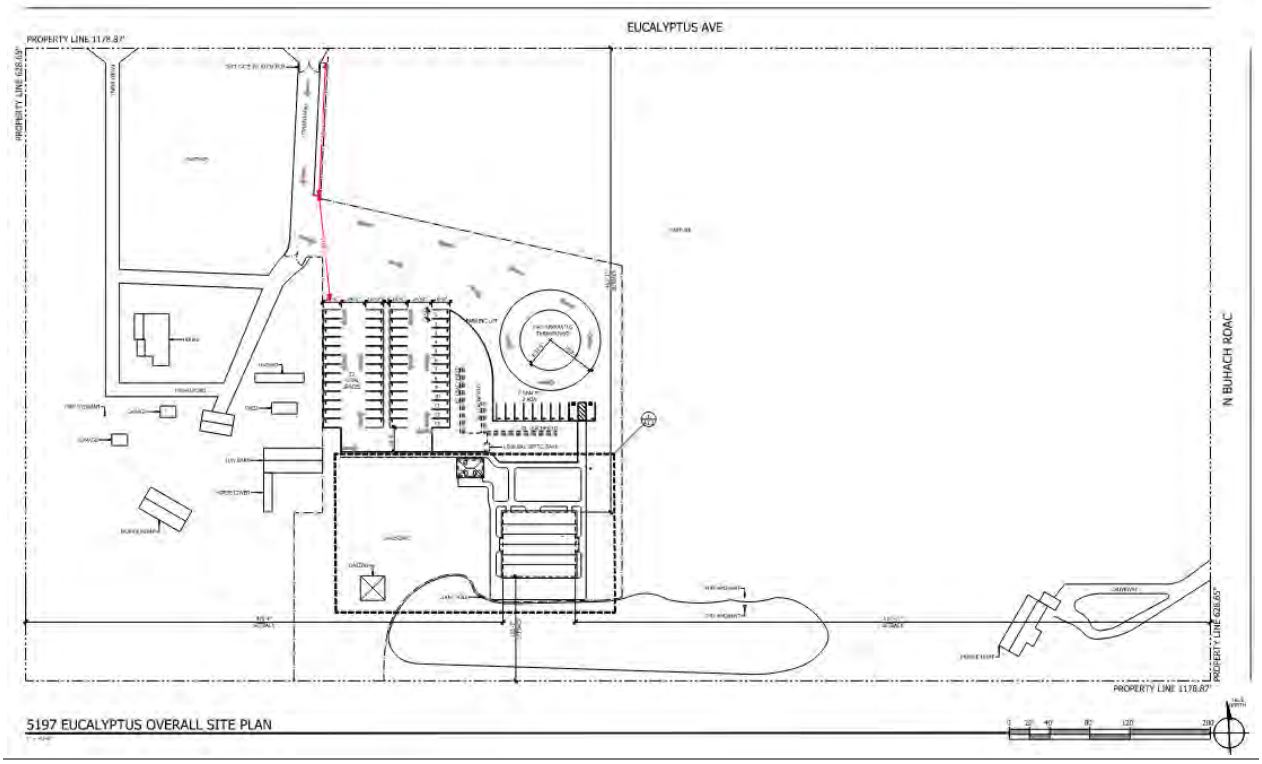
RE: Hoyt Event Center – Transportation Impact Study

INTRODUCTION

Kittelson & Associates, Inc. (Kittelson) has prepared this Transportation Impact Study (TIS) for the proposed Hoyt Event Center project, located at 5197 Eucalyptus Avenue in Winton, California (see Figure 1). The project involves repurposing the existing barn structures on the 16-acre site to host weddings and family events. Of the total site area, 3.6 acres are dedicated to the event center, which includes a 4,325-square-foot assembly area. The project site also includes three existing dwelling units, which are currently occupied and will not contribute to additional trips.

Designed to accommodate up to 200 guests, the event center will not require permanent staff, as event organizers will handle catering and cleanup services. The project site features three driveways: two located along Eucalyptus Avenue and one on Buhach Road. The event center will utilize the easternmost driveway on Eucalyptus Avenue. The repurposed project site will offer up to 60 parking spaces, including two (2) ADA-compliant spaces. This document presents the findings of the California Environmental Quality Act (CEQA) transportation assessment conducted for the project.

Figure 1: Project Site Plan



Source: KUOP Design, dated -12.21.2022

ENVIRONMENTAL SETTING

The project site is situated east of the community of Winton, within unincorporated Merced County. Its entry driveway is located on the south side of Eucalyptus Avenue, approximately 0.86 miles east of Shaffer Road, in an area predominantly surrounded by agricultural land. Shaffer Road connects to Oakdale Road, which provides access to Waterford and Hickman. Eucalyptus Avenue connects to both Buhach Road and Santa Fe Drive, offering routes to the cities of Merced and Livingston. Key roadways serving as primary connections to the project site include Eucalyptus Avenue, Santa Fe Drive, Shaffer Road, Buhach Road, and Fox Road.

Eucalyptus Avenue provides a direct connection to the project driveway and is a two-lane undivided local roadway with low volumes and low speed at the project site.

Santa Fe Drive is an important route that runs generally north of and parallel to State Route 99 (SR 99) along the BN&SF railroad. The Merced County General Plan designates the roadway a two-lane Minor Arterial west of Winton and a four lane Principal Arterial east of Winton.[1] The posted speed limit on Santa

[1] County of Merced. 2030 Merced County General Plan. Retrieved from https://www.countyofmerced.com/2018/Adopted-General-Plan on December 5, 2024

Fe Drive is 35 mph through the downtown Winton area and 55 mph elsewhere. The Average Daily Traffic at Santa Fe drive is 5,464 vehicles per day (2018).[2]

Shaffer Road is designated a two-lane Major Collector in the Merced County General Plan that runs north south and provides connections with the City of Atwater. The posted speed limit near the project site is 45 mph and the average daily traffic volume on the roadway is 4,492 vehicles per day. Buhach Road and Fox Road are two lane undivided local roads with low volume and low speed that primarily provides connections to other major roads.

The applicant estimates that approximately 34 events will be held annually, with most occurring during the months of April, May, September, October, and November. Wedding events are expected to take place on Saturday afternoons and extend until midnight. It is anticipated that around five staff members or vendors will be involved in event arrangements. The site's three existing dwelling units are currently occupied and will not contribute to additional project-related trips.

ENVIRONMENTAL EVALUATION

A. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The project applicant plans to repurpose the existing barn structures on the site to host weddings and family events. This proposed use is expected to generate approximately 146 daily vehicle trips on 34 weekends per year (see Table 1). Given the current low traffic volumes in the area surrounding the project site, the additional trips generated by the proposed project are not anticipated to significantly affect roadway performance.

The project aligns with the Circulation policies outlined in the Merced County General Plan. Currently, there are no transit, bicycle, or pedestrian facilities in the immediate vicinity of the site. Furthermore, the 2022 Merced County Association of Governments (MCAG) Regional Transportation Plan (RTP) does not identify any planned projects or improvements within the project area.[3] Furthermore, the project will not modify the configuration of public roads and will not preclude the County from adding pedestrian, bicycle, and transit facilities in the vicinity of the project site. The project would not conflict with a program, plan, ordinance, or policy addressing the circulation system and therefore will have **no impact**.

B. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Section 15064.3, subdivision (b) of the CEQA Guidelines describes criteria for analyzing transportation impacts. Senate Bill (SB) 743 updated the process of measuring transportation impacts for CEQA purposes based on Vehicle Miles Traveled (VMT) determined as the number of daily trips and the distance traveled

[2] County of Merced. *Winton Community Plan EIR Appendix G: Traffic Report.* Retrieved from https://www.countyofmerced.com/DocumentCenter/View/26138/Appendix-G-Traffic-Report-and-Appendix on December 5, 2024
[3] Merced County Association of Governments. *2022 Regional Transportation Plan.* Retrieved from https://www.mcagov.org/364/2022-RTP on December 6, 2024

by those trips to their destinations. MCAG adopted VMT Thresholds and Implementation Guidelines to assist the member jurisdictions with the implementation of VMT metric. According to the MCAG VMT Guidelines, projects that are consistent with the lead agency's General Plan and generate less than 1,000 daily trips are presumed to cause less than significant VMT impacts. However, for projects that are not consistent with the lead agency's General Plan, a screening threshold of 500 ADT will be applied.

The daily project trip generation is based on the information provided by the applicant. Table 1 shows the daily trip generation for the project. With an assumed average utilization of 85% for a conservative estimate, the expected attendees will be 170 persons. The project will generate 68 vehicle trips each way or 136 daily trips, based on 2.5 guests per vehicle. The applicant anticipates around five (5) staff/vendors to make the arrangements for the event, some of which are expected to come a day before the event. To be conservative, Kittelson anticipates all staff and vendors to arrive on the day of the event and will generate 10 daily trips. Therefore, the total daily project trips will be 146. Over the course of a year, with 34 events, this amounts to 4,964 trips annually. On average, this equates to 14 trips per day throughout the year.

Table 1: Project Trip Generation

Type of Users	Capacity (Persons)	Average Utilization	Expected Users	Daily Trips
Attendees	200	85%	170	136
Staff and Caterers		NA	5	10
Total				**146**

Source: Kittelson & Associates, Inc. 2024
Calculation = Capacity x Average Utilization = Expected Users.
Daily Trips = Expected Users/Guests per vehicle x 2 (two-way trips).
Notes: Assumed average utilization of 85% to be conservative. Typically, 75% utilization is estimated. (Source: Estimating Trip Generation and Distribution by Mike Spack)

The project meets the screening criteria established under MCAG VMT guidelines, which set a threshold of 500 trips per day. With an annual daily average of 14 trips, which is below the threshold. Therefore, the VMT impact due to the project would be considered **less than significant**.

C. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The property features three driveways: two located along Eucalyptus Avenue and one on Buhach Road. The event center (project) will utilize the easternmost driveway on Eucalyptus Avenue, which is 20 feet wide and secured by a gate equipped with a Knox Box. This driveway spans approximately 240 feet in length and includes a fire apparatus turnaround meeting the dimension (50' outside and 30' inside) specified in the Merced County Fire Code.

It is anticipated that most event attendees will arrive gradually over an extended period before the start of the event, reducing the likelihood of significant queues forming on Eucalyptus Avenue. Upon departure, attendees are expected to assess the length of the queue at the driveway and time their exit accordingly.

Prior to obtaining building permits, the project applicant will be required to submit detailed plans demonstrating compliance with applicable state and local standards and required conditions. The access driveway design will be reviewed by the County's engineering department and constructed as part of the development review process to their satisfaction. These include a detailed sight distance assessment for the proposed site access driveways to Eucalyptus Avenue to comply with requirements from the California Department of Transportation (Caltrans) Highway Design Manual and the County standard plans. Sufficient sight distance can be met by providing clear line of sight without the interference of features such as vegetation, landscape and curbside vehicle parking. This will be confirmed as part of the project's application review and approval process prior to construction permits when detailed construction plans are available.

In addition, the proposed project would not introduce any permanent modifications to the design features or uses of public roadways within the project area, nor would it involve the construction of new roadways. With application of standard conditions that require a review of access driveway sight distance standards and given the project does not propose the modification of features on public roadways, the project would not create hazards associated with geometric design features or incompatible uses. As a result, the impact is anticipated to be **less than significant**, and no mitigation measures are necessary.

D. Result in inadequate emergency access?

The Merced County Fire Department enforces standards for project driveways to ensure adequate emergency access. The project's 20-foot-wide driveway complies with the access requirements outlined in CFC 503.2.1. Additionally, a Knox Box will be installed in accordance with CFC 506.1 to facilitate emergency access to the site. The project will also include fire lane markings to ensure fire apparatus can efficiently access the property. As a result, the proposed project would not lead to inadequate emergency access, and hence, there will be **no impact**.

Table 2 summarizes the transportation CEQA checklist for transportation element for the project.

Table 2: Transportation CEQA Checklist

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?				X
b) Would the project conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?			X	

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?				X

Source: Kittelson & Associates, Inc. 2024