DRAFT INITIAL STUDY and ENVIRONMENTAL CHECKLIST

FOR

MENDOCINO-LAKE COMMUNITY COLLEGE SECONDARY ACCESS ROADWAY

June 2022

Lead Agency:
Mendocino-Lake Community College District

Prepared by:
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LACO Project No. 6816.28

State Clearinghouse Number:

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I. PROJECT SUMMARY

Date: June 2022

Project Title: Mendocino-Lake Community College Secondary Access Roadway

Lead Agency: Mendocino-Lake Community College District

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Location: The proposed project is to be located south of the Ukiah Mendocino College Campus (College) on the parcels identified by Assessor's Parcel Numbers (APN) 169-020-07, -14, and -15, 156-060-13, and -15, and 156-110-35 (Site). The College is located 4 miles north of Ukiah, west of the intersection of Highway 101 and Hensley Creek Road, at 1000 Hensley Creek Road, Ukiah, California, 95482. The northern end of the Site begins on the north side of the existing track field at the College. The southern end of the Site is located adjacent to the north of Orr Springs Road, west of Highway 101. See Figure 1 for the overview of the project location.

Coastal Zone: No

Affected Parcel(s): APNs 169-020-07, 169-020-14, 169-020-15, 156-060-13, 156-060-15, and 156-110-35

Current County of Mendocino Land Use Designations:
APNs 169-020-07, 169-020-14, & 169-020-15: Public Services (PS)
APNs 156-060-13, 156-060-15, & 156-110-35: Rangelands, 160-acre minimum (RL160)

Current County of Mendocino Zoning Designation:
APNs 169-020-07, 169-020-14, & 169-020-15: Public Facilities (PF)
APNs 156-060-13, 156-060-15, & 156-110-35: Rangeland, 160-acre minimum (RL:160)

Anticipated Permits and Approvals:

1) Approval of Improvement Plans for the project by the Mendocino-Lake Community College District Board of Trustees
2) Section 401 Water Quality Certification through the North Coast Regional Water Quality Control Board (NCRWQCB)
3) Section 1602 Lake or Streambed Alteration Agreement through the California Department of Fish and Wildlife (CDFW)
4) Section 404 Nationwide Permit through the U.S. Army Corps of Engineers (USACE)

Tribal Cultural Resources: 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.?

The District has no record of receiving requests for notification of proposed projects from California Native American tribes pursuant to Public Resources Code Section 21080.3.1. The District nevertheless sent notification and informal consultation letters on May 12, 2022, to five (5) Native American tribes from a list previously provided by the Native American Heritage Commission (NAHC) for similar projects in the area in order to provide the tribes with an opportunity to advise the District of any comments or concerns regarding the project. A letter dated June 9, 2022, received by the District requested formal consultation from the Pinoleville Pomo Nation. Project-related documents were sent to the Pinoleville Pomo Nation for review on June 21, 2022. The Tribe will have the opportunity to review and comment on the Initial Study during the 30-day public review period, and a link to the Initial Study will be provided to the Tribe once the document is posted online for review. See Section XVIII (Tribal Cultural Resources) for additional detail.

CEQA Requirement:

The proposed project is subject to the requirements of the California Environmental Quality Act (CEQA). The Lead Agency is the Mendocino-Lake Community College District. The purpose of this Initial Study (IS) is to provide a basis for determining whether to prepare an Environmental Impact Report (EIR) or a Negative Declaration. This IS is intended to satisfy the requirements of the CEQA (Public Resources Code, Div. 13, Sec. 21000-21177) and the State CEQA Guidelines (California Code of Regulations, Title 14, Sec 15000-15387).

CEQA encourages lead agencies and applicants to modify their projects to avoid significant adverse impacts (CEQA Section 20180(c) (2) and State CEQA Guidelines Section 15070(b) (2)).

Section 15063(d) of the State CEQA Guidelines states that an IS shall contain the following information in brief form:

1) A description of the project including the project location;
2) Identification of the environmental setting;
3) Identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to provide evidence to support the entries;
4) Discussion of means to mitigate significant effects identified, if any;
5) Examination of whether the project would be consistent with existing zoning, plans, and other applicable land use controls; and
6) The name of the person or persons who prepared and/or participated in the Initial Study.

II. PROJECT DESCRIPTION

The Mendocino-Lake Community College District (District) is proposing to construct a secondary access roadway from the Ukiah Mendocino College Campus (College) located at 1000 Hensley Creek Road in Ukiah, California to Orr Springs Road located southwest of the College. The proposed secondary access roadway would be constructed on portions of the parcels identified by Assessor's Parcel Numbers (APNs) 169-020-07, -14, -15, and 156-060-13, -15, and 156-110-35 (Site), which are all owned by the District. The proposed roadway would begin on the north side of the existing track field at the College and extend south through undeveloped grasslands to an existing paved private road at the southern end of the Site, which provides access to Orr Springs Road.

Purpose and Need

Long identified as a critical need by local, state and federal first responders and emergency planning documents, the purpose of the proposed project is to provide a secondary access roadway from the College to Orr Springs Road. The College is currently solely accessed via the two-lane roadway of Hensley Creek Road, with no alternative route available in the event of the emergency. The proposed project will facilitate construction of a secondary access roadway for emergency use, which will be gated and accessible only to employees of the District, primarily for maintenance purposes, and emergency responders. The proposed secondary access roadway is not intended to be used for regular access by the students or faculty to reach the campus. Existing residential properties in the southern portion of the Site will continue to have easement to the southern portion of the roadway to gain access to Orr Springs Road.

Proposed Improvements

The proposed roadway will require improvements to the existing driveway approaches at the southwest corner of the College and the southern end of the Site, adjacent to Orr Springs Road, and the construction of a new roadway, with associated cut and fill slopes, cut ditches, rock rip-rap, and drainage crossing improvements. The proposed roadway would be 24 feet wide, with approximately 10 to 15 feet of shoulder gradings to either side and would be approximately 4,030 feet in length. The portion of the proposed roadway within the northern portion of the Site would be designed to follow the existing contours and maintain the existing elevations, to the extent feasible. Constructing the roadway along the existing contours would help to limit the extent of the road prism necessary to achieve the appropriate road design. It is anticipated that 12 oak trees between 6 and 12 inches in diameter at breast height (DBH) and 5 redwood trees between 10 and 30 inches DBH would require removal for expansion of the existing driveway approach near the College. Roadway construction within the southern portion of the Site, near Orr Springs Road would require replacement of an existing paved private road and upgrades to existing drainage infrastructure. Additionally, one 8-inch DBH oak tree and one 6-inch DBH manzanita would require removal for drainage improvements in the southern portion of the Site. Construction equipment for the project would include, but not be limited to, excavators, bulldozers, compactors, slip form pavers, backhoes, and survey equipment.

III. PROJECT SETTING AND LOCATION

The College is located 4 miles north of Ukiah, west of the intersection of Highway 101 and Hensley Creek Road, at 1000 Hensley Creek Road, Ukiah, California, 95482. The northern end of the Site begins on the north side of the existing track field. The southern end of the Site is located adjacent to the north of Orr Springs Road, west of Highway 101. As noted above, the Site is comprised of APNs 169-020-07, -14, -15, and 156-060-13, -15, and 156-110-35 (Site).

The following environmental setting is generally based on the *Biological Resources Assessment* (BRA) dated October 2021 and prepared by Ms. Lucy Macmillan, M.S. and Ms. Anya Peron-Burdick, M.S. (see Appendix

B), and the site visit conducted by LACO Associates (LACO) and representatives from CDFW and NCRWQCB on April 6, 2022. Refer to the photo log (Appendix A) for photos of the Site.

The following environmental setting is generally based on the *Biological Resources Assessment* (BRA) dated October 2021 and prepared by Ms. Lucy Macmillan, M.S. and Ms. Anya Peron-Burdick, M.S. to analyze potential of sensitive biological resources to occur on the Site, and the site visit conducted by LACO Associates (LACO) and representatives from CDFW and NCRWQCB on April 6, 2022.

Aquatic resources on-site were determined by Lucy Macmillan and Anya Peron-Burdick, as described in the BRA through a combination of review of background materials and a field visit. Wetlands were delineated according to the methods outlined in the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West* (Corps, 2008) of the U.S. Army Corps of Engineers (Corps). The Corps identifies wetlands using a "multi-parameter approach" which requires positive wetland indicators in three distinct environmental categories: hydrology, soils, and vegetation. The Site was additionally evaluated for other waters of the United States (WUS), which may include ponds, lakes, river, streams, and all areas below the High Tide Line subject to tidal influence. On June 14, 2021, Lucy Macmillan and Anya Peron-Burdick conducted a wetland assessment along the proposed roadway, with approximately 50 feet on either side of the proposed road alignment. A wetland area was delineated in the northern portion of the Site, southwest of the College. The wetland area is dominated by wetland vegetation including Italian rye grass (*Lolium perenne*), penny royal (*Mentha pulegium*), and dense flower willowherb (*Epilobium densiflorum*). The extent of the wetland area delineated is shown on Plate 1 of the BRA. The wetlands hydrologically connect flows between the streams west of the proposed roadway with the unnamed tributary to Ackerman Creek east of the proposed roadway. The wetland-stream system provides a bed, bank, and channel for intermittent flows from the upper tributaries west of the proposed roadway to the unnamed tributary to Ackerman Creek east of the proposed roadway. Additionally, an ephemeral drainage was identified in the southern portion of the Site, which drains in a southerly direction from an existing stock pond towards Orr Springs Road and Ackerman Creek. The channel of the drainage is incised and measures on average 3 to 4 feet side.

Special-status plants and animals, legally protected under the State and Federal Endangered Species Acts or other regulations, and species that are considered rare by the scientific community, were evaluated for their potential for occurrence at the Site. Special status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA); California Department of Fish and Wildlife (CDFW) Species of Special Concern; U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern; CDFW special status invertebrates; and those with California Rare Plant Rank (CRPR) 1A (Plants Presumed Extinct in California), CRPR 1B (Plants Rare, Threatened, or Endangered in California and Elsewhere), or CRPR 2 (Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere), as indicated by the California Native Plant Society (CNPS) Inventory. In addition to regulations for special status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act of 1918. Under this legislation, destroying active nests, eggs, and young is illegal.

As detailed in the BRA (2021), special-status wildlife species potentially occurring on or in the vicinity of the project area were determined based on a review of the species recorded in the California Natural Diversity Database (CNDDB) of CDFW. A list of special-status wildlife species, their status, general habitat requirements, and an assessment of their potential to occur on or in the vicinity of the project area is provided in Table 1 of the BRA (see Appendix B). Five special-status wildlife species, foothill yellow-legged frog (*Rana boylii*), Northern American porcupine (*Erethizon dorsatum*), osprey (*Pandion haliaetus*), red-bellied newt (*Taricha*

rivularis), and western pond turtle (*Emys marmorata*) were identified as being documented within five miles of the Site. Based on the biological communities present on the Site and species identified in the search on the CNDDB, it was determined that the Site provides habitat for nesting birds and raptors, foothill yellow-legged frog and western pond turtle. The remaining species documented in the area (see Table 1 of Appendix B) are not likely to occur due to absence of suitable habitat. Additionally, based on a database query of the CNDDB and the CNPS Electronic Inventory within a five-mile radius of the project area, five special-status plant species, including Baker's meadowfoam (*Limnanthes bakeri*), Baker's navarretia (*Navarretia leucocephala ssp. bakeri*), Burke's goldfields (*Lasthenia burkei*), North Coast semaphore grass (*Pleuropogon hooverianus*), and Raiche's manzanita (*Arctostaphylos stanfordiana ssp. raichei*) may have the potential to occur in the project area. Rare plant surveys were conducted by Lucy Macmillan and Anya Peron-Burdick in May and June 2021. No rare plants were identified onsite at the time of the surveys. See Table 3 of the BRA (2021) for a list of all plant species identified on-site during the plant surveys.

The College at the northern end of the Site is developed with multiple buildings, parking lots, various sports facilities, greenhouses, and gardens. South of the College, the Site is largely open space comprised of undeveloped grasslands in hilly terrain. An existing unimproved maintenance road parallels an existing fence that generally separates the undeveloped open space lands from an area of open space utilized for a Frisbee golf course and walking trails. The northern portion of the Site contains a wetland-stream system, which provides a bed, bank, and channel for intermittent flows from the upper tributaries west of the proposed roadway to the unnamed tributary to Ackerman Creek east of the proposed roadway, as shown on Plate 1 of the BRA. The tributary appears to drain south to a large stock pond, which drains to Ackerman Creek and, eventually, the Russian River.

The southern portion of the Site contains an existing paved private road that serves approximately four (4) adjacent property owners and connects to Orr Springs Road. The southern portion of the Site contains a large stock pond that outlets to an ephemeral drainage, identified on Plate 2 of the BRA as a southern tributary to Ackerman Creek. The ephemeral drainage generally flows to the southeast to an existing approximately 113-foot long, 24-inch Reinforced Concrete pipe (RCP), which outlets to a north-south oriented roadside ditch located perpendicular to Orr Springs Road on the east side of the paved private road. Surface runoff from the paved private road appears to generally drain to the ephemeral drainage and/or roadside ditch. The roadside ditch outlets in an existing 36-inch Corrugated Metal pipe (CMP) under Orr Springs Road. Drainage from an existing roadside ditch parallel to Orr Springs Road and an unimproved driveway on the west side of the paved private road is conveyed to the west side of the existing driveway apron and under Orr Springs Road via a 12-inch CMP. The existing 36-inch and 12-inch CMPs outfall to Ackerman Creek from a height approximately 25 feet above the creek surface.

IV. ENVIRONMENTAL EFFECTS

An environmental checklist follows this section, and addresses all potential adverse effects resulting from the proposed project. No significant adverse effects are expected from any of the proposed activities.

V. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

An explanation for all checklist responses is included, and all answers take into account the whole action involved and the following types of impacts: off-site and on-site; cumulative and project-level; indirect and direct; and construction and operational. The explanation of each issue identifies (a) the threshold of significance, if any, used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance. The mitigation measures recommended for the project are included in Appendix C.

In the checklist the following definitions are used:

"**Potentially Significant Impact**" means there is substantial evidence that an effect may be significant.

"**Potentially Significant Unless Mitigation Incorporated**" means the incorporation of one or more mitigation measures can reduce the effect from potentially significant to a less than significant level.

"**Less Than Significant Impact"** means that the effect is less than significant and no mitigation is necessary to reduce the impact to a lesser level.

"**No Impact"** means that the effect does not apply to the proposed project, or clearly will not impact nor be impacted by the proposed project.

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

☐	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☒	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
☐	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 (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

6/30/2022

Date

Eileen Cichocki, VP of Administrative Services

Name and Title

I. **AESTHETICS**. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation 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 point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Thresholds of Significance: The project would have a significant effect on aesthetics if it would have a substantial adverse effect on a scenic vista; substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway; substantially degrade the existing visual character or quality of public views of the site and its surroundings (if the project is in a non-urbanized area) or conflict with applicable zoning and other regulations governing scenic quality (if the project is in an urbanized area); or create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

DISCUSSION

As noted in Chapter 4 (Resource Management Element) of the Mendocino County General Plan (August 2009), the County of Mendocino (County) is a predominately rural county, with most of the land in forest or agricultural production, both of which are considered open spaces that add to the quality of life of the County's residents and attract tourists. The Site, located generally southwest of the College, is largely open space comprised of undeveloped grasslands in hilly terrain. The College at the northern end of the Site is developed with multiple buildings, parking lots, various sports facilities, greenhouses, and gardens. An existing unimproved maintenance road parallels an existing fence that generally separates open space lands from an area of open space utilized for a Frisbee golf course and walking trails. Currently, the College is accessed via Hensley Creek Road, with no alternative route available in the event of an emergency. This issue has been raised as a significant vulnerability by first responders. The southern portion of the Site contains an existing paved private road that serves approximately four (4) adjacent property owners and connects to Orr Springs Road. Refer to the photo log (Appendix A) for photos of the Site.

Under the proposed project, a secondary access roadway would be constructed, largely through the undeveloped grasslands, to connect the College with Orr Springs Road to the south of the Site. Conceptual plans for the proposed project indicate that the proposed roadway would be 24 feet wide, with approximately 10 to 15 feet of shoulder gradings to either side and would be approximately 4,030 feet in length (see Figure 2 and Appendix E). The proposed roadway would require improvements to the existing driveway approaches at the southwest corner of the College and the southern end of the Site, adjacent to Orr Springs Road, and the construction of a new roadway, with associated cut and fill slopes, cut ditches, and rock rip-rap. The central portion of the proposed roadway would be designed to follow the existing contours and maintain the existing elevations, to the extent feasible. Constructing the roadway along the existing contours would help to limit the extent of the road prism necessary to achieve the appropriate road

design. The proposed roadway construction would additionally impact a roadside ditch and culvert down-gradient of an ephemeral drainage identified in the southern portion of the Site.

It is anticipated that 12 oak trees between 6 and 12 inches DBH and 5 redwood trees between 10 and 30 inches DBH would require removal for expansion of the existing driveway approach near the College. Additionally, one 8-inch DBH oak tree and one 6-inch manzanita would require removal for the above-listed drainage improvements in the southern portion of the Site. No exterior lighting is proposed.

I.a-b) The proposed project is not located within a City- or County-mapped or designated scenic vista; within a scenic resources area, or along a state scenic highway (Caltrans, 2022). The Mendocino County General Plan (2009) does not identify specific scenic vistas in the vicinity of the Site. Furthermore, per Chapter 4 of the 2009 Mendocino County General Plan (pg. 4-31), there are no officially designated State Scenic Highways in Mendocino County, although there are two designated State Scenic Byways through forests, which include the North Central Coast Heritage Corridor on State Route 1 and the Tahoe-Pacific Heritage Corridor encompassing sections of State Route 20 and Highway 101. While not officially designated as State Scenic Highways, Highway 20 through Mendocino County is eligible for designation and Highway 128, which passes through Yolo, Napa, Sonoma, and Mendocino Counties and is 140 miles long, was recently made eligible for designation under Assembly Bill (998) signed by Governor Gavin Newsom in July 2019. However, Highways 20 and 128 are not in the vicinity of the Site. As the Site is currently undeveloped, the Site does not contain any historic buildings. The Site is not a designated scenic vista and is not located in the vicinity of a designated scenic vista or state scenic highway. No impact would occur.

I.c) As noted above, the County is predominately rural, and the Site's location is also considered rural with limited development. Surrounding uses include the College to the north, vineyards to the north, east and south, residences to the south, and undeveloped lands to the west. In addition, the Site is bordered to the south by Orr Springs Road, a two-lane minor collector road managed by the Mendocino County Department of Transportation (MCDOT). Public views of the Site would only be from the College to the north and Orr Springs Road to the south. The northern end of the Site contains an existing driveway at the College that would be slightly modified to accommodate the proposed roadway. No significant change to public views of this portion of the Site would be anticipated. As the central portion of the proposed roadway would be designed to follow the existing contours, to the extent feasible, and the undeveloped grasslands would be largely unaltered, public views of this portion of Site would not be substantially degraded. From Orr Springs Road, other than the proposed improvements to the existing driveway approach, public views of the Site would remain unchanged. The moderately steep (up to 16 percent) slope adjacent to Orr Springs Road and curve of the existing private driveway would prevent public views of the Site. The project would not be anticipated to substantially degrade the existing visual character or quality of public views of the Site and its surroundings. A less than significant impact would occur.

I.d) The proposed development would not create a new source of substantial light or glare at the Site that would adversely affect day or nighttime views in the area. As such, no impact would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less than Significant Impact** on Aesthetics.

II. AGRICULTURE AND FORESTRY RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation 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 non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by PRC section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?	☐	☐	☐	☒

Thresholds of Significance: The project would have a significant effect on agriculture and forestry resources if it would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (hereafter "farmland"), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural uses; conflict with existing zoning for agricultural use or a Williamson Act contract; conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by PRC section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)); Result in the loss of forest land or conversion of forest land to non-forest use; or involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use.

DISCUSSION

The Site has a Mendocino County General Plan land use designation of Public Services (PS) and Rangelands (RL160) and is zoned as Public Facilities (PF) and Rangeland (R-L 160) under the Mendocino County Inland Zoning Code (County Zoning Code), adopted in 1987. South of the College, the Site is largely open space comprised of undeveloped grasslands in hilly terrain. The College at the northern end of the Site is developed with multiple buildings, parking lots, various sports facilities, greenhouses, and gardens. The proposed project consists of construction of a secondary access roadway to connect the College with Orr Springs Road to the south of the Site, through the undeveloped grasslands, paralleling an existing fence and unimproved maintenance road until connecting with an existing paved private road at the southern end of the Site. The existing paved private road provides access from approximately four (4) properties to Orr Springs Road. The proposed project would be permitted as an accessory use to the existing College.

Surrounding uses include the College to the north, vineyards to the north, east and south, residences to the south, and undeveloped lands to the west. The Site is designated as "Urban and Built-up Land" and "Grazing Land" under the Farmland Mapping and Monitoring Program (FMMP) of the California Department of Conservation Division of Land Resource Protection (DOC, 2016), and is not currently under a Williamson Act Agricultural Preserve contract (Mendocino County Maps - Timber Production & Williamson Act Lands, 2014).

II.a-b) The proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, conflict with existing zoning for agricultural use, or a Williamson Act contract. As noted above, the Site is designated as "Urban and Built-up Land" and "Grazing Land" under the FMMP of the DOC. No impact would occur.

II.c-d) As discussed above, the Site is currently zoned Public Facilities (PF) and Rangeland (R-L 160) under the County Zoning Code and is therefore neither designated nor zoned as forest land or timberland. Although a limited number of trees may need to be removed as a result of the proposed project, tree removal would be limited to the areas surrounding the existing driveway approach near the College and drainage improvements in the southern portion of the Site. As such, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

II.e) There are no components of the proposed project that would involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use or conversion of forest land to non-forest use. Development of the Site would be limited to the proposed project, a secondary access roadway to be used in the event of an emergency, as described above, and would not support additional development. No impact would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have **No Impact** on Agricultural and Forestry Resources.

III. AIR QUALITY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation 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 non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Thresholds of Significance: The project would have a significant effect on air quality if it would conflict with or obstruct implementation of applicable air quality plans; result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard; expose sensitive receptors to substantial pollutant concentrations; or result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

DISCUSSION:

Air pollution control in the State of California is based on federal, state, and local laws and regulations. According to the 2005 Mendocino County Air Quality Management District (MCAQMD) Particulate Matter Attainment Plan (PM Attainment Plan) (pg. 5), the United States Environmental Protection Agency (EPA), California Air Resources Board (CARB), and regional clean air agencies all regulate air quality. Air districts in California are required to monitor air pollutant levels to assure that National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) are met and, in the event that they are not, to develop strategies to meet these standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in "attainment" or "non-attainment." Efforts to reduce air emissions are required by the Clean Air Act (CAA) and the California Clean Air Act. The federal government, primarily through the EPA, sets federal health standards for air emissions. The EPA also oversees state and local actions and implements programs for toxic air pollutants, heavy-duty trucks, locomotives, ships, aircraft, off-road diesel equipment, and other types of industrial equipment. In California, the CARB sets state air quality standards and implements programs to improve air quality. The thresholds set by the EPA and CARB of criteria pollutants, which include ozone (O_3), carbon monoxide (CO), oxides of nitrogen (NOx), lead (Lb), sulfur dioxide (SO_2), particulate matter less than 10 microns in size (PM_{10}), and particulate matter less than 2.5 microns in size ($PM_{2.5}$), are shown below in Table 1. The standards set by the CARB are generally more stringent than those set by the EPA and the CARB has set additional standards for visibility-reducing particles (of any size), sulfates, and hydrogen sulfide (H_2S). These standards are based on observable short-term (acute) health effects (MCAQMD, 2005).

Table 1 - National and California Ambient Air Quality Standards

Pollutant	**Averaging Time**	**National** a,c	**State of California** b,c
Ozone	1 hour	NA	0.09 ppm (180 μg/m³)
	8 hour	0.07 ppm (137 μg/m³)	0.07 ppm (137 μg/m³)
Carbon Monoxide	1 hour	35 ppm (40,000 μg/m³)	20 ppm (23,000 μg/m³)
	8 hour	9 ppm (10,000 μg/m³)	9.0 ppm (10,000 μg/ m³)
Nitrogen Dioxide	1 hour	100 ppb (188 μg/m³)	0.18 ppm (339 μg/m³)
	Annual	0.053 ppm (100 μg/m³)	0.03 ppm (57 μg/m³)
Sulfur Dioxide	1 hour	75 ppb (196 μg/m³)	0.25 ppm (655 μg/m³)
	3 hour	NA	NA
	24 hour	0.14 ppm	0.04 ppm (105 μg/m³)
	Annual	0.03 ppm	NA
Particulate Matter (PM_{10})	24 hour	150 μg/m³	NA
	Annual	12.0 μg/m³	12 μg/m³
Sulfates	24 hour	NA	25 μg/m³
Lead	30 day	NA	1.5 μg/m³
	Calendar Quarter	1.5 μg/m³	NA
Hydrogen Sulfide	1 hour	NA	0.03 ppm (42 μg/m³)
Vinyl Chloride	24 hour	NA	0.010 ppm (26 μg/m³)

a National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m3 is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
b California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded.
c ppm = parts per million by volume; μg/m3 = micrograms per cubic meter.
NA: Not Applicable.

The Site is located within the North Coast Air Basin (NCAB) and is subject to the requirements of the MCAQMD. The MCAQMD is responsible for monitoring and enforcing the state and federal Clean Air Acts as well as local air quality protection regulations in Mendocino County. The entire NCAB is currently designated as "non-attainment," or in excess of allowable limits, for the state 24-hour allowable limits for breathable PM_{10}, and as "attainment," or within allowable limits, with respect to the balance of the criteria pollutants. The MCAQMD has been determined to be in "attainment", or within allowable limits, for all federal and state ambient air quality standards, except for the state annual average PM_{10} standard and the 24-hour PM_{10} standard. The California Clean Air Act does not require attainment plans or transportation conformity for Districts that exceed the PM_{10} standard, but only requires that the Districts make reasonable efforts toward coming into attainment, defined as a five percent reduction in emissions per year, until the standard is attained. Although not required for coming into attainment for the state standard, the MCAQMD adopted the PM Attainment Plan in 2005. The PM Attainment Plan includes a description of local air quality, the sources of local particulate matter (PM) emissions, and recommended control measures to reduce future PM_{10} levels. While PM_{10} levels have dropped over the last 20 years, due to changing industrial base, enhanced regulations, and increased enforcement by the MCAQMD, the MCAQMD still exceeds the State PM_{10} level several times a year. The majority of these exceedances result from wildfires, residential wood burning, unpaved roads, and construction activities (MCAQMD, 2005).

The project and its emission sources are subject to the rules and regulations contained in the most recent version of the *Rules and Regulations* of the MCAQMD. The MCAQMD has also identified significance thresholds for use in evaluating project impacts under CEQA, provided in Table 2, below.

Table 2. MCAQMD Significance Thresholds

Criteria Pollutant and Precursors	Average Daily Emissions (lb/day)	Maximum Annual Emissions (tons/year)
ROG	180	40
NO_x	42	40
PM_{10}	82	15
$PM_{2.5}$	54	10
Fugitive Dust (PM_{10}/$PM_{2.5}$)	same as above	
Local CO	125 tons/year	

Source: Mendocino County Air Quality Management District (MCAQMD). Adopted Air Quality CEQA Thresholds of Significance – June 2, 2010. Available at: http://www.co.mendocino.ca.us/aqmd/pdf_files/MCAQMDCEQARecomendations.pdf.

As previously discussed, the Site is largely open space comprised of undeveloped grasslands in hilly terrain and is located immediately north of Orr Springs Road and south of the College. The surrounding area contains limited existing development, with existing residences to the south on the parcels identified as APN 169-160-03 and APN 156-110-36, and the College to the north on the parcels identified as APN 169-020-07, -14, and -15. Surrounding uses include the College to the north, vineyards to the north, east and south, residences to the south, and undeveloped lands to the west.

Site improvements proposed under the project involve the construction of an approximately 4,030-foot long, 24-foot-wide roadway with approximately 10 to 15 feet of shoulder gradings to either side. Associated improvements include upgrades to the existing driveway approaches at the southwest corner of the College and the southern end of the Site, adjacent to Orr Springs Road, and drainage crossing improvements, where required.

Emissions from the proposed project would be comprised of direct and indirect emissions. On-site emission sources at the Site include stationary, mobile, and fugitive sources. Direct emissions from on-site activities, including exhaust and fugitive dust, would result from operation of the equipment utilized for Site maintenance. Indirect emissions would be produced by trucks and other vehicles, including workers, traveling to and from the Site. During construction at the Site, the equipment use is expected to include excavators, bulldozers, compactors, slip form pavers, backhoes, and survey equipment. Temporary air pollutant emissions would be associated with the use of construction equipment; however, the project would be required to comply with policies regarding the control of fugitive dust during these activities, which have been established by the MCAQMD. These policies include maintaining all construction equipment in good working condition and limiting truck idling on-site to a maximum of five minutes, pursuant to State law. Once construction is complete, operational emissions at the Site are not expected to increase, as the proposed secondary access roadway is not intended to be used for regular access by the students or faculty to reach the campus, will be gated, and will be accessible only to employees of the Applicant and emergency responders. Residential properties to the south of the roadway will also continue to have access to a portion of the proposed private roadway that provides access to Orr Springs Road.

III.a-b) The project would not conflict with or obstruct implementation of any air quality plan or result in a cumulatively considerable net increase of PM_{10}, the only criteria pollutant for which the project region is in non-attainment (MCAQMD, 2005). MCAQMD has advised that generally an activity that individually complies with the state and local standards for air quality emissions would not result in a cumulatively considerable net increase in the countywide PM_{10} emissions.

Potential air quality impacts associated with the proposed project were modeled using the California Emissions Estimator Model (CalEEMod) and compared to the significance thresholds shown in Table 2, above. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. This program is the standard for Air Quality and GHG analysis within the MCAQMD jurisdiction. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The model is an accurate and comprehensive tool for quantifying air quality impacts from land use projects throughout California. The model can be used for a variety of situations where an air quality analysis is necessary or desirable such as preparing CEQA or National Environmental Policy Act (NEPA) documents, conducting pre-project planning, and, verifying compliance with local air quality rules and regulations, etc. Under the proposed project, the model was used to estimate emissions and evaluate its impact on air quality.

The CalEEMod results in their entirety are included in Appendix D. The CalEEMod analysis assumes that construction would begin August 2022 (during the dry season) and be constructed over an approximately 2-month period until the entire project is complete in approximately October 2022. It is assumed that the proposed project would implement basic construction- and operational-level mitigation measures, including watering exposed areas and unpaved roads and reducing vehicle speeds on unpaved roads to 10 miles per hour. The results of the CalEEMod analysis are shown in Table 3 below and represent the total amount of emissions anticipated over the construction of the project.

Table 3 – CalEEMod analysis of project construction emissions of criteria air pollutants

Pollutant	Construction Emissions (tons/year)			
	Modeled Unmitigated Construction Emissions	Modeled Mitigated Construction Emissions	Federal Annual Thresholds	MCAQMD Average Daily Significance Threshold
Carbon monoxide (CO)	1.518	1.518	--	125 tons/year
Nitrogen oxides (NOx)	1.287	1.287	10	42
Particulate matter (PM_{10}) (fugitive)	12.939	6.485	20	82
Particulate matter (PM_{10}) (exhaust)	0.055	0.055	20	82
Particulate matter ($PM_{2.5}$) (fugitive)	1.298	0.652	12	54
Particulate matter ($PM_{2.5}$) (exhaust)	0.052	0.052	12	54
Reactive organic gases (ROG)	0.205	0.205	--	180
Sulfur dioxide (SO_2)	2.8500 e-003	2.8500 e-003	--	--

As shown in Table 3 above, emissions from construction would be well-below annual and daily thresholds for the listed pollutants even if the specific mitigation measures provided by the CalEEMod model are not implemented. Compliance with standard regulations of the MCAQMD during project construction would further reduce PM_{10} and $PM_{2.5}$ emissions. While the anticipated construction at the Site would generate temporary emissions, the proposed project would not include any source of visible emissions, including intentional fire/burning or manufacturing and would control exhaust emissions from construction equipment by minimizing idling. In addition, the contractor would suppress fugitive dust during construction and operation, pursuant to Rule-1-430 (Fugitive Dust Emissions) of Chapter IV (Prohibitions) of Regulation 1 (Air Pollution Control Rules) of the MCAQMD's Rules and Regulations (February 2011) and would maintain all construction equipment in good working order such that exhaust and fugitive dust emissions are minimized. As the proposed project entails the construction of a secondary access roadway not intended to be used for regular access by the students or faculty to reach the campus and that will be gated and accessible only to employees of the District and emergency responders, operational emissions are not anticipated. The proposed project would be subject to current and future regulations adopted by MCAQMD, including the PM Attainment Plan (2005), and compliance with these regulations would ensure the proposed project would not result in a substantial increase of PM_{10} within the vicinity of the Site. Based on the aforementioned analysis, the proposed project would not conflict with or obstruct implementation of federal, state, or MCAQMD standards, or MCAQMD's Attainment Plan; violate any air quality standard; or result in a cumulatively considerable net increase in the PM_{10} non-attainment levels in Mendocino County. As such, a less than significant impact would occur.

III.c) Sensitive receptors are generally defined as people that have an increased sensitivity to air pollution or environmental contaminants, and include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling unit(s). As discussed above, the nearest sensitive receptor to the Site is the College to the north, which includes a day care center, and existing residences to the south.

As provided in Table 2, above, emissions associated with construction and operation of the proposed project would not be anticipated to exceed the annual thresholds of significance of the MCAQMD for the six listed pollutants. Although temporary exhaust from construction equipment may be anticipated over the course of the construction period (August 2022 – October 2022), potential impacts to sensitive receptors near the Site would be minimized due to suppression of fugitive dust during construction and operation, pursuant to Rule-1-430 (Fugitive Dust Emissions) of Chapter IV (Prohibitions) of Regulation 1 (Air Pollution Control Rules) of the MCAQMD's *Rules and Regulations* (February 2011), and the requirement to maintain all equipment in good working condition. A less than significant impact would occur.

III.d) The proposed project would not create substantial emissions (such as odors or dust) adversely affecting a substantial number of people. Temporary odors and dust, typical of construction sites and equipment use, may be generated during the construction phase. However, with suppression of fugitive dust during construction and operation, pursuant to Rule-1-430 (Fugitive Dust Emissions) of Chapter IV (Prohibitions) of Regulation 1 (Air Pollution Control Rules) of the MCAQMD's *Rules and Regulations* (February 2011), and maintaining all equipment in good working condition, fugitive dust and exhaust emissions would be minimized. A less than significant impact would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Air Quality.

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

Thresholds of Significance: The project would have a significant effect on biological resources if it would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means; 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; conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

DISCUSSION

The following environmental setting is generally based on the BRA dated October 2021 and prepared by Ms. Lucy Macmillan, M.S. and Ms. Anya Peron-Burdick, M.S. to analyze potential of sensitive biological resources to occur on the Site, and the site visit conducted by LACO and representatives from CDFW and NCRWQCB on April 6, 2022.

Aquatic resources on-site were determined by Lucy Macmillan and Anya Peron-Burdick, as described in the BRA through a combination of review of background materials and a field visit. Wetlands were delineated according to the methods outlined in the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West* (Corps, 2008). The Corps identifies wetlands using a "multi-parameter approach" which requires positive wetland indicators in three distinct environmental categories: hydrology, soils, and vegetation. The Site was additionally evaluated for other WUS, which may include ponds, lakes, river, streams, and all areas below the High Tide Line subject to tidal influence. On June 14, 2021, Lucy Macmillan and Anya Peron-Burdick conducted a wetland assessment along the proposed roadway, with approximately 50 feet on either side of the proposed road alignment. A wetland area was delineated in the northern portion of the Site, southwest of the College. The wetland area is dominated by wetland vegetation including Italian rye grass (*Lolium perenne*), penny royal (*Mentha pulegium*), and dense flower willowherb (*Epilobium densiflorum*). The extent of the wetland area delineated is shown on Plate 1 of the BRA. The wetlands hydrologically connect flows between the streams west of the proposed roadway with the unnamed tributary to Ackerman Creek east of the proposed roadway. The wetland-stream system provides a bed, bank, and channel for intermittent flows from the upper tributaries west of the proposed roadway to the unnamed tributary to Ackerman Creek east of the proposed roadway. Additionally, an ephemeral drainage was identified in the southern portion of the Site, which drains in a southerly direction from an existing stock pond towards Orr Springs Road and Ackerman Creek. The channel of the drainage is incised and measures on average 3 to 4 feet side.

Special-status plants and animals, legally protected under the State and Federal Endangered Species Acts or other regulations, and species that are considered rare by the scientific community, were evaluated for their potential for occurrence at the Site. Special status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the ESA or CESA; CDFW Species of Special Concern; USFWS Birds of Conservation Concern; CDFW special status invertebrates; and those with CRPR 1A (Plants Presumed Extinct in California), CRPR 1B (Plants Rare, Threatened, or Endangered in California and Elsewhere), or CRPR 2 (Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere), as indicated by the CNPS Inventory. In addition to regulations for special status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act (MBTA) of 1918. Under this legislation, destroying active nests, eggs, and young is illegal. The MBTA generally prohibits the take of migratory birds and their nests and roosting bats are protected under CDFW regulations.

As detailed in the BRA (2021), special-status wildlife species potentially occurring on or in the vicinity of the project area were determined based on a review of the species recorded in the CNDDB. A list of special-status wildlife species, their status, general habitat requirements, and an assessment of their potential to occur on or in the vicinity of the project area is provided in Table 1 of the BRA (see Appendix B). Five special-status wildlife species, foothill yellow-legged frog (*Rana boylii*), Northern American porcupine (*Erethizon dorsatum*), osprey (*Pandion haliaetus*), red-bellied newt (*Taricha rivularis*), and western pond turtle (*Emys marmorata*) were identified as being documented within five miles of the Site. Based on the biological communities present on the Site and species identified in the search on the CNDDB, it was determined that the Site provides habitat for nesting birds and raptors, foothill yellow-legged frog and western pond turtle. The remaining species documented in the area (see Table 1 of Appendix B) are not likely to occur due to absence of suitable habitat. Additionally, based on a database query of the CNDDB and the CNPS Electronic Inventory within a five-mile radius of the project area, five special-status plant species, including Baker's meadowfoam (*Limnanthes bakeri*), Baker's navarretia (*Navarretia leucocephala ssp. bakeri*), Burke's goldfields (*Lasthenia burkei*), North Coast semaphore grass (*Pleuropogon hooverianus*), and Raiche's manzanita (*Arctostaphylos stanfordiana ssp. raichei*) may have the potential to occur in the project area.

Rare plant surveys were conducted by Lucy Macmillan and Anya Peron-Burdick in May and June 2021. No rare plants were identified onsite at the time of the surveys. See Table 3 of the BRA (2021) for a list of all plant species identified on-site during the plant surveys.

The College at the northern end of the Site is developed with multiple buildings, parking lots, various sports facilities, greenhouses, and gardens. South of the College, the Site is largely comprised of undeveloped grasslands in hilly terrain that is currently open space. An existing unimproved maintenance road parallels an existing fence that generally separates open space lands from an area of open space utilized for a Frisbee golf course and walking trails. The northern portion of the Site contains a wetland-stream system, which provides for intermittent flows from the streams west of the proposed roadway to the unnamed tributary to Ackerman Creek east of the proposed roadway, as shown on Plate 1 of the BRA. The tributary appears to drain south to a large stock pond, which drains to Ackerman Creek and, eventually, the Russian River.

The southern portion of the Site contains an existing paved private road that serves approximately four (4) adjacent property owners and connects to Orr Springs Road. The southern portion of the Site contains a large stock pond that outlets to an ephemeral drainage, identified on Plate 2 of the BRA as a southern tributary to Ackerman Creek. The ephemeral drainage generally flows to the southeast to an existing approximately 113-foot long, 24-inch RCP, which outlets to a north-south oriented roadside ditch located perpendicular to Orr Springs Road on the east side of the paved private road. Surface runoff from the paved private road appears to generally drain to the ephemeral drainage and/or roadside ditch. The roadside ditch outlets in an existing 36-inch CMP under Orr Springs Road. Drainage from an existing roadside ditch parallel to Orr Springs Road and an unimproved driveway on the west side of the paved private road is conveyed to the west side of the existing driveway apron and under Orr Springs Road via a 12-inch CMP. The existing 36-inch and 12-inch CMPs outfall to Ackerman Creek from a height approximately 25 feet above the creek surface.

The proposed roadway would begin on the north side of the existing track field at the College then extend south through undeveloped grasslands, until connecting with an existing paved private road at the southern end of the Site, which provides access to Orr Springs Road. As currently designed, the proposed roadway would traverse a portion of the wetland-swale system, requiring drainage improvements, in the central portion of the Site. Within the southern portion of the Site, the approximately 0.02-acre (780-square-foot) roadside ditch would be filled in order to widen the encroachment to Orr Springs Road. Additionally, it is anticipated that 12 oak trees between 6 and 12 inches in diameter at breast height (DBH) and 5 redwood trees between 10 and 30 inches DBH would require removal for expansion of the existing driveway approach near the College. One 8-inch DBH oak tree and one 6-inch DBH manzanita would require removal for the drainage improvements in the southern portion of the Site.

IV.a) As noted above, nesting birds and raptors and two (2) special-status wildlife species, foothill yellow-legged frog (*Rana boylii*) and western pond turtle (*Emys marmorata*), were identified as having the potential to occur onsite and may be affected either directly or indirectly by the proposed project. Additionally, while five (5) special-status plant species were identified as having the potential to occur within the vicinity of the Site, no rare plants were identified onsite at the time of the plant surveys and no impacts are anticipated.

Due to the presence of trees that could provide suitable habitat for nesting bird species adjacent to the proposed project in the northern and southern portions of the Site, there is potential for impacts to nesting birds and raptors. To reduce the potential for take of the nesting birds and raptors, it is recommended that noise and ground disturbance associated with construction within 500 feet of potential nesting habitat occur between September 1 and January 31, outside the nesting season for nesting birds and raptors. If the

seasonal work restrictions are infeasible, pre-construction surveys shall be conducted in accordance with Mitigation Measure BIO-1. Additionally, as noted above, there is the potential for foothill yellow-legged frog and western pond turtle to be present within the project area during construction. To reduce potential impacts to these species, measures such as training for the construction crew, daily site review, and construction scheduling measures such as prohibiting construction during rain events and any time 30 minutes before sunrise or sunset, shall be implemented in accordance with Mitigation Measure BIO-2.

With the incorporation of Mitigation Measures BIO-1 and BIO-2, the project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS based on location of the Site and the surrounding uses. With mitigation incorporated, a less than significant impact would occur.

IV.b) As discussed above, aquatic resources are present on-site, including a wetland-stream system in the northern portion of the Site and an ephemeral drainage in the southern portion of the Site. Construction of the proposed roadway is anticipated to require modifications to the existing wetland-stream system, including the streams and/or the wetland areas. As shown on the Road Improvement Plan exhibits (see Appendix E), culverted crossings of the wetland-stream system would be installed to facilitate the continuation of hydrologic connectivity between the streams west of the proposed roadway and the unnamed tributary to Ackerman Creek to the east of the proposed roadway. Fill within the areas of the crossing would be minimized to the extent feasible; however, impacts within the streams and/or wetlands are anticipated. In the southern portion of the Site, the existing culvert that drains the ephemeral drainage would be replaced and the roadside ditch would be filled to accommodate the widened encroachment to Orr Springs Road. Due to the presence of a wetland-stream system in the northern portion of the Site and the ephemeral drainage in the southern portion of the Site, the proposed modifications may additionally potentially impact existing riparian habitat.

In order to minimize and mitigate for any potential impacts to the wetland-stream system and the ephemeral drainage, the District shall obtain a Lake or Streambed Alteration Agreement (LSAA) through CDFW, a Section 401 Water Quality Certification (WQC) through the North Coast Regional Water Quality Control Board (NCRWQCB), and a Section 404 permit through the U.S. Army Corps of Engineers (USACE), prior to construction of the proposed improvements, if needed, in accordance with Mitigation Measure BIO-3, below. Compliance with the necessary permits will ensure that the project will not result in a loss of waters of the United States or wetlands, by providing mitigation through impact avoidance, impact minimization, and/or compensatory mitigation for the impact, as determined by the resource agencies.

During construction, erosion would be minimized, and runoff would be managed through the implementation of site-specific BMPs detailed in the Erosion and Sediment Control Plan (ESCP) prepared for the proposed project, which includes physical barriers, and controls such as fiber rolls, silt fencing structures, drop inlet protection, sediment barriers, and stabilized construction entrances, and preventative actions such as scheduling construction for the non-rainy season, if possible, soil compaction, and seeding/mulching disturbed areas. Furthermore, as the proposed project will disturb more than one acre of land, it is subject to the requirements of the NPDES General Construction Activity Stormwater Permit (Construction General Permit Order 2009-0009-DWQ, also known as the CGP) of the SWRCB, which requires operators of such construction sites to implement stormwater controls and develop a Stormwater Pollution Prevention Plan (SWPPP) identifying specific BMPs to be implemented during construction to reduce the amount of sediment and other pollutants associated with construction sites from being discharged in stormwater runoff. With mitigation incorporated, a less than significant impact would occur.

IV.c) As discussed above, the project area contains streams, wetland areas, and an ephemeral drainage. According to the BRA, work that would result in a discharge of fill material, including the installation of road culverts, into the streams, wetlands, and/or drainage would require authorization from CDFW, the NCRWQCB and the USACE. Due to the proposed impacts to potentially jurisdictional waters, a Section 404 CWA permit through the USACE, a Section 401 Water Quality Certification from the NCRWQCB, and a Section 1602 Streambed Alteration Agreement from the CDFW shall be obtained from the respective agencies, as required by Mitigation Measure BIO-3 below. With mitigation incorporated, a less than significant impact would occur.

IV.d) The project would not be anticipated to substantially interfere 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. Although, according to the BRA, trees on and adjacent to the Site provide potential nesting habitat for a variety of nesting birds and raptors, Mitigation Measure BIO-1, which requires that a qualified biologist conduct a pre-construction survey if construction occurs within the breeding season (February 1 to August 31), would reduce the potential impact to nesting birds and raptors to a less than significant level. With mitigation incorporated, a less than significant impact would occur.

IV.e) During construction of the project, BMPs will be implemented to protect waterbodies from stormwater pollutants due to project construction. Furthermore, the District shall design the project such that it will not result in a loss of water of the United States or wetlands, by providing mitigation through impact avoidance, impact minimization, and/or compensatory mitigation for the impact, as determined by the resource agencies. The project would not conflict with any local policies or ordinances related to the protection of biological resources. A less than significant impact would occur.

IV.f) There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans that apply to the site. No impact would occur.

MITIGATION MEASURES

BIO-1: If construction activities begin during the nesting season (February 1 to August 31), a qualified biologist shall conduct a preconstruction survey for active nests in suitable nesting habitat within 500 feet of the construction area for nesting raptors and migratory birds. Areas adjacent to the project area that are inaccessible due to private property restrictions shall be surveyed using binoculars from the nearest vantage point. The survey shall be conducted by a qualified biologist no more than seven days prior to the initiation of construction. If no active nests are identified during the pre-construction survey, no further mitigation is necessary. If at any time during the nesting season construction stops for a period of seven days or longer, pre-construction surveys shall be conducted prior to construction resuming.

If active nests are found during the survey, the biologist shall establish an appropriate exclusion zone around the nest until the breeding season has ended, or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. This exclusion zone may be modified depending upon the species, nest location, and existing visual buffers. If the nest is too close to the proposed work area, work may be delayed until the young have fledged.

If construction activity is required within the buffer, the nest(s) shall be monitored by a qualified biologist during all construction activities. If the biologist determines that the activity would impact the nest, the biologist shall have the authority to stop work. If the activity is determined to not be disturbing nesting activity,

it may continue under supervision of the biologist. Completion of nesting and fledging activities shall be determined by the qualified biologist.

BIO-2: The following measures shall be implemented during prior to and during the active period of construction:

- Prior to construction, all workers on the crew should be trained by a qualified biologist as to the sensitivity of the foothill yellow-legged frog and western pond turtle. If new construction personnel are added to the project, they must receive the mandatory training before starting work.
- No construction activities shall occur during rain events, defined as ¼ inch of rain falling within a 24-hour period. Construction activities may resume 24 hours after the end of the rain event.
- Construction activities shall not be conducted 30 minutes before sunrise or sunset.
- Daily, prior to the start of work, the contractor will check the work area to ensure that no special-status species are within the proposed work zone.

BIO-3: Due to the proposed impacts to potentially jurisdictional waters, a Section 404 CWA permit through the U.S. Army Corps of Engineers (USACE), a Section 401 Water Quality Certification from the North Coast Regional Water Quality Control Board (NCRWQCB), and a Section 1602 Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW) must be obtained, if required. These permits shall be obtained prior to project construction. The District shall design the project such that it will not result in a loss of water of the United States or wetlands, by providing mitigation through impact avoidance, impact minimization, and/or compensatory mitigation for the impact, as determined by the resource agencies. If it is determined, through obtaining an Approved Jurisdictional Determination, that the aquatic resource features on the Site are not jurisdictional under the federal Clean Water Act, the Section 404 CWA permit shall not be required. Prior to submitting the relevant resource agency permits, the Applicant shall determine the extent of the impact on jurisdictional waters and propose mitigation as follows, to be approved by the relevant resource agencies.

If compensatory mitigation is required, it may consist of: (1) obtaining credits from a mitigation bank; (2) making a payment to an in-lieu fee program that will conduct wetland, stream, or other aquatic resource restoration, creation, enhancement, or preservation activities; and/or (3) providing compensatory mitigation through an aquatic resource restoration, establishment, enhancement, and/or preservation activity. This final type of compensatory mitigation may be provided at or adjacent to the impact site (i.e., on-site mitigation) or at another location, usually within the same watershed as the permitted impact (i.e., off-site mitigation). The project proponent retains responsibility for the implementation and success of the mitigation project.

FINDINGS

The proposed project would have a **Less Than Significant Impact with Mitigation Incorporated** on Biological Resources.

V. **CULTURAL RESOURCES**. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Thresholds of Significance: The project would have a significant effect on cultural resources if it would cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5; cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5; or disturb any human remains, including those interred outside of formal cemeteries.

DISCUSSION

Per Chapter 3 (Development Element) of the Mendocino County General Plan (2009), ten (10) Native American tribes historically had territory in what is now Mendocino County. Native American tribes known to inhabit Mendocino County concentrated mainly along the coast and along major rivers and streams, while mountainous areas and redwood groves were occupied seasonally by some tribes. The first permanent non-native settlers came to Mendocino County in the middle of the 16th century, exploring and establishing small outposts. It was almost 300 years before the first permanent non-Spanish settlements in Mendocino County were established in April of 1852 on the coast north of Big River. As European-American settlement expanded in Mendocino County, most of the tribes known to inhabit the land were restricted to reservations and rancherias. During the 19th century, other tribes from the interior of California were forced to settle on the Round Valley Reservation in the northeastern portion of Mendocino County.

Various County policies exist related to the protection and preservation of cultural and historical resources, in particular Native American sites. These include but are not limited to an archaeological ordinance, adopted as Chapter 22.12 *Archaeological Resources* of the Mendocino County Code (Code, 1987), and Chapter 3 (Development Element) of the Mendocino County General Plan (2009). The archaeological ordinance establishes a County Archaeological Commission that evaluates the potential impacts of proposed projects on archaeological resources and recommends measures to reduce or eliminate impacts on these resources. The ordinance additionally includes the "Discovery Clause," which establishes procedures to follow in the event that archaeological or cultural resources or human remains are unearthed during project construction. These procedures are outlined in Code Sections 22.12.090 and 22.12.100. Both Policy DE-115 of Chapter 3 of the Mendocino County General Plan (2009) and Code Sections 22.12.050 through 22.12.100 (1987) include provisions for archaeological sensitivity review, field evaluations, impact mitigations, archaeological discovery, and human remain discovery protocols.

An Archaeological Survey Report was prepared for the project on April 22, 2022, by Alta Archeological Consulting (ALTA) in order to identify archaeological, historical, and/or cultural resources within the project area. Due to the sensitive and confidential nature of this report, a copy is not included in this Initial Study.

On March 30, 2022, ALTA contacted the Native American Heritage Commission (NAHC) to request a Sacred Lands File (SLF) search and the contact information for the representatives of the Native American tribes associated with the area. As of the date of this Initial Study, no response has been received from the NAHC.

Using a recent NAHC contact list from a previous project in the general area, a letter requesting information regarding the project area was sent to each contact on March 30, 2022. The District has no record of receiving requests for notification of proposed projects from California Native American tribes pursuant to Public Resources Code Section 21080.3.1. On May 12, 2022, the District nevertheless sent notification and informal consultation letters to five (5) Native American tribes from a list previously provided by the NAHC for similar projects in the area in order to provide the tribes with an opportunity to advise the District of any comments or concerns regarding the project. A letter dated June 9, 2022, received by the District requested formal consultation from the Pinoleville Pomo Nation. Project-related documents were sent to the Pinoleville Pomo Nation for review on June 21, 2022. The Tribe will have the opportunity to review and comment on the Initial Study during the 30-day public review period, and a link to the Initial Study will be provided to the Tribe once the document is posted online for review. As of the date of this Initial Study, no other requests for consultation or any other responses have been received from any of the remaining Tribes that were contacted by ALTA and the District.

Although no requests for further study were received from the NAHC or Native American tribes contacted, ALTA conducted a records search, literature review, and archeological field study. ALTA conducted a records search at the Northwest Information Center (NWIC) located on the Sonoma State University campus on April 5, 2022 (File Number 21-1650). The records search included a review of all study reports on file within a quarter mile radius of the project area. Sources consulted include archaeological site and survey base maps, survey reports, site records, and historic General Land Office (GLO) maps. Review of the historic registers and inventories indicated that no historical landmarks or points of interest are located within the project area. Additionally, no National Register-listed or eligible properties are located within a half mile of the project area. Seven prior cultural resources studies have been performed within a half mile radius of the Site, although no studies have previously occurred within the project area. One prehistoric cultural resource, one historic-era resource, and one informal multicomponent resource have been documented within a half mile of the Site (ALTA, 2022). No cultural resources were identified within the Project Area as a result of the records search or literature review.

On April 6, 2022, ALTA conducted fieldwork, which entailed a cultural resources inventory of the project area and surrounding lands, covering an area of approximately 4.14 acres. Ground surface visibility was generally poor due to low grasses, thistle, and gravelly soils. A total of 15 shovel pits were conducted. Exposed mineral soils were inspected for evidence of cultural materials. One historic-era cultural resource, a collapsed water tower, was identified within the vicinity of the project area as a result of archaeological field survey. One historic-era cultural resource, a collapsed water tower, was identified during the archaeological field survey. If the project can avoid impacting this site, it will not cause a substantial adverse change in the significance of a historical resource, and the project as presently designed is not expected to have an adverse effect on cultural resources.

V.a) The project is not anticipated to have an adverse effect on historical resources. One historic-era cultural resource, a collapsed water tower, was identified during the archaeological field survey. The project is not expected to have an adverse effect on the collapsed water tower as presently designed, and no other historical resources are identified at the Site. However, Mitigation Measure CUL-1, which requires a buffer of ground disturbing activities around sensitive areas, is recommended to ensure the identified cultural resource is not impacted during project construction. With mitigation incorporated, a less than significant impact would occur.

V.b-c) The project is not anticipated to cause a substantial adverse change in the significance of an archaeological resource or disturb any human remains. Although ALTA did not receive responses from the

Native American tribes contacted and further study has not been requested, there is a possibility that an archaeological resource or human remains could be inadvertently discovered due to the ground-disturbing activities required during project construction. The incorporation of Mitigation Measure CUL-2, which requires that the contractor implement standard protocol similar to the County's "Discovery Clause" during project construction, and Mitigation Measure CUL-3, which stops work in the event that human remains are encountered, would ensure that archaeological resources and human remains are not adversely impacted by the proposed project. With mitigation incorporated, a less than significant impact would occur.

MITIGATION MEASURES

CUL-1: Cultural resources present within the project area shall be avoided. Project proponents should ensure that cultural resources are not adversely affected by ground disturbing activities within the sensitive area and buffer (25 feet). If the site cannot be avoided, due to project re-design or otherwise, and ground disturbance is necessary within the recorded site limits and buffer, the site should first be formally evaluated by a qualified architectural historian to determine if it meets the criteria for eligibility, which includes an assessment of the site's integrity, for listing in the CRHR as an historical resource or constitutes a unique archaeological resource (PRC Section 5024.1(c)). If the site is determined to lack integrity or data potential to be considered an historical resource or unique archaeological resource, the project actions can proceed without consideration of the site as a cultural resource. However, if it is determined that the site is an historical resource or unique archaeological resource, and cannot be avoided, then the adverse effects to the resource shall be mitigated through an archaeological data recovery program (ADRP).

CUL-2: In the event archaeological resources or cultural resources are inadvertently unearthed or discovered during construction, the contractor shall immediately halt all grading/land-clearing activities and contact the Mendocino-Lake Community College District (District) who will contact a qualified professional archaeologist and a Native American representative. Prehistoric resources include, but are not limited to, chert or obsidian flakes, projectile points, mortars, pestles, and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic resources include stone or abode foundations or walls; structures and remains with square nails; and refuse deposits or bottle dumps, often located in old wells or privies. All activity in the vicinity of the resource shall cease until it can be evaluated by a qualified archaeologist and a Native American representative. If the archaeologist and Native American representative determine that the resources may be significant, they shall notify the District and develop an appropriate treatment plan for the resources. The archaeologist shall consult with Native American representatives in determining appropriate treatment for prehistoric or Native American cultural resources. In considering any suggested mitigation proposed by the archaeologist and Native American representative, the District will determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) will be instituted, as directed by the archaeologist and Native American representative. Work may proceed in other parts of the project area while mitigation for cultural resources is being carried out.

CUL-3: Although unlikely, if human remains are encountered, all work must stop in the immediate vicinity of the discovered remains and the Mendocino County Coroner and a qualified archaeologist must be notified immediately so that an evaluation can be performed. If the remains are deemed to be Native American and prehistoric, the Native American Heritage Commission must be contacted by the Coroner so that a "Most Likely Descendant" can be designated and further recommendations regarding treatment of the remains can be provided. Work may proceed in other parts of the project area while appropriate treatment of the remains is carried out.

FINDINGS

The proposed project would have a **Less Than Significant Impact with Mitigation Incorporated** on Cultural Resources.

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

Thresholds of Significance: The project would have a significant effect on energy if it would result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation.

DISCUSSION

On October 7, 2015, Governor Edmund G. Brown, Jr. signed into law Senate Bill (SB) 350, known as the Clean Energy and Pollution Reduction Act of 2015 (De León, Chapter 547, Statutes of 2015), which sets ambitious annual targets for energy efficiency and renewable electricity aimed at reducing greenhouse gas (GHG) emissions. SB 350 requires the California Energy Commission (CEC) to establish annual energy efficiency targets that will achieve a cumulative doubling of statewide energy efficiency savings and demand reductions in electricity and natural gas final end uses by January 1, 2030. This mandate is one of the primary measures to help the state achieve its long-term climate goal of reducing GHG emissions to 40 percent below 1990 levels by 2030. The proposed SB 350 doubling target for electricity increases from 7,286 gigawatt hours (GWh) in 2015 up to 82,870 GWh in 2029. For natural gas, the proposed SB 350 doubling target increases from 42 million of therms (MM) in 2015 up to 1,174 MM in 2029 (CEC, 2017).

The proposed project involves the construction of a 24-foot-wide roadway with approximately 10 to 15 feet of shoulder gradings to either side and will be approximately 4,030 feet in length. Associated improvements include upgrades to the existing driveway approaches at the southwest corner of the College and the southern end of the Site, adjacent to Orr Springs Road, and drainage crossing improvements, where required.
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XIX.a-b) The proposed project would not be anticipated to result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy or wasteful use of energy resources, nor would the proposed project conflict with or obstruct a State or local plan for renewable energy or energy efficiency. As discussed above, the District is proposing the construction of a secondary access roadway for emergency use to connect the College with Orr Springs Road to the south, not intended to be used for regular access by the students or faculty to reach the campus and that will be gated and accessible only to employees of the Applicant and emergency responders.

The consumption of energy would occur during construction through the use of fossil fuels and electricity in construction equipment and vehicles. Construction would occur during normal business hours, typically 7:00 am to 6:00 pm, Monday through Friday, and would be temporary in nature. The contractor would keep all construction equipment in good working order and would limit idling of vehicles and equipment during construction, in accordance with California Code of Regulations, Title 13, Section 2485: *Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling* (adopted 2005), which limits idling from both on-road and off-road diesel-powered equipment and is enforced by the California Air Resources Board (ARB). Therefore, it is anticipated that the construction phase of the project would not result in wasteful, inefficient, and unnecessary consumption of energy.

Operation of the project would not result in an increase energy usage, as the proposed roadway will only be used by employees of the Applicant and emergency responders that currently access the Site via Hensley Creek Road. A less than significant impact would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Energy.

VII. GEOLOGY AND SOILS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation 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:	☐	☒	☐	☐
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv) Landslides?	☐	☒	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Thresholds of Significance: The project would have a significant effect on geology and soils if it would 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, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides; result in substantial soil erosion or the loss of topsoil; 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; be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property; 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; or directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

DISCUSSION

A *Geotechnical Exploration* was prepared by LACO on September 3, 2021 (see Appendix F), in order to explore the surface and subsurface conditions and develop recommendations related to site preparation and grading, retaining wall foundations, retaining walls, slab-on-grade construction, asphalt pavement, seismic hazards, and construction considerations.

The Site is comprised of developed areas, in the north and south and undeveloped grasslands in the center. The College at the northern end of the Site is developed with multiple buildings, parking lots, various sports facilities, greenhouses, and gardens. South of the College, the Site is largely open space comprised of undeveloped grasslands in hilly terrain. An existing unimproved maintenance road parallels an existing fence that generally separates the open space lands from an area of open space utilized for a Frisbee golf course and walking trails. The southern portion of the Site contains an existing paved private road that serves approximately four (4) adjacent property owners and connects to Orr Springs Road.

As noted in the *Geotechnical Exploration*, on July 23, 26, and 27, 2021, LACO explored subsurface conditions through the advancement of thirteen (13) test pits (TP1 through TP13) to depths ranging from 3.5 to 11.5 feet below ground surface (bgs) and borings (B1 through B16) to depths ranging from 3.5 to 11.5 feet bgs. Exploratory borings B1 through B6 were advanced along the paved access near the College campus in an area that is generally flat to gently sloping (identified as End of Hensley Creek Road at Mendocino College to Station 3+25). Exploratory boring B7 and test pits TP1 through TP13 were advanced in moderately sloping undeveloped terrain located between the track field near the College and the paved driveway located at the southern end of the Site (identified as Station 3+25 to Station 31+00). Exploratory boring B8 through B16 were advanced along a moderately sloping asphalt paved communal driveway accessed from Orr Springs Road (identified as Station 31+00 to Station 41+00). No groundwater was encountered during any of the explorations. Laboratory tests were performed on select soil samples by LACO's materials testing laboratory to evaluate and characterize the soils.

The Site is located in the California Coast Ranges Geomorphic Province, a seismically active and geologically complex province due to historic and ongoing tectonic deformation that is characterized by northwest-trending faults and topographic and geologic features. Potential geologic hazards assessed for the proposed project include the following: slope instability, seismicity, lurching, liquefaction, flooding, and soil swelling or shrinkage potential. The seismicity of the area is dominated by the presence of the San Andreas Fault system, with the nearest potentially active fault being the northern section of the Maacama fault zone, located approximately 1.75 miles east of the Site. However, the Site is not mapped as a special studies zone per the Alquist-Priolo Earthquake Fault Zoning Act and thus the likelihood of surface rupture from a potentially active fault is considered low (LACO, 2021).

Based on the exploration program, the *Geotechnical Exploration* (LACO, 2021) concludes that, from a geotechnical standpoint, the proposed project is feasible. The primary geotechnical concerns at the Site documented for each of the project area sections are as follows:

- End of Hensley Creek Road at Mendocino College to Station 3+25
    - The presence of undocumented fill material; and
    - Weak and porous topsoil extending up to 3 feet bgs.
- Station 3+25 to Station 31+00
    - The presence of undocumented fill material and weak and porous topsoil extending to 2.5 feet below ground surface on sloping terrain;
    - The potential for seasonal high groundwater conditions;
    - The presence of clay soils that exhibit a medium to high potential for expansion; and
    - Areas where hard digging may be encountered.
- Station 31+00 to Station 41+00
    - The presence of weak and porous near-surface soils and undocumented fill extending to a depth of 7.5 feet bgs on sloping terrain;
    - The potential for seasonal high groundwater conditions;
    - Retaining walls may be needed to retain cut and fill slopes; and

- Areas of hard digging will be encountered.

VII.a.i) The Site is situated within a seismically active area where large earthquakes may be expected to occur during the economic lifespan (50 years) of the project due to the proximity of the proposed project to active seismic sources (the Maacama Fault Zone and San Andreas Fault). However, as the Site is not located within a "Fault Rupture Hazard Zone" or within an area currently designated as a "Seismic Hazard Zone" by the State and based on the distance between the Site and the closest active fault, the Maacama fault zone, the potential for surface rupture at the Site is considered low. A less than significant impact would occur.

VII.a.ii) As noted above, there are no mapped faults or Alquist-Priolo special studies zones traversing the Site. However, since the project area is situated within a seismically active region and given the proximity of significant active faults to the Site, the Site will likely experience strong ground shaking during the economic life span of any development on the Site. The proposed project would be subject to the recommendations contained in the *Geotechnical Exploration* (LACO, 2021) and the latest version of the California Building Code (CBC), to reduce any potential geological risks. Furthermore, the *Geotechnical Exploration* (LACO, 2021) provides several recommendations pertaining to Site development, including Site grading and preparation, retaining wall foundations, retaining walls, slab-on-grade construction, asphalt pavement, and seismic design parameters. These recommendations are included as Mitigation Measure GEO-1, below, in order to reduce potential seismic risks. Mitigation Measure GEO-1 requires compliance with the design recommendations provided in the *Geotechnical Exploration* (LACO, 2021), and with adherence to the requirements of the latest version of the CBC, the proposed project, would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. With mitigation incorporated, a less than significant impact would occur.

VII.a.iii) As noted in the *Geotechnical Exploration* (LACO, 2021), based on soils observed at the Site and geologic maps, the Site has low liquefaction susceptibility. However, as the Site is situated within a seismically active region, the potential exists for seismic-related ground failure at the Site. Provided the recommendations pertaining to Site development, including site preparation and grading, retaining wall foundations, retaining walls, slab-on-grade construction, asphalt pavement, and seismic design parameters provided in the *Geotechnical Exploration* (LACO, 2021) and included as Mitigation Measure GEO-1, below, are adhered to, the potential for substantial adverse effects involving seismic-related ground failure is low. With mitigation incorporated, a less than significant impact would occur.

VII.a.iv) Landslides generally occur on relatively steep slopes and/or on slopes underlain by weak sediments. As noted in the *Geotechnical Exploration* (LACO, 2021), the Site consists of generally flat to gently sloping partially developed terrain from the end of Hensley Creek Road at the College to Station 3+25, moderately sloping undeveloped terrain from Station 3+25 to Station 31+00, and moderately sloping asphalt pavement from Station 31+00 to Station 41+00. The potential for landslides from the end of Hensley Creek Road at Mendocino College to Station 3+25 would be low due to the gentle slopes of the area. The *Geotechnical Evaluation* (LACO, 2021) identifies the presence of undocumented fill material and weak and porous topsoil on sloping terrain from Station 3+25 to Station 31+00 and Station 31+00 to Station 41+00. Given the moderate slopes and soil characteristics identified in these areas, the potential for landslides exists. Provided the recommendations related to site preparation and grading provided in the *Geotechnical Exploration* (LACO, 2021) and included as Mitigation Measure GEO-1, below, the potential for substantial adverse effects involving landslides is limited. With mitigation incorporated, a less than significant impact would occur.

VII.b) Construction projects that would disturb more than one acre of land, such as the proposed project, would be subject to the requirements of the SWRCB CGP (see Section X. Hydrology and Water Quality), which

requires operators of such construction sites to implement stormwater controls and develop a SWPPP identifying specific BMPs to be implemented during construction to reduce the amount of sediment and other pollutants associated with construction sites from being discharged in stormwater runoff. Such BMPs may include, for example, straw bales, fiber rolls, and/or silt fencing structures to assure the reduction in erosion resulting from construction and to avoid runoff into sensitive habitat areas (including the unnamed tributary and downstream watercourses), limit ground disturbance, and stabilize disturbed soil areas as soon as feasible after construction is completed. Compliance with the CGP would facilitate the implementation of water quality control efforts and limit the potential for soil erosion or the loss of topsoil due to the proposed project. A less than significant impact would occur.

VII.c) As discussed previously, although the Site is not located within a mapped Alquist-Priolo special study zone, the Site is located within a seismically active region and would likely experience ground shaking during the economic lifespan of the proposed project. Additionally, the Site consists of moderately sloping undeveloped terrain consisting partially of undocumented fill material and weak and porous topsoil from Station 3+25 to Station 31+00 and Station 31+00 to Station 41+00. Given that these areas contain moderate slopes and the aforementioned soil characteristics and that the Site is in a seismically active area, the potential exists for landslides, lateral spreading, liquefaction, or collapse. Several recommendations were provided in the *Geotechnical Evaluation* (LACO, 2021) in order to minimize and reduce the potential for such risks. Implementation of these recommendations, pursuant to Mitigation Measure GEO-1 would reduce the potential impact to a less than significant level. With mitigation incorporated, a less than significant impact would occur.

VII.d) Expansive soils generally consist of cohesive fine-grained clay soils and represent a significant structural hazard to structures and roads founded on them as they have a tendency to undergo volume changes (shrink or swell) with changes in moisture content. Based on soil classification and laboratory testing, the *Geotechnical Exploration* (LACO, 2021) found that near-surface soils in the areas of TP3 through TP5 and Station 16+00 to Station 34+00 have a medium to possibly high potential to shrink and swell during seasonal moisture variation events. However, with the implementation of Mitigation Measure GEO-1, which requires following the recommendations for site preparation and grading provided in the *Geotechnical Evaluation* (LACO, 2021), the potential for expansive soils creating substantial direct or indirect risks to life or property is limited. With mitigation incorporated, a less than significant impact would occur.

VII.e) The proposed project involves the construction of a secondary access roadway to connect the College to Orr Springs Road. Since the proposed project would not require the use of septic tanks or alternative wastewater disposal systems, no impact would occur.

VII.f) Based on a query of the University of California Museum of Paleontology (UCMP), the majority of paleontological resources found in Mendocino County were located in proximity to the coast. As such, the probability of a unique paleontological resource or site or unique geologic feature at the Site is low. However, as the central portion of the Site is undeveloped grasslands, there is the possibility that unique paleontological resources or sites or unique geologic features could exist on the Site. Mitigation Measure GEO-2, which includes halting construction until the resource can be evaluated and mitigated if needed, has been included to prevent significant impacts on fossils or fossil-bearing deposits in the event they are encountered during project construction. With mitigation incorporated, a less than significant impact would occur.

MITIGATION MEASURES

GEO-1: The project shall comply with the recommendations pertaining to site preparation and grading, retaining wall foundations, retaining walls, slab-on-grade construction, asphalt pavement, seismic hazards,

and construction considerations provided in the *Geotechnical Exploration* prepared by LACO Associates and dated September 3, 2021. Prior to construction of the project, the Mendocino-Lake Community College District shall review and approve of the site development plans, which must demonstrate project compliance with the recommendations of the *Geotechnical Exploration* (LACO, 2021), in addition to any seismic requirements of the latest adopted edition of the CBC. In addition, all soil engineering recommendations and structural foundations shall be designed by a licensed Professional Engineer. All on-site geotechnical engineering activities shall be conducted under the supervision of a licensed Geotechnical Engineer or Certified Engineering Geologist.

GEO-2: In the event that fossils or fossil-bearing deposits are discovered during project construction, the contractor shall notify a qualified paleontologist to examine the discovery and excavations within 50 feet of the find shall be temporarily halted or diverted. The area of discovery shall be protected to ensure that fossils are not removed, handled, altered, or damaged until the Site is properly evaluated, and further action is determined. The paleontologist shall document the discovery as needed, in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 1995), evaluate the potential resource, and assess the significance of the finding under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the project proponent determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project based on the qualities that make the resource important. The plan shall be submitted to the Northwest Information Center (NWIC) for review and approval prior to implementation.

FINDINGS

The proposed project would have a **Less Than Significant Impact with Mitigation Incorporated** on Geology and Soils.

VIII. GREENHOUSE GAS EMISSIONS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions (GHG), 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?	☐	☐	☒	☐

Thresholds of Significance: The project would have a significant effect on greenhouse gas emissions if it would generate greenhouse gas emissions (GHG), either directly or indirectly, that may have a significant impact on the environment; or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

DISCUSSION

The Global Warming Solutions Act of 2006, also known as Assembly Bill (AB) 32, is a State law that establishes a comprehensive program to reduce GHG emissions from all sources throughout the State. AB 32 requires the State to reduce its total GHG emissions to 1990 levels by 2020, a reduction of approximately 15 percent below emissions expected under a "business as usual" scenario. Pursuant to the AB 32 Scoping Plan (last reviewed in 2018), the California Air Resources Board (CARB) must adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. The following major GHGs and groups of GHGs being emitted into the atmosphere are included under AB 32: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). The 2020 GHG emissions statewide limit set by AB 32, equal to the 1990 level, is 431 million metric tonnes of carbon dioxide equivalent ($MMTCO_2e$). In addition, in 2016, Senate Bill (SB) 32 was signed into law to codify the reduction target to reduce GHG emissions to 40 percent below the 1990 levels by 2030 (CARB, 2018).

CARB, in its *California Greenhouse Gas Emissions for 2000 to 2017* (California GHG Emission Inventory), 2019 edition, states that GHG emissions within the State of California have followed a declining trend since 2007. In 2017, statewide GHG emissions were 424 million metric tons of CO_2 equivalent ($MMTCO_2e$), 5 $MMTCO_2e$ lower than 2016 levels and lower than the 2020 statewide GHG limit of 431 $MMTCO_2e$. The transportation section remains the largest source of GHG emissions in the State, accounting for 41 percent of the State's GHG emissions in 2017 (CARB, 2019).

The Site is located within the NCAB and is subject to the requirements of the MCAQMD. The MCAQMD is responsible for monitoring and enforcing federal, state, and local air quality standards in the Mendocino County. As noted in Chapter 4 (Resource Element) of the Mendocino County General Plan (2009), due to the rural nature of Mendocino County, the amount of GHG generated by human activities (primarily the burning of fossil fuels for vehicles, heating, and other uses) is small as compared to other, more urban counties and miniscule in statewide or global terms. However, GHG emissions in Mendocino County are higher per capita due to the distances involved in traveling around the county.

CalEEMod was utilized to quantify potential criteria pollution and GHG emissions associated with construction of the proposed project. The model quantifies direct emissions from construction activities (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Further, the model identifies mitigation measures to reduce criteria

pollutants and GHG emissions. The results of the CalEEMod analysis in their entirety are included in Appendix D.

According to the CalEEMod results for the proposed project, unmitigated construction activities would result in approximately 251.8106 metric tons of CO_2e ($MTCO_2e$), and mitigated construction activities would result in approximately 251.8104 metric tons of CO_2e ($MTCO_2e$). This amount is very small in comparison to the 424 million metric tons of CO_2e ($MMTCO_2e$) emitted statewide in 2017. The generation of direct onsite and offsite GHG emissions would be intermittent and would terminate following completion of construction activities. Furthermore, operational GHG emissions are not expected to increase, as the proposed roadway will only be used by employees of the Applicant and emergency responders that currently access the Site via Hensley Creek Road.

VIII.a) The proposed project would have a less than significant impact on greenhouse gas (GHG) emissions as neither construction nor operation of the project would generate significant amounts of GHGs. As noted above, unmitigated construction activities would result in approximately 251.8106 metric tons of CO_2e ($MTCO_2e$), and mitigated construction activities would result in approximately 251.8104 metric tons of CO_2e ($MTCO_2e$), which would account for significantly less than one percent of the State's total 2020 GHG emissions. As discussed under Section III, Air Quality, above, the proposed project would not increase operational emissions of the College. In addition, compliance with MCAQMD standards and regulations, including obtaining all necessary permits for equipment through the MCAQMD, and California Code of Regulations, Title 13, Section 2485: *Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling* (adopted 2005), which limits idling of both on-road and off-road diesel-powered equipment and is enforced by the CARB, would limit the potential for GHG emissions during construction. Compliance would require that the contractor keep all construction equipment in good working order and limit idling of vehicles and equipment during construction. Therefore, a less than significant impact would occur.

VIII.b) The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Action Item RM-50.2 in Chapter 4 of the Mendocino County General Plan (2009) requires the County to "create a greenhouse gas reduction plan for the unincorporated areas of the county that sets specific reduction strategies and targets to meet." Although the County has not yet prepared and adopted this plan, a significant amount of GHG emissions is not anticipated under the project, as described above. In addition, the proposed project would not conflict with local, MCAQMD, State, or federal regulations pertaining to GHG emissions. A less than significant impact would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Greenhouse Gas Emissions.

IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation 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, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

Thresholds of Significance: The project would have a significant effect on hazards and hazardous materials if it were to 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; emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; be located on a site which is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment; result in a safety hazard or excessive noise for people residing or working in the project area if located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport; or impair the implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan; or expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

DISCUSSION

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or has characteristics defined as hazardous by a federal, state, or local agency. Chemical and physical properties such as toxicity, ignitability, corrosiveness, and reactivity cause a substance to be considered hazardous. These properties are defined in the California Code of Regulations, Title 22, Article 3: Characteristics of Hazardous Waste (effective July 1, 1991). A "hazardous waste" includes any hazardous material that is discarded, abandoned, or will be recycled. The criteria that render a material hazardous also

cause a waste to be classified as hazardous, per California Health and Safety Code, Chapter 6.5, Section 25117 (effective January 1, 1997).

The County has adopted numerous plans related to hazard management and mitigation including, but not limited to: Community Wildfire Protection Plan (2015), Multi-Jurisdictional Hazard Mitigation Plan (2021), Hazardous Waste Management Plan (through the California Environmental Reporting System (CERS), 2020), and Operational Area Emergency Plan (2016). On September 13, 2016, the County adopted the *Mendocino County Operational Area Emergency Operations Plan* (County EOP), under Resolution Number 16-119. As noted on the Plans and Publications webpage of the Mendocino County Office of Emergency Services (MCOES), the County EOP, which complies with local ordinances, state law, and state and federal emergency planning guidance, serves as the primary guide for coordinating and responding to all emergencies and disasters within Mendocino County. The purpose of the County EOP is to "facilitate multi-agency and multi-jurisdictional coordination during emergency operations, particularly between the County, local and tribal governments, special districts as well as state and Federal agencies" (MCOES – Plans and Publications, 2019).

The Site does not include any known hazardous waste sites, as mapped by the State Water Resources Control Board (SWRCB) or the California Department of Toxic Substances Control (DTSC) on the GeoTracker (2022) and EnviroStor (2022) databases, respectively, nor are there any listed sites within the vicinity of the Site. The surrounding area contains limited existing development, which includes the College to the north and a few residences to the south of the Site. The Site is located within the State Responsibility Area (SRA), just outside of the service boundaries of the Ukiah Fire Protection District (UFPD) and is served by the California Department of Forestry and Fire Protection (CalFire) (Mendocino County Maps – Ukiah Valley – Fire Responsibility Areas, 2019). The Site is mapped as located within a "Moderate" fire hazard severity zone (CalFire – Fire Hazard Severity Zones Maps Viewer, 2007). The Site is designated as having a "Moderate" exposure to Wildfire per Table 5.5 of the 2020 Mendocino County Multi-Jurisdictional Hazard Mitigation Plan – Volume 2 and is in a rural area within the County's jurisdiction.

IX.a-b) It is anticipated that the proposed project would not transport, use, emit, or dispose of significant hazardous materials common to medical facilities, such as cleaning supplies, as well as the construction process, or 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. As previously discussed, the proposed project consists of constructing a secondary access roadway from the northwesterly portion of the College to a connection point with Orr Springs Road to the south. During the construction phase, small quantities of hazardous materials common to equipment maintenance and operation, such as gasoline, diesel fuel, hydraulic fluids, oils, and lubricants may be required. However, the types and quantities of materials to be used are not expected to pose a significant risk to the public and/or environment and would be managed in accordance with federal, state, and local regulations. Post-construction, the project would require limited maintenance and would not request the use of hazardous materials. A less than significant impact would occur.

IX.c) The College is located at the northern end of the Site, as the proposed project entails the construction of a secondary access roadway intended to serve the College in the event of an emergency. The Site is located within the Ukiah Unified School District (Mendocino County Maps – School Districts, 2014), with the nearest school, Ukiah High School, located approximately 2.5 miles southeast of the Site. It is not anticipated that hazardous materials to be utilized on-site during the construction process would be used or stored at the Site in any quantity or application that could pose a significant risk to the public and/or environment, including existing schools. A less than significant impact would occur.

IX.d) Review of the SWRCB's GeoTracker (2022) and DTSC's EnviroStor (2022) databases indicates that the Site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As discussed above, any hazardous materials to be used on-site during the construction process would be minimal and would be utilized, stored, transported, and disposed of in accordance with federal, state, and local regulations. A less than significant impact would occur.

IX.e) The Site is not located within an airport land use plan or within two miles of a public or public use airport. The nearest airport, Ukiah Municipal Airport, is located approximately 5.6 miles southeast of the Site in Ukiah. Therefore, the proposed project would not result in a safety hazard or excessive noise for people residing or working in the proposed project area and no impact would occur.

VIII.f) The proposed development would be compatible with existing surrounding development and would be designed to current standards with suitable road widths and turn radii to accommodate emergency vehicles as the secondary access roadway from the northwesterly portion of the College to a connection point with Orr Springs Road. The proposed roadway is not intended to be used for regular access by the students or faculty to reach the campus and would be gated and accessible only to employees of the College and emergency responders. Existing residential properties in the southern portion of the Site would also continue to have access to the southern roadway to gain access to Orr Springs Road. Construction of the project would benefit emergency response to and evacuations from the College, as it would provide a secondary access route for emergency vehicles. No impact would occur.

VIII.g) As discussed above, the purpose of the proposed project is to provide a secondary access route from the College that could be utilized in the event of an emergency. The College is currently only accessed via Hensley Creek Road, with no alternative route available in the event of an emergency. 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. The nearest fire station to the Site is the Cal Fire Ukiah Station located approximately 1.1 miles east of the Site. The proposed secondary access roadway would be constructed in accordance with state and local standards, including safety and emergency access requirements, and would serve as an alternative route for the employees of the Applicant and emergency responders in the event of an emergency. By meeting current standards and design requirements and with sufficient fire protection services available to serve the Site, a less than significant impact would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Hazards or Hazardous Materials.

X. HYDROLOGY AND WATER QUALITY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation 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:	☐	☐	☒	☐
i) Result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
iv) Impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Thresholds of Significance: The project would have a significant effect on hydrology and water quality if it would violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality; substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin; 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 result in substantial erosion or siltation on- or off-site, substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or impede or redirect flows; in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

DISCUSSION

The NPDES permit program of the EPA addresses water pollution by regulating point sources that discharge pollutants to waters of the United States. Created in 1972 by the Clean Water Act, the NPDES permit program grants authority to state governments to perform many permitting, administrative, and enforcement aspects of the program. Within California, the NPDES permit program is administered by the SWRCB and the Regional Water Quality Control Boards. In Mendocino County, this is the NCRWQCB.

Construction projects that would disturb more than one acre of land are subject to the requirements of the SWRCB CGP, which requires operators of such construction sites to implement stormwater controls and develop a SWPPP identifying specific BMPs to be implemented during construction to reduce the amount of sediment and other pollutants associated with construction sites from being discharged in stormwater runoff. Such BMPs may include, for example, fiber rolls, silt fencing structures, inlet protection, stabilized construction entrance, and/or concrete waste management to facilitate the reduction in erosion resulting from construction and to avoid runoff into sensitive habitat areas, limit ground disturbance, and stabilize disturbed soil areas as soon as feasible after construction is completed.

Within cities and certain urban areas, discharges of stormwater and non-stormwater from Municipal Separate Storm Sewer Systems (MS4s) are subject to the waste discharge requirements of Phase I or Phase II NPDES Permits, as defined by the SWRCB. The Site is located outside the boundaries of the MS4 areas of the City of the Ukiah and the County of Mendocino and is therefore not subject to the requirements of either MS4 area. Projects located outside an MS4 area are subject to the runoff reduction requirements of the CGP. This includes the requirement that the proposed project, through the use of non-structural and structural measures as described in Appendix 2 of the CGP, replicate the pre-project water balance (defined as the volume of rainfall that ends up as runoff) for the smallest storms up to the 85th percentile storm event (or the smallest storm event that generates runoff, whichever is larger). The CGP additionally requires the implementation of post-construction BMPs to reduce pollutants in stormwater discharges that are reasonably foreseeable after all construction phases have been completed.

The Site is located in Zone "X" – area of minimal flood hazard – as shown on Federal Emergency Management Agency's (FEMA) National Flood Hazard Layer FIRMette map numbers 06045C1503F and 06045C1511F, effective June 2, 2011. The Site is located within the Russian River Hydrologic Unit, Upper Russian River Hydrologic Area, Ukiah Hydrologic Subarea and the nearest body of water is Ackerman Creek, which drains to the Russian River. The Russian River is on the SWRCB 303(d) list of impaired waterbodies for water temperature and sedimentation/siltation. The Russian River provides habitat for Chinook salmon and steelhead trout, which are listed as threatened species under the federal Endangered Species Act (City of Ukiah, 2019).

The College at the northern end of the Site is developed with multiple buildings, parking lots, various sports facilities, greenhouses, and gardens. South of the College, the Site is largely open space comprised of undeveloped grasslands in hilly terrain. An existing unimproved maintenance road parallels an existing fence that generally separates the open space lands from an area of open space utilized for a Frisbee golf course and walking trails. On June 14, 2021, Lucy Macmillan and Anya Peron-Burdick conducted a wetland assessment along the proposed roadway, with approximately 50 feet on either side of the proposed road alignment. A wetland area was delineated in the northern portion of the Site, southwest of the College. The extent of the wetland area delineated is shown on Plate 1 of the BRA. The wetlands hydrologically connect flows between the streams west of the proposed roadway with the unnamed tributary to Ackerman Creek east of the proposed roadway. The wetland-stream system provides a bed, bank, and channel for intermittent flows from the upper tributaries west of the proposed roadway to the unnamed tributary to Ackerman Creek east of the proposed roadway.

The southern portion of the Site contains an existing paved private road that serves approximately four (4) adjacent property owners and connects to Orr Springs Road. A pond is located upgradient off the paved private road to the west. The southern portion of the Site contains an ephemeral drainage, which drains in a southerly direction from an existing stock pond towards Orr Springs Road and Ackerman Creek. The channel of the drainage is incised and measures on average 3 to 4 feet side. The ephemeral drainage is identified on

Plate 2 of the BRA as a southern tributary to Ackerman Creek. The ephemeral drainage generally flows to the southeast to an existing approximately 113-foot long, 24-inch reinforced concrete pipe (RCP), which outlets to a north-south oriented roadside ditch located perpendicular to Orr Springs Road on the east side of the paved private road. Surface runoff from the paved private road appears to drain to the ephemeral drainage and/or open-cut ditch. The roadside ditch drains to an existing 36-inch corrugated metal pipe (CMP) that spans Orr Springs Road. Drainage from an existing roadside ditch along Orr Springs Road and an unimproved driveway on the west side of the paved private road is conveyed to the west side of the existing driveway apron and under Orr Springs Road via a 12-inch CMP. The existing 36-inch and 12-inch CMPs outfall to Ackerman Creek from a height approximately 25 feet above the creek surface.

As discussed previously, the proposed project consists of the construction of a 24-foot-wide secondary access roadway from the College to Orr Springs Road. As the proposed roadway would be 4,030 feet in length, construction of the proposed project would disturb an area greater than one acre and as the roadway would be constructed with an asphalt surface, the impervious surface area of the roadway would be approximately 96,720 square feet (or 2.2 acres). The central portion of the proposed roadway would seek to minimize impacts by following the existing contours, and maintaining the existing elevations, to the extent feasible. Constructing the proposed roadway along the existing contours would help to limit the extent of the road prism necessary to achieve the appropriate road design.

Roadway construction would impact a portion of the swales and/or wetland that are hydrologically connected to a northern tributary of Ackerman Creek. The proposed roadway construction would additionally impact a roadside ditch and culvert down-gradient of an ephemeral drainage identified in the southern portion of the Site. Work within this area would include the replacement of the existing 113-foot long 24-inch RCP and an approximately 30-foot-long roadside ditch with a 165-foot long 24-inch RCP that extends to a new circular junction box at the inlet of the existing 36-inch CMP. The approximately 780 square-foot roadside ditch would be filled with approximately 75 cubic yards of road construction materials, including the new 24-inch RCP.

Additional drainage improvements within the southern portion of the Site would direct all stormwater runoff to the proposed circular junction box and existing 36-inch CMP. These improvements include the installation of a new 12-inch RCP under the driveway apron to direct flows from the Orr Springs Road roadside ditch west of the driveway apron to the proposed circular junction box; abandonment of the existing 12-inch CMP under Orr Springs Road; and installation of a new 12-inch HDPE pipe to direct flows from the unimproved driveway west of the paved private road to the proposed circular junction box. No modifications are proposed to the existing 36-inch and 12-inch CMPs under Orr Springs Road.

X.a) The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. As discussed above, construction activities would be subject to the standards of the CGP, which include environmental protection and BMPs designed to prevent, at a minimum, erosion resulting from construction activities and minimize the discharge of sediment and other pollutants associated with construction sites. The *Geotechnical Exploration* (LACO, 2021) notes that no groundwater was encountered during field exploration activities and if construction is performed during the dry months of summer or early fall, groundwater may not be a concern. However, seasonal groundwater levels fluctuate and may rise above the depths explored. Should groundwater be encountered during foundation excavation and/or pier drilling activities, construction shall be performed in accordance with Mitigation Measure HYDRO-1, below, in order to reduce potential impacts to groundwater quality. Additionally, adherence to the post-construction requirements of the CGP would ensure that the

proposed project would comply with applicable water quality standards post-construction. With mitigation incorporated, a less than significant impact would occur.

X.b) The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. As noted above, the proposed project consists of the construction of a 24-foot-wide secondary access road, approximately 4,030 feet in length. The Site is located within the boundaries of the Ukiah Valley groundwater basin (Basin), which encompasses a surface area of 37,500 acres (59 square miles) (Larry Walker Associates, Inc., 2019). The proposed project would not require the use of groundwater supplies and while the project proposes an increase in the impervious surfaces at the Site, the total surface area of the proposed roadway would be approximately 2.2 acres, including portions of the Site that are already comprised of impervious surfaces. Additionally, groundwater recharge would continue to occur in the undeveloped grasslands surrounding the proposed secondary access road. A less than significant impact would occur.

X.c.i-ii) The proposed project would not alter the existing drainage pattern of the Site in a manner that would result in substantial erosion or siltation on- or off-site or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site since any potential runoff from the Site would be controlled in accordance with the parameters of existing regulations. During construction, erosion would be minimized, and runoff would be managed through the implementation of site-specific BMPs detailed in the ESCP prepared for the proposed project, which includes physical barriers, and controls such as fiber rolls, silt fencing structures, drop inlet protection, sediment barriers, and stabilized construction entrances, and preventative actions such as scheduling construction for the non-rainy season, if possible, soil compaction, and seeding/mulching disturbed areas. In addition, post-construction runoff and stormwater flows would be managed through stormwater facilities designed in accordance with the post-construction requirements of the CGP. A less than significant impact would occur.

X.c.iii) As previously discussed, the proposed project would be designed and implemented in accordance with the construction and post-construction requirements of the CGP. While the proposed project would create and replace approximately 2.2 acres of impervious surfaces, the majority of the central portion of the Site would remain as undeveloped grasslands, which would continue to allow for infiltration. In accordance with the requirements of the CGP, the proposed roadway would be designed to replicate the pre-project water balance for the smallest storms up to the 85th percentile storm event (or the smallest storm event that generates runoff, whichever is larger) and to implement post-construction BMPs to reduce pollutants in stormwater discharges that are reasonably foreseeable after all construction phases have been completed.

Additionally, the only existing stormwater drainage system impacted by the proposed project would be the drainage facilities adjacent to Orr Springs Road, which are owned and maintained by the Mendocino County Department of Transportation (DOT). As discussed above, the proposed project's drainage facilities would connect to the existing 36-CMP and would be designed to not exceed the existing capacity. An encroachment permit required to be obtained from DOT would ensure the proposed drainage facilities were appropriately designed. The proposed project would not be anticipated to create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. A less than significant impact would occur.

X.c.iv) As discussed above, the Site is located in Zone "X" – area of minimal flood hazard – as shown on FEMA National Flood Hazard Layer FIRMette map numbers 06045C1503F and 06045C1511F, effective June 2, 2011. On the basis of the FEMA designation, and as provided in the *Geotechnical Evaluation* (LACO, 2021), the risk of flooding occurring at the Site is low (LACO, 2020). No impact would occur.

X.d) The Site is located in central Mendocino County within the City of Ukiah, approximately 28 miles east of the Pacific Ocean, and is therefore not located in a tsunami zone. As noted above, the Site is located in an area of minimal flood hazard (FEMA, 2011). The Site is not located in close proximity to a body of water that is at risk of a seiche. No impact would occur.

X.e) As discussed above, the proposed project would be subject to the construction and post-construction requirements of the CGP. Compliance with the CGP would facilitate the implementation of water quality control efforts in accordance with applicable State requirements. As discussed above, the proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge or impede sustainable groundwater management. The proposed project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. A less than significant impact would occur.

MITIGATION MEASURES

HYDRO-1: In the event groundwater is encountered during foundation excavation and/or pier drilling activities, the contractor shall dewater the excavation and/or drilling area prior to placing concrete. Extracted groundwater shall be discharged in a manner that does not cause erosion at the discharge point. Any dewatering activities on-site shall be conducted under the supervision of a Qualified Stormwater Practitioner (QSP).

FINDINGS

The proposed project would have a **Less Than Significant Impact with Mitigation Incorporated** on Hydrology and Water Quality.

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

THRESHOLDS OF SIGNIFICANCE: The project would have a significant effect on land use and planning if it would physically divide an established community or cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

DISCUSSION

The Site, identified by APNs 169-020-07, -14, -15, and 156-060-13, -15, and 156-110-35, consists of the College to the north, open space comprised of undeveloped grasslands in hilly terrain south of the College, and an existing paved private road that provides access to Orr Springs Road to the south. The Site is located in Mendocino County but is entirely owned and managed by the District. Pursuant to the Mendocino County General Plan (2009), the parcels identified by APNs 169-020-07 and 169-020-14 have a land use designation of Public Services (PS), while the parcels identified by APNs 156-060-13 and 156-060-15 have a land use designation of Rangelands, 160-acre minimum (RL160). Pursuant to the Mendocino County Zoning Map (2022), the parcels identified by APNs 169-020-07, -14, and -15 have a zoning designation of Public Facilities (PF), while the parcels identified by APNs 156-060-13, -15, and 156-110-35 have a zoning designation of Rangeland, 160-acre minimum (RL:160). No changes to the Site's current land use or zoning designations are proposed. The Site is located within the Ukiah Valley Planning Area and is subject to the Ukiah Valley Area Plan (UVAP, 2011), which has legal land use authority over the unincorporated lands in the Planning Area.

The District is proposing the construction of a secondary access roadway from the College to Orr Springs Road located southwest of the College. The proposed secondary access roadway would be utilized in the event of an emergency requiring secondary access to the College and occasionally for facility maintenance. The College at the northern end of the Site is developed with multiple buildings, parking lots, various sports facilities, greenhouses, and gardens. South of the College, the Site is largely open space comprised of undeveloped grasslands in hilly terrain. An existing unimproved maintenance road parallels an existing fence that generally separates the open space lands from an area of open space utilized for a Frisbee golf course and walking trails. The southern portion of the Site contains an existing paved private road that serves approximately four (4) adjacent property owners and connects to Orr Springs Road.

XI.a) The proposed secondary access roadway would be constructed on property owned by the District and utilized for the College campus (to the north), an unimproved maintenance road (the Site), and an existing driveway (to the south). As the proposed project would be constructed on District-owned property that is not developed with an established community, no impact would occur.

XI.b) The proposed project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect as the project is consistent with all applicable land use plans, policies, and regulations, including the Mendocino County General Plan (2009), the UVAP (2011), and the Mendocino County Zoning Code. The PF and RL:160 zoning designations allow for the construction of essential services, such as the proposed secondary access road, necessary to support principal development. The proposed project would provide the College with an essential secondary access route

that could be utilized by employees of the District, primarily for maintenance purposes, and emergency responders, in the event of an emergency, and no additional development is proposed. In addition, residential properties to the south of the roadway will also have access to a portion of the proposed private roadway to gain access to Orr Springs Road. No impact would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have **No Impact** on Land Use and Planning.

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

THRESHOLDS OF SIGNIFICANCE: The project would have a significant effect on mineral resources if it would 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 or result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

DISCUSSION

The proposed project is not located in an area of known rock, aggregate, sand, or other mineral resource deposits of local, regional, or state residents. There are no known mineral resources of significance on the Site that would be made unavailable by the proposed project. Furthermore, the project Site is not utilized for Surface Mining and Reclamation Act (SMARA) activities.

XII.a-b) The proposed project area does not contain mineral resources that are of value locally, to the region, or to residents of the City, County, or State. According to the Mineral Land Classification Studies Index of the California Department of Conservation (DOC, 2015), the proposed project is not located in an area with known mineral resources. The proposed project area is not identified as a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, the proposed project would not interfere with materials extraction or otherwise cause a short-term or long-term decrease in the availability of mineral resources. No impact would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have **No Impact** on Mineral Resources.

XIII. NOISE. Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation 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 applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of 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?	☐	☐	☐	☒

THRESHOLDS OF SIGNIFICANCE: The project would have a significant effect on noise if it would result in the 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; or generation of excessive groundborne vibration or groundborne noise levels; or expose people residing or working in the project area to excessive noise levels (for a project located within the vicinity of a private airstrip or an airport or an airport land use plan, or where such as plan has not been adopted, within two miles of a public airport or public use airport).

DISCUSSION

Noise is typically defined as unwanted sound. In any one location, the noise level will vary over time, from the lowest background or ambient noise level to temporary increases caused by traffic or other sources. Acceptable levels of noise vary depending on the land use. Generally speaking, land uses considered noise-sensitive are those in which noise can adversely affect the people performing general activities on the land. For example, a residential land use where people live, sleep, and study is generally considered sensitive to noise because noise can disrupt these activities. Churches, schools, and certain kinds of outdoor recreation are also usually considered noise-sensitive. State and federal standards have been established as guidelines for determining the compatibility of a particular use with its noise environment. The County of Mendocino (County) relies principally on standards in Chapter 3 (Development Element) of the Mendocino County General Plan (2009), the Mendocino County Municipal Code (last updated 2022), the Mendocino County Airport Comprehensive Land Use Plan (ACLUP) (last updated 1996), and the Ukiah Municipal Airport Land Use Compatibility Plan (UKIALUCP) (last updated 2021) to evaluate noise-related impacts of development.

As provided in Chapter 3 (Development Element) of the Mendocino County General Plan (2009), major noise sources in Mendocino County consist of highway and local traffic, railroad operations, airports, commercial and industrial uses, and recreation and community facilities. Highways with traffic that generates significant noise include Highway 101 and State Routes 1, 20, 128, 162, 253, and 175, which are not in close proximity to the Site.

Policies contained in Chapter 3 of the Mendocino County General Plan (2009) denote the County's standards for maximum exterior noise levels for residential land uses and noise compatibility guidelines for residential, commercial, and industrial land use types. Per Policy DE-100, exterior noise levels for single family homes should not exceed 60 decibels (dBA) during the hours of 7:00 a.m. and 10:00 p.m. and 50 dBA during the hours of 10:00 p.m. and 7:00 a.m. for more than 30 minutes in any hour. Pursuant to Policy DE-102, the

proposed use and the Site's land use designation are not listed in Table 3-K: *Noise Compatibility Guidelines (Expressed as a 24-hour day-night average or Ldn)*. Therefore, the proposed project is not subject to the County's exterior noise compatibility standards.

The Site, currently vacant and undeveloped, is located immediately north of Orr Springs Road and southwest of Hensley Creek Road. Surrounding uses include the College to the north, vineyards to the north, east and south, residences to the south, and undeveloped lands to the west. The proposed project entails the construction of a secondary access roadway from the College to Orr Springs Road.

The noise environment surrounding the Site is influenced by traffic on Orr Springs Road, local traffic associated with surrounding vineyards and residences. Ambient noise levels are relatively low due to the distance between the Site and Highway 101, which is approximately 1 mile east of the Site and buffered by hilly terrain, and surrounding roads (i.e., Orr Springs Road and Hensley Creek Road). Sensitive receptors that could be affected by noise from the Site include the College located immediately to the north and single-family residences located adjacent to the southern portion of the Site.

Construction of the proposed project would generate short-term noise corresponding to the phase of construction and the noise generating equipment used during that phase. Construction activities could involve excavation, grading, trenching, compaction, paving, earth movement, and vehicle travel to and from the Site. Operation of the proposed project would generate minimal noise in nature due to its infrequent use as a secondary access roadway to be primarily utilized in the event of an emergency.

XIII.a) The proposed project would result in a temporary increase in noise levels surrounding the Site during construction but would not be expected to generate operational noise in excess of what currently exists within the general vicinity of the Site. The Site is located in a rural area with limited development. However, three sensitive receptors are located near the Site (within 1,000 feet), including two residences located to the south of the roadway, and the College located immediately to the north. The District has engaged in continual open dialogue with these neighbors during the planning phases of this project and will continue this engagement in pre-construction and construction phases.

Construction of the secondary access roadway, and use of construction equipment would cause temporary increases in noise; however, these impacts would only be associated with construction and would be temporary in nature. Noise would be anticipated as a result of utilizing standard heavy equipment, which may include, but is not limited to the following: excavator, bulldozer, compactor, slip form paver, and backhoe. Given the small size of the project, it is anticipated that the effects of construction noise levels and vibration would be less than significant through the implementation of limiting construction hours within 500 feet of residential uses to the hours of 7:00 a.m. and 7:00 p.m. on weekdays, utilize quiet models of air compressors and other stationary noise sources where technology exists, utilize mufflers on all internal combustion engine-driven equipment, and locate staging areas as far away as possible from noise-sensitive land use areas. These recommendations are included as Mitigation Measure NOISE-1 below, in order to reduce the potential for a substantial temporary increase in ambient noise levels within the vicinity of the proposed project.

Upon build-out, the proposed secondary access roadway, would provide an alternative route to the College in the event of an emergency. As such, operational noise is not anticipated to have an impact on nearby uses due to its infrequent use. With mitigation incorporated, a less than significant impact would occur.

XIII.b) With the exception of minor nearby vibrations created from standard heavy equipment, there are no elements of the proposed project that would create either temporary or permanent ground borne vibrations or noise levels. A less than significant impact would occur.

XIII.c) As previously discussed, the Site is not located within an airport land use plan or within two (2) miles of a public or public use airport. The nearest airport, Ukiah Municipal Airport, is located approximately 5.6 miles southeast of the Site in Ukiah. Therefore, no impact would occur.

MITIGATION MEASURES

NOISE-1: The project shall implement limiting construction hours within 500 feet of residential uses to the hours of 7:00 a.m. and 7:00 p.m. on weekdays, utilize quiet models of air compressors and other stationary noise sources where technology exists, utilize mufflers on all internal combustion engine-driven equipment, and locate staging areas as far away as possible from noise-sensitive land use areas.

FINDINGS

The proposed project would have a **Less Than Significant Impact with Mitigation Incorporated** on Noise.

XIV. POPULATION AND HOUSING. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation 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/or 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?	☐	☐	☐	☒

THRESHOLDS OF SIGNIFICANCE: The project would have a significant effect on population and housing if it would induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and/or businesses) or indirectly (e.g., through extension of roads or other infrastructure); or displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

DISCUSSION

Based on the U.S. Census Bureau Quick Facts, Mendocino County had a population of approximately 91,305 persons as of July 1, 2021, a decrease of approximately 0.3 percent, as compared to April 1, 2020. There were an estimated 41,027 housing units as of July 1, 2019, with 2.48 persons per household.

The proposed project entails the construction of a secondary access roadway from the College to Orr Springs Road. The proposed roadway would be primarily utilized as an alternative route for emergency vehicles traveling to/from the College in the event of an emergency. The proposed roadway is not intended to be used for regular access by the students or faculty to reach the College and would be gated and accessible only to employees of the District, primarily for maintenance purposes, and emergency responders.

XIV.a) The proposed roadway would serve as a secondary route to be utilized to access the College in the event of an emergency and would not change the existing or proposed use of the Site or surrounding area. As previously discussed, under Section III (Air Quality), above, for the purposes of this Initial Study, it is assumed that the proposed project would be constructed over an approximately 2-month period from August 2022 to October 2022. Because construction of the project would be temporary in nature, it is anticipated that most, if not all, of the construction workers would be local. As a result, it is not anticipated that the proposed project would increase the population within the area, and no significant infrastructure improvements would be required to serve the project. As such, no impact would occur.

XIV.b). The proposed project would not displace any residents or housing, as the Site is currently vacant, and no residential units are located on-site. As previously discussed, the proposed access route is not intended to be used for regular access by the students or faculty to reach the College and would be gated and accessible only to employees of the College and emergency responders. Existing residential properties in the southern portion of the Site would continue to have access to the southern portion of the roadway to gain access to Orr Springs Road. No impact would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have **No Impact** on Population and Housing.

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

THRESHOLDS OF SIGNIFICANCE: The project would have a significant effect on public services if it would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or result in the 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 (a) fire protection, (b) police protection, (c) schools, (d) parks, or (e) other public facilities**.**

DISCUSSION

There are no elements of the proposed project that would impact the ability of the County or other local services providers to provide public services to the Site or local community. As previously discussed, the proposed project entails the construction of a secondary access roadway from the College to Orr Springs Road, as a secondary route available in the event of an emergency. The proposed secondary access roadway is not intended to be used for regular access by the students or faculty to reach the College and would be gated and accessible only to employees of the District and emergency responders. Existing residential properties in the southern portion of the Site will continue to have access to the southern portion of the roadway to gain access to Orr Springs Road. The proposed roadway and improvements to the existing driveway approaches would be designed to current standards with suitable road widths and turn radii to accommodate emergency vehicles. Since an increase in population within the area is not expected as a result of the proposed project, significant impacts on public services are also not anticipated.

XV.a) As previously discussed, the Site is located within the SRA, just outside of the service boundaries of the Ukiah Valley Fire District (UVFD) and is served by the CalFire (Mendocino County Maps – Fire Responsibility Areas – Ukiah, 2019). The Site is mapped as located within a "High" fire hazard severity zone (Mendocino County Maps – Fire Hazard Severity Map, 2007). The nearest fire station to the Site is the Cal Fire Ukiah Station located approximately 1.1 miles east of the Site, east of Highway 101, at 2690 N State Street.

As previously indicated, the proposed roadway and improvements to the existing driveway approaches would be designed to current standards with suitable road widths and turn radii to accommodate emergency vehicles. The proposed project entails the construction of a secondary access roadway to serve an existing use (the College) and would therefore not necessitate an increase in service needs at the Site. A less than significant impact would occur.

XV.b) Police protection services within the unincorporated area of Mendocino County, including the Site, is provided by the Mendocino County Sheriff's Office (Sheriff's Office). The nearest Sheriff's Office is the Ukiah office, which is located approximately 3.5 miles south of the Site, at 951 Low Gap Road in Ukiah. As the Site is already served by Sheriff's Office and the project entails the construction of a secondary access roadway to serve an existing use (the College), no impact would occur.

XV.c) The Site is located within the Ukiah Unified School District (Mendocino County Maps – School Districts, 2014), with the nearest school, Ukiah High School, located approximately 2.5 miles southeast of the Site. As the proposed project entails the construction of a secondary access roadway to serve an existing use (the College) and the proposed project does not involve the development of any residential units, there would be no increase in the need for school services within the area. No impact would occur.

XV.d-e) As detailed in Section XVI (Recreation), below, four (4) parks and recreational facilities are located within 5 miles of the Site, including Kennwood Drive Park, which is located approximately 2.2 miles northeast of the Site, and Vineyard Park, located approximately 2.8 miles southeast of the Site. As the proposed project entails the construction of a secondary access roadway to serve an existing use (the College) and the proposed project does not involve the development of any residential units, the use of existing park and recreational facilities would not be expected to increase as a result of the proposed project and there would not be a need for a new or physically altered park facility. No impact would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less than Significant Impact** on Public Services.

XVI. RECREATION. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

THRESHOLDS OF SIGNIFICANCE: The project would have a significant effect on recreation if it would 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, or include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

DISCUSSION

The Site is located within the vicinity of the following neighborhood parks and recreational facilities:

- Kennwood Drive Park, located approximately 2.2 miles northeast of the Site;
- Vinewood Park, located approximately 2.8 miles southeast of the Site;
- Low Gap Park and Low Gap Park – Fit Trail, located approximately 3.6 miles south of the Site; and
- Ukiah Sports Complex, located approximately 4.6 miles southeast of the Site.

XVI.a-b) As discussed above, the purpose of the proposed project is to construct a secondary access roadway from the College to Orr Springs Road, as the College is currently only accessed via Hensley Creek Road, with no alternative route available in the event of an emergency. The proposed roadway is not intended to be used for regular access by the students or faculty to reach the College and would be gated and accessible only to employees of the District and emergency responders. Existing residential properties in the southern portion of the Site will continue to have access to the southern portion of the roadway to gain access to Orr Springs Road. No residential units would be constructed, nor is the population expected to increase, as a result of the proposed project. As a result, the use of existing park and recreational facilities would not be expected to increase as a result of the proposed project. Therefore, there would not be a need for a new or physically altered park or recreational facility. No impact would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have **No Impact** on Recreation.

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

THRESHOLDS OF SIGNIFICANCE: The project would have a significant effect on transportation if it would conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities; conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b); substantially increase hazards due to a geometric design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or result in inadequate emergency access.

DISCUSSION

On September 27, 2013, Governor Jerry Brown signed Senate Bill (SB) 743 into law, initiating an update to the CEQA Guidelines to change how lead agencies evaluate transportation impacts under CEQA, with the goal to better measure the actual transportation-related environmental impacts of a given project. Traditionally, transportation impacts had been evaluated by using Level of Service (LOS) analysis. Starting July 1, 2020, lead agencies are required to analyze the transportation impacts of new projects using vehicle miles traveled (VMT), instead of LOS. According to the *SB 743 Frequently Asked Questions* provided by the Governor's Office of Planning and Research (OPR), VMT measures how much actual auto travel (additional miles driven) a proposed project would create on California roads. If the project adds excessive car travel onto the roads, the project may cause a significant transportation impact. VMT analysis is intended to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution, promoting the development of a multimodal transportation system, and providing clean, efficient access to destinations (OPR, 2020). On May 20, 2020, Fehr & Peers, on behalf of the Mendocino Council of Governments (MCOG), prepared a *Senate Bill 743 Vehicle Miles Traveled Regional Baseline Study* (SB 743 Baseline Study) to provide an overview of SB 743, summarize VMT data available for Mendocino County, discuss alternatives for and recommend VMT measurement methods and thresholds for lead agencies in Mendocino County, and recommend transportation demand management (TDM) strategies for reducing VMT on projects in Mendocino County.

As previously discussed, the Site is currently accessed via Hensley Creek Road, a two-lane minor arterial road. Currently, this is the only access route to the Site, with no alternate route available in the event of an emergency. One bus stop is located at the College on Hensley Creek Road. As the Site is located in a rural area surrounded by vineyards, undeveloped land, and dispersed rural residences, no dedicated bicycle or pedestrian facilities, including sidewalks, currently exist in the project area. The proposed project includes construction of a secondary access roadway from the College to Orr Springs Road. The proposed roadway is not intended to be used for regular access by the students or faculty to reach the campus and that will be gated and accessible only to employees of the District and emergency responders. Existing residential properties in the southern portion of the Site will continue to have access to the southern portion of the

roadway to gain access to Orr Springs Road. As the proposed roadway will only be used by employees of the District and emergency responders that already access the Site via Hensley Creek Road, VMT are not expected to increase.

XVII.a) The proposed project would not conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities. It is expected that construction of the proposed project will result in a slight temporary increase in traffic to and from the Site, as construction workers arrive and leave the Site at the beginning and end of the day, in addition to minor interruption of traffic on adjacent streets when heavy equipment necessary for project construction is brought to and from the Site. However, once construction is complete, the construction workers and equipment would no longer be required at the Site. After completion of construction, the proposed project is not expected to increase traffic, as the proposed roadway will only be used by employees of the District and emergency responders that already access the Site via Hensley Creek Road. As noted above, the Site is located in a rural area with no dedicated bicycle or pedestrian facilities, is not located near existing pedestrian-generating land uses where pedestrians would be anticipated, and would not be expected to attract pedestrians to the Site. The project is not anticipated to substantially impact transit operations or facilities. A less than significant impact would occur.

XVII.b) The proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b), which states:

> *"(1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be considered to have a less than significant transportation impact.*
>
> *(2) Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, a lead agency may tier from that analysis as provided in Section 15152."*

All project-generated trips would be temporary in nature, ceasing upon completion of construction. As the proposed roadway will only be used by employees of the District and emergency responders that already access the Site via Hensley Creek Road, the proposed roadway is not expected to increase VMT after completion of construction. In addition, as of the date of this Initial Study, the County and the City of Ukiah have not established a threshold with regards to VMT impact significance consistent with CEQA Guidelines Section 15064.3, subdivision (b). As a result, a less than significant impact would occur.

XVII.c) The proposed project is not anticipated to substantially increase hazards due to geometric design features or incompatible uses. As discussed above, the Site is currently accessed via Hensley Creek Road with no alternate route available in the event of an emergency. As demonstrated by the proposed design improvements shown on the attached Site Plan (see Figure 2), the proposed roadway does not include sharp turns or dangerous intersections, and will not be used for incompatible uses. A less than significant impact would occur.

XVII.d) The proposed project will not result in inadequate emergency access, as the project has been designed to increase emergency access to the Site. A less than significant impact would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Transportation.

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

Thresholds of Significance: The project would have a significant effect on Tribal Cultural Resources if it would cause a substantial adverse change in the significance of a cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Places or in a local register of historical resources as defined in Public Resources Code §5020.1(k), or is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code §5024.1.

DISCUSSION

According to Chapter 3 (Development Element) of the Mendocino County General Plan (2009), ten (10) Native American tribes historically had territory in what is now Mendocino County. Native American tribes known to inhabit Mendocino County concentrated mainly along the coast and along major rivers and streams, while mountainous areas and redwood groves were occupied seasonally by some tribes. The first permanent non-native settlers came to Mendocino County in the middle of the 16th century, exploring and establishing small outposts. It was almost 300 years before the first permanent non-Spanish settlements in Mendocino County were established in April of 1852 on the coast north of Big River. As European-American settlement expanded in Mendocino County, most of the tribes known to inhabit the land were restricted to reservations and rancherias. During the 19th century, other tribes from the interior of California were forced to settle on the Round Valley Reservation in the northeastern portion of Mendocino County.

The District has no record of receiving requests for notification of proposed projects from California Native American tribes pursuant to Public Resources Code Section 21080.3.1. The District nevertheless sent notification and informal consultation letters on May 12, 2022, to five (5) Native American tribes from a list previously provided by the Native American Heritage Commission (NAHC) for similar projects in the area in

order to provide the tribes with an opportunity to advise the District of any comments or concerns regarding the project. A letter dated June 9, 2022, received by the District requested formal consultation from the Pinoleville Pomo Nation. Project-related documents were sent to the Pinoleville Pomo Nation for review on June 21, 2022. The Tribe will have the opportunity to review and comment on the Initial Study during the 30-day public review period, and a link to the Initial Study will be provided to the Tribe once the document is posted online for review.

In addition to the informal consultation letters sent by the District, efforts to identify tribal cultural resources that could be affected by the project were conducted by Alta Archaeological Consulting, Inc. (ALTA) as part of the preparation of the Archaeological Survey Report (ASR) dated April 22, 2022. These efforts included a search of records at the Northwest Information Center (NWIC), literature review, consultation with the NAHC, notification letters sent to appropriate local Native American tribes, and a pedestrian archaeological survey of the Site.

On March 30, 2022, ALTA contacted the NAHC to request a Sacred Lands File (SLF) search and the contact information for the representatives of the Native American tribes associated with the project area. To date, no response has been received from the NAHC. Using a recent NAHC contact list from a previous project in the area, on March 30, 2022, ALTA sent a letter requesting information regarding the general project to each contact. No responses have been received by ALTA to date.

a.i-ii) As discussed in Section V (Cultural Resources), above, one historic-era cultural resource, a collapsed water tower, was identified during the archaeological field survey. The project is not expected to have an adverse effect on the collapsed water tower as presently designed, and no other historical resources are identified at the Site. However, there are no known tribal cultural resources in the project area. No impact would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have **No Impact** on Tribal Cultural Resources.

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

THRESHOLDS OF SIGNIFICANCE: The project would have a significant effect on utilities and service systems if it would require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects; not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years; result in a determination by the wastewater treatment provider, which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments; 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; or not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

DISCUSSION

The proposed project includes the construction of a secondary access roadway from the College to Orr Springs Road on a currently undeveloped Site, located 4 miles north of Ukiah within an unincorporated area of Mendocino County. According to Chapter 3 (Development Element) of the Mendocino County General Plan (2009):

- PG&E maintains transmission lines throughout the County;
- Various telecommunication companies provide telecommunications to the County; and
- Solid waste from the County is exported to the Potrero Hills Landfill in Solano County because there are no remaining operating landfills in the County.

Although the Site is undeveloped, the College is developed and already serviced for telecommunications, electric power, solid waste, water, and wastewater treatment. Electricity is provided to the Site by Pacific Gas and Electric (PG&E), solid waste management is provided by the County, and water is provided by the Millview County Water District. Wastewater generated on-site is collected by the Ukiah Valley Sanitation

District (UVSD) and treated at the Ukiah Wastewater Treatment Plant (UWWTP), which is owned and operated by the City of Ukiah.

As discussed previously, the proposed project consists of the construction of a 24-foot-wide secondary access roadway from the College to Orr Springs Road. As the proposed roadway would be 4,030 feet in length, construction of the proposed project would disturb an area greater than one acre and as the roadway would be constructed with an asphalt surface, the impervious surface area of the roadway would be approximately 96,720 square feet (or 2.2 acres). However, the proposed project would be designed and implemented in accordance with the construction and post-construction requirements of the CGP. While the proposed project would create and replace approximately 2.2 acres of impervious surfaces, the majority of the central portion of the Site would remain as undeveloped grasslands, which would continue to allow for infiltration. Additionally, the only existing stormwater drainage system impacted by the proposed project would be the drainage facilities adjacent to Orr Springs Road, which are owned and maintained by the Mendocino County Department of Transportation (DOT). Surface runoff from the existing paved private road currently is conveyed via a 24-inch (RCP) running under the paved private road and sheet flow, respectively, to a north-south oriented open-cut ditch on the east side of the paved private road, then under Orr Springs Road via an existing 36-inch (CMP). Drainage from an existing roadside ditch along Orr Springs Road and the unimproved driveway on the west side of the paved private road is conveyed to the west side of the existing driveway apron and under Orr Springs Road via a 12-inch CMP. The existing 36-inch CMP and 12-inch CMP outfall to Ackerman Creek from a height approximately 25 feet above the creek surface.

In accordance with the requirements of the CGP, during construction, BMPs would be implemented to prevent the discharge of construction waste, debris, or contaminants from construction materials, tools, and equipment from leaving the Site. Additionally, the proposed roadway would be designed to replicate the pre-project water balance for the smallest storms up to the 85th percentile storm event (or the smallest storm event that generates runoff, whichever is larger) and to implement post-construction BMPs to reduce pollutants in stormwater discharges that are reasonably foreseeable after all construction phases have been completed.

XVIX.a) As discussed above, the infrastructure necessary for drainage would be installed as part of the proposed project; however, in order to ensure significant environmental effects would not occur, the respective installers would implement applicable BMP) to reduce the potential for impacts to occur, including but not limited to erosion during construction. Although the Site is undeveloped, the College is developed and already serviced for telecommunications, electric power, solid waste, water, and wastewater treatment, and therefore does not require relocation or construction of new utility facilities. A less than significant impact would occur.

XVIX.b) As discussed above, the proposed project involves the construction of a secondary access roadway, and therefore, is not anticipated to need water. No impact would occur.

XVIX.c) As discussed above, the proposed project involves the construction of a secondary access roadway, and therefore, is not anticipated to generate wastewater. No impact would occur.

XVIX.d-e) A significant amount of solid waste is not anticipated under the proposed project and all solid waste generated, as anticipated during construction, would be disposed of in accordance with all federal, state, and local statutes and regulations related to solid waste, including state and local waste diversion requirements. A less than significant impact would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Utilities and Service Systems.

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

THRESHOLDS OF SIGNIFICANCE: The project would have a significant effect on wildfire if it would impair an adopted emergency response plan or emergency evacuation plan; due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; 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; or 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 challenges.

DISCUSSION

On September 13, 2016, the County adopted a *Mendocino County Operational Area Emergency Operations Plan* (County EOP), under Resolution Number 16-119. As noted on the Plans and Publications webpage of the MCOES, the County EOP, which complies with local ordinances, state law, and state and federal emergency planning guidance, serves as the primary guide for coordinating and responding to all emergencies and disasters within the County. The purpose of the County EOP is to "*facilitate multi-agency and multi-jurisdictional coordination during emergency operations, particularly between Mendocino County, local and tribal governments, special districts as well as state and Federal agencies*" (MCOES – Plans and Publications, 2019).

The Site is located within the SRA, just outside of the service boundaries of the UVFD and is served by the CalFire (Mendocino County Maps – Fire Responsibility Areas – Ukiah, 2019). The Site is mapped as located within a "High" fire hazard severity zone (Mendocino County Maps – Fire Hazard Severity Map, 2007). The nearest fire station to the Site is the Cal Fire Ukiah Station located approximately 1.1 miles east of the Site, east of Highway 101, at 2690 N State Street. As the Site is located within the SRA, the project is required to comply with the Fire Safe Regulations adopted by the State Board of Forestry in Title 14 of the California Administrative Code. These include standards for roads, defensible space, and an emergency water supply. As previously discussed, the proposed project entails the construction of a secondary access roadway intended to serve the College in the event of an emergency, such as a wildfire.

XX.a) As discussed under Section IX (Hazards and Hazardous Materials), above, there are no components of the proposed project that would impair an adopted emergency response plan or emergency evaluation plan, including the adopted County EOP. The Site is located with the SRA and is designated as having a "Moderate" exposure to Wildfire per Table 5.5 of the 2020 Mendocino County Multi-Jurisdictional Hazard Mitigation Plan – Volume 2. The proposed secondary emergency access roadway would be constructed in accordance with state and local standards, including safety and emergency access requirements. As such, there are no components of the project that would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. A less than significant impact would occur.

XX.b) Under the proposed project, it is not anticipated that wildfire risks would be exacerbated due to slope, prevailing winds, and other factors. The Site consists of developed areas in the north and south and undeveloped grassland in hilly terrain in the center, with elevations at the Site ranging between approximately 690 feet and 830 feet above mean sea level. In addition, the Site is located in a rural area with limited development where there is a moderate threat of wildfire. As noted above, the proposed project entails constructing a secondary access roadway with restricted use. The proposed roadway would be gated and accessible only to employees of the District, primarily for maintenance purposes, and emergency responders in the event of an emergency, such as a wildfire. The roadway itself would not exacerbate wildfire risk due to the nature of the project and would facilitate a reduction of potential wildfire risk to occupants of the College by providing a secondary roadway that could be utilized in the event of an emergency. In addition, this roadway will act as a defensible fire break in the open space rangeland. A less than significant impact would occur.

XX.c) The Site is currently vacant and undeveloped, and the proposed project entails the construction of a secondary access roadway from the College to Orr Springs Road for emergency use. No additional infrastructure or connections would be warranted on-site. As such, the proposed project would not require the installation or maintenance of infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. No impact would occur.

XX.d) The proposed project would not 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 challenges, as the Site is located in a rural area with limited development and would be constructed in accordance with the construction and post-construction standards of the SWRCB CGP. As discussed in Section X (Hydrology and Water Quality), compliance with the CGP would ensure stormwater runoff from the proposed roadway is properly managed to prevent downstream flooding or drainage challenges. A less than significant impact would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less than Significant Impact** on Wildfire.

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

THRESHOLDS OF SIGNIFICANCE: The project would have a significant effect on mandatory findings of significance if it would have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory; 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.); or have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

DISCUSSION

Certain mandatory findings of significance must be made to comply with CEQA Guidelines §15065. The proposed project has been analyzed and it has been determined that it would not:

- Substantially degrade environmental quality;
- Substantially reduce fish or wildlife habitat;
- Cause a fish or wildlife population to fall below self-sustaining levels;
- Threaten to eliminate a plant or animal community;
- Reduce the numbers or range of a rare, threatened, or endangered species;
- Eliminate important examples of the major periods of California history or pre-history;
- Achieve short term goals to the disadvantage of long term goals;
- Have environmental effects that will directly or indirectly cause substantial adverse effects on human
- beings; or
- Have possible environmental effects that are individually limited but cumulatively considerable when viewed in connection with past, current, and reasonably anticipated future projects.

Potential environmental impacts from the construction of the proposed secondary access roadway have been analyzed in this document and mitigation measures have been included in the document to ensure impacts would be held to a less than significant level.

XXI.a) The project does not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. The historical resource found on-site will be avoided by design. While the Site contains a wetland-stream system and an ephemeral drainage that drains to tributaries to Ackerman Creek and contains potential habitat for listed wildlife species, the Site was not found to contain any special status plant species. Mitigation has been applied to reduce any potential environmental impacts to biological resources and water quality to levels that are less than significant.

XXI.b) No cumulative impacts have been identified as a result of the proposed project. The project is intended to serve an existing use provide the Ukiah Mendocino College campus with a secondary access roadway for emergency use. Individual impacts from construction of the project would be mitigated, as needed, and would not significantly contribute to cumulative impacts in the area. A less than significant impact would occur.

XXI.c) The project will not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly. Concerns related to the suitability of soils on-site for this type of construction would be mitigated by Mitigation Measures GEO-1 and GEO-2, which reduce the threat of failure of the proposed roadway structure to a level that is less than significant and concerns related to the impact of construction noise on nearby sensitive receptors are mitigated by Mitigation Measure NOISE-1. A less than significant impact would occur.

MITIGATION MEASURES

Refer to Mitigation Measures BIO-1 through BIO-3 in Section IV (Biological Resources), CUL-1 through CUL-3 in Section V (Cultural Resources), GEO-1 and GEO-2 in Section VII (Geology and Soils), HYDRO-1 in Section X (Hydrology and Water Quality), and NOISE-1 in Section XIII (Noise), above.

FINDINGS

The proposed project would have a **Less Than Significant Impact with Mitigation Incorporated** on Mandatory Findings of Significance.

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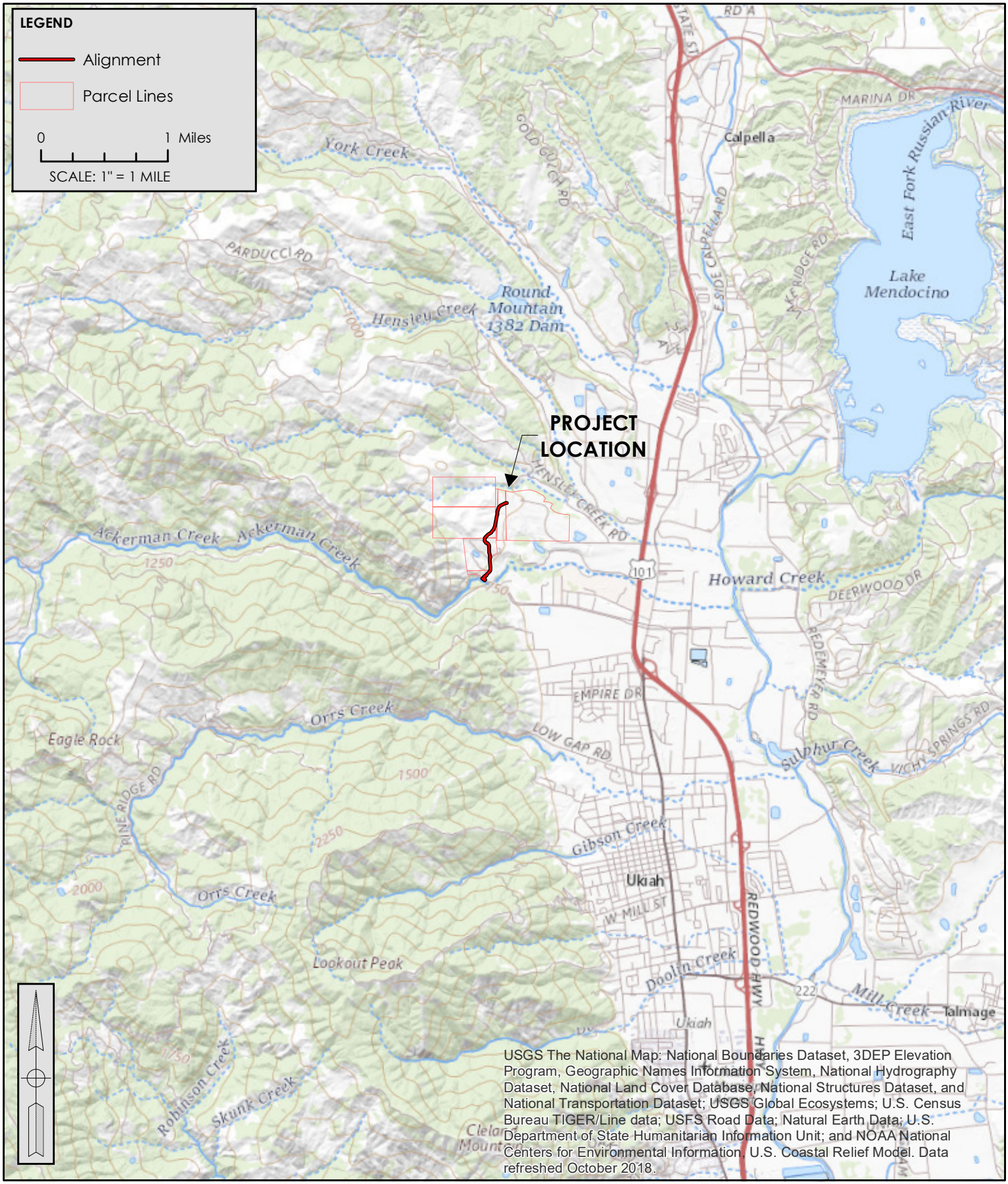
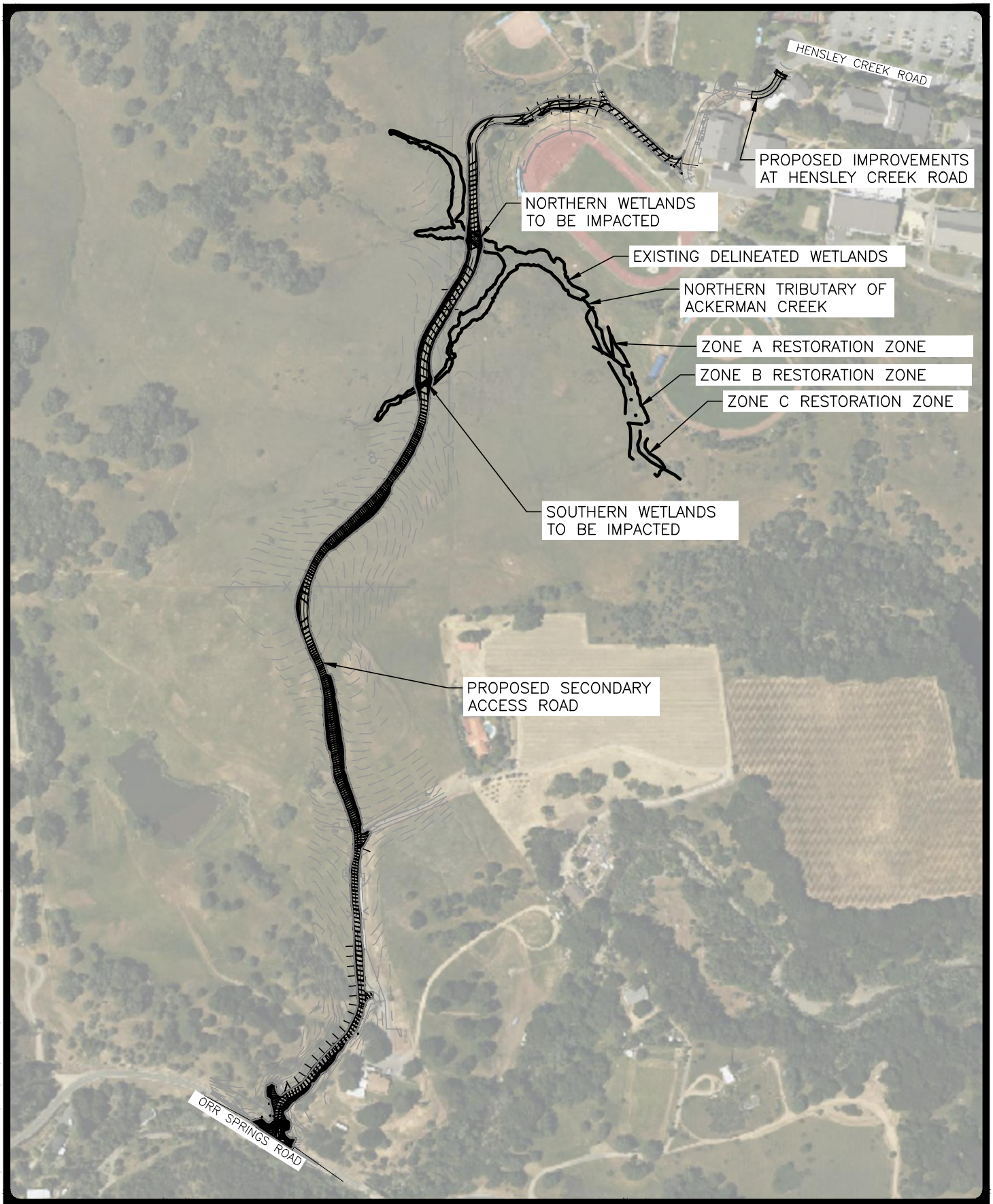
FIGURES

LACO EUREKA • UKIAH • SANTA ROSA 1-800-515-5054 www lacoassociates com	PROJECT	SECONDARY ACCESS FEASIBILITY STUDY	BY	JRG	FIGURE 1
	CLIENT	MENDO-LAKE COMMUNITY COLLEGE DISTRICT	CHECK	KRM	
	LOCATION	1000 HENSLEY CREEK ROAD, UKIAH, CA	DATE	08/17/21	JOB NO 6816.28
		SITE VICINITY			



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed October 2018.



JOB NO. 6816.28
DATE 05/10/2022
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SHEET 1 of 1

MENDOCINO JUNIOR COLLEGE SECONDARY ACCESS ROAD ALIGNMENT

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APPENDIX A

Photo Log

Site Photographs

Mendocino-Lake Community College Secondary Access Roadway

Northern end of project site, looking south (March 2021)

Northern wetland area, looking northwest (March 2021)

Northern wetland area, looking north (April 2022)

Wetland areas, looking southwest (April 2022)

Northern tributary east of wetland areas, looking southeast (April 2022)

Northern tributary east of wetland areas, looking northwest (April 2022)

Southern wetland area, looking southwest (March 2021)

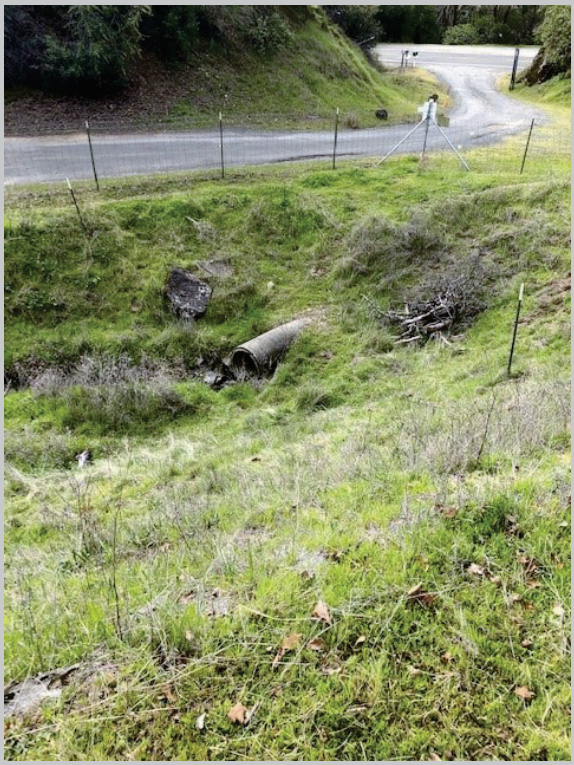
Southern wetland area, looking west (March 2021)

West of proposed roadway, looking northeast towards southern wetland and College (April 2022)

West of proposed roadway at drainage intersection of tributaries to southern wetland (April 2022)

View of northern section of proposed roadway (April 2022)

Pond and beginning of southern tributary draining towards Orr Springs Rd. looking west (April 2022)



Outlet of southern tributary, looking south to Orr Springs Rd. (beginning of 24-inch RCP) (March 2021)

Outlet of southern tributary, looking north (beginning of 24-inch RCP) (April 2022)

Outlet of existing 24-inch RCP (roadside ditch), looking north up paved private road (April 2022)

Inlet of existing 36-inch CMP (south end of roadside ditch), looking southeast (April 2022)

APPENDIX B

Biological Resources Assessment

Biological Resources Assessment
Secondary Emergency Access Road Project
Mendocino Community College
Ukiah, Mendocino County, California
APN 169-020-014 & -07
APN 156-060-013 & -015

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OCTOBER 2021

EXECUTIVE SUMMARY

This report presents the results of a biological resources assessment conducted for a proposed secondary emergency access road from the Ukiah College Campus to connect to Orr Springs Road located southwest of the college campus in Ukiah, Mendocino County, California. The college owns four contiguous parcels of land to the west and southwest of the college that are proposed for the secondary access to Orr Springs Road which is located approximately 3/4 miles due southwest.

The purpose of the assessment is to identify special-status plant and wildlife species and sensitive habitats (including wetlands) that have the potential to occur on or in the vicinity of the study area to determine if the proposed road construction could potentially affect these resources. Based on information and data collected for the analysis, appropriate mitigation measures designed to minimize and/or avoid potential biological resource impacts are provided.

The proposed access road would occur in undeveloped grasslands in hilly terrain that is currently used for grazing horses or as open space. Two swales were identified within the limits of the proposed access road. Both swales drain in an easterly direction to Ackerman creek, which ultimately drains to the Russian River east of Highway 101 in downtown Ukiah. An ephemeral drainage was identified near the southern portion of the project site near Orr Springs Road. This drainage is outside the proposed access road limits.

The access road footprint and surrounding lands provide potential habitat for nesting birds. Two unnamed stock ponds in the vicinity of the proposed route provide potential habitat for western pond turtle. The southern tributary of Ackerman Creek provides potential habitat for foothill yellow-legged frog as described in Section 4.1. No special-status plants were observed during seasonally-timed rare plant surveys conducted in the spring and summer of 2021 as described in Section 4.2.

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PROJECT	MCC- SECONDARY ACCESS	BY KD	FIGURE 1
CLIENT	MENDOCINO COLLEGE DISTRICT	DATE 4/30/2021	
LOCATION	HENSLEY CREEK ROAD, UKIAH	CHECK RLW	JOB NO. 6816.28
	OVERALL SITE PLAN	SCALE 1"=500l	

LANDS OF MENDOCINO COLLEGE DISTRICT

LANDS OF MENDOCINO COLLEGE FOUNDATION, LLC

LANDS OF MENDOCINO COLLEGE FOUNDATION, LLC

LANDS OF MENDOCINO COLLEGE DISTRICT

PROPOSED ACCESS ROAD

HENSLEY CREEK ROAD

LANDS OF MURNO VINEYARDS

LANDS OF GHERINI

LANDS OF MENDOCINO COLLEGE FOUNDATION, LLC

LANDS OF MARSH

ORR SPRINGS RD

LANDS OF MENDOCINO COLLEGE FOUNDATION, LLC

May 01,2021 - 3:45pm
T:\Landfiles\6800\6816.28_Secondary Access Road\DWG\6816.28_CONCEPT PLAN.dwg

1.0 INTRODUCTION

This report presents the results of a biological resources assessment conducted for a proposed secondary emergency access road from the Ukiah College Campus to connect to Orr Springs Road located southwest of the college campus in Ukiah, Mendocino County, California. The college owns four contiguous parcels of land to the west and southwest of the college that are proposed for the secondary access to Orr Springs Road which is located approximately 3/4 miles due southwest.

The purpose of the assessment is to identify special-status plant and wildlife species and sensitive habitats (including wetlands) that have the potential to occur on or in the vicinity of the study area to determine if the proposed road construction could potentially affect these resources. Based on information and data collected for the analysis, appropriate mitigation measures designed to minimize and/or avoid potential biological resource impacts are provided.

The proposed access road would occur in undeveloped grasslands in hilly terrain that is currently used for grazing horses and open space. The access road would begin at the northern end of campus off of an existing maintenance road near the Gymnasium and Athletics/Fitness Lab. The road would extend just west of the stadium and continue south through the agricultural fields paralleling an existing fence-line and unimproved maintenance road and then up into higher ground in a southwest direction until it would connect with an existing paved private road that connects to Orrs Spring Road.

The final footprint of the road and associated base would measure 32-feet wide.

Project site looking northeast towards gymnasium.

2.0 WETLANDS ASSESSMENT

2.1 Corps of Engineers Jurisdictional Criteria Review

Unless exempt from regulation, all proposed discharges of dredged or fill material into waters of the United States require U.S. Army Corps of Engineers (Corps) authorization under Section 404 of the Clean Water Act (33 U.S.C. 1344) and Clean Water Act Section 401 authorization from the Regional Water Quality Control Board (RWQCB). Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), wetlands (excluding isolated wetlands for the Corps), and farmed wetlands.

The Corps identifies wetlands using a "multi-parameter approach" which requires positive wetland indicators in three distinct environmental categories: hydrology, soils, and vegetation. The Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West, which was released in early 2007 and revised in 2008 (version 2.0), is utilized when conducting jurisdictional wetland determinations in areas identified within the boundaries of the Arid West (U.S. Army Corps of Engineers, 2008). The project site falls within the Arid West region and wetlands identified on the site were delineated using that and the federal guidance.

2.1.1 Potential Wetlands

Section 328.3 of the Federal Code of Regulations defines wetlands as:

"Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

EPA, 40 CFR 230.3 and CE, 33 CFR 328.3 (b)

The three parameters used to delineate wetlands are the presence of hydrophytic vegetation, wetland hydrology, and hydric soils. According to the Corps Manual, for areas not considered “problem areas” or “atypical situations”:

"....[E]vidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland delineation."

<u>Vegetation</u>

Plant species identified are assigned a wetland status according to the U.S. Fish and Wildlife Service list of plant species that occur in wetlands (Reed 1988). This wetland

classification system is based on the expected frequency of occurrence in wetlands as follows:

OBL	Always found in wetlands	>99% frequency
FACW	Usually found in wetlands	67-99%
FAC	Equal in wetland or non-wetlands	34-66%
FACU	Usually found in non-wetlands	1-33%
UPL/NL	Upland/Not listed (upland)	<1%

The Corps Manual and Supplements require that a three-step process be conducted to determine if hydrophytic vegetation is present. The first step is the Dominance Test (Indicator 1); the second is the Prevalence Index (Indicator 2); the third is Morphological Adaptations (Indicator 3). The Dominance Test requires the delineator to apply the "50/20 rule". The dominant species are chosen independently from each stratum of the community. In general, dominant species are determined for each vegetation stratum from a sampling plot of an appropriate size surrounding the sample point. Dominants are defined as the most abundant species that individually or collectively account for more than 50 percent of the total vegetative cover in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total cover. If greater than 50 percent of the dominant species has an OBL, FACW, or FAC status, the sample point meets the hydrophytic vegetation criterion.

If the sample point fails the 50/20 rule and both hydric soils and wetland hydrology are not present, then the sample point does not meet the hydrophytic vegetation criterion, unless the site is a problematic wetland situation. However, if the sample point fails Indicator 1, but hydric soils and wetland hydrology are both present, the delineator must apply the Indicator 2, Prevalence Index. The Indicator 3, Morphological Adaptations, is rarely used in this region.

Hydrology

The Corps jurisdictional wetland hydrology criterion is satisfied if an area is inundated or saturated for a period sufficient to create anoxic soil conditions during the growing season (a minimum of 14 consecutive days). Evidence of wetland hydrology can include primary indicators, such as visible inundation or saturation or oxidized root channels, or secondary indicators such as the FAC-neutral test or the presence of a shallow aquitard. Only one primary indicator is required to meet the wetland hydrology criterion; however, if secondary indicators are used, at least two secondary indicators must be present to conclude that an area has wetland hydrology.

Soils

The Natural Resource Conservation Service (NRCS) defines a hydric soil as follows:

"A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part." Federal Register July 13, 1994, U.S. Department of Agriculture, NRCS

Soils formed over long periods under wetland (anaerobic) conditions often possess characteristics that indicate they meet the definition of hydric soils. The supplement provides a list of the hydric soil indicators that are known to occur in region.

2.1.2 Waters of the U.S. (Other Waters)

"Other waters" or "Waters of the United States" (WUS) other than wetlands are also potentially subject to Corps jurisdiction. WUS subject to Corps jurisdiction include ponds, lakes, rivers, streams (including ephemeral and intermittent streams), and all areas below the High Tide Line (HTL) subject to tidal influence. Jurisdiction in non-tidal areas extends to the ordinary high water mark (OHWM) defined as:

"...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the characteristics of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

Federal Register Vol. 51, No. 219, Part 328.3 (e). November 13, 1986

2.2 North Coast Regional Water Quality Control Board

The Regional Water Quality Control Board regulates waters of the State pursuant to Sections 13260(a)(1) and 13050(e) of the State Water Code, and the Porter Cologne Act. In addition, anyone proposing to conduct a project that requires a federal permit or involves dredge or fill activities that may result in a discharge to U.S. surface waters and/or "Waters of the State" are required to obtain a Clean Water Act (CWA) Section 401 Water Quality Certification and/or Waste Discharge Requirements (Dredge/Fill Projects) from the Regional Water Quality Control Board, verifying that the project activities will comply with state water quality standards. The most common federal permit for dredge and fill activities is a CWA Section 404 permit issued by the Corps of Engineers (North Coast Regional Water Quality Control Board, 2007). In general, the RWQCB employs similar wetland delineation techniques for identifying wetland areas potentially subject to its regulation.

Section 401 of the CWA grants each state the right to ensure that the State's interests are protected on any federally permitted activity occurring in or adjacent to Waters of the State. In California, the Regional Water Quality Control Boards (Regional Board) are the agency mandated to ensure protection of the State's waters. So if a proposed project requires a U.S. Army Corps of Engineers CWA Section 404 permit, falls under

other federal jurisdiction, and has the potential to impact Waters of the State, the Regional Water Quality Control Board will regulate the project and associated activities through a Water Quality Certification determination (Section 401) (North Coast Regional Water Quality Control Board, 2007).

However, if a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a fill discharge to "Waters of the State", the Regional Board has the option to regulate the project under it's state authority (Porter-Cologne) in the form of Waste Discharge Requirements or Waiver of Waste Discharge Requirements (North Coast Regional Water Quality Control Board, 2007). Waters of the State include isolated wetlands, which are not regulated by the Corps.

In June 2020, the State of California developed its definition of a wetland to address arid conditions in the west. The definition differs from the federal definition in that a wetland can include only wetlands soil and hydrology and not hydrophytic wetland vegetation. However, if the area does have vegetation, it must include wetland vegetation in order to be classified a wetland.

2.3 California Department of Fish and Wildlife

Activities that result in the substantial modification of the bed, bank or channel of a stream or lake may require a Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW) pursuant to Sections 1600-1607 of the California Fish and Game Code. On streams, creeks and rivers, the extent of CDFW jurisdiction extends from the top of bank to top of bank or the outer limits of the riparian canopy, whichever is wider.

2.4 Background review

Prior to conducting the on-site wetlands assessment within the project area, various background materials relating to the site were reviewed. These include aerials from Google earth and the Ukiah U.S.G.S. 7.5-minute quadrangle. Ackerman Creek and two seasonal swales are visible on Google Earth. An ephemeral drainage that is a tributary to Ackerman Creek is also visible on the southern portion of the site where the private road connects to Orrs Spring Road. Two unnamed stockponds were visible on the aerial photographs but these are well outside the proposed alignment.

The web soil survey was also reviewed to determine what soils units are mapped on the project site to determine if any of the soil units are mapped as hydric. The soils mapped on the site are:

- Yokayo sandy loam 50-70 percent slopes
- Yorkville loam, 15-30 percent slopes
- Witherell-Hopland-Squawrock 50 to 70 percent slopes
- Hopland Loam

None of the soil units are listed as hydric soils. Yorkville loam is listed on the County hydric soil list as having unnamed hydric inclusions in the form of depressions.

2.5 Wetland Assessment and Results

On June 14, 2021, Lucy Macmillan and Anya Peron-Burdick conducted a wetland assessment along the proposed access road with approximately 50 feet on either side of the alignment. Two swales were identified on the northern portion of the project site. These areas were dominated by wetland vegetation including Italian rye grass (Lolium perenne), penny royal (Mentha pulegium), and dense flower willowherb (Epilobium densiflorum). There was no water in the swales at the time of survey however there was evidence of soil saturation (oxidized rhizospheres) and some algal matting. Soils within the wetland areas exhibited mottling (7.5 YR 4/6). The two swales drain in an easterly direction towards a large stockpond downslope, which ultimately drains to the northern fork of Ackerman Creek and the Russian River.

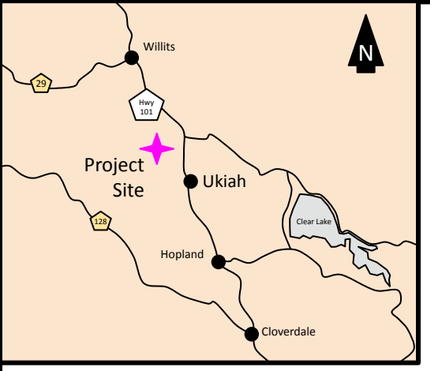
On the far southerly end of the project by the private road off of Orrs Spring Road, there is an ephemeral drainage that drains from the hills to the west in a southerly direction towards the southern fork of Ackerman Creek. The channel of the creek is incised and measures on average 3-4 feet wide.

Work that would result in a discharge of fill material, including the installation of road culverts, into the swales would require authorization from the North Coast Regional Water Quality Control Board and the Corps of Engineers. Road improvements that may impact area below the top of bank along the ephemeral tributary at the southern end of the road alignment would likely require authorization from the California Department of Fish and Wildlife as well.

Swale located on northern portion of project site looking west.

Swale draining towards Ackerman Creek

Ephemeral tributary on southern portion of site drains towards southern tributary of Ackerman Creek



Map Key

- Wetland Area
- Seasonal Creeks
- Data Point
- Proposed Access Road

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Professional Ecological Services
2923 Grinnel Drive, Davis, CA 95618
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MAP DETAILS: APB

DRAFT: 10/05/2021

REVISION:

REVISION:

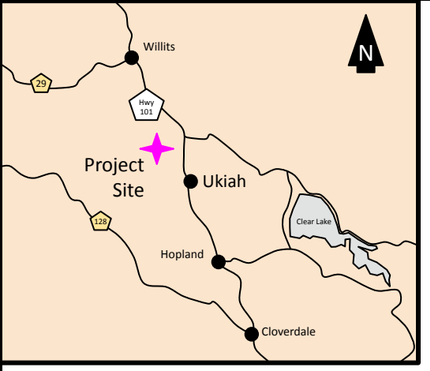
N

0.5 in = 75 ft

Wetland Assessment

Mendocino Community College
1000 Hensley Creek Road, Ukiah, CA 95482
APNs: 169-020-14, 169-020-15, 169-020-07,
156-060-13, 156-060-15, 156-110-35

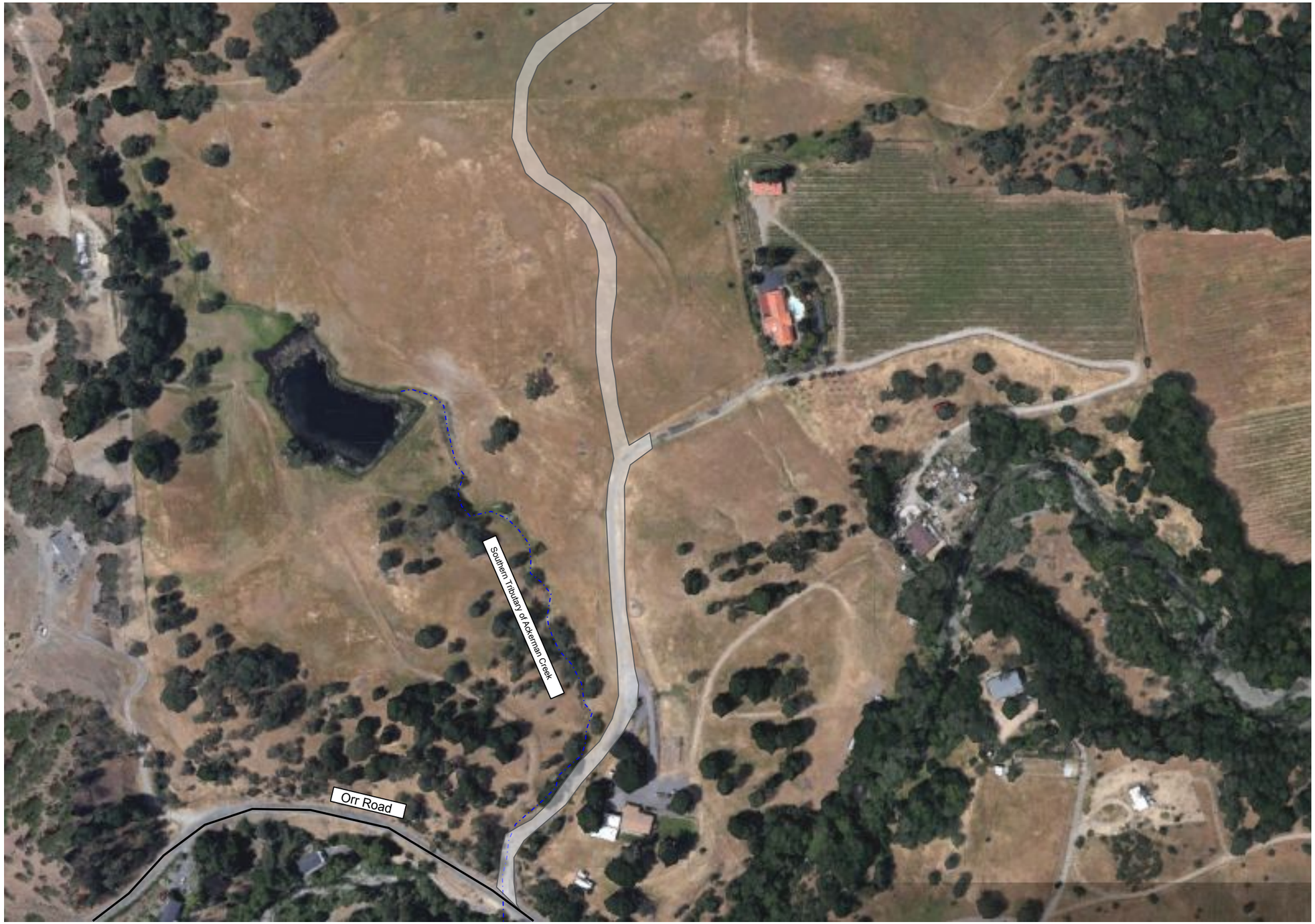
PLATE 1



Map Key

Proposed Access Road

Seasonal Creeks



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MAP DETAILS: APB

DRAFT: 10/05/2021

REVISION:

REVISION:

N

0.5 in = 120 ft

Proposed Access Road - Southern Portion

Mendocino Community College
1000 Hensley Creek Road, Ukiah, CA 95482
APNs: 169-020-14, 169-020-15, 169-020-07,
156-060-13, 156-060-15, 156-110-35

PLATE
2

3.0 SPECIAL-STATUS SPECIES REGULATORY FRAMEWORK

Special-status plants and animals are legally protected under the State and Federal Endangered Species Acts or other regulations, and species that are considered rare by the scientific community. Special status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed and proposed species. In addition, California Department of Fish and Wildlife (CDFW) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, and CDFW special status invertebrates are all considered special status species. Although CDFW Species of Special Concern generally have no special legal status, they are given special consideration under the California Environmental Quality Act (CEQA). In addition to regulations for special status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act of 1918. Under this legislation, destroying active nests, eggs, and young is illegal.

To obtain up-to-date conservation information U.S. Fish and Wildlife Service (USFWS) species lists were reviewed for federally listed species (including Proposed and Candidate species) and California Department of Fish and Wildlife (CDFW) species lists for State of California listed species were also reviewed. Special-status species also include those with California Rare Plant Rank (CRPR) 1A (Plants Presumed Extinct in California), CRPR 1B (Plants Rare, Threatened, or Endangered in California and Elsewhere), or CRPR 2 (Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere), as indicated by the CNPS Inventory. Impacts to these species must be reviewed under the provisions of the California Environmental Quality Act (CEQA) Guidelines.

Rare plants are defined here to include: (1) all plants that are federal- or state listed as rare, threatened, or endangered, or a candidate for listing; (2) all plants ranked by the California Natural Diversity Database (CNDDB) and the California Native Plant Society (CNPS) as California Rare Plant Rank (CRPR) 1,2, 3, or 4. Locally rare species if present, are also included in this report.

The methods and results of the special-status species assessment follow.

3.1 Special-status Animals

3.1.1 Background Review

The California Department of Fish and Wildlife's Natural Diversity Database (CNDDB) was reviewed (Ukiah and surrounding quadrangles) to identify special-status species potentially occurring on or in the vicinity of the project site. Species recorded as occurring within a 5-mile radius are illustrated on Figure 2.

3.1.2 Field Reconnaissance

The project site and surrounding areas provide habitat for a variety of terrestrial wildlife including coyote, fox, rabbits, squirrels and skunks and a variety of avian species including downy woodpecker, Steller's jay, red-tailed hawk and turkey vulture.

On June 14, 2021, a reconnaissance level survey of the site was conducted. The focus of the survey was to identify whether suitable habitat elements for each of the special status species documented in the surrounding vicinity or in the range of the project site are present on the project site whether the project would have the potential to result in impacts to any of these species and/or their habitats either on- or off-site. Habitat elements examined included the presence of: dispersal habitat, foraging habitat, refugia or estivation habitat, and breeding (or nesting) habitat.

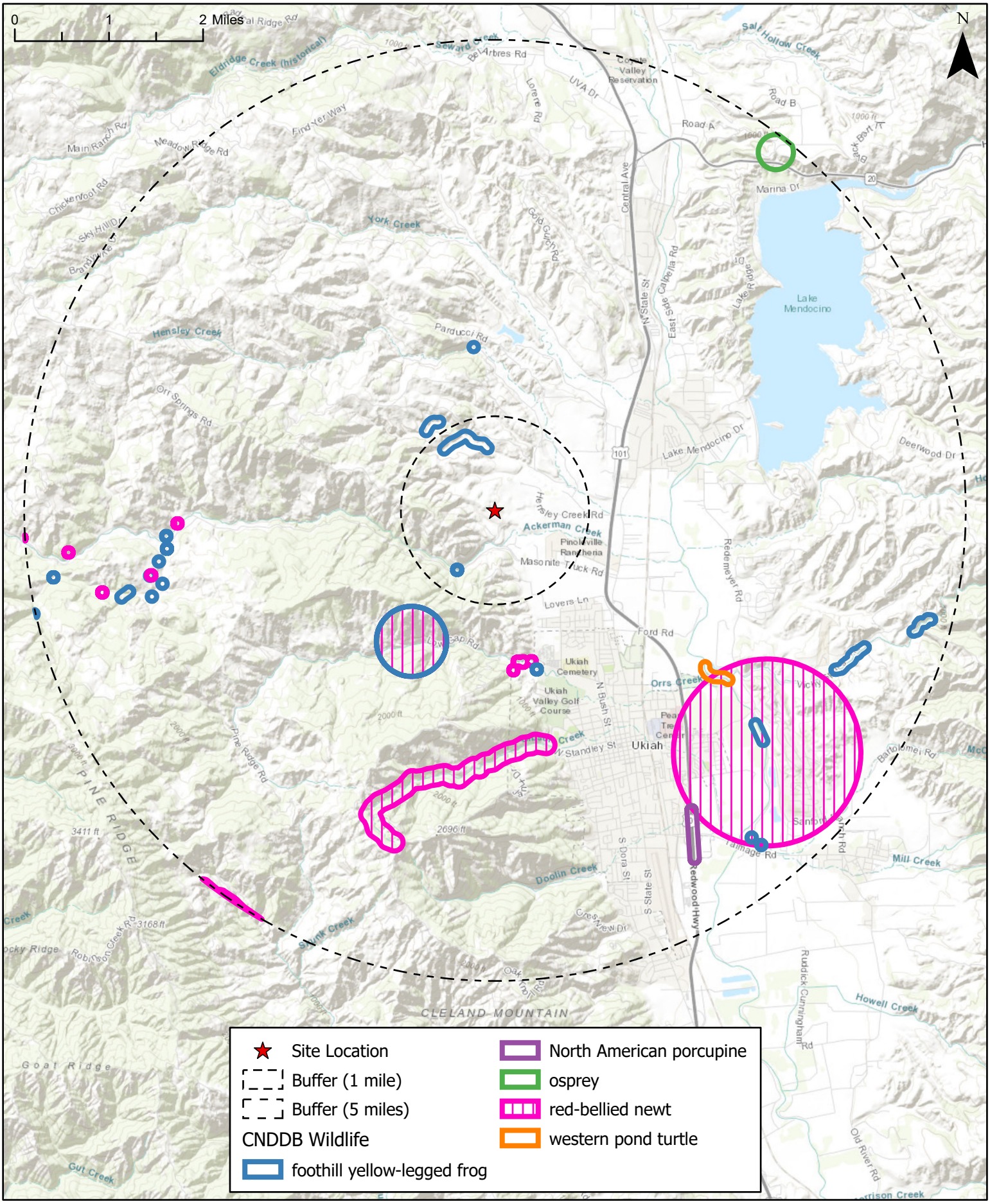

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Figure 2: CNDDB Wildlife
Mendocino College
Ukiah, CA

3.1.3 Results

Five special-status wildlife species have been documented within five miles of the Project Site (Figure 2). Based on the biological communities present on the project site and species identified in the search on the CNDDB, it was determined that the site provides habitat for nesting birds and raptors, foothill yellow-legged frog and western pond turtle. The remaining species documented in the area are not likely to occur due to absence of suitable habitat (Table 1).

Special-status species that may potentially occur in the project area are described below.

Nesting Birds

The trees on and adjacent to the site provide potential nesting habitat for a variety of nesting birds and raptors. Birds and raptors are protected under the federal Migratory Bird Treaty Act (50 CFR 10.13). Their nest, eggs, and young are also protected under California Fish and Wildlife Code (§3503, §3503.5, and §3800). In addition, raptors such as the white-tailed kite (Elanus leucurus) are "fully protected" under Fish and Wildlife Code (§3511). Fully protected raptors cannot be taken or possessed (that is, kept in captivity) at any time. Nesting season for birds in California generally occurs between February 1st and August 31st.

Western pond turtle

The Western pond turtle (Emys marmorata) is the only native freshwater turtle in California. The species is considered a Species of Special Concern by the California Department of Fish and Wildlife. Western pond turtle inhabits annual and perennial aquatic habitats including man-made habitats, such as coastal lagoons, lakes, ponds, marshes, rivers, and streams from sea level to 5,500 feet in elevation. This species requires low-flowing or stagnant freshwater aquatic habitat with suitable basking structures, including rocks, logs, algal mats, mud banks and sand. To escape periods of high water flow, high salinity, or prolonged dry conditions, Western pond turtle may move upstream and/or take refuge in vegetated, upland habitat for up to four months, though aquatic habitat is preferred (Rathbun et al. 2002). Western pond turtle nests from late April through July. This species requires open, dry upland habitat with friable soils for nesting and prefer to nest on unshaded slopes within 5 to 100 meters of suitable aquatic habitat. Females venture from water for several hours in the late afternoon or evening during the nesting season to excavate a nest, lay eggs, and bury the eggs to incubate and protect them. Hatchlings generally emerge in late fall but may overwinter in the nest and emerge in early spring of the following year. Western pond

turtle could potentially occur in the stock pond downstream of the two swales as well as within the stock pond located approximately 400 feet west of the proposed access road at the southern end of the alignment just northwest of the private road.

Foothill yellow-legged frog (Rana boylii)

The ephemeral drainage on the southern portion of the proposed road alignment provides potential habitat for Foothill yellow-legged frog (FYLF). FYLF is a State Candidate Threatened species and a Species of Special Concern. This species occurs in the Coast ranges from northern California to Los Angeles and is found in or near creeks and streams with rocky substrates in a variety of habitats. This species is infrequently found away from a permanent water source, even on rainy nights (Zeiner, 1988).

Stockpond located to the west of the southerly end of the proposed access road.

Table 1. Special-status animal species with potential to occur in the vicinity of proposed project at Secondary Access Road Mendocino Community College, Ukiah, California

Animal*	Status	Habitat	Potential for Occurrence on of In Vicinity of Site
Amphibians and Reptiles			
Western pond turtle (*Emys marmorata*)	CSC	Associated with permanent or nearly permanent water in a wide variety of habitats. Requires basking sites, nest sites may be found up to 0.5 km from water.	Potential for occurrence in stockponds within vicinity of project site.
Foothill yellow-legged frog (*Rana boylii*)	SCT, CSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	Potential for occurrence in tributary to Ackerman Creek.
Red-bellied newt (*Taricha rivularis*)	CSC	Coastal drainages from Humboldt County to Sonoma County and inland to Lake County. Lives in terrestrial habitats and typically breeds in streams with moderate flow and clean rocky substrate.	Potential for occurrence in tributary to Ackerman Creek.

Animal*	Status	Habitat	Potential for Occurrence on of In Vicinity of Site
Fish			
Clear Lake tule perch (*Hysterocarpus traskii lagunae*)	CSC	Found in low-elevation lakes, streams, and estuarine environments. Require cool, well oxygenated water. Common in Clear Lake and Upper Blue Lake; less common in Lower Blue Lake.	No suitable habitat on or adjacent to site. No potential.
Birds**			

Northern goshawk (*Accipiter gentilis*)	CSC	Year-round resident in extensive forest habitats, primarily those with old growth or otherwise mature stands of conifer and/or conifer/hardwood. Nests in trees. Preys on birds and mammals.	May forage on or near project site. Potential for nesting in adjacent trees.
Tricolored blackbird (*Agelaius tricolor*)	CSC, USFWS CE	Colonial nester. Most numerous in the Central Valley & Vicinity. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	No suitable habitat on site.
Grasshopper sparrow (*Ammodramus savannarum*)	CSC	Summer resident. Breeds in open annual grasslands in lowlands and foothills, generally with low- to moderate-height grasses and scattered shrubs. Well-hidden nests are placed on the ground.	May forage on or near project site. Potential for nesting in adjacent grasslands.

Animal*	Status	Habitat	Potential for Occurrence on or in Vicinity of Site
Mammals			
Pallid bat (*Antrozous pallidus*)	CSC, WBWG_H	Deserts, grasslands, woodlands and forests. Most common in open dry habitats with rocky areas for roosting. Very sensitive to disturbance of roosting sites.	Potential for occurrence low.
Sonoma tree vole (*Arborimus pomo*)	CSC	North coast fog belt from Oregon border to Sonoma County. Occurs In Douglas fir, redwood and montane hardwood-conifer forests. Feeds almost exclusively on Douglas fir needles. Will occasionally take needles of grand fir, hemlock or spruce.	No potential due to lack of conifer forests.
Townsend's big-eared bat (*Corynorhinus townsendii*)	CSC, WBWG High Priority	Throughout California in a variety of habitats. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Potential for occurrence low.
American porcupine (*Erethizon dorsatum*)	CSC	Found in a variety of habitats from forest to chaparral to desert.	Potential for occurrence to pass through project site.
Fisher – West Coast DPS (*Pekania pennanti*)	FCT, SCT, CSC	Intermediate to large-tree stages of coniferous forests and deciduous riparian area within high percent canopy closure. Uses cavities, snags, logs and rocky areas for cover and denning.	No suitable habitat on or adjacent to site. No potential.

*Note: FSC = U.S. Fish and Wildlife Service Species of Concern; FE = federally listed as endangered; FT = federally listed as threatened; SE = state listed as endangered; ST = state listed as threatened; SFP = State fully protected (may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFW). CSC = California species of special concern; CDFS = considered sensitive by the California Department of Forestry. W BWG (Western Bat Working Group) high priority = represents those species considered the highest priority for funding, planning, and conservation actions. These species are imperiled or are at high risk of imperilment. S1- Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state. S2 - Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state.

**All migratory birds are protected by the Migratory Bird Treaty Act (50 CFR 10), which makes it unlawful to take, possess, buy, sell, purchase or barter any migratory bird, including feathers or other parts, nests, eggs or products, except as allowed by implementing regulations (50 CFR 21). In addition, Section 2080 of the California Fish and Game Code prohibits the killing of a listed species, and Sections 3503, 3503.5, and 3800 of the Fish and Game Code prohibit the take, possession, or destruction of birds, their nests, or eggs.

Based on review of the CNDDB Ukiah and surrounding quadrangles October 2021. Updated October 2021.

3.1.4 Recommendations and Mitigation Measures

The following mitigation measures are recommended for minimizing or avoiding potential impacts to special-status species resulting from road construction:

Nesting Birds

If project activities occur during the breeding season (February 1 through August 31), a qualified biologist will conduct a breeding bird survey no more than 7 days prior to project activities to determine if any birds are nesting in trees adjacent to the study area.

If active nests are found close enough to the project area to affect breeding success, the biologist will establish an appropriate exclusion zone around the nest. This exclusion zone may be modified depending upon the species, nest location, and existing visual buffers. If the next is too close to the proposed work area, work may be delayed until the young have fledged.

If initial work is delayed or there is a break in project activities of greater than 7 days within the bird-nesting season, then a follow-up nesting bird survey should be performed to ensure no nests have been established in the interim.

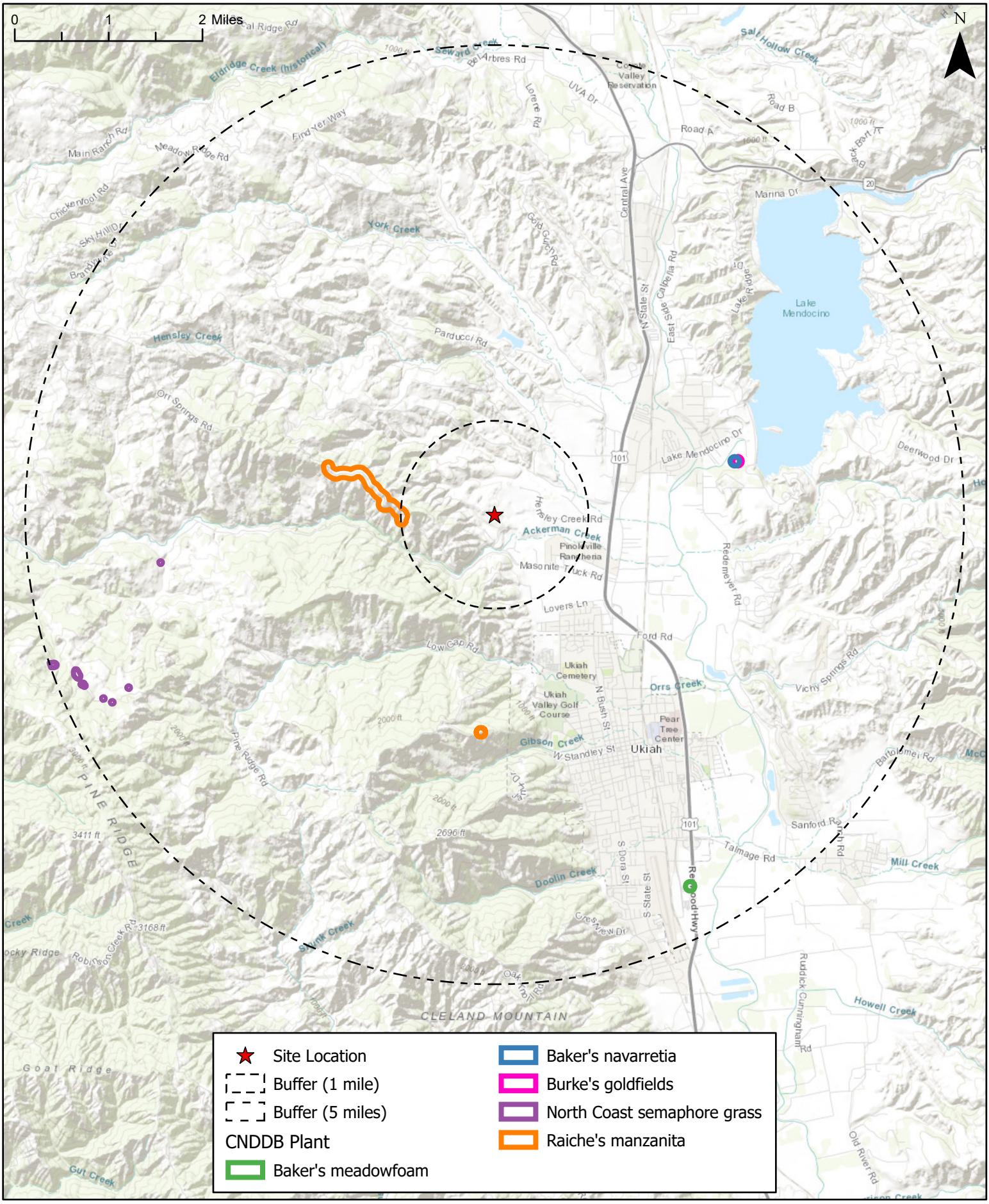
Special-status Amphibians and Reptiles

- Prior to construction, all workers on the crew should be trained by a qualified biologist as to the sensitivity of the FYLF and WPT.
- No construction activities will occur during rain events, defined as ¼ inch of rain falling within a 24-hour period. Construction activities may resume 24 hours after the end of the rain event.
- Work should not be conducted any time 30 minutes before sunrise or sunset.
- The work area will be checked daily prior to the start of work to ensure that no special-status species are within the proposed work zone.

3.2 Special-status Plants

A database query of the CNDDB and the CNPS Electronic Inventory within a 5-mile radius of the proposed road alignment was conducted to assess the potential for sensitive communities and/or special-status plant species that may have the potential to occur in the Project Area. These species are listed on Figure 2.

The dominant vegetation community on the project site is valley and foothill grassland, with areas of wetland and riparian habitat. The foothill grassland east of the fence on parcels 169-020-14 and 169-020-07 are dominated by annual non-native grasses wild oats (*Avena sp.*), quaking grasses (*Briza sp.*), rip-gut brome (*Bromus diandrus*), dogtail grass (*Cynosurus echinatus*), and Italian rye-grass (*Festuca perennis*). Foothill grassland located west of the fence in parcels 156-060-13 and 156-060-15 is dominated by the same mixture of annual non-native grasses with large areas of native California grasses dominated by blue fescue (*Festuca idahoensis*) and purple needle grass (*Stipa pulchra*). Wetland areas are dominated by Santa Barbara sedge (Carex barbarae), nutsedges (*Cyperus sp*.), spring vetch (*Vicia sativa*), Himalayan blackberry (*Rubus armeniacus*), sheep sorrel (*Rumex acetosella*), and curly dock (*Rumex crispus*). Native plants used for landscaping were found between the softball and football fields and consist mainly of California native oaks, coastal redwood, and native shrub species. Naturally occurring native California riparian oak trees (*Quercus lobata* and *Quercus agrifolia*) were found along the southern tributary of Ackerman Creek on parcels 156-110-35 and 156-060-15. There were no rare plants identified onsite at the time of the plant surveys. A list of plant species observed in May and June site assessment is provided in Table 3.



2246 Camino Ramon
San Ramon, CA 94583
(925) 362-3041

Figure 3: CNDDB Plant
Mendocino College
Ukiah, CA

Table 2. Rare Plant Species that have the potential to occur on site

Scientific Name	Common Name	Status Federal, State, CRPR, GRank, SRAnk	Habitat	Flowering Period	Potential for Occurence on Project Site
Amsinckia lunaris	bent-flowered fiddleneck	1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland, openings in broadleaved upland forest.	March-June	Small amount of suitable habitat occurs in survey area. **Low to Moderate Potential** None observed during 2021 surveys.
Astragalus breweri	*Brewer's milk vetch*	4.2	Foothill Woodland, Chaparral, Valley Grassland	April-June	Small amount of suitable habitat onsite. **Low to Moderate Potential** None observed during 2021 surveys.
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	1B.1	Red rhyolitic substrate; chaparral, cismontane woodland.	February-May	No suitable habitat onsite. **No Potential** None observed during 2021 surveys.
Blennosperma bakeri	Sonoma sunshine	CE; FE; 1B.1; G1; S1	Vernally moist to inundated places; vernal pools, valley and foothill grassland.	February-May	Small amount of suitable habitat onsite. **Low to Moderate Potential** None observed during 2021 surveys.
Brodiaea filifolia	Thread leaved brodiaea	CE; FT; 1B.1	Freshwater Wetlands, Coastal Sage Scrub, Foothill Woodland, Valley Grassland, wetland-riparian, vernal-pools	March-June	Suitable habitat onsite. **Moderate Potential** None observed during 2021 surveys.
Calamagrostis ophitidis	Serpentine reed grass	4.3	Chaparral, Valley Grassland, meadows	April-July	Small amount of suitable habitat onsite. **Low to Moderate Potential** None observed during 2021 surveys.
Calochortus pulchellus	Mount Diablo globelily	1B.2	Foothill Woodland, Chaparral, Valley Grassland	April-June	Suitable habitat onsite. **Moderate Potential** None observed during 2021 surveys.
Delphinium uliginosum	Swamp larkspur	4.2	Chaparral, Valley Grassland, wetland-riparian, seeps	May-June	Small amount of suitable habitat onsite. **No to Low Potential** None observed during 2021 surveys.
Eriogonum luteolum	Tiburon buckwheat	1B.2	Chaparral, Coastal Prairie, Valley Grassland	May-September	Small amount of suitable habitat onsite. **No to Low Potential** None observed during 2021 surveys.

Erysimum franciscanum	Franciscan wallflower	4.2	Coastal Strand, Northern Coastal Scrub, Coastal Dunes, Valley Grassland	March-June	Suitable habitat onsite. **Moderate Potential** None observed during 2021 surveys.
Eschscholzia hypecoides	Leafy stemmed poppy	4.3	Foothill Woodland, Chaparral, Valley Grassland	March-June	Suitable habitat onsite. **Moderate Potential** None observed during 2021 surveys.
Fritillaria agrestis	Stinkbells	4.2	Foothill Woodland, Chaparral, Valley Grassland, wetland-riparian	March-June	Small amount of suitable habitat onsite. **Low Potential** None observed during 2021 surveys.
Fritillaria pluriflora	Adobe lily	1B.2	Foothill Woodland, Chaparral, Valley Grassland	February-April	Small amount of suitable habitat onsite. **Low Potential** None observed during 2021 surveys.
Fritillaria roderickii	Roderick's fritillary	SE; 1B.1; G1Q; S1	Coastal bluff scrub, Coastal prairie, Valley and foothill grassland	March-May	**Potential.** None observed during 2021 surveys.
Hemizonia congesta ssp. calyculata	Mendocino tarplant	4.3	Foothill Woodland, Valley Grassland	July-November	Habitat occurs onsite. **Moderate Potential.** None observed during 2021 surveys.
Hemizonia congesta ssp. leucocephala	Hayfield tarplant	1B.2	Northern Coastal Scrub, Valley Grassland	April-November	Habitat occurs onsite. **Moderate Potential.** None observed during 2021 surveys.
Hesperolinon adenophyllum	Glandular dwarf flax	1B.2	Foothill Woodland, Chaparral, Valley Grassland	May-August	Habitat occurs onsite. **Moderate Potential.** None observed during 2021 surveys.
Horkelia bolanderi	Bolander's horkelia	1B.2	Yellow Pine Forest, Valley Grassland, wetland-riparian	June-August	onsite. **No to Low Potential** None observed during 2021 surveys.
Gratiola heterosepala	Boggs Lake hedge- hyssop	1B.2	Marshes and swamps (lake margins), Vernal pools	April-August	Marginal habitat may occur on site. **No to Low Potential** None observed during 2021 surveys.
Lasthenia burkei	Burke's goldfields	FE; SE; 1B.1	Wet or moist (at least vernally) places; generally vernal pools and swales, sometimes meadows.	April-June	Marginal habitat may occur on site. **No to Low Potential** None observed during 2021 surveys.

Layia septentrionalis	Colusa layia	1B.2	Foothill Woodland, Chaparral, Valley Grassland	April-May	Habitat occurs onsite. **Moderate Potential.** None observed during 2021 surveys.
Limnanthes bakeri	Baker's meadowfoam	CR; 1B.1; G1; S1	Marshes and swamps, Meadows and seeps, Valley and foothill grassland, Vernal pools	April-May	Marginal habitat may occur on site. **No to Low Potential** None observed during 2021 surveys.
Leptosiphon grandiflorus	Large flowered leptosiphon	4.2	Coastal Strand, Northern Coastal Scrub, Coastal Sage Scrub, Closed-cone Pine Forest, Foothill Woodland, Coastal Prairie, Valley Grassland	April-August	Habitat occurs onsite. **Low to Moderate Potential.** None observed during 2021 surveys.
Lupinus milo-bakeri	Milo baker's lupine	1B.1	Foothill Woodland, Valley Grassland, disturbed	June-September	Habitat occurs onsite. **Low to Moderate Potential.** None observed during 2021 surveys.
Micropus amphibolus	Mount diablo cottonseed	3.2	Mixed Evergreen Forest, Foothill Woodland, Valley Grassland	March-May	Habitat occurs onsite. **Low to Moderate Potential.** None observed during 2021 surveys.
Navarretia heterandra	Tehama navarretia	4.3	Freshwater Wetlands, Valley Grassland, wetland-riparian	April-June	Marginal habitat may occur on site. **No to Low Potential** None observed during 2021 surveys.
Navarretia leucocephala ssp. bakeri	Baker's navarretia	1B.1	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland, Vernal pools	April-July	Suitable habitat occurs in survey area. **Moderate Potential** None observed during 2021 surveys.
Pentachaeta exilis ssp. aeolica	Meager pygmydaisy	1B.2	Foothill Woodland, Valley Grassland	March-May	Suitable habitat occurs in survey area. **Moderate Potential** None observed during 2021 surveys.
Perideridia gairdneri ssp. gairdneri	Gairdner's yampah	4.2	Freshwater Wetlands, Mixed Evergreen Forest, Chaparral, Valley Grassland, wetland-riparian	June-October	Marginal habitat may occur on site. **No to Low Potential** None observed during 2021 surveys.
Pleuropogon hooverianus	North Coast semaphore grass	CT; 1B.1; G2; S2	Broadleafed upland forest, Meadows and seeps, North Coast coniferous forest	April-Jun	Small amount of suitable habitat onsite. **Low Potential** None observed during 2021 surveys.

Ranunculus lobbii	Lobb's aquatic buttercup	4.2	Freshwater Wetlands, Redwood Forest, Foothill Woodland, Valley Grassland, wetland-riparian, vernal pools	February-May	Marginal habitat may occur on site. **No to Low Potential** None observed during 2021 surveys.
Streptanthus albidus	Most beautiful jewel flower	1B.2	Foothill Woodland, Chaparral, Valley Grassland	April-September	Small amount of suitable habitat onsite. **Low Potential** None observed during 2021 surveys.
Tracyina rostrata	Beaked tracyina	1B.2	Foothill Woodland, Valley Grassland	May-June	Small amount of suitable habitat onsite. **Low Potential** None observed during 2021 surveys.

[1]Plant listing status:

Federal (USFWS 2019): FE – endangered; FT – threatened

State of California (CDFW 2016): SE– endangered; ST – threatened; SR – rare

California Rare Plant Rank (CRPR) (CNPS 2016): CRPR 1A: Presumed extinct. CRPR 1B: Rare, Threatened, or Endangered in California and elsewhere. CRPR 2B: Rare, Threatened, or Endangered in California, more common elsewhere.
CRPR 3: Plants about which more information is needed.

CRPR Threat Code extensions: .1: Seriously endangered in California. .2: Fairly endangered in California. .3 Not very endangered in California.

Table 3. Plant species identified on site on 6/25/21 and 7/23/21

Family	Scientif Name	Common Name	Native (N)Non-native Invasive (I)Cultivar (C)
ANACARDIACEAE	*Toxicodendron diversilobum*	poison oak	N
ASPARAGACEAE	*Brodiaea elegans*	harvest brodiaea	N
ASTERACEAE	*Baccharis pilularis*	coyote bush	N
	Carduus pycnocephalus	Italian thistle	I
	Centaurea solstitialis	yellow start-thistle	I
	Cirsium vulgare	bull thistle	I
	Helminthotheca echioides	bristly ox-tongue	I
	Hemizonia congesta	hayfield tarweed	N
	Silybum marianum	milk thistle	I
	Taraxacum officinale	dandelion	I
BRASSICACEAE	*Brassica nigra*	wild mustard	I
	Raphanus sativus	jointed charlock, wild radish	I
CONVULVULUS	*Convolvulus arvensis*	bindweed	I
CUPRESSACEAE	*Calocedrus decurrens*	Incense cedar	N/C
	Sequoia sempervirens	California coast redwood	N/C
CYPERACEAE	*Carex barbarae*	Santa Barbara sedge	N
	Cyperus sp.	nutsedge	I
ERICACEAE	*Arbutus menziesii*	Pacific madone	N
	Arctostaphylos sp.	manzanita	N/C
EUPHORBIACEAE	*Croton setiger*	turkey mullen	N
FABACEAE	*Acmispon americanus*	Spanish lotus	N
	Medicago polymorpha	bur-clover	I
	Trifolium hirtum	rose clover	I
	Vicia sativa	spring vetch	I
FAGACEAE	*Quercus agrifolia*	coast live oak	N/C
	Quercus durata	scrub oak	N/C
	Quercus lobata	valley oak	N/C
GERANIACEAE	*Erodium cicutarium*	redstem filaree	I
	Geranium dissectum	wild geranium	I
JUNCACEAE	*Juncus sp.*	common Juncus	N
LAMIACEAE	*Mentha pulegium*	penny royal	I
ONAGRACEAE	*Epilobium densiflorum*	dense flower willowherb	N
PAPAVERACEAE	*Eschscholzia californica*	California poppy	N
PLANTAGINACEAE	*Plantago lanceolata*	English plantain	I
POACEAE	*Avena barbata*	slender wild oat	I
	Avena fatua	wild oat	I
	Briza maxima	quaking grass	I
	Briza minor	small quaking grass	I
	Bromus diandrus	rip-gut brome	I
	Cynosurus echinatus	dogtail grass	I
	Elymus caput-medusae	medusa head	I
	Festuca idahoensis	Blue fescue	N
	Festuca perennis	perennial Italian rye grass	I
	Hordeum murinum	foxtail barley	I
	Poa annua	annual bluegrass	I
	Phalaris aquatica	harding grass	I
	Stipa pulchra	purple needle-grass	N
POLYGONACEAE	*Polygonum aviculare*	common knotweed	I
	Polypogon monspeliensis	rabbit foot grass	I
ROSACEAE	*Heteromeles arbutifolia*	toyon	N
	Rubus armeniacus	himalayan blackberry	I
	Rumex acetosella	sheep sorrel	I
	Rumex crispus	curly dock	I
SAPINDACEAE	*Aesculus californica*	buckeye	N
VITACEAE	*Vitis vinifera*	grape	N

Wetland Data Sheets

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mendocino Community College Access Road City/County: Ukiah, Mendocino Sampling Date: 6/14/21

Applicant/Owner: Mendocino Community College State: CA Sampling Point: A

Investigator(s): Lucy Macmillan Section, Township, Range: Unnamed R12W

Landform (hillslope, terrace, etc.): field Local relief (concave, convex, none): concave Slope (%): ~3

Subregion (LRR): LRRC Lat: Long: Datum:

Soil Map Unit Name: Yokayo sandy loam 30-70% NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes ✓ No

Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes No	**Is the Sampled Area within a Wetland?** Yes No ✓
Hydric Soil Present?	Yes No ✓	
Wetland Hydrology Present?	Yes No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Bromus briziformis	80	Y	UPL
2. Festuca idahoensis	20	N	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum % Cover of Biotic Crust

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0[1]
- Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No ✓

Remarks:

SOIL

Sampling Point: A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR3/2	100						refusal @ 8"

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mendocino Community College Access Road City/County: Ukiah, Mendocino Sampling Date: 6/14/21

Applicant/Owner: Mendocino Community College State: CA Sampling Point: B

Investigator(s): Lucy Macmillan Section, Township, Range: Unnamed R12W

Landform (hillslope, terrace, etc.): swale/tributary Local relief (concave, convex, none): concave Slope (%): ~10

Subregion (LRR): LRRC Lat: Long: Datum:

Soil Map Unit Name: Yorkville loam 15-30% slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ✓ No ____

Hydric Soil Present? Yes ✓ No ____

Wetland Hydrology Present? Yes ✓ No ____

Is the Sampled Area within a Wetland? Yes ✓ No ____

Remarks:

vegetated channel ~ 1-2 wide w/in adjacent wetland

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ____)			
1. Lolium perenne	60	Y	FAC
2. Mentha pugciana	20	N	OBL
3. Epilobium densiflorum	10	N	FACW
4.			
5.			
6.			
7.			
8.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR3/2	85	7.5YR4/6	15	D	PL	silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mendocino Community College Access Road City/County: Ukiah, Mendocino Sampling Date: 6/14/21

Applicant/Owner: Mendocino Community College State: CA Sampling Point: C

Investigator(s): Lucy Macmillan Section, Township, Range: Unnamed R12W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): ~10

Subregion (LRR): LRRC Lat: Long: Datum:

Soil Map Unit Name: Yorkville loam 15-30% NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ____)			
1. Taeniatherum caput-medusae	50	Y	UPL
2. Bromus hrizaformis	40	Y	UPL
3. Malacothrix glabrata	10	N	UPL
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species 100	x 5 = 500
Column Totals: 100 (A)	500 (B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

SOIL

Sampling Point: C

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100						hardpan/packed ~10"

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mendocino Community College Access Road City/County: Ukiah, Mendocino Sampling Date: 6/14/21

Applicant/Owner: Mendocino Community College State: CA Sampling Point: D

Investigator(s): Lucy Macmillan Section, Township, Range: Unnamed R12W

Landform (hillslope, terrace, etc.): drainageswale Local relief (concave, convex, none): concave Slope (%): ~10

Subregion (LRR): LRRC Lat: Long: Datum:

Soil Map Unit Name: Yorkville loam 15-30 NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? Na (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓ No ____	
Wetland Hydrology Present?	Yes ✓ No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ____)			
1. Lolium perenne	30	Y	FAC
2. Epilobium ciliatum	20	Y	FACW
3. Mentha pulegium	10	Y	OBL
4. Juncus sp.	10	NA	
5. Carex sp.	10	NA	
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: D

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR3/2	85	7.5YR4/6	15	D	PL	silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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APPENDIX C

Mitigation and Monitoring Program (MMRP)

Mitigation Monitoring and Reporting Program
Mendocino-Lake Community College District
Secondary Access Roadway

Impact	Mitigation Measure	Implementation Responsibility	Monitoring/ Reporting Responsibility	Timing
Biological Resources	**BIO-1:** If construction activities begin during the nesting season (February 1 to August 31), a qualified biologist shall conduct a preconstruction survey for active nests in suitable nesting habitat within 500 feet of the construction area for nesting raptors and migratory birds. Areas adjacent to the project area that are inaccessible due to private property restrictions shall be surveyed using binoculars from the nearest vantage point. The survey shall be conducted by a qualified biologist no more than seven days prior to the initiation of construction. If no active nests are identified during the pre-construction survey, no further mitigation is necessary. If at any time during the nesting season construction stops for a period of seven days or longer, pre-construction surveys shall be conducted prior to construction resuming. If active nests are found during the survey, the biologist shall establish an appropriate exclusion zone around the nest until the breeding season has ended, or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. This exclusion zone may be modified depending upon the species, nest location, and existing visual buffers. If the nest is too close to the proposed work area, work may be delayed until the young have fledged. If construction activity is required within the buffer, the nest(s) shall be monitored by a qualified biologist during all	Qualified Biologist	Mendocino-Lake Community College District	Prior to Construction

	construction activities. If the biologist determines that the activity would impact the nest, the biologist shall have the authority to stop work. If the activity is determined to not be disturbing nesting activity, it may continue under supervision of the biologist. Completion of nesting and fledging activities shall be determined by the qualified biologist.			
Biological Resources	**BIO-2**: The following measures shall be implemented during prior to and during the active period of construction: • Prior to construction, all workers on the crew should be trained by a qualified biologist as to the sensitivity of the foothill yellow-legged frog and western pond turtle. If new construction personnel are added to the project, they must receive the mandatory training before starting work. • No construction activities shall occur during rain events, defined as ¼ inch of rain falling within a 24-hour period. Construction activities may resume 24 hours after the end of the rain event. • Construction activities shall not be conducted 30 minutes before sunrise or sunset. • The work area shall be checked daily prior to the start of work to ensure that no special-status species are within the proposed work zone.	Project Contractor & Qualified Biologist	Mendocino-Lake Community College District	Prior to Construction
Biological Resources	**BIO-3:** Due to the proposed impacts to potentially jurisdictional waters, a Section 404 CWA permit through the U.S. Army Corps of Engineers (USACE), a Section 401 Water Quality Certification from the North Coast Regional Water Quality Control Board (NCRWQCB), and a Section 1602 Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW) must be obtained, if required. These permits shall be obtained prior to project construction. The District shall design the project such that	Mendocino-Lake Community College District	Mendocino-Lake Community College District	Prior to Construction

	it will not result in a loss of water of the United States or wetlands, by providing mitigation through impact avoidance, impact minimization, and/or compensatory mitigation for the impact, as determined by the resource agencies. If it is determined, through obtaining an Approved Jurisdictional Determination, that the aquatic resource features on the Site are not jurisdictional under the federal Clean Water Act, the Section 404 CWA permit shall not be required. Prior to submitting the relevant resource agency permits, the Applicant shall determine the extent of the impact on jurisdictional waters and propose mitigation as follows, to be approved by the relevant resource agencies. If compensatory mitigation is required, it may consist of: (1) obtaining credits from a mitigation bank; (2) making a payment to an in-lieu fee program that will conduct wetland, stream, or other aquatic resource restoration, creation, enhancement, or preservation activities; and/or (3) providing compensatory mitigation through an aquatic resource restoration, establishment, enhancement, and/or preservation activity. This final type of compensatory mitigation may be provided at or adjacent to the impact site (i.e., on-site mitigation) or at another location, usually within the same watershed as the permitted impact (i.e., off-site mitigation). The project/permit applicant retains responsibility for the implementation and success of the mitigation project.			
Cultural Resources	**CUL-1**: Cultural resources present within the project area shall be avoided. Project proponents should ensure that cultural resources are not adversely affected by ground disturbing activities within the sensitive area and buffer (25 feet). If the site cannot be avoided, due to project re-design or otherwise, and ground disturbance is necessary within the recorded site limits and buffer, the site should first	Project Engineer & Qualified Archaeologist	Mendocino-Lake Community College District	Prior to Construction

	be formally evaluated by a qualified architectural historian to determine if it meets the criteria for eligibility, which includes an assessment of the site's integrity, for listing in the CRHR as an historical resource or constitutes a unique archaeological resource (PRC Section 5024.1(c)). If the site is determined to lack integrity or data potential to be considered an historical resource or unique archaeological resource, the project actions can proceed without consideration of the site as a cultural resource. However, if it is determined that the site is an historical resource or unique archaeological resource, and cannot be avoided, then the adverse effects to the resource shall be mitigated through an archaeological data recovery program (ADRP).			
Cultural Resources	**CUL-2:** In the event archaeological resources or cultural resources are inadvertently unearthed or discovered during construction, the contractor shall immediately halt all grading/land-clearing activities and contact the Mendocino-Lake Community College District (District) who will contact a qualified professional archaeologist and a Native American representative. Prehistoric resources include, but are not limited to, chert or obsidian flakes, projectile points, mortars, pestles, and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic resources include stone or abode foundations or walls; structures and remains with square nails; and refuse deposits or bottle dumps, often located in old wells or privies. All activity in the vicinity of the resource shall cease until it can be evaluated by a qualified archaeologist and a Native American representative. If the archaeologist and Native American representative determine that the resources may be significant, they shall notify the District and develop an appropriate treatment plan for the resources. The archaeologist shall consult with Native American representatives in determining appropriate treatment for	Project Contractor & Qualified Archaeologist	Mendocino-Lake Community College District	During Construction

	prehistoric or Native American cultural resources. In considering any suggested mitigation proposed by the archaeologist and Native American representative, the District will determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) will be instituted, as directed by the archaeologist and Native American representative. Work may proceed in other parts of the project area while mitigation for cultural resources is being carried out.			
Cultural Resources	**CUL-3:** Although unlikely, if human remains are encountered, all work must stop in the immediate vicinity of the discovered remains and the Mendocino County Coroner and a qualified archaeologist must be notified immediately so that an evaluation can be performed. If the remains are deemed to be Native American and prehistoric, the Native American Heritage Commission must be contacted by the Coroner so that a "Most Likely Descendant" can be designated and further recommendations regarding treatment of the remains can be provided. Work may proceed in other parts of the project area while appropriate treatment of the remains is carried out.	Project Contractor & Qualified Archaeologist	Mendocino-Lake Community College District	During Construction
Geology and Soils	**GEO-1:** The project shall comply with the recommendations pertaining to site preparation and grading, retaining wall foundations, retaining walls, slab-on-grade construction, asphalt pavement, seismic hazards, and construction considerations provided in the *Geotechnical Exploration* prepared by LACO Associates and dated September 3, 2021. Prior to construction of the project, the Mendocino-Lake Community College District shall review and approve of the site development plans, which must demonstrate project compliance with the recommendations of the *Geotechnical Exploration*	Project Engineer	Mendocino-Lake Community College District	Prior to Construction

	(LACO, 2021), in addition to any seismic requirements of the latest adopted edition of the CBC. In addition, all soil engineering recommendations and structural foundations shall be designed by a licensed Professional Engineer. All on-site geotechnical engineering activities shall be conducted under the supervision of a licensed Geotechnical Engineer or Certified Engineering Geologist.			
Geology and Soils	**GEO-2:** In the event that fossils or fossil-bearing deposits are discovered during project construction, the contractor shall notify a qualified paleontologist to examine the discovery and excavations within 50 feet of the find shall be temporarily halted or diverted. The area of discovery shall be protected to ensure that fossils are not removed, handled, altered, or damaged until the Site is properly evaluated, and further action is determined. The paleontologist shall document the discovery as needed, in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 1995), evaluate the potential resource, and assess the significance of the finding under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the project proponent determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project based on the qualities that make the resource important. The plan shall be submitted to the Northwest Information Center (NWIC) for review and approval prior to implementation.	Project Contractor & Qualified Paleontologist	Mendocino-Lake Community College District	During Construction
Hydrology and Water Quality	**HYDRO-1:** In the event groundwater is encountered during foundation excavation and/or pier drilling activities, the contractor shall dewater the excavation and/or drilling area prior to placing concrete. Extracted groundwater shall be discharged in a manner that does not cause	Project Contractor	Mendocino-Lake Community College District	During Construction

	erosion at the discharge point. Any dewatering activities on-site shall be conducted under the supervision of a Qualified Stormwater Practitioner (QSP).			
Noise	**NOISE-1:** The project shall implement limiting construction hours within 500 feet of residential uses to the hours of 7:00 a.m. and 7:00 p.m. on weekdays, utilize quiet models of air compressors and other stationary noise sources where technology exists, utilize mufflers on all internal combustion engine-driven equipment, and locate staging areas as far away as possible from noise-sensitive land use areas.	Project Contractor	Mendocino-Lake Community College District	During Construction

APPENDIX D

California Emissions Estimator Model (CalEEMod) Report

Mendocino-Lake Community College Secondary Access Roadway

Mendocino-Inland County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	9.67	1000sqft	0.22	9,672.00	0
Other Non-Asphalt Surfaces	120.90	1000sqft	2.78	120,900.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	86
Climate Zone	1			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Other Asphalt Surfaces: Construction of a road 24 feet wide and approximately 4,030 feet in length
Other Non-Asphalt Surfaces: Construction of road shoulders 10 to 15 feet wide on either side of the road and approximately 4,030 feet in length

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1175	1.0209	0.9970	1.8600e-003	6.5730	0.0469	6.6199	0.6795	0.0439	0.7233	0.0000	163.4247	163.4247	0.0352	0.0000	164.3053
2023	0.2045	1.2867	1.5181	2.8500e-003	12.9386	0.0552	12.9938	1.2975	0.0519	1.3494	0.0000	250.6435	250.6435	0.0467	0.0000	251.8106
Maximum	**0.2045**	**1.2867**	**1.5181**	**2.8500e-003**	**12.9386**	**0.0552**	**12.9938**	**1.2975**	**0.0519**	**1.3494**	**0.0000**	**250.6435**	**250.6435**	**0.0467**	**0.0000**	**251.8106**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1175	1.0209	0.9970	1.8600e-003	3.3180	0.0469	3.3648	0.3540	0.0439	0.3978	0.0000	163.4245	163.4245	0.0352	0.0000	164.3051
2023	0.2045	1.2867	1.5181	2.8500e-003	6.4853	0.0552	6.5405	0.6522	0.0519	0.7041	0.0000	250.6433	250.6433	0.0467	0.0000	251.8104
Maximum	**0.2045**	**1.2867**	**1.5181**	**2.8500e-003**	**6.4853**	**0.0552**	**6.5405**	**0.6522**	**0.0519**	**0.7041**	**0.0000**	**250.6433**	**250.6433**	**0.0467**	**0.0000**	**251.8104**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**49.76**	**0.00**	**49.50**	**49.11**	**0.00**	**46.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mendocino-Lake Community College Secondary Access Roadway - Mendocino-Inland County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	8-15-2022	11-14-2022	0.7861	0.7861
2	11-15-2022	2-14-2023	0.6472	0.6472
3	2-15-2023	5-14-2023	0.5925	0.5925
4	5-15-2023	8-14-2023	0.5559	0.5559
5	8-15-2023	9-30-2023	0.0382	0.0382
		Highest	0.7861	0.7861

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0131	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3300e-003	2.3300e-003	1.0000e-005	0.0000	2.4900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0131**	**1.0000e-005**	**1.2000e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.3300e-003**	**2.3300e-003**	**1.0000e-005**	**0.0000**	**2.4900e-003**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0131	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3300e-003	2.3300e-003	1.0000e-005	0.0000	2.4900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0131**	**1.0000e-005**	**1.2000e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.3300e-003**	**2.3300e-003**	**1.0000e-005**	**0.0000**	**2.4900e-003**

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

3.0 Construction Detail

Construction Phase

Mendocino-Lake Community College Secondary Access Roadway - Mendocino-Inland County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	8/15/2022	9/9/2022	5	20	
2	Site Preparation	Site Preparation	9/10/2022	9/14/2022	5	3	
3	Grading	Grading	9/15/2022	9/22/2022	5	6	
4	Building Construction	Building Construction	9/23/2022	7/27/2023	5	220	
5	Paving	Paving	7/28/2023	8/10/2023	5	10	
6	Architectural Coating	Architectural Coating	8/11/2023	8/24/2023	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3

Acres of Paving: 3

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 7,834 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	55.00	21.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	**0.0264**	**0.2572**	**0.2059**	**3.9000e-004**		**0.0124**	**0.0124**		**0.0116**	**0.0116**	**0.0000**	**33.9902**	**33.9902**	**9.5500e-003**	**0.0000**	**34.2289**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1300e-003	9.0000e-004	7.5300e-003	1.0000e-005	0.3654	1.0000e-005	0.3655	0.0366	1.0000e-005	0.0366	0.0000	1.0008	1.0008	6.0000e-005	0.0000	1.0024
Total	**1.1300e-003**	**9.0000e-004**	**7.5300e-003**	**1.0000e-005**	**0.3654**	**1.0000e-005**	**0.3655**	**0.0366**	**1.0000e-005**	**0.0366**	**0.0000**	**1.0008**	**1.0008**	**6.0000e-005**	**0.0000**	**1.0024**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	**0.0264**	**0.2572**	**0.2059**	**3.9000e-004**		**0.0124**	**0.0124**		**0.0116**	**0.0116**	**0.0000**	**33.9902**	**33.9902**	**9.5500e-003**	**0.0000**	**34.2289**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1300e-003	9.0000e-004	7.5300e-003	1.0000e-005	0.1832	1.0000e-005	0.1832	0.0184	1.0000e-005	0.0184	0.0000	1.0008	1.0008	6.0000e-005	0.0000	1.0024
Total	**1.1300e-003**	**9.0000e-004**	**7.5300e-003**	**1.0000e-005**	**0.1832**	**1.0000e-005**	**0.1832**	**0.0184**	**1.0000e-005**	**0.0184**	**0.0000**	**1.0008**	**1.0008**	**6.0000e-005**	**0.0000**	**1.0024**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0271	0.0000	0.0271	0.0149	0.0000	0.0149	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7600e-003	0.0496	0.0296	6.0000e-005		2.4200e-003	2.4200e-003		2.2300e-003	2.2300e-003	0.0000	5.0159	5.0159	1.6200e-003	0.0000	5.0565
Total	**4.7600e-003**	**0.0496**	**0.0296**	**6.0000e-005**	**0.0271**	**2.4200e-003**	**0.0295**	**0.0149**	**2.2300e-003**	**0.0171**	**0.0000**	**5.0159**	**5.0159**	**1.6200e-003**	**0.0000**	**5.0565**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.6000e-004	1.3600e-003	0.0000	0.0658	0.0000	0.0658	6.5900e-003	0.0000	6.6000e-003	0.0000	0.1801	0.1801	1.0000e-005	0.0000	0.1804
Total	**2.0000e-004**	**1.6000e-004**	**1.3600e-003**	**0.0000**	**0.0658**	**0.0000**	**0.0658**	**6.5900e-003**	**0.0000**	**6.6000e-003**	**0.0000**	**0.1801**	**0.1801**	**1.0000e-005**	**0.0000**	**0.1804**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0271	0.0000	0.0271	0.0149	0.0000	0.0149	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7600e-003	0.0496	0.0296	6.0000e-005		2.4200e-003	2.4200e-003		2.2300e-003	2.2300e-003	0.0000	5.0159	5.0159	1.6200e-003	0.0000	5.0565
Total	**4.7600e-003**	**0.0496**	**0.0296**	**6.0000e-005**	**0.0271**	**2.4200e-003**	**0.0295**	**0.0149**	**2.2300e-003**	**0.0171**	**0.0000**	**5.0159**	**5.0159**	**1.6200e-003**	**0.0000**	**5.0565**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.6000e-004	1.3600e-003	0.0000	0.0330	0.0000	0.0330	3.3100e-003	0.0000	3.3100e-003	0.0000	0.1801	0.1801	1.0000e-005	0.0000	0.1804
Total	**2.0000e-004**	**1.6000e-004**	**1.3600e-003**	**0.0000**	**0.0330**	**0.0000**	**0.0330**	**3.3100e-003**	**0.0000**	**3.3100e-003**	**0.0000**	**0.1801**	**0.1801**	**1.0000e-005**	**0.0000**	**0.1804**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8500e-003	0.0626	0.0458	9.0000e-005		2.8200e-003	2.8200e-003		2.6000e-003	2.6000e-003	0.0000	7.8164	7.8164	2.5300e-003	0.0000	7.8796
Total	**5.8500e-003**	**0.0626**	**0.0458**	**9.0000e-005**	**0.0197**	**2.8200e-003**	**0.0225**	**0.0101**	**2.6000e-003**	**0.0127**	**0.0000**	**7.8164**	**7.8164**	**2.5300e-003**	**0.0000**	**7.8796**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.7000e-004	2.2600e-003	0.0000	0.1096	0.0000	0.1096	0.0110	0.0000	0.0110	0.0000	0.3002	0.3002	2.0000e-005	0.0000	0.3007
Total	**3.4000e-004**	**2.7000e-004**	**2.2600e-003**	**0.0000**	**0.1096**	**0.0000**	**0.1096**	**0.0110**	**0.0000**	**0.0110**	**0.0000**	**0.3002**	**0.3002**	**2.0000e-005**	**0.0000**	**0.3007**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8500e-003	0.0626	0.0458	9.0000e-005		2.8200e-003	2.8200e-003		2.6000e-003	2.6000e-003	0.0000	7.8164	7.8164	2.5300e-003	0.0000	7.8796
Total	**5.8500e-003**	**0.0626**	**0.0458**	**9.0000e-005**	**0.0197**	**2.8200e-003**	**0.0225**	**0.0101**	**2.6000e-003**	**0.0127**	**0.0000**	**7.8164**	**7.8164**	**2.5300e-003**	**0.0000**	**7.8796**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.7000e-004	2.2600e-003	0.0000	0.0549	0.0000	0.0550	5.5200e-003	0.0000	5.5200e-003	0.0000	0.3002	0.3002	2.0000e-005	0.0000	0.3007
Total	**3.4000e-004**	**2.7000e-004**	**2.2600e-003**	**0.0000**	**0.0549**	**0.0000**	**0.0550**	**5.5200e-003**	**0.0000**	**5.5200e-003**	**0.0000**	**0.3002**	**0.3002**	**2.0000e-005**	**0.0000**	**0.3007**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0606	0.5544	0.5809	9.6000e-004		0.0287	0.0287		0.0270	0.0270	0.0000	82.2625	82.2625	0.0197	0.0000	82.7552
Total	**0.0606**	**0.5544**	**0.5809**	**9.6000e-004**		**0.0287**	**0.0287**		**0.0270**	**0.0270**	**0.0000**	**82.2625**	**82.2625**	**0.0197**	**0.0000**	**82.7552**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5900e-003	0.0842	0.0256	2.1000e-004	1.2286	3.3000e-004	1.2289	0.1234	3.2000e-004	0.1237	0.0000	19.8315	19.8315	9.0000e-004	0.0000	19.8540
Worker	0.0147	0.0117	0.0980	1.4000e-004	4.7569	1.4000e-004	4.7570	0.4768	1.3000e-004	0.4770	0.0000	13.0269	13.0269	8.3000e-004	0.0000	13.0476
Total	**0.0183**	**0.0958**	**0.1236**	**3.5000e-004**	**5.9854**	**4.7000e-004**	**5.9859**	**0.6002**	**4.5000e-004**	**0.6007**	**0.0000**	**32.8585**	**32.8585**	**1.7300e-003**	**0.0000**	**32.9016**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0606	0.5544	0.5809	9.6000e-004		0.0287	0.0287		0.0270	0.0270	0.0000	82.2624	82.2624	0.0197	0.0000	82.7551
Total	**0.0606**	**0.5544**	**0.5809**	**9.6000e-004**		**0.0287**	**0.0287**		**0.0270**	**0.0270**	**0.0000**	**82.2624**	**82.2624**	**0.0197**	**0.0000**	**82.7551**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5900e-003	0.0842	0.0256	2.1000e-004	0.6162	3.3000e-004	0.6165	0.0622	3.2000e-004	0.0625	0.0000	19.8315	19.8315	9.0000e-004	0.0000	19.8540
Worker	0.0147	0.0117	0.0980	1.4000e-004	2.3840	1.4000e-004	2.3841	0.2395	1.3000e-004	0.2397	0.0000	13.0269	13.0269	8.3000e-004	0.0000	13.0476
Total	**0.0183**	**0.0958**	**0.1236**	**3.5000e-004**	**3.0001**	**4.7000e-004**	**3.0006**	**0.3017**	**4.5000e-004**	**0.3022**	**0.0000**	**32.8585**	**32.8585**	**1.7300e-003**	**0.0000**	**32.9016**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1172	1.0717	1.2102	2.0100e-003		0.0521	0.0521		0.0491	0.0491	0.0000	172.6945	172.6945	0.0411	0.0000	173.7216
Total	**0.1172**	**1.0717**	**1.2102**	**2.0100e-003**		**0.0521**	**0.0521**		**0.0491**	**0.0491**	**0.0000**	**172.6945**	**172.6945**	**0.0411**	**0.0000**	**173.7216**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.6400e-003	0.1416	0.0465	4.3000e-004	2.5783	2.2000e-004	2.5785	0.2590	2.1000e-004	0.2592	0.0000	41.0261	41.0261	1.3500e-003	0.0000	41.0597
Worker	0.0293	0.0222	0.1845	2.9000e-004	9.9827	2.7000e-004	9.9830	1.0007	2.5000e-004	1.0009	0.0000	26.4562	26.4562	1.5500e-003	0.0000	26.4949
Total	**0.0350**	**0.1638**	**0.2309**	**7.2000e-004**	**12.5610**	**4.9000e-004**	**12.5615**	**1.2597**	**4.6000e-004**	**1.2601**	**0.0000**	**67.4823**	**67.4823**	**2.9000e-003**	**0.0000**	**67.5546**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1172	1.0717	1.2102	2.0100e-003		0.0521	0.0521		0.0491	0.0491	0.0000	172.6943	172.6943	0.0411	0.0000	173.7214
Total	**0.1172**	**1.0717**	**1.2102**	**2.0100e-003**		**0.0521**	**0.0521**		**0.0491**	**0.0491**	**0.0000**	**172.6943**	**172.6943**	**0.0411**	**0.0000**	**173.7214**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.6400e-003	0.1416	0.0465	4.3000e-004	1.2931	2.2000e-004	1.2933	0.1305	2.1000e-004	0.1307	0.0000	41.0261	41.0261	1.3500e-003	0.0000	41.0597
Worker	0.0293	0.0222	0.1845	2.9000e-004	5.0030	2.7000e-004	5.0033	0.5027	2.5000e-004	0.5029	0.0000	26.4562	26.4562	1.5500e-003	0.0000	26.4949
Total	**0.0350**	**0.1638**	**0.2309**	**7.2000e-004**	**6.2961**	**4.9000e-004**	**6.2966**	**0.6332**	**4.6000e-004**	**0.6336**	**0.0000**	**67.4823**	**67.4823**	**2.9000e-003**	**0.0000**	**67.5546**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5900e-003	0.0440	0.0610	9.0000e-005		2.1800e-003	2.1800e-003		2.0100e-003	2.0100e-003	0.0000	8.1893	8.1893	2.5700e-003	0.0000	8.2536
Paving	2.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.8800e-003**	**0.0440**	**0.0610**	**9.0000e-005**		**2.1800e-003**	**2.1800e-003**		**2.0100e-003**	**2.0100e-003**	**0.0000**	**8.1893**	**8.1893**	**2.5700e-003**	**0.0000**	**8.2536**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.4000e-004	4.5000e-003	1.0000e-005	0.2436	1.0000e-005	0.2436	0.0244	1.0000e-005	0.0244	0.0000	0.6457	0.6457	4.0000e-005	0.0000	0.6466
Total	**7.2000e-004**	**5.4000e-004**	**4.5000e-003**	**1.0000e-005**	**0.2436**	**1.0000e-005**	**0.2436**	**0.0244**	**1.0000e-005**	**0.0244**	**0.0000**	**0.6457**	**0.6457**	**4.0000e-005**	**0.0000**	**0.6466**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5900e-003	0.0440	0.0610	9.0000e-005		2.1800e-003	2.1800e-003		2.0100e-003	2.0100e-003	0.0000	8.1893	8.1893	2.5700e-003	0.0000	8.2536
Paving	2.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.8800e-003**	**0.0440**	**0.0610**	**9.0000e-005**		**2.1800e-003**	**2.1800e-003**		**2.0100e-003**	**2.0100e-003**	**0.0000**	**8.1893**	**8.1893**	**2.5700e-003**	**0.0000**	**8.2536**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.4000e-004	4.5000e-003	1.0000e-005	0.1221	1.0000e-005	0.1221	0.0123	1.0000e-005	0.0123	0.0000	0.6457	0.6457	4.0000e-005	0.0000	0.6466
Total	**7.2000e-004**	**5.4000e-004**	**4.5000e-003**	**1.0000e-005**	**0.1221**	**1.0000e-005**	**0.1221**	**0.0123**	**1.0000e-005**	**0.0123**	**0.0000**	**0.6457**	**0.6457**	**4.0000e-005**	**0.0000**	**0.6466**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0454					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
Total	**0.0464**	**6.5100e-003**	**9.0600e-003**	**1.0000e-005**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2785**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	3.0000e-004	2.4800e-003	0.0000	0.1340	0.0000	0.1340	0.0134	0.0000	0.0134	0.0000	0.3551	0.3551	2.0000e-005	0.0000	0.3556
Total	**3.9000e-004**	**3.0000e-004**	**2.4800e-003**	**0.0000**	**0.1340**	**0.0000**	**0.1340**	**0.0134**	**0.0000**	**0.0134**	**0.0000**	**0.3551**	**0.3551**	**2.0000e-005**	**0.0000**	**0.3556**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0454					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
Total	**0.0464**	**6.5100e-003**	**9.0600e-003**	**1.0000e-005**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2785**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	3.0000e-004	2.4800e-003	0.0000	0.0672	0.0000	0.0672	6.7500e-003	0.0000	6.7500e-003	0.0000	0.3551	0.3551	2.0000e-005	0.0000	0.3556
Total	**3.9000e-004**	**3.0000e-004**	**2.4800e-003**	**0.0000**	**0.0672**	**0.0000**	**0.0672**	**6.7500e-003**	**0.0000**	**6.7500e-003**	**0.0000**	**0.3551**	**0.3551**	**2.0000e-005**	**0.0000**	**0.3556**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.497946	0.041736	0.196549	0.128845	0.034372	0.005581	0.016726	0.068189	0.001664	0.001271	0.005110	0.001091	0.000920
Other Non-Asphalt Surfaces	0.497946	0.041736	0.196549	0.128845	0.034372	0.005581	0.016726	0.068189	0.001664	0.001271	0.005110	0.001091	0.000920

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0131	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3300e-003	2.3300e-003	1.0000e-005	0.0000	2.4900e-003
Unmitigated	0.0131	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3300e-003	2.3300e-003	1.0000e-005	0.0000	2.4900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.5400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	8.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1000e-004	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3300e-003	2.3300e-003	1.0000e-005	0.0000	2.4900e-003
Total	**0.0131**	**1.0000e-005**	**1.2000e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.3300e-003**	**2.3300e-003**	**1.0000e-005**	**0.0000**	**2.4900e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.5400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	8.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1000e-004	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3300e-003	2.3300e-003	1.0000e-005	0.0000	2.4900e-003
Total	**0.0131**	**1.0000e-005**	**1.2000e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.3300e-003**	**2.3300e-003**	**1.0000e-005**	**0.0000**	**2.4900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

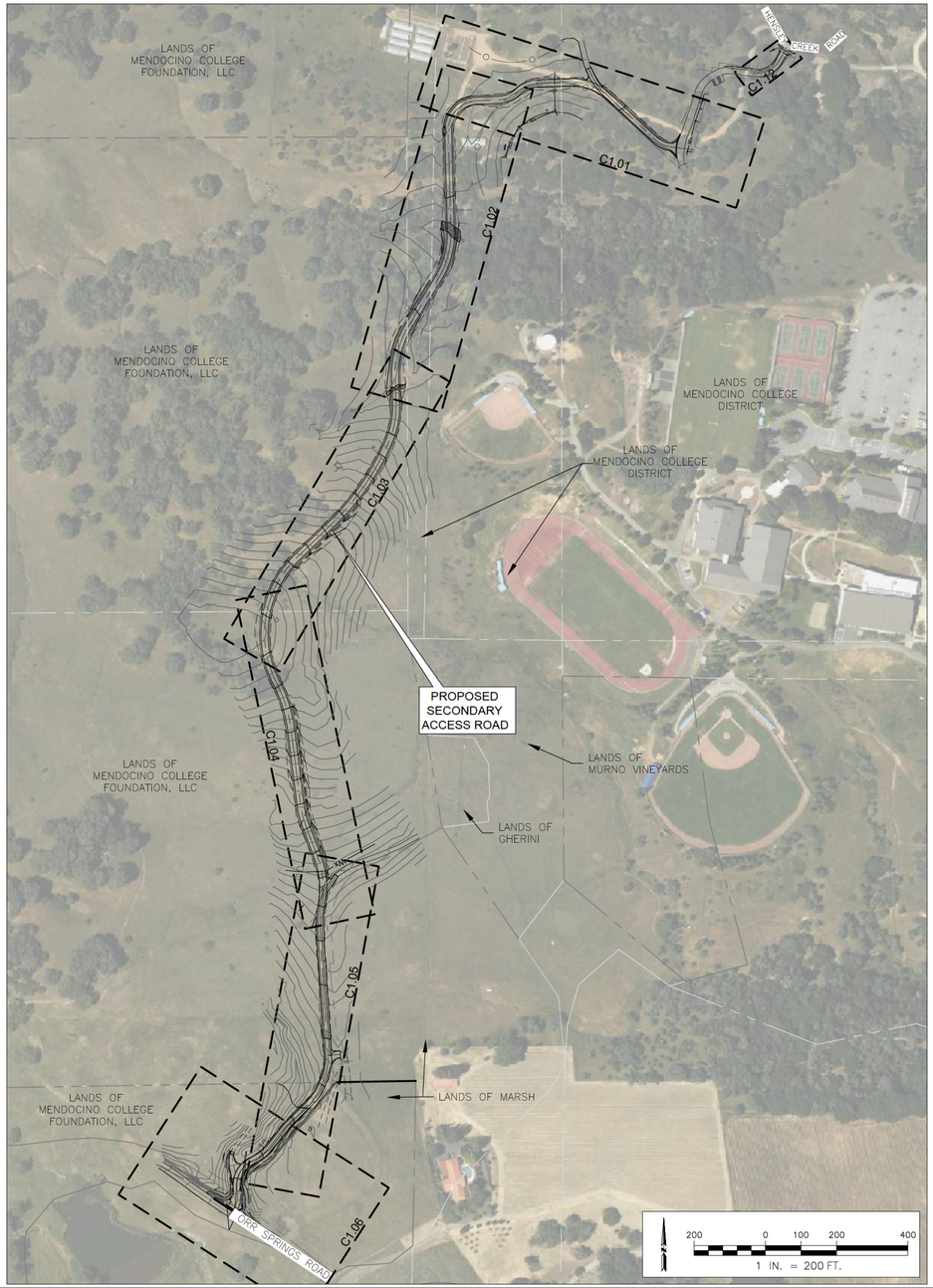
APPENDIX E

Road Improvement Plans

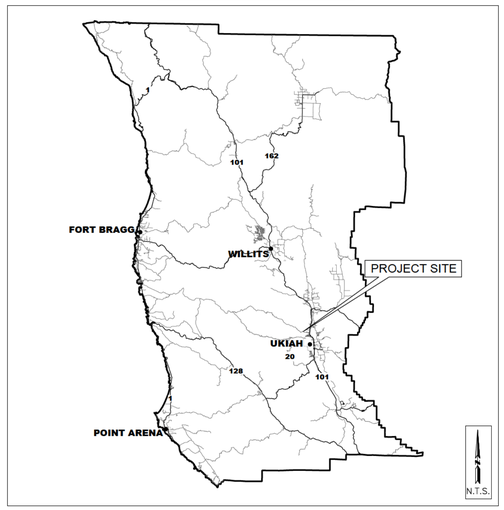
SECONDARY EMERGENCY ACCESS ROAD IMPROVEMENT PLANS

FOR
MENDO-LAKE COMMUNITY COLLEGE DISTRICT
UKIAH CAMPUS

SITE PLAN



COUNTY MAP



LOCATION MAP

SHEET INDEX

EARTHWORK NOTES

1. ALL QUANTITIES SHOWN ON THIS PLAN ARE APPROXIMATE. CALCULATED EXCESS AND SHORTAGE ARE FROM FINISHED ROUGH GRADE TO EXIST NG GROUND. THE ACTUAL AMOUNT OF EARTH MOVED WILL VARY, DEPENDANT ON COMPACTION, CONSOLIDATION, STRIPPING REQUIREMENTS, AND THE CONTRACTORS METHOD OF OPERATION.
2. DUE TO THE INEXACT NATURE OF EARTHWORK ESTIMATING, THERE IS NO GUARANTEEE OF THESE QUANTITIES. CONTRACTOR SHALL MAKE HIS OWN ESTIMATE FOR BID AND CONTRACT PURPOSES.

CONTRACTOR SHALL REFER TO REPORT TITLED 'GEOTECHNICAL EXPLORATION, MENDOCINO-LAKE COMMUNITY COLLEGE DISTRICT, 1000 HENSLEY CREEK ROAD, UKIAH, CA 95482', PREPARED BY LACO ASSOCIATES, DATED SEPTEMBER 3, 2021, LACO JOB NO 6816.28 FOR SPECIFIC SO LS INFORMATION.

ENGINEER'S ESTIMATE:

EARTHWORK:
CUT= 3630 CY
FILL= 2410 CY
NET= 1220 CY (CUT)

DISTURBED AREAS:
DISTURBED AREA = 3.62 ACRES

NO. REVISION DATE

REGISTERED PROFESSIONAL ENGINEER
TYLER JAMES ANDERSEN
No. C088305
EXP. 3-31-24
CIVIL
STATE OF CALIFORNIA

LACO
EUREKA • UKIAH • SANTA ROSA • CHICO
1-800-515-5054 www.lacoassociates.com

COVER SHEET
SECONDARY ACCESS ROADWAY IMPROVEMENT PLANS
UKIAH CAMPUS, UKIAH
FOR
MENDO-LAKE COMMUNITY COLLEGE DISTRICT

JOB NO. 6816 28
DATE May 6, 2022
DESIGNER TA
CHECKED CM DRAWN TA
SHEET C0.00
SHEET COUNT 1 OF 21

Date: May 06, 2022, 4:19pm User ID: tasetia
File: T:\Civil\Files\6800\6816.28 Secondary Access Road\CIVIL\DWG\SET TWO\6816.28 PLAN CVR 2.dwg

ABBREVIATIONS

A

AB	–	AGGREGATE BASE
ABON	–	ABANDONED
AC	–	ASPHALT CONCRETE
ACP	–	ASBESTOS CEMENT PIPE
ACI	–	AMERICAN CONCRETE INSTITUTE
AG	–	AGGREGATE
APPROX	–	APPROXIMATELY
ASTM	–	AMERICAN SOCIETY FOR TESTING & MATERIALS
@	–	AT

B

BC	–	BEGIN CURVE
BCR	–	BEGIN CURB RETURN
BF	–	BLIND FLANGE
BFV	–	BUTTERFLY VALVE
BLDG	–	BUILDING
BM	–	BENCH MARK
BOT	–	BOTTOM
BRG	–	BEARING
BTWN	–	BETWEEN
BVC	–	BEGINNING OF VERTICAL CURVE
BW	–	BOTTOM OF WALL

C

CATV	–	CABLE TELEVISION
CB	–	CATCH BASIN
CEIL	–	CEILING
CFM	–	CUBIC FEET PER MINUTE
CI	–	CAST IRON
CIP	–	CAST IRON PIPE
C.I.P.	–	CAST–IN–PLACE
CJ	–	CONSTRUCTION JOINT
CL,℄	–	CENTERLINE
CLR	–	CLEAR
CMP	–	CORRUGATED METAL PIPE
CMU	–	CONCRETE MASONRY UNIT
CO	–	CLEANOUT
CONC	–	CONCRETE
CONT	–	CONTINUOUS
COORD	–	COORDINATE
CP	–	SURVEY CONTROL POINT
CPLG	–	COUPLING
CTR	–	CENTER
CU FT	–	CUBIC FEET
CV	–	CHECK VALVE
CW	–	COLD WATER
CY	–	CUBIC YARD

D

°	–	DEGREE (ANGLE)
d	–	PENNY (NAIL SIZE)
DBL	–	DOUBLE
DI	–	DRAINAGE INLET
DIA	–	DIAMETER
DIAG	–	DIAGONAL
DIM	–	DIMENSION
DIP	–	DUCTILE IRON PIPE
DRWY	–	DRIVEWAY
DWG	–	DRAWING

E

<E>	–	EXISTING
EA	–	EACH
EC	–	END CURVE
ECR	–	END CURB RETURN
EF	–	EACH FACE
EG	–	EXISTING GRADE
EL	–	ELBOW
ELEC	–	ELECTRIC OR ELECTRICAL
ELEV	–	ELEVATION
ENGR	–	ENGINEER
EP	–	EDGE OF PAVEMENT
EQ	–	EQUAL
EQUIP	–	EQUIPMENT
EVC	–	END OF VERTICAL CURVE
EW	–	EACH WAY
EXC	–	EXCAVATE
EXP JT	–	EXPANSION JOINT
EXT	–	EXTERIOR

F

FCA	–	FLANGE COUPLING ADAPTER
FC	–	FACE OF CURB
FF	–	FINISHED FLOOR
FG	–	FINISHED GRADE
FH	–	FIRE HYDRANT
FIN	–	FINISH
FL,℄	–	FLOW LINE
FLG	–	FLANGE
FLR	–	FLOOR
FS	–	FINISHED SURFACE
FT	–	FOOT
FT^2	–	SQUARE FEET
FT^3	–	CUBIC FEET
FTG	–	FOOTING

G

G	–	GAS
GALV	–	GALVANIZED
GIP	–	GALVANIZED IRON PIPE
GPM	–	GALLONS PER MINUTE
GRD	–	GRADE
GSP	–	GALVANIZED STEEL PIPE
GV	–	GATE VALVE

H

HB	–	HOSE BIBB
HDR	–	HEADER
HP	–	HORSEPOWER
HORIZ	–	HORIZONTAL
HT	–	HEIGHT
HW	–	HOT WATER

I

ID	–	INSIDE DIAMETER
IN	–	INCH
INT	–	INTERIOR
INV	–	INVERT

J

JT	–	JOINT
JP	–	JOINT POLE

K

KIP	–	THOUSAND POUNDS
KW	–	KILOWATT

L

∠	–	ANGLE (DEGREES)
LB	–	POUND
LF	–	LINEAR FEET
LG	–	LONG
LT	–	LEFT

M

MATL	–	MATERIAL
MAX	–	MAXIMUM
ME	–	MATCH EXISTING
MECH	–	MECHANICAL
MFR	–	MANUFACTURER
MH	–	MANHOLE
MIN	–	MINIMUM
MISC	–	MISCELLANEOUS
MJ	–	MECHANICAL JOINT
MTL	–	METAL

N

<N>	–	NEW
NC	–	NORMALLY CLOSED
NIC	–	NOT IN CONTRACT
NO.	–	NUMBER
NO	–	NORMALLY OPEN
NPT	–	NATIONAL PIPE THREAD
NTS	–	NOT TO SCALE
#	–	NUMBER

O

OC	–	ON CENTER
OD	–	OUTSIDE DIAMETER
OG	–	ORIGINAL GROUND
OHE	–	OVERHEAD ELECTRIC
OZ	–	OUNCE
OVHD	–	OVERHEAD

P

PB	–	PULL BOX
PCC	–	POINT OF COMPOUND CURVATURE
PCF	–	POUNDS PER CUBIC FOOT
PE	–	PLAIN END
PERF	–	PERFORATED
PEP	–	POLYETHYLENE PIPE
PL,℄	–	PROPERTY LINE
PLYWD	–	PLYWOOD
POC	–	POINT ON CURVE
PP	–	POWER POLE
PRC	–	POINT OF REVERSE CURVATURE
PREFAB	–	PREFABRICATED
PSF	–	POUNDS PER SQUARE FOOT
PSI	–	POUNDS PER SQUARE INCH
PSIG	–	POUNDS PER SQUARE INCH GAUGE
PV	–	PLUG VALVE
PVC	–	POLYVINYL CHLORIDE PLASTIC
PVI	–	POINT OF VERTICAL INTERSECTION
PVMT	–	PAVEMENT
PVT	–	PRIVATE

Q

QTY	–	QUANTITY

R

R	–	RADIUS
RC	–	RELATIVE COMPACTION
RCP	–	REINFORCED CONCRETE PIPE
RD	–	ROAD
RDCR	–	REDUCER
RDWD	–	REDWOOD
REQD	–	REQUIRED
RM	–	ROOM
RSP	–	ROCK SLOPE PROTECTION
RT	–	RIGHT
R/W	–	RIGHT–OF–WAY

S

SL	–	SLOPE
SCHED	–	SCHEDULE
SD	–	STORM DRAIN
SDMH	–	STORM DRAIN MAN HOLE
SECT	–	SECTION
SHT	–	SHEET
SIM	–	SIMILAR
SPEC	–	SPECIFICATIONS
SQ	–	SQUARE
SQ FT	–	SQUARE FOOT
SQ IN	–	SQUARE INCH
SS	–	SANITARY SEWER
SSMH	–	SEWER SYSTEM MAN HOLE
STA	–	STATION
STD	–	STANDARD
STL	–	STEEL
SW	–	SIDEWALK
SYMM	–	SYMMETRICAL

T

T	–	TELEPHONE
TAN	–	TANGENT
T&B	–	TOP AND BOTTOM
T&G	–	TONGUE AND GROOVE
TBM	–	TEMPORARY BENCH MARK
TC	–	TOP OF CURB
TELEM	–	TELEMETRY
TEMP	–	TEMPERATURE OR TEMPORARY
THD	–	THREAD
TOC	–	TOP OF CONCRETE
TOG	–	TOP OF GRATE
TOF	–	TOP OF FOOTING
TOW	–	TOP OF WALL
TP	–	TOP OF PAVEMENT OR TELEPHONE POLE
<TYP>	–	TYPICAL

U

UBC	–	UNIFORM BUILDING CODE
UOS	–	UNLESS OTHERWISE SPECIFIED
UG	–	UNDERGROUND
UTIL	–	UTILITY
UP	–	UTILITY POLE

V

V	–	VOLT
VC	–	VERTICAL CURVE
VCP	–	VITRIFIED CLAY PIPE
VERT	–	VERTICAL
VPI	–	VERTICAL POINT OF INTERSECTION

W

WM	–	WATER METER
WSP	–	WELDED STEEL PIPE
WV	–	WATER VALVE

X

XFMR	–	TRANSFORMER

Y

YD	–	YARD
YD^2	–	SQUARE YARD
YD^3	–	CUBIC YARD

NOTES:

1. CONTACT THE ENGINEER FOR SYMBOLS NOT LISTED.
2. THIS IS A STANDARD SHEET, THEREFORE SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET WHICH DO NOT APPEAR ON THE PLANS.
3. SITE AND UTILITY SYMBOLS SHOWN ON THIS SHEET ARE NOT INTENDED TO REPRESENT THE PHYSICAL SCALE OR SHAPE OF ANY ITEMS. WHERE LARGE–SCALE PLANS ARE PRESENTED, THE SYMBOLS SHOWN HEREON MAY BE REPLACED BY DETAILS MORE SUITED TO THE DRAWING SCALE.

LEGEND/ABBREVIATIONS

BOUNDARY LINE

ADJOINER BOUNDARY LINE

TIE LINE

170 MAJOR PROPOSED CONTOUR

168 MINOR PROPOSED CONTOUR

170 MAJOR EXISTING CONTOUR

168 MINOR EXISTING CONTOUR

WOOD FENCE

BUILDING LINE

STORM DRAIN PIPE W/ SIZE & TYPE

FLOWLINE

E / 2 — DETAIL LETTER / SHEET NUMBER

GUY UTILITY POLE W/GUY WIRE

FIRE HYDRANT

SIGN

E ELECTRICAL BOX/METER

GV GAS VALVE

WV WATER VALVE

HB HOSE BIB

GRADE BREAK

OHW OVERHEAD WIRE

AT&T UNDERGROUND TELECOMMUNICATIONS LINE

E E E UNDERGROUND ELECTRICAL LINE

W UNDERGROUND WATER LINE

EDGE OF ASPHALT CONCRETE

CONCRETE SURFACE

TREE DRIPLINE/EDGE OF VEGETATED AREA

12" MYOP TREE W/ SIZE & TYPE

TOP SLAB 168.74 SPOT ELEVATION

1X2 STAKE W/ GREEN FLAG

SURVEY CONTROL POINT

FOUND MONUMENT AS NOTED

MYOP	MYOPORUM BUSH
RCP	REINFORCED CONCRETE PIPE
CONC	CONCRETE
CP	SURVEY CONTROL POINT
EL	ELEVATION
NT	NO TAG OR PLUG
INV	INVERT
UG	UNDERGROUND
BLD	BUILDING
PSI	PRESSURE

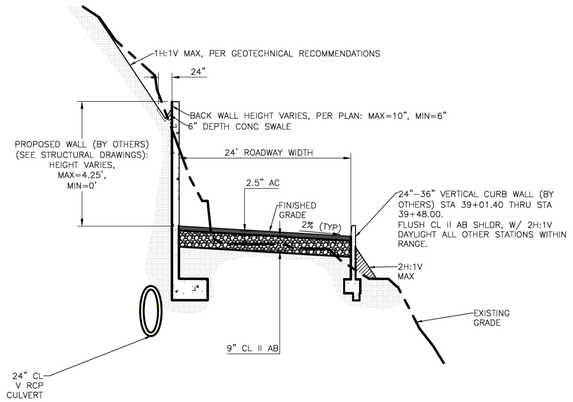
NO.	REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER
TYLER JAMES ANDERSEN
No. C088305
EXP. 3–31–24
CIVIL
STATE OF CALIFORNIA

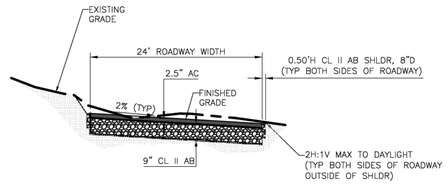
LACO
EUREKA • UKIAH • SANTA ROSA • CHICO
1-800-515-5054 www.lacoassociates.com

ABBREVIATIONS & LEGEND
SECONDARY ACCESS ROADWAY IMPROVEMENT PLANS
UKIAH CAMPUS, UKIAH
FOR
MENDO-LAKE COMMUNITY COLLEGE DISTRICT

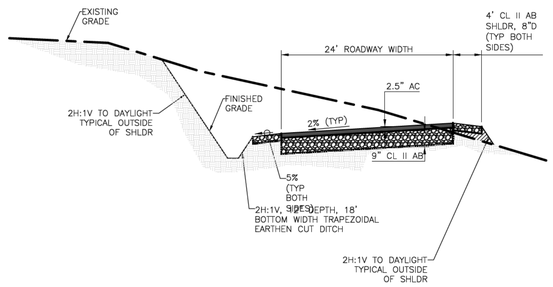
JOB NO. 6816.28
DATE May 6, 2022
DESIGNER TA
CHECKED CM DRAWN TA
SHEET C0.01
SHEET COUNT 2 OF 21



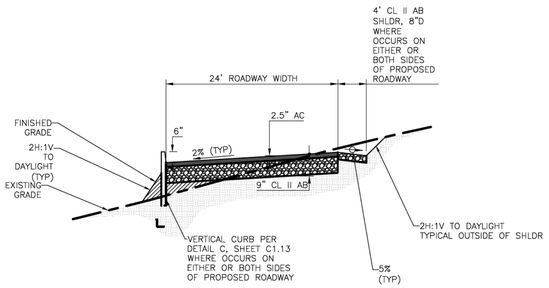
ROAD W/ WALL & WIDENING
TYPICAL SECTION: STA 38+61 TO 41+78
N.T.S.



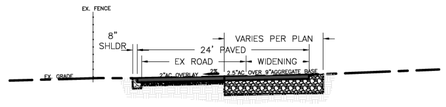
CONSTRICTED ROAD NEAR ORR SRINGS ROAD CUT/FILL
TYPICAL SECTION: STA 31+70 TO 38+60
N.T.S.



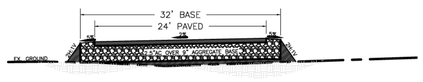
ROAD W/ DITCH
TYPICAL SECTION: STA 11+87 TO 16+85,
20+20 TO 22+69, & 27+05 TO 31+70
N.T.S.



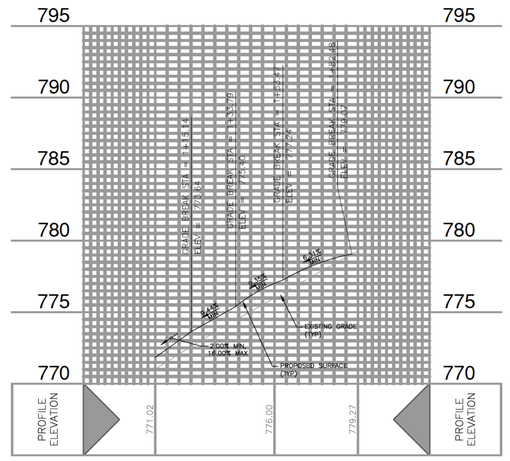
ROAD W/ VERTICAL CURB WALL
TYPICAL SECTION: STA 4+17 TO 8+21
N.T.S.



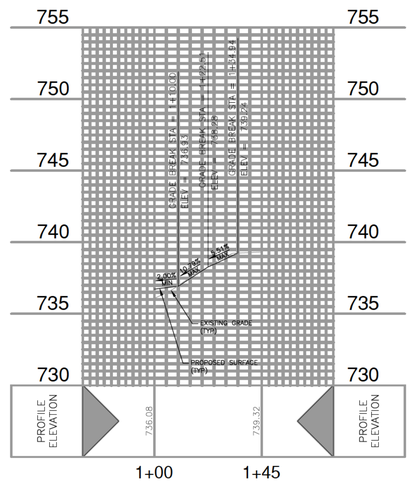
EXISTING ROAD W/ WIDENING
TYPICAL SECTION: STA 1+52 TO 4+17
N.T.S.



UNCONSTRICTED ROAD
TYPICAL SECTION: STA 8+21 TO 11+87,
16+85 TO 20+20, & 22+69 TO 27+05
N.T.S.



DWY # 1 PROFILE: STA 1+00.00 TO STA 1+85.00



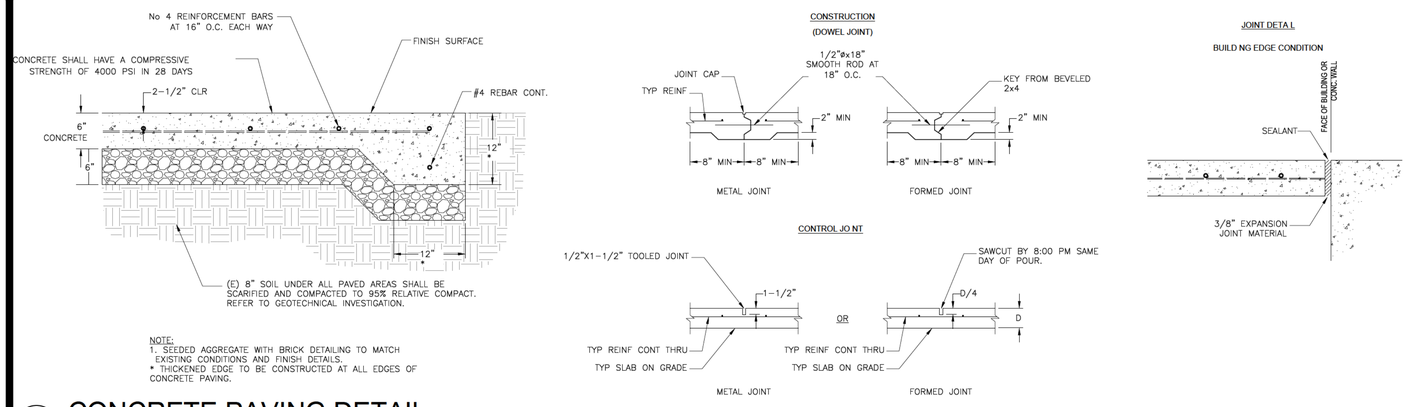
DWY #2 PROFILE: STA 1+00.00 TO STA 1+45.00

NO.	REVISION	DATE

LACO
ASSOCIATES
EUREKA • UKIAH • SANTA ROSA • CHICO
1-800-515-5054 www.lacoassociates.com

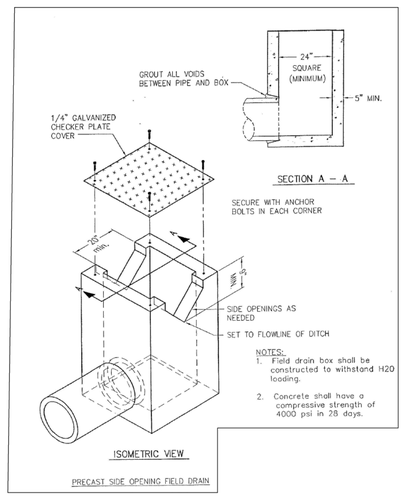
TYPICAL SECTIONS & DWY PROFILES
SECONDARY ACCESS ROADWAY IMPROVEMENT PLANS
UKIAH CAMPUS, UKIAH
FOR
MENDO-LAKE COMMUNITY COLLEGE DISTRICT

JOB NO. 6816.28
DATE May 6, 2022
DESIGNER TA
CHECKED CM DRAWN TA
SHEET C1.13
SHEET COUNT 16 OF 21

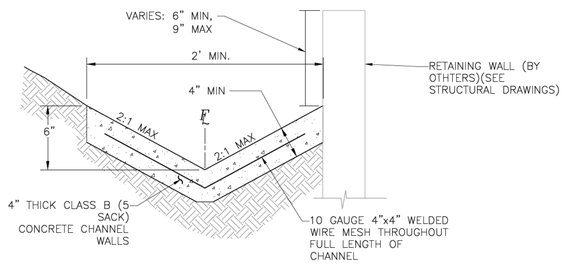


NOTE:
1. SEEDED AGGREGATE WITH BRICK DETAILING TO MATCH EXISTING CONDITIONS AND FINISH DETAILS.
* THICKENED EDGE TO BE CONSTRUCTED AT ALL EDGES OF CONCRETE PAVING.

A CONCRETE PAVING DETAIL
NOT TO SCALE

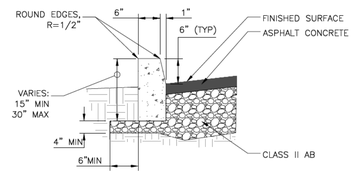


B FIELD DRAIN W/ TRIANGULAR SO DETAIL
NOT TO SCALE

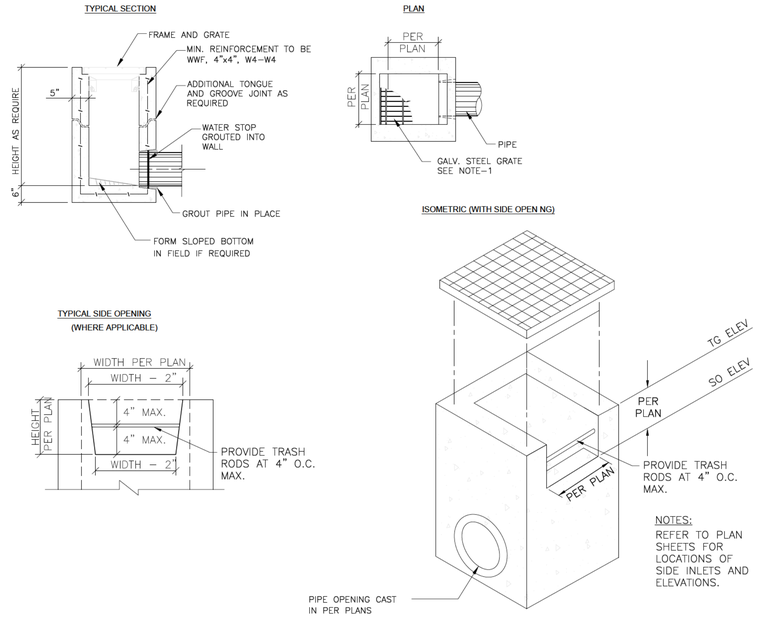


NOTE:
LONGITUDINAL SLOPE
VARIES – 0.5% MIN

E CONCRETE SWALE
NOT TO SCALE

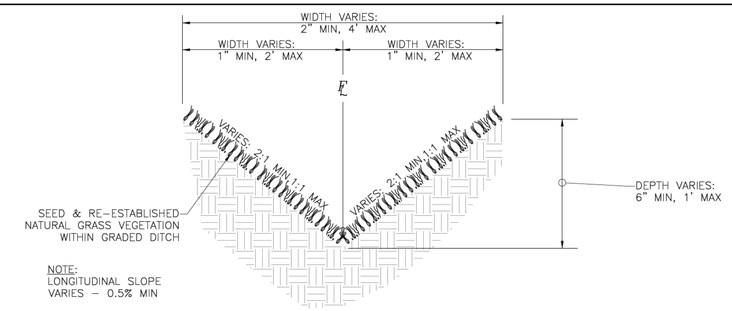


C VERTICAL CURB DETAIL
NOT TO SCALE



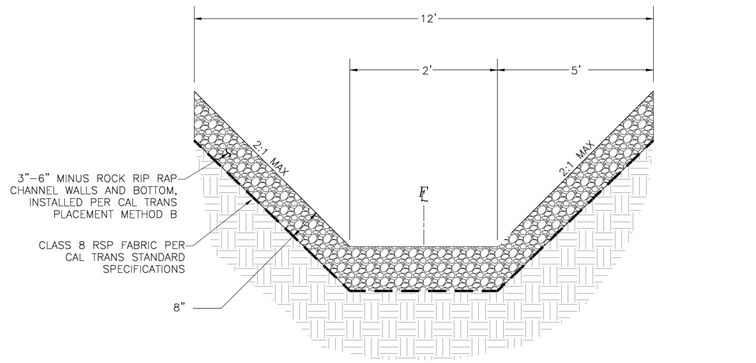
NOTES:
1. FRAME AND GRATES SHALL BE HEAVY DUTY FOR H20 TRAFFIC LOADING. ALL GRATES SHALL BE BICYCLE PROOF.
2. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4000 PSI IN 28 DAYS.

D STORM DRAIN INLET DETAIL
NOT TO SCALE



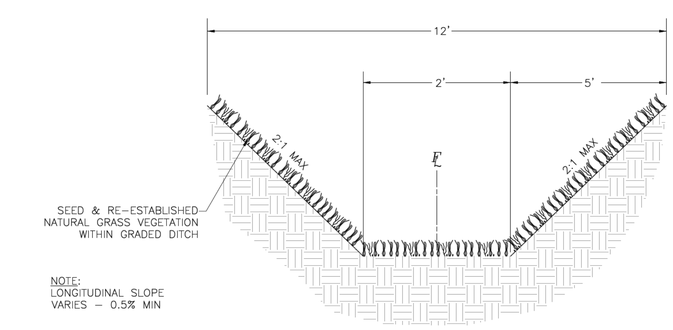
NOTE:
LONGITUDINAL SLOPE
VARIES – 0.5% MIN

F GRASS LINED V-DITCH
NOT TO SCALE



NOTE:
LONGITUDINAL SLOPE
VARIES – 0.5% MIN

G RIP RAP SWALE
NOT TO SCALE



NOTE:
LONGITUDINAL SLOPE
VARIES – 0.5% MIN

H GRASS LINED CUT DITCH
NOT TO SCALE

DATE
NO. REVISION

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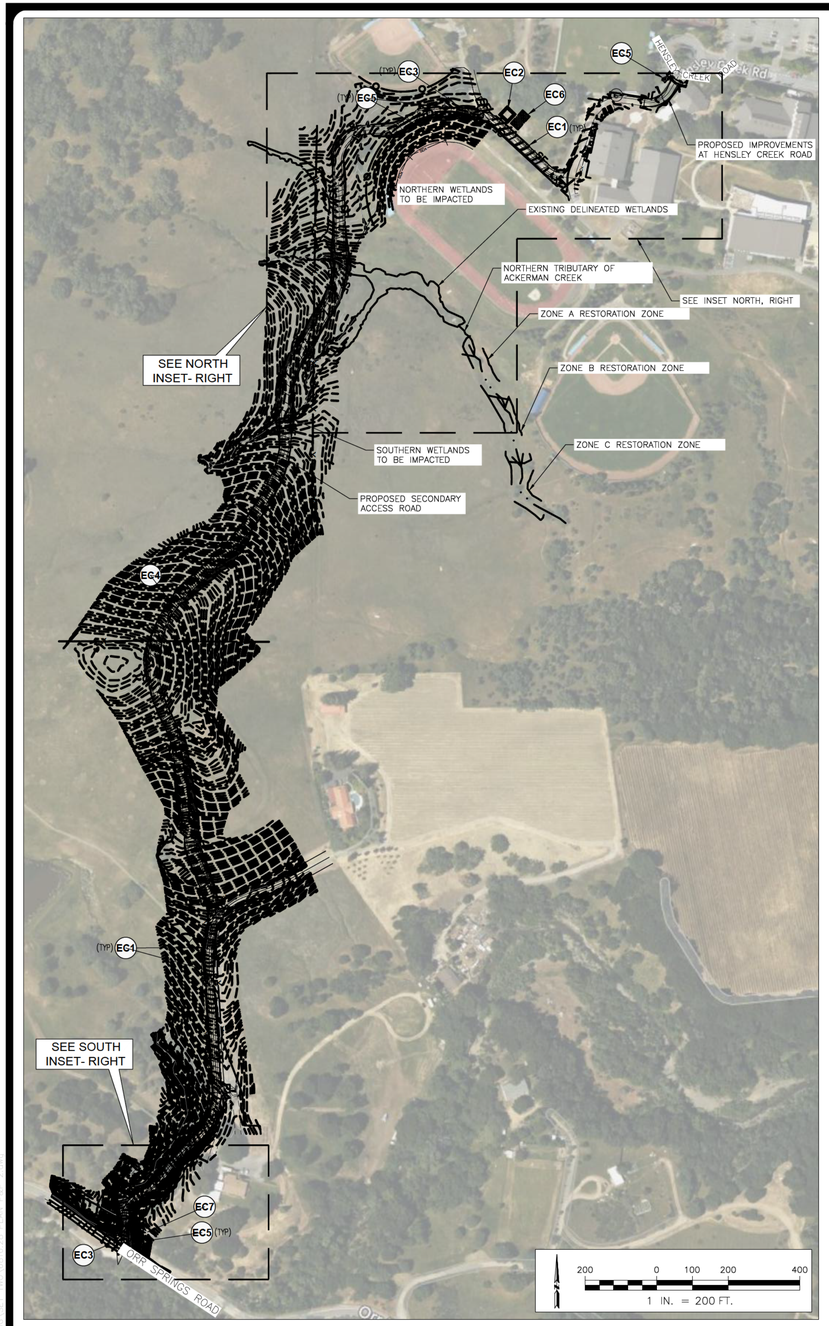
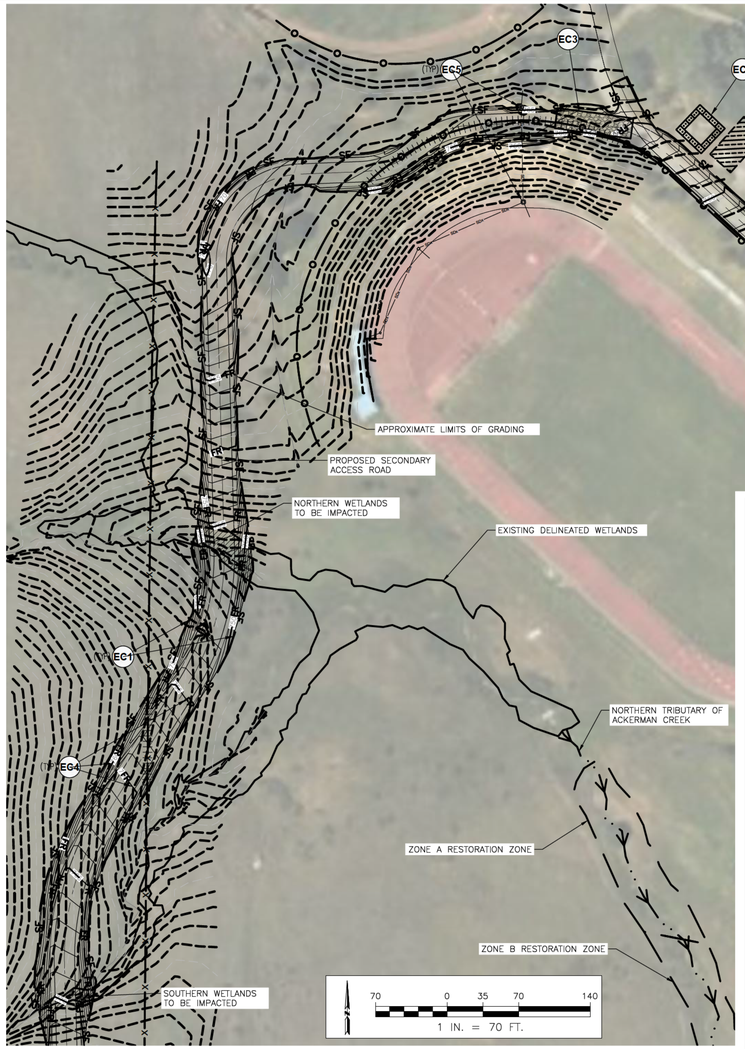
DETAILS
SECONDARY ACCESS ROADWAY IMPROVEMENT PLANS
UKIAH CAMPUS, UKIAH
FOR
MENDO-LAKE COMMUNITY COLLEGE DISTRICT

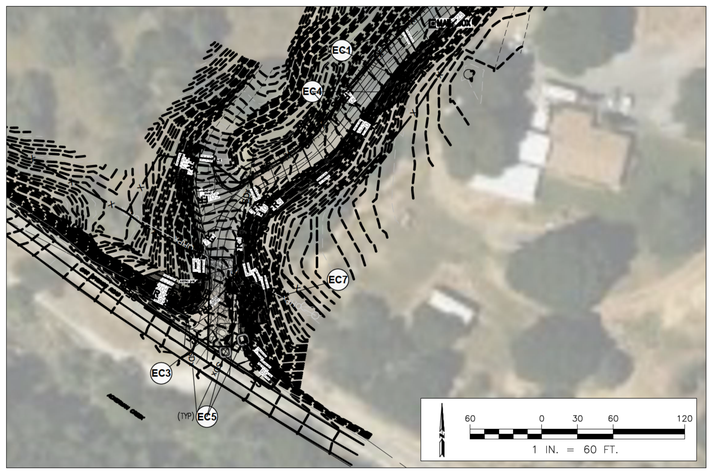
JOB NO. 6816.28
DATE May 6, 2022
DESIGNER TA
CHECKED CM DRAWN TA
SHEET C1.15
SHEET COUNT 19 OF 21



OVERALL SITE PLAN



INSET NORTH



INSET SOUTH

REFERENCE NOTES:

DELINEATED WETLAND PER PROJECT BIOLOGIST REPORT TITLED 'BIOLOGICAL RESOURCES ASSESSMENT SECONDARY EMERGENCY ACCESS ROAD PROJECT, MENDOCINO COMMUNITY COLLEGE, UKIAH, MENDOCINO COUNTY, CALIFORNIA, APN 169-020-014 & -07, APN 156-060-013 & -015', DATED OCTOBER 2021, PREPARED BY MS. LUCY MACMILLAN & MS. ANYA PERON-BURDICK.

DEL NEATION OF ACKERMAN CREEK AND RESTORATION ZONES A, B, & C PER 'VEGETATION AND MONITOR NG PLAN', DATED DECEMBER 16, 2021, PREPARED BY MS. ANYA PERON-BURDICK.

EROSION AND SEDIMENT CONTROL NOTES

- EC1 PROVIDE SE-1 SILT FENCE PER — A C2.01
- EC2 CONCRETE WASHOUT PER — B C2.01
- EC3 PROVIDE CONSTRUCTION ENTRANCE PER (SIZE REDUCED DUE TO SPACE CONSTRAINTS) — C C2.01
- EC4 SE-5 TYPICAL FIBER ROLE PER — F C2.01
- EC5 PROVIDE DROP INLET PROTECTION PER — D C2.01
- EC6 PROVIDE TEMPORARY STOCKPILE MANAGEMENT AREA PER WM-3 OF 2003 CASQA BMP HANDBOOK FOR CONSTRUCTION
- EC7 PRESERVE & VERIFY/MAINTAIN CLEARANCE FROM OVERHEAD WIRES
- EC8 PROVIDE GUTTER SEDIMENT BARRIER PER — E C2.01

LEGEND

- TEMPORARY STOCKPILE MANAGEMENT AREA PER WM-3 OF 2003 CASQA BMP HANDBOOK FOR CONSTRUCTION
- DROP INLET PROTECTION
- GRAVEL BAG
- CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- SF — SILT FENCE
- FR — FR — FIBER ROLL
- EC2 — REFER TO EROSION AND SEDIMENT CONTROL NOTE

NOTES:
1. CHECK DAMS TO BE INSTALLED ALONG PATHS OF CONCENTRATED FLOW UTILIZING FIBER ROLL PER DETAIL F, SHEET C2.01.

NO. REVISION | DATE

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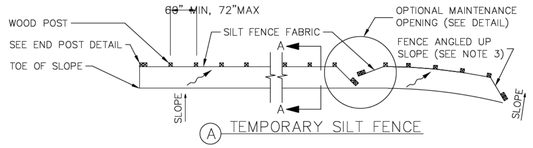
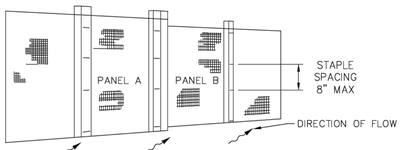
EROSION CONTROL PLAN
SECONDARY ACCESS ROADWAY IMPROVEMENT PLANS
UKIAH CAMPUS, UKIAH
FOR
MENDO-LAKE COMMUNITY COLLEGE DISTRICT

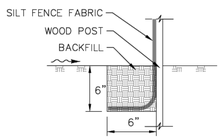
JOB NO. 6816.28
DATE May 6, 2022
DESIGNER TA
CHECKED CM DRAWN TA
SHEET C2.00
SHEET COUNT 20 OF 21



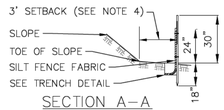
A TEMPORARY SILT FENCE



B SILT FENCE PANELS AT JOINTS

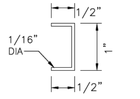


C TRENCH DETAIL

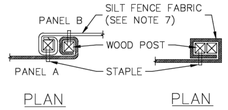


SECTION A–A

D TEMPORARY SILT FENCE



E STAPLE DETAIL (SEE NOTE 8)



PLAN — F POST AT JOINTS

PLAN — G END POST DETAIL

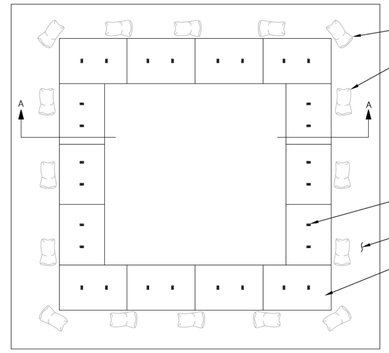
NOTES:

1. INSTALL TEMPORARY SILT FENCE BY FIRST DIGGING TRENCH, DRIVING POSTS, PLACING AND SECURING FABRIC. THEN BACKFILL AND TAMP.
2. REACH LENGTH NOT TO EXCEED 500 FEET.
3. THE DOWN STREAM END OF THE TEMPORARY SILT FENCE SHALL HAVE THE LAST 8' ANGLED UP SLOPE.
4. SETBACK DIMENSIONS MAY VARY TO FIT FIELD CONDITIONS.
5. POSTS TO OVERLAP AND FENCE FABRIC TO FOLD AROUND EACH POST ONE FULL TURN. SECURE FABRIC WITH 4 STAPLES FOR EACH POST.
6. POSTS SHALL BE DRIVEN TIGHTLY TOGETHER TO PREVENT POTENTIAL FLOW–THROUGH OF SEDIMENT AT THE JOINT. THE TOPS OF THE POSTS SHALL BE SECURED TO EACH OTHER WITH WIRE.
7. FOR EACH END POST, FENCE FABRIC SHALL BE FOLDED AROUND TWO POSTS ONE FULL TURN AND SECURED WITH 4 STAPLES.
8. MINIMUM OF 4 STAPLES SHALL BE INSTALLED PER POST. DIMENSIONS SHOWN ARE TYPICAL.
9. MAINTENANCE OPENINGS SHALL BE CONSTRUCTED IN A MANNER TO ENSURE THAT SEDIMENT IS RETAINED BY THE TEMPORARY SILT FENCE.
10. JOINT SECTIONS SHALL NOT BE PLACED AT SUMP LOCATIONS.

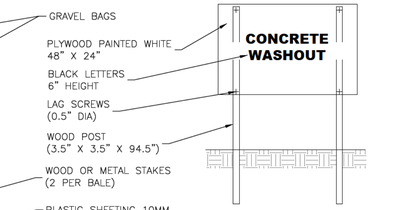
A SE-1 SILT FENCE DETAIL

NOT TO SCALE

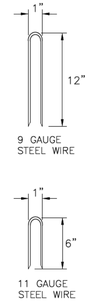
SE = SEDIMENT CONTROL PER CASQA (TYP)

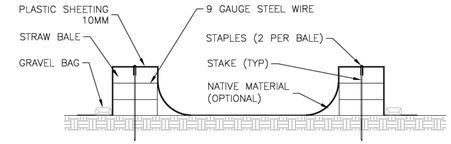


PLAN TYPE "ABOVE GRADE" WITH STRAW BALES



CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)





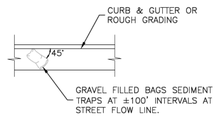
SECTION A–A

NOTES:

1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN (SEE FIGURE 4–15) SHALL BE INSTALLED WITHIN 32 FT OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

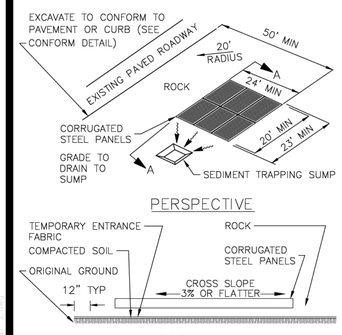
B CONCRETE WASTE MANAGEMENT

NOT TO SCALE



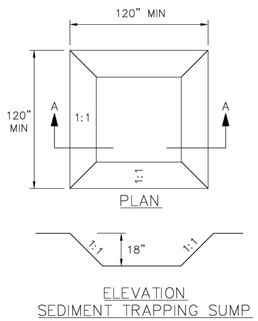
E GUTTER SEDIMENT BARRIER

NOT TO SCALE



PERSPECTIVE

SECTION A–A

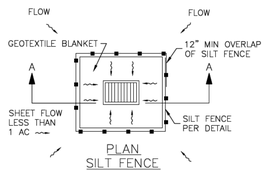


PLAN

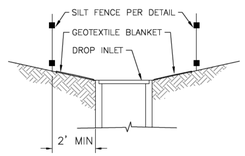
ELEVATION SEDIMENT TRAPPING SUMP

C CONSTRUCTION ENTRANCE

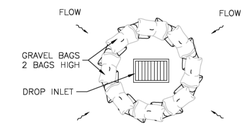
NOT TO SCALE



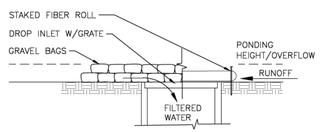
PLAN SILT FENCE



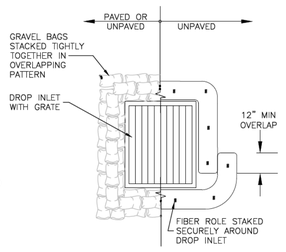
SECTION A–A



PLAN GRAVEL BAG BARRIER



SECTION FIBER ROLL/GRAVEL BAG FILTER



PLAN VIEW FIBER ROLL/GRAVEL BAG FILTER

NOTES:

1. FOR USE IN ARGRADING HAS BEEN COMPLETED AND FINAL SOIL STABILIZATION AND SEEDING ARE PENDING.
2. NOT APPLICABLE WITH CONCENTRATED FLOWS.

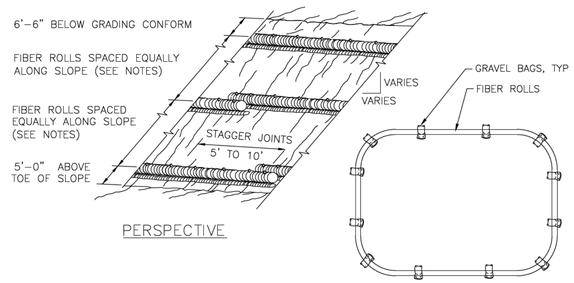
NOTES:

3. IMPLEMENTATION, SPECIFICATIONS, AND MAINTENANCE PER CASQA BMP HANDBOOK STANDARD SE–10.
4. THE TOP OF THE STRUCTURE (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

D DROP INLET PROTECTION

NOT TO SCALE

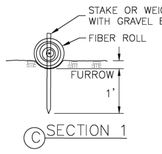
SE = SEDIMENT CONTROL PER CASQA (TYP)



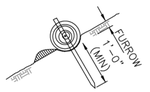
PERSPECTIVE

A FIBER ROLL (TYPE 1)

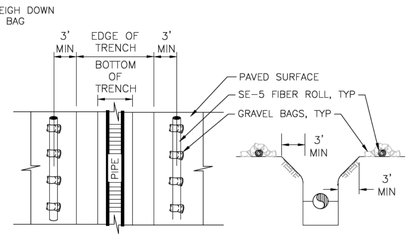
B TYPICAL FIBER ROLL AT PROTECTED AREA DETAIL



C SECTION 1



D SECTION 2



E TYPICAL FIBER ROLL AT TRENCH DETAIL

NOTES:

1. FIBER ROLL SPACING VARIES DEPENDING UPON SLOPE INCLINATION, BUT NOT TO EXCEED 10 FOOT AS MEASURED ALONG THE SLOPE INCLINATION.
2. INSTALLATIONS SHOWN IN THE PERSPECTIVES ARE FOR SLOPE INCLINATION OF 10:1 AND STEEPER.
3. IF TRENCHING WORK IS TO PROCEED IN A PIECE–MEAL FASHION, SECTION BY SECTION. BMP'S ARE ONLY REQUIRED AROUND THOSE SECTIONS OF OPEN TRENCHING.

F SE-5 TYPICAL FIBER ROLL INSTALLATION DETAIL

NOT TO SCALE

SE = SEDIMENT CONTROL PER CASQA (TYP)

NO. REVISION DATE

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ASSOCIATES

EUREKA • UKIAH • SANTA ROSA • CHICO

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EROSION CONTROL DETAILS

SECONDARY ACCESS ROADWAY IMPROVEMENT PLANS

UKIAH CAMPUS, UKIAH

FOR

MENDO-LAKE COMMUNITY COLLEGE DISTRICT

JOB NO. 6816.28

DATE May 6, 2022

DESIGNER TA

CHECKED CM DRAWN TA

SHEET C2.01

SHEET COUNT 21 OF 21

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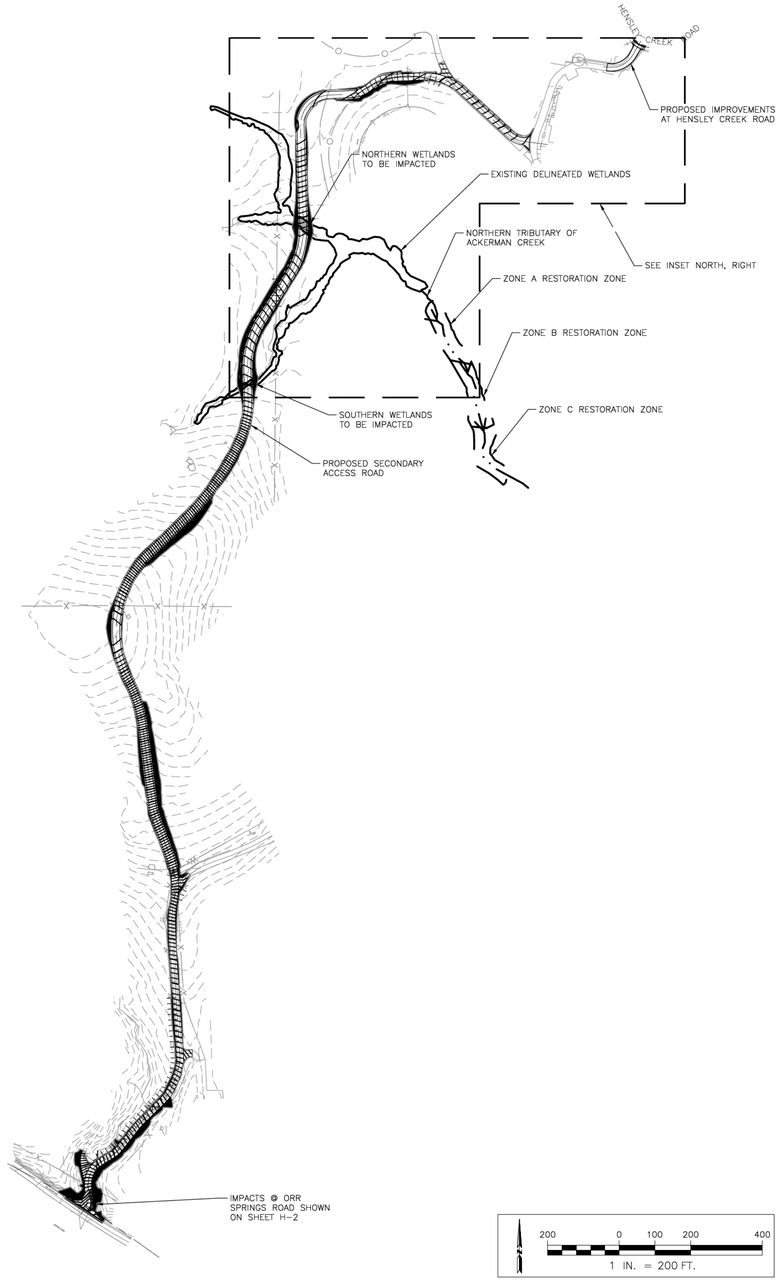
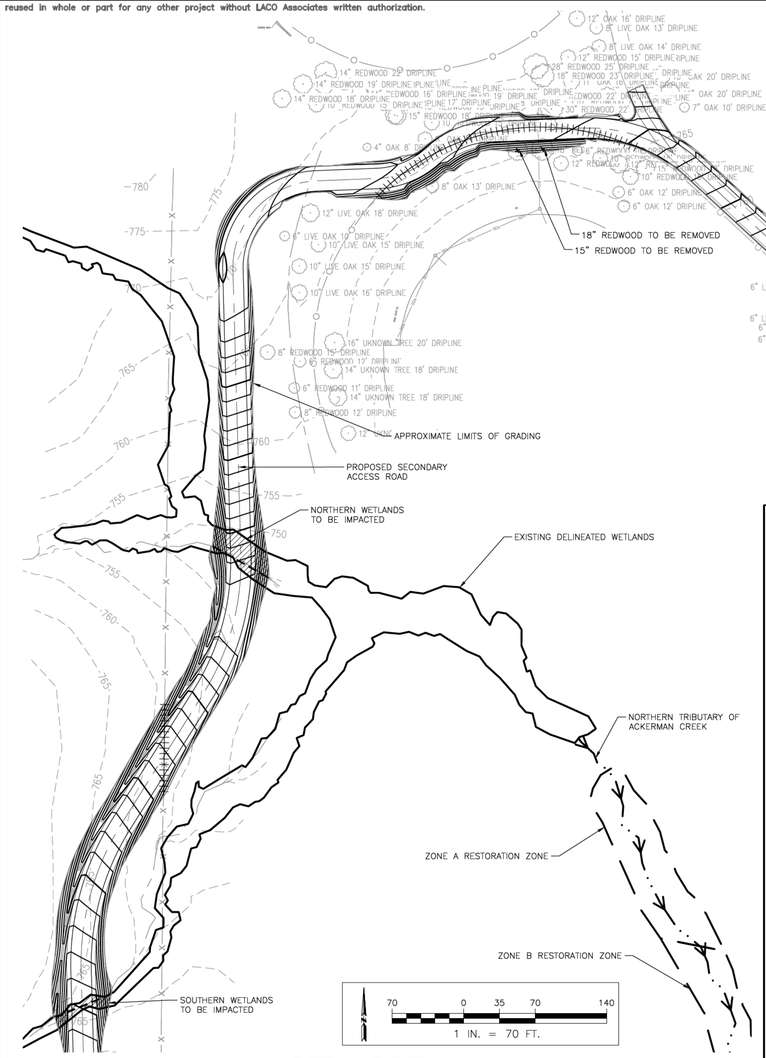


OVERALL SITE PLAN



INSET NORTH

WETLAND IMPACTS

AREA OF IMPACTS TO NORTHERN WETLANDS: 1650 SF = 0.04 ACRES

TOTAL FILL TO BE PLACED WITHIN NORTHERN WETLANDS: 268 CY

MATERIALS TO BE PLACED & QUANTITY:
DIRT– 220 CY
CL II AB– 25 CY
AC PAVEMENT– 6 CY

AREA OF IMPACTS TO SOUTHERN WETLANDS: 600 SF = 0.01 ACRES

TOTAL FILL TO BE PLACED WITHIN SOUTHERN WETLANDS: 111 CY

MATERIALS TO BE PLACED & QUANTITY:
DIRT– 84 CY
CL II AB– 9 CY
AC PAVEMENT– 2 CY

TREE REMOVAL LIST BY SIZE AND SPECIES

5 – 6" LIVE OAK
1 – 15" REDWOOD
1 – 18" REDWOOD

TREE REMOVAL IMPACTS

× TREE TO BE REMOVED

REFERENCE NOTES:

DELINEATED WETLAND PER PROJECT BIOLOGIST REPORT TITLED 'BIOLOGICAL RESOURCES ASSESSMENT SECONDARY EMERGENCY ACCESS ROAD PROJECT, MENDOCINO COMMUNITY COLLEGE, UKIAH, MENDOCINO COUNTY, CALIFORNIA, APN 169-020-014 & -07, APN 156-060-013 & -015', DATED OCTOBER 2021, PREPARED BY MS. LUCY MACMILLAN & MS. ANYA PERON-BURDICK

DELINEATION OF ACKERMAN CREEK AND RESTORATION ZONES A, B, & C PER 'VEGETATION AND MONITORING PLAN', DATED DECEMBER 16, 2021, PREPARED BY MS. ANYA PERON-BURDICK.

REGISTERED PROFESSIONAL ENGINEER
TYLER JAMES ANDERSEN
No. C088305
EXP. 3-31-22
CIVIL
STATE OF CALIFORNIA

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1-800-515-5054 www.lacoassociates.com

NO.	HISTORY / REVISION	BY	CHK.	DATE

SECONDARY ACCESS ROADWAY IMPROVEMENT PLANS
UKIAH CAMPUS, UKIAH
FOR
MENDO-LAKE COMMUNITY COLLEGE DISTRICT

OVERALL SITE PLAN & IMPACTS @ WETLANDS NEAR CAMPUS

DRAWN	TA
CHECK	KD
APPROVED	KD
DATE	May 6, 2022
JOB NUMBER	6816.28
SHEET	H-1
	SHEET 1 OF 2

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IMPACTS NEAR ORR SPRINGS ROAD

HOLE/CUT DITCH AREA: 780 SF = 0.02 ACRES

TOTAL FILL TO BE PLACED WITHIN CUT DITCH: 75 CY

LENGTH AND MATERIAL TYPE OF PIPE TO BE REMOVED: ±113LF OF 24" RCP SD PIPE (AS SHOWN)

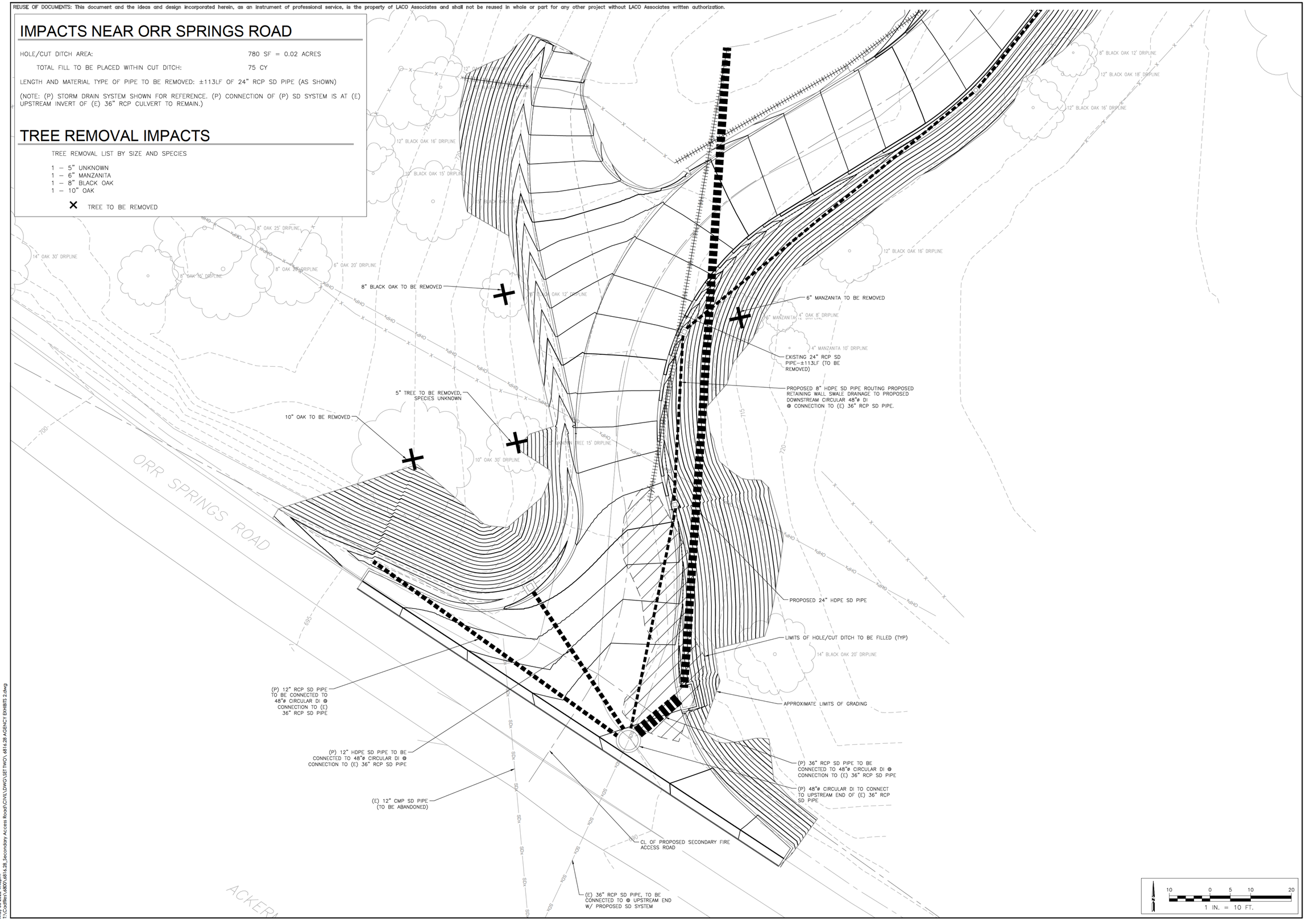
(NOTE: (P) STORM DRAIN SYSTEM SHOWN FOR REFERENCE. (P) CONNECTION OF (P) SD SYSTEM IS AT (E) UPSTREAM INVERT OF (E) 36" RCP CULVERT TO REMAIN.)

TREE REMOVAL IMPACTS

TREE REMOVAL LIST BY SIZE AND SPECIES

1 – 5" UNKNOWN
1 – 6" MANZANITA
1 – 8" BLACK OAK
1 – 10" OAK

× TREE TO BE REMOVED



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1 IN. = 10 FT.

May 06, 2022-4:48pm
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REGISTERED PROFESSIONAL ENGINEER
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NO.	HISTORY / REVISION	BY	CHK.	DATE

SECONDARY ACCESS ROADWAY IMPROVEMENT PLANS
UKIAH CAMPUS, UKIAH
FOR
MENDO-LAKE COMMUNITY COLLEGE DISTRICT

PROJECT IMPACTS @ ORR SPRINGS ROAD

DRAWN	TA
CHECK	KD
APPROVED	KD
DATE	May 6, 2022
JOB NUMBER	6816.28
SHEET	H-2
	SHEET 2 OF 2

APPENDIX F

Geotechnical Exploration

LACO

TECHNICAL MEMORANDUM

Geotechnical Exploration
Mendocino-Lake Community College District
1000 Hensley Creek Road, Ukiah, CA 95482

Date: September 3, 2021
Project No.: 6816.28

Prepared For: Mendocino-Lake Community College District

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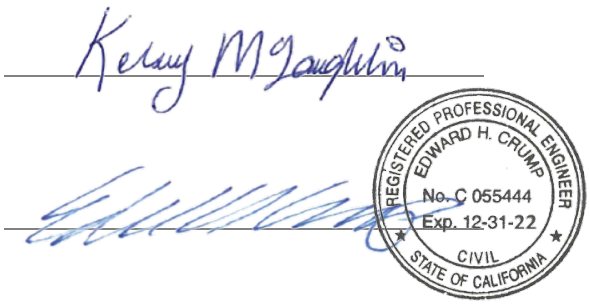

Attachments: Figures:

Figure 1: Vicinity Map
Figure 2: Site Plan
Figure 3: Fill Over Slope Construction
Figure 4: Retaining Wall Backdrain Recommendations
Figure 5: Slab on Grade Subdrain

Appendix 1: Secondary Access Road Conceptual Design
Appendix 2: Boring Logs
Appendix 3: Laboratory Test Results

1.0 INTRODUCTION

This memorandum presents the results of a geotechnical exploration performed by LACO Associates (LACO) for the proposed development of a new secondary emergency access road from the Ukiah college campus of Mendocino College, located at 1000 Hensley Creek Road in Ukiah, California, to a point of connection to Orr Springs Road to the south and southwest of the existing campus. The planned road will measure approximately 4,500 feet in length. Assessor's parcel numbers along the proposed alignment are 169-020-07,

-14, -15; 156-060-13,15; 156-110-35; and 156-050-05. A vicinity map indicating the Site location is provided as Figure 1. The Site plan with the location of the proposed road is provided as Figure 2.

1.1 Project Understanding

Based on the project conceptual design plans (project plans) included as Appendix 1, we understand that the project will consist of the development of a new access road that will be approximately 4,500 feet in length and extend from the end of Hensley Creek Road at the Mendocino College Ukiah Campus to Orr Springs Road (Figure 2). The proposed access road will be 32 feet wide (28-foot wide in the asphalt-paved portion) and it is our understanding that use will be limited to service vehicles and emergency access. This memorandum will reference locations in terms of the station numbers provided on the project plans. The easternmost 500 feet of the proposed road does not have stationing; therefore, this 500-foot section will be referenced as starting from the "end of Hensley Creek Road" (Sheet 3 of Appendix 1).

Where present, the access road will align with and improve existing paved communal driveways and access roads (end of Hensley Creek Road to station 3+25 and stations 31+00 to 41+00); however, portions of the proposed alignment will be located on undeveloped sloping terrain (stations 3+25 to station 31+00). Three retaining walls may be required to support cuts and fills near the southern end of the new access road alignment (stations 36+25 to 41+00). We anticipate that cuts and fills of up to 10 vertical feet may be required for construction of this project. Accordingly, we anticipate that the engineered retaining structures could be up to 8 vertical feet in height.

1.2 Scope of Services

In accordance with our engineering services agreement amendment no. 1 with you dated June 21, 2021, our scope of services was limited to the following:

- Review publicly available geologic reports and topographic maps as well as information in LACO's database.
- Direct the excavation of up to 13 test pits (TP1 through TP13) and 16 exploratory borings (B1 through B16) by a LACO subcontracted backhoe, track-mounted drilling rig, and operator. Our geologist logged the soil encountered in general accordance with ASTM 2488 (Visual Manual Procedures) and obtained soil samples for laboratory testing.
- Perform laboratory tests to assess/determine soil classification, particle size gradation, and R-value, as appropriate. Soil and/or rock testing requirements will be determined by a Professional Geologist, Certified Engineering Geologist, and/or Professional Engineer following field work and after examining soil and rock samples in the lab.
- Perform engineering analyses to develop conclusions and recommendations regarding lateral earth pressures, drainage and construction considerations that may include the following as applicable:
  - Suitability of on-site material for fill;
  - Fill placement and restrictions;
  - Requirements for cut and fill slopes including hillside grading recommendations;
  - Retaining wall design criteria;
  - Asphaltic pavement design criteria; and,
  - Construction considerations based on the above analyses.
- Evaluation of the potential for geohazards that may include the following: earthquake ground motion, fault rupture hazard, and slope stability.

- Provide seismic coefficients as per Structural Engineers Association of California (SEAOC) and OSHPD Seismic Design Maps.
- Record the results of our exploration and analysis in a technical memorandum.

2.0 EXPLORATION

Our exploration consisted of reviewing published geotechnical reports and maps related to the surface topography and geology of the Site vicinity and performing subsurface exploration. Documents reviewed are presented in the references section (Section 9.0) of this memorandum. Our subsurface exploration was performed on July 23, July 26, and July 27, 2021, and was limited to the advancement of thirteen test pits (TP1 through TP13) to depths ranging between 2 and 7.5 feet below ground surface (bgs) and borings (B1 through B16) to depths ranging from 3.5 to 11.5 feet bgs at the approximate locations shown in Figure 2. Test pits were excavated under the direction of a LACO geologist by Stapleton Engineering and Exploration using an excavator with a 2-foot bucket. Borings were drilled under the direction of a LACO geologist by Stapleton Engineering and Exploration using a MT52 bobcat track-mounted drill rig equipped with 5-inch diameter solid flight augers.

Soil samples were collected in test pits with hand tools from the sidewall or directly from the excavator bucket. Soil samples from borings were collected with a 1.5-inch inside diameter split-spoon sampler (Standard Penetration Test, (SPT) and 2.5-inch inside diameter (ID) Modified California split-spoon sampler, driven with a 140-pound hammer falling 30 inches. All blow counts have been converted to SPT values for reporting and analysis purposes. Our geologist logged the borings and test pits and obtained relatively undisturbed and disturbed soil samples for visual classification in general accordance with the American Society for Testing and Materials (ASTM) Test Procedure D2488 Visual-Manual Procedures and laboratory testing. Select soil samples were transported to LACO's testing and materials laboratory located in Santa Rosa, California, and were subject to the laboratory tests listed below:

- Atterberg Limits (ASTM D4318)
- Percent Finer than No. 200 Sieve (ASTM D1140)
- Resistance (R)-value

Laboratory test results are summarized in the boring and test pit logs enclosed in Appendix 2, with copies of the laboratory test results presented in Appendix 3. Laboratory test results are summarized in Table A below.

Table A. Laboratory Test Results

Boring Identification	Depth (feet bgs)	ASTM Soil Type	ASTM D1140	ASTM D4318		CA Test 301
			Fines Content (percent finer than No. 200 sieve)	Liquid Limit (percent)	Plasticity Index (percent)	R-value
TP4	1 to 2	CH	72.2	57	38	-
TP9	5	CL	74.6	46	31	-
B2	1 to 1.5	SC	46.4	30	12	-
B7	3 to 4.5	CL	74.5	48	29	-
B9	2 to 2.5	CL	59.1	42	24	-
B10	1.5 to 2	CL	61.3	25	9	-
B11	4 to 4.5	GM	33.1	28	12	-

B1 through B5	0 to 3	-	-	-	-	21
B8 though B13	0 to 3	-	-	-	-	19
TP3 and TP4	0.5 to 2	-	-	-	-	12

bgs – below ground surface

3.0 SITE CONDITIONS

3.1 Geologic Setting

The Site is located in the California Coast Ranges Geomorphic Province. This province is seismically active and geologically complex due to historic and ongoing tectonic deformation that is characterized by northwest-trending faults and topographic and geologic features. The California Coast Ranges Province extends west to the Pacific Ocean, east to the Great Valley, north to Oregon, and south to the Transverse Ranges. The complex structure of the Coast Ranges Geomorphic Province began with a period of plate convergence during late Jurassic which involved eastward thrusting of oceanic crust beneath the coastal crust and was characterized by the accretion of material to the continent and the formation of east-dipping thrust and reverse faults. Beginning in the mid-Cenozoic and continuing to the present, the plate boundary was dominated by right-lateral, strike-slip deformation which was superimposed on the existing structures. This is characterized by the northwest-trending nearly vertical faults of the San Andreas system.

The oldest bedrock units in the Coast Ranges Geomorphic Province are those of the Jurassic-Cretaceous Franciscan Complex and the Great Valley Sequence. Younger bedrock units consist of the Tertiary-aged Sonoma Volcanic Group, the Plio-Pleistocene-age Clear Lake Volcanics, and Sedimentary rock formations such as the Petaluma, Wilson Grove, and Huichica. Quaternary-aged alluvium generally covers the bedrock in the valleys and low-lying areas.

Ukiah valley is interpreted to be a fault-bounded, pull-apart basin flanked by valley-bounding hillslopes underlain by Cretaceous- to Jurassic-aged Franciscan Complex bedrock to the west and east (Jennings and Strand, 1960; Cardwell, 1965). Three mapped geologic units are within the Site alignment consist of Quaternary-aged non-marine terrace deposits (Qto), Cretaceous- to Jurassic-aged Franciscan Complex (KJf); and Cretaceous- to Jurassic-aged undivided marine sedimentary rocks (K) (Jennings, 1960). These units relative to the Site are described in the following subsections.

3.1.1 End of Hensley Creek Road to Station 4+00

Published geologic mapping indicates that this section of the project site is underlain by Quaternary-aged non-marine terrace deposits likely to have been associated with the ancestral Russian River channel. They are older alluvial deposits of Pleistocene-age. These terrace deposits are described as weathered clayey sand and gravel, silt, and clay. The terrace deposits are underlain by Cretaceous- to Jurassic-aged Franciscan Complex (KJf). The Franciscan Complex is described as sandstone, shale, chert, and conglomerate, with locally small areas of greenstone, limestone, basalt and glaucophane schist, and related metamorphic rocks (Jennings and Strand, 1960).

3.1.2 Station 4+00 to Station 34+00

Published geologic mapping indicates that this section of the project site is underlain by Cretaceous- to Jurassic-aged Franciscan Complex (KJf). The Franciscan Complex is described as sandstone, shale, chert,

and conglomerate, locally small areas of greenstone, limestone, basalt and glaucophane schist, and related metamorphic rocks (Jennings and Strand, 1960).

3.1.3 Station 34+00 to Station 41+00

Published geologic mapping indicates that this section of the project site is underlain by Cretaceous- to Jurassic-aged undivided marine sedimentary rocks (K). The undivided marine sedimentary rocks are described as sandstone, shale, and conglomerate (Jennings and Strand, 1960).

3.2 Surface and Subsurface Conditions

The Site consists of a proposed road alignment that will extend from the end of Hensley Creek Road southwesterly to the junction with Orr Springs Road (Figure 2; Appendix 1). The alignment is largely unpaved. However, two portions of the Site are asphalt paved:

- The end of Hensley Creek Road to Station 3+25; and,
- Stations 31+00 to 41+00.

The unpaved section transverses two ephemeral drainages with moderate slopes. Descriptions of surface and subsurface conditions are divided into the following subsections listed below. Boring and test pit logs are enclosed as Appendix 2.

3.2.1 End of Hensley Creek Road to Station 3+25

Exploratory borings B1 through B6 were advanced along the paved access near Mendocino College Ukiah Campus (end of Hensley Creek Road to Station 3+25). This section is generally flat to gently sloping.

Our exploratory borings indicate this section of the Site is blanketed by 20 to 36 inches of topsoil and/or fill that consists of loose to medium-dense clayey sand with gravel or hard sandy lean clay. Underlying the topsoil and/or fill is well consolidated sandstone bedrock that extended to the maximum depth explored, 8 bgs. In boring B2, a crushed and friable shale was encountered below the sandstone bedrock at a depth of 4.25 feet that extended to the total depth explored of 7 feet. No groundwater was encountered during our exploration.

3.2.2 Station 3+25 to Station 31+00

Exploratory boring B7 and test pits TP1 through TP13 were advanced in undeveloped terrain located between the track and baseball field, traversing moderate slopes and crossing two ephemeral drainages (dry at the time of the field exploration). Bedrock outcroppings are composed primarily of meta-sandstone and are present in areas of high relief (TP10) and intermittently along slopes from TP8 through TP13.

Observations and laboratory testing indicate that near surface materials through this section consist of:

- Fill and topsoil that ranges 0.5 to 2.5 feet in thickness and consists of a loose to medium dense clayey gravel with sand that is weak and porous, silty sand with gravel, and hard sandy lean clay with gravel; or a hard fat to lean clay from depths ranging from 0.5 to 7.25 feet bgs;
- Weak to hard meta-sandstone bedrock and a plastic to friable serpentinite or shale bedrock that is weathered to a very stiff to hard fat clay from depths ranging from 1.5 to the total depth explored of 10.5 feet bgs

Detailed Boring and Test pit Logs can be found in Appendix 2. No groundwater was encountered during our exploration in this section.

3.2.3 Station 31+00 to Station 41+00

Exploratory borings B8 through B16 were advanced along a moderately sloping asphalt paved communal driveway accessed from Orr Springs Road. A seasonal unnamed tributary is located along the west side of the alignment that was dry at the time of the exploration. The tributary flows southwesterly through a culvert under the existing communal driveway and Orr Spring Road to Orr Creek that had some pools of water present at the time of the exploration. Evidence of existing site grading consisting of cuts and fills of the native slopes were observed from Stations 36+25 to 41+00.

At the junction of the communal driveway with Orr Springs Road (Station 41+00), large outcroppings of very hard, occasionally fractured and competent meta-sandstone bedrock are present on both sides of the existing entrance. Additionally, very hard boulders of meta-sandstone from the surrounding outcroppings range up to 12 feet in diameter are present in the tributary and make up the roadbed at the entrance. The boulders extend under the communal driveway at the entrance as a source of fill. The depth of fill could not be determined due to refusal on the meta-sandstone boulders.

Our exploratory borings indicate this section of the Site is underlain by 2.25 to 7.5 feet of fill consisting of loose silty sand and gravel and medium dense to dense silty gravel with sand. Underlying the fill, meta-sandstone, shale, and serpentine bedrock was encountered at depths ranging from 1.5 to the total depth of exploration at 11.5 feet bgs. No groundwater was encountered during our exploration.

4.0 GEOLOGIC HAZARDS

4.1 Slope Instability

Slope instability maps for the Site were not provided and have not been discovered; however, no evidence of instability was observed within the project Site during our exploration. Provided construction is performed following the recommendations within this report, we judge that the potential for slope instability to adversely affect the Site to be low.

4.2 Seismicity

The Site is in a seismically active region where large earthquakes may be expected to occur during the economic lifespan (50 years) of the structures due to the seismic activity of the northern section of the San Andreas fault (Branum, et al., 2016). The nearest mapped active fault is the Maacama fault zone that is located approximately 1.75 miles to the east. The Maacama fault zone is approximately 100-miles-long, right lateral strike-slip, has an average strike of north 24° west, a vertical dip and slip rate of greater than 5 millimeters per year (Hart and Bryant, 2001).

The Site is not mapped as a special studies zone per the Alquist-Priolo Earthquake Fault Zoning Act and thus the likelihood of surface rupture from a potentially active fault is considered low (CDMG, 1983). Using an estimated mean shear wave velocity in the upper 100 feet (V_{S30}) of 733 meters per second (based on existing mapped velocities; CDC, 2016), the 2008 Ground Motion Interpolator indicates that within 50 years, the Site has a 2 percent probability of experiencing peak ground accelerations up to 0.964 times the acceleration of gravity (CDC, 2019).

4.3 Lurching

Seismic slope failure, or lurching, is a phenomenon that occurs during earthquakes when slopes or man-made embankments yield and displace in the unsupported direction. Provided construction follows the recommendations presented within this memorandum, we consider the potential for impact to the proposed developments from lurching is low.

4.4 Liquefaction

Liquefaction is a phenomenon that results in a loss of shear strength and potential soil volume reduction in loose, saturated sandy/silty soils below the groundwater table as a result of earthquake shaking. It is dependent on many factors, including the intensity and duration of ground shaking, the soil age, density, particle size distribution, and position of the groundwater table. Geologic hazards maps related to liquefaction susceptibility are not available for the Site or vicinity; however, based on soils observed at the site, and geologic maps (Cardwell, 1965; Jennings and Strand, 1960), the Site has low liquefaction susceptibility.

4.5 Flooding

The location of the proposed alignment is not mapped in a flood zone (FEMA 2011a; FEMA 2011b); however, on the south end of the proposed alignment, the federal emergency management agency (FEMA) study limit ends approximately 350 feet downstream (to the east) on Orr Creek (FEMA, 2011b).

4.6 Soil Swelling or Shrinkage Potential

Expansive soils tend to undergo volume changes (shrink or swell) with changes in moisture content. They generally consist of cohesive fine-grained clay soils and represent a significant structural hazard to structures and roads founded on them. Shrink-and-swell cycles associated with seasonal moisture variation events typically occur with the upper 30 inches of near-surface expansive soils. Near-surface soils in the area of TP3 through TP5 (Stations 12+00 to 16+00) consist of fat clay with high plasticity. Additionally, near surface soils consisting of clays with medium to high plasticity were encountered in near surface soils from Station 16+00 to Station 34+00. Based on soil classification and our laboratory testing, these near surface soils have a medium to possibly high potential to shrink and swell during seasonal moisture variation events.

5.0 CONCLUSIONS

Based on the results of our Site exploration the project is feasible from a geotechnical standpoint provided that the recommendations presented in our memorandum are incorporated into final design. If designed and constructed in accordance with the recommendations of this memorandum, we estimate total and differential settlement will be less than ½ inch over distances of 20 feet. A summary of geotechnical conclusions and recommendations are provided in the following sections.

5.1 End of Hensley Creek Road at Mendocino College to Station 3+25

The primary geotechnical concerns in this section consist of the following:

- presence of undocumented fill material; and,
- weak and porous topsoil extending up to 3 feet below ground surface.

5.2 Station 3+25 to Station 31+00

The primary geotechnical concerns for this area consist of the following:

- The presence of undocumented fill material and weak and porous topsoil extending to 2.5 feet below ground surface on sloping terrain;
- The potential for seasonal high groundwater conditions;
- The presence of clay soils that exhibit a medium to high potential for expansion; and,
- Areas where hard digging may be encountered.

5.3 Station 31+00 to Station 41+00 Conclusions

The primary geotechnical concerns for this area consist of the following:

- The presence of weak and porous near-surface soils and undocumented fill extending to a depth of 7.5 feet bgs on sloping terrain;
- The potential for seasonal high groundwater conditions;
- Retaining walls may be needed to retain cut and fill slopes; and,
- Areas of hard digging will be encountered.

6.0 RECOMMENDATIONS

6.1 Site Preparation and Grading

General Site preparation and grading recommendation have been provided in the following sections. Further detail, identified by Stationing, has been included in sections 6.1.1 through 6.1.3.

Areas to be graded should be stripped of any vegetation and topsoil containing organic material. Bushes and designated trees should be removed and their roots grubbed. These materials are not suitable for reuse as select fill. Prior to placement and compaction of engineered fill, undocumented fill should be removed to its full depth. We anticipate that excavation of fill and weak and porous topsoils will range from 20 inches up to 3 feet below existing grades. Following the excavation, LACO should approve the excavation bottoms to check that a firm and unyielding subgrade is suitable for fill placement. Prior to placement of fill, the exposed soil subgrade should be scarified to a depth of 6 inches, moisture conditioned to at least 2 percent wet of the optimum moisture content, and compacted to at least 90 percent relative compaction.[1] Material proposed for use as fill should be free of organic or other deleterious material and rocks with a maximum dimension greater than 3 inches, and should meet the following criteria:

Fraction Finer than No. 200 Sieve:	Between 5 percent and 60 percent
Plasticity Index:	15 percent or less
Liquid Limit:	35 percent or less

Fill material proposed for use should be observed and tested by LACO for conformance to the criteria listed above prior to importation to the Site. Fill should be placed in lifts no greater than 8 inches in loose thickness,

[1] Relative compaction refers to the ratio of the in place dry density of the soil to the maximum dry density as described in the latest addition of the ASTM D1557 compaction test procedure. Optimum Moisture Content is the water content as a percentage of the dry weight of the soil corresponding to the maximum dry density.

moisture conditioned to at least 2 percent wet of optimum moisture content and compacted to at least 90 percent relative compaction. In areas to receive vehicular loads, the upper 6 inches of soil subgrade should be compacted to at least 95 percent relative compaction and be firm and unyielding when subjected to proof-rolling during construction

6.1.1 End of Hensley Creek Road to Station 3+25

- Prior to placement and compaction of select fill, undocumented fills, and weak and porous surface soils, should be removed to their full depth.

- Our exploration indicates that on-site soils in this section are generally suitable for use as fill.

6.1.2 Station 3+25 to Station 31+00

- Our exploration indicates that portions of the soils are suitable for use as fill; however, our laboratory testing indicates that the on-site clay soils are of medium to high plasticity, likely expansive, and are not suitable for use as fill in the upper 12 inches.

- Prior to placement and compaction of engineered fill, weak and porous surface soils and undocumented fill should be removed to their full depths as determined by a LACO representative in the field during construction,

- We anticipate excavation could extend to 10 feet below the existing grade. Benches should be cut horizontally into firm soil or undisturbed bedrock in conjunction with fill placement. The maximum height of the benches should be reviewed in the field by the LACO representative in the field. A keyway should be constructed at the toe of the fill embankment and a LACO representative should be consulted prior to keyway construction to determine its location. The keyways should be a minimum of 8 feet in width and extend at least 3 feet into competent material consisting of firm soil or bedrock, as measured on the downhill side and as determined by the LACO representative in the field during construction.

- In general, cut and fill slope gradients should be inclined no greater than 2 horizontal to 1 vertical. However, in areas where expansive clay materials are present, the slopes should be no greater than 3:1 (horizontal:vertical). Where competent bedrock is present, slopes can be constructed at 1.5:1 provided no adverse rock conditions are present as determined by the LACO representative in the field at the time of construction. A fill slope construction detail has been provided in Figure 3. Steeper cut or fill slopes should be retained by walls.

6.1.3 Station 31+00 to Station 41+00

- Prior to placement and compaction of fill, weak and porous surface soils and undocumented fill should be removed as determined by a LACO representative in the field during construction.

- Our exploration indicates that a majority of the on-site soils are suitable for use as fill; however, our laboratory testing indicates that the clay soils are of medium to high in plasticity and should not be used as fill in the upper 12 inches.

- We anticipate that excavations could extend up to 8 feet below the existing grade. Benches should be cut horizontally into competent bedrock in conjunction with fill placement. The maximum height of the benches should be reviewed in the field by the LACO representative. A keyway should be constructed at the toe of the fill embankment and a LACO representative should be consulted prior to keyway construction to determine its location. The keyways should be a minimum of 8 feet in width and extend at least 3 feet into competent material consisting of bedrock, as measured on the downhill side and as determined by the LACO representative the field during construction. Cut and fill slope gradients should be maintained/designed at slopes no greater than 2 horizontal to 1 vertical. Steeper cut or fill slopes will require specialized engineering and grading techniques and may need to be retained. A fill slope construction detail has been provided in Figure 3.

- Where lateral site constraints prevent engineered fill or cut slopes, retaining walls will be required. We understand that three retaining walls are planned to be used to retain cut and fills slopes for this project. Retaining wall foundations should bear on bedrock or firm native soils. The foundation support for the proposed retaining walls can be provided by drilled piers or spread footings foundations bearing on bedrock. Prior to placement and compaction of select fill, undocumented fills, and weak and porous surface soils, should be removed to their full depth. A LACO representative should observe foundation excavation bottoms to check that suitable bearing materials are exposed.

6.2 Retaining Wall Foundations

It is our understanding that retaining walls could be required from Station 36+25 to 41+00. Retaining wall foundations should consist of spread footing or driller pier foundation systems in accordance with the recommendations below.

6.2.1 Spread Footings

Spread footings for the planned retaining walls shown on the project plans should bear entirely on competent native soil or bedrock. Footings should extend a minimum of 12 inches below lowest adjacent grade and should achieve a minimum of 5 feet of horizontal confinement between the bottom of the footing and the face of the nearest slope. All footings should be at least 12 inches (continuous) or 18 inches (isolated) wide. Footings adjacent to existing utility trenches or other footings should be deepened enough to bear below a 1:1 (horizontal: vertical) plane extending upwards from the bottom edge of utility trench or footing excavation. Additional embedment may be needed to satisfy code and/or structural requirements. On ungraded sloping terrain, footings should be stepped as necessary to produce level tops and bottoms.

The bottoms of all footing excavations should be thoroughly cleaned out or wetted and compacted using hand-operated tamping equipment prior to placing steel and concrete. This will remove the soils that were disturbed during footing excavations, or restore their adequate bearing capacity, and reduce post-construction settlements. Footing excavation should not be allowed to dry before placing concrete. If shrinkage cracks appear in soils exposed in the footing excavations, the soil should be thoroughly moistened to close all cracks prior to concrete placement. A LACO representative should observe the footing excavations within 24 hours prior to the placement of reinforcing steel and concrete forms to check that they are founded in suitable bearing materials, have been properly cleaned of loose soil, and the proper moisture condition has been achieved.

6.2.1.1 *Bearing Pressures*

Footings bearing on competent bedrock and can be designed using a maximum allowable bearing capacity of 3,000 pounds per square foot (psf). These values can be increased by one-third when considering wind or seismic loads.

6.2.1.2 *Lateral Pressures*

The portion of spread footings on bedrock may impose a passive equivalent fluid pressure and a friction factor of 350 pounds per cubic foot (pcf) and 0.35, respectively, to resist sliding. Passive pressure should be neglected within the upper 6 inches unless the soils are confined by concrete slabs or pavements.

6.2.2 Drilled Piers

As an alternative, drilled piers can be used to support retaining walls. Drilled piers should gain support from firm native soil or bedrock. Piers should be spaced no closer than three (3) pier diameters, center to center.

6.2.2.1 *Skin Friction*

The portion of the piers extending below the upper 2 feet can be designed using an allowable skin friction of 500 pounds per square foot (psf) for dead load plus long-term live loads. This value can be increased by one-third for total loads, wind, and seismic forces. End bearing should be neglected because of the difficulty of cleaning out small diameter pier holes and the uncertainty of mobilizing end bearing and skin friction simultaneously. The piers can be designed to resist uplift using one-third of the downward capacity.

6.2.2.2 *Lateral Forces*

Lateral loads on piers can be resisted by passive pressure using an equivalent fluid pressure of 350 pcf acting on two pier diameters should be used. Confinement for passive pressure can be assumed to commence at the ground surface, but neglected in the upper 3 feet.

6.2.2.3 *Concrete*

Concrete mix design and placement should be done in accordance with the current International Association of Foundation Drilling (ADSC) and/or American Concrete Institute (ACI) specifications. Concrete should not be allowed to mushroom at the top of piers or below the bottom of grade beams.

6.2.2.4 *Pier Drilling*

Groundwater was not encountered in our exploration. If groundwater is encountered during drilling, it may be necessary to de-water the holes and/or place concrete using the tremmie method. If caving soils are encountered, it may be necessary to case the holes.

A LACO engineer or geologist should observe all pier excavations to check that suitable bearing materials are exposed, proper cleanout is achieved, and to modify our recommendations if warranted based on conditions exposed during construction

6.3 Retaining Walls

Retaining walls can be adequately supported by a system of drilled piers or spread footings constructed according to the recommendations presented in the Foundations section of this Memorandum. Allowable active and at-rest equivalent fluid pressures for level backfill conditions are presented below; these pressures act in a triangular distribution and assume that backdrains (described below) will be installed. Where

retaining wall backfill is subject to vehicular traffic, the walls should be designed to resist an added surcharge pressure equivalent to 2 feet of additional backfill. The ground surface behind retaining walls should be sloped to drain. Where migration of moisture through retaining walls would be detrimental, retaining walls should be waterproofed.

Level Backfill

Active Pressure	40 pcf
At Rest Pressure	60 pcf

pcf – pounds per cubic foot

Backfill Slopes Greater than 3:1

Active Pressure	50 pcf
At Rest Pressure	70 pcf

pcf – pounds per cubic foot

Retaining walls should also be designed to resist a seismic surcharge following the guidelines presented in Table B. The dynamic component of total thrust should be applied as a line load at a height of 0.6 times the height above the base of the retaining wall.

Table B. Seismic Surcharge on Retaining Walls

Backslope Inclination (β)	Total Thrust (lbs/ft)
$0 < \beta \leq 8:1$	$15H^2$
$8:1 < \beta \leq 4:1$	$20H^2$
$4:1 < \beta$	$25H^2$

H – Height of retaining wall

6.3.1 Retaining Wall Back Drains

Retaining wall back drains should be installed to reduce the potential for build-up of hydrostatic pressure acting on both restrained and free to rotate retaining walls and should be constructed following the recommendations presented in Figure 4. Retaining wall subdrains should be constructed and discharged in designated drainage facilities and away from foundations and steep slopes.

6.4 Slab-on-Grade

Exterior slabs and/or concrete flatwork can be supported entirely on a minimum of 12 inches of engineered fill that extends a minimum of 3 feet beyond the edge of the slab and should be constructed following the recommendations presented in Figure 5.

Prior to slab construction, the subgrade should be scarified to a depth of 6 inches, be compacted following the recommendations presented in the Site Preparation and Grading section (Section 6.1) of this memorandum, and maintained in a wet-of-optimum moisture content condition. To provide a capillary moisture break between the slab and the supporting soil/rock, we recommend a 4-inch-thick layer of crushed rock be placed on the prepared subgrade. The crushed rock should be placed as soon as possible after slab subgrade preparation to reduce the potential for drying and cracking of the moisture-conditioned subgrade material. Where the risk of moisture vapor movement through the slab may be detrimental to the intended use of the slab, the capillary break material should be covered by an impermeable membrane consisting of

15-mil Stego® Wrap sheeting, or equivalent, installed in accordance with the manufacturer's recommendations.

Special precautions should be taken during the placement and curing of all concrete slabs. Excessive slump (high water-cement ratio) of the concrete and/or improper curing procedures used during either hot-or cold-weather conditions could lead to excessive shrinkage, cracking, or curling of the slabs. High water-cement ratio and/or improper curing also greatly increase the water vapor permeability of concrete. We recommend concrete placement and curing operations be performed in accordance with the American Concrete Institute (ACI) manual.

6.5 Asphalt Pavement

6.5.1 End of Hensley Creek Road to Station 3+25; and Station 34+00 to 41+00

The following asphalt pavement section is provided for the roadway planned from the end of Hensley Creek Road to Station 3+25; and from Station 34+00 to Station 41+00 of the project plans (Appendix 1). The upper 6 inches of soil subgrade in pavement areas should be compacted to 95 percent relative compaction and be firm and unyielding when subjected to proof-rolling as observed by a LACO representative. To estimate a minimum pavement section thickness, an R-value of 19 was selected based on laboratory test results (Table A). Minimum pavement section thicknesses are presented in Table C below.

Table C. Minimum Recommended Pavement Section Thicknesses with Corresponding Traffic Index

Traffic Index (TI)	HMA Thickness (Inches)	Class 2 Aggregate Base Thickness (Inches)
6	3.0	10.5
7	3.5	13.0
8	4.5	14.5

HMA-Hot Mix Asphalt

Hot mix asphalt (HMA) and Class 2 aggregate base materials should meet the requirements specified in the latest edition of the CalTrans Standard Specifications. The Class 2 aggregate base should be compacted to at least 95 percent relative compaction prior to HMA placement and compaction.

6.5.2 Station 3+25 to Station 34+00

The following asphalt pavement section pertains from Station 9+00 to Station 34+00 of the project plans (Appendix 1). The upper 6 inches of soil subgrade in pavement areas should be compacted to 95 percent relative compaction and be firm and unyielding when subjected to proof-rolling as observed by a LACO representative. To estimate a minimum pavement section thickness, an R-value of 12 was selected based on laboratory test results (Table A). Minimum pavement section thicknesses are presented in Table D below.

Table D. Minimum Recommended Pavement Section Thicknesses with Corresponding Traffic Index

Traffic Index (TI)	HMA Thickness (Inches)	Class 2 Aggregate Base Thickness (Inches)
6	3.0	12.0
7	3.5	14.5
8	4.5	16.5

HMA-Hot Mix Asphalt

Hot mix asphalt (HMA) and Class 2 aggregate base materials should meet the requirements specified in the latest edition of the CalTrans Standard Specifications. The Class 2 aggregate base should be compacted to at least 95 percent relative compaction prior to HMA placement and compaction.

6.6 Seismic Design Parameters

Earthquake design parameters presented herein are based on the California building code (CBC) and the standard "Minimum Design Loads and Associated Criteria for Buildings and Other Structures" (ASCE 7-16), which, in turn, is based on a maximum considered earthquake ground motion, defined as the motion caused by an event with a 2-percent probability of exceedance within a 50-year period (recurrence interval of approximately 2,500 years). We used the site location (39.181959°, -123.234449°), site class D, and risk level III, as project input to Seismic Design Maps tool co-developed by the Structural Engineers Association of California (SEAOC) and California's Office of Statewide Health Planning and Development (OSHPD) (SEAOC and OSHPD, 2019). Values of those inputs and model outputs are presented in Table E. Based on the soils encountered, we recommend a seismic design category of D.

We refer the building designer to the exemptions listed in ASCE 7-16 to determine whether a site-specific ground motion analysis is required.

Table E. Summary of Seismic Design Parameters

Site Class	F_a	F_v	S_s	S_1	S_{MS}	S_{M1}	S_{DS}	S_{D1}	Ts
D	1.0	1.7	1.929	0.738	1.929	1.255	1.286	0.836	0.650

* F_v, S_{M1}, and S_{D1} may only be used for calculation of T_s

The factors are defined as follows:

- S_s - Mapped spectral response acceleration, 5 percent damped, at 0.2 second period (times g).
- S_1 - Mapped spectral response acceleration, 5 percent damped, at 1.0 second period (times g).
- F_a – Short period coefficient to modify 0.2 second period of mapped spectral response accelerations.
- F_v – Long-period coefficient to modify 1.0 second period of mapped spectral response accelerations.
- S_{MS} – Maximum considered earthquake spectral response acceleration, 5 percent damped, at 0.2 seconds (times g).
- S_{M1} – Maximum considered earthquake spectral response acceleration, 5 percent damped, at 1.0 second period (times g).
- S_{DS} – Design spectral response acceleration, 5 percent damped, at 0.2 second period (times g).
- S_{D1} – Design spectral response acceleration, 5 percent damped, at 1.0 second period (times g).
- Ts - S_{D1} / S_{DS}

7.0 CONSTRUCTION CONSIDERATIONS

7.1 Groundwater

Groundwater was not encountered in test pits or borings during our exploration. However, seasonal groundwater levels fluctuate and may rise above the depths explored. Provided construction is performed during the dry months of summer or early fall, it may not be a concern. If groundwater accumulates in foundation excavations, it should be pumped out prior to concrete placement.

7.2 Pier Drilling

If caving soils are encountered, it may be necessary to case the holes. If groundwater is encountered during drilling, it may be necessary to de-water the holes and/or place concrete using the tremie method. Hard drilling may be required to achieve the desired depths.

7.3 Surface Drainage

The Site should generally be graded to provide positive surface drainage away from foundations. A minimum gradient of 3 percent should be maintained for hardscape areas within 5 feet of a structure where this does not conflict with Americans with Disabilities Act (ADA) design requirements. A minimum 5 percent gradient should be maintained for landscaped areas not designed to receive foot traffic within 5 feet of a structure. The grading or landscaping design and construction should not allow water to pond on the Site within 10 feet of any engineered structure nor to migrate beneath any structure. Runoff from hardscaped areas, roofs, patios, and other impermeable surfaces should be contained, controlled, and directed into the Site storm drainage or infiltration systems.

7.4 Subsurface Drainage

A retaining wall back drain will be required as outlined in Section 6.3. At a minimum, retaining wall subdrains should be constructed and routed away from foundations and steep slopes. The retaining wall back drain should be constructed as shown in Figure 4.

7.5 Temporary Slopes and Trench Excavations

Contractor is responsible for the stability of temporary slopes and trenches excavated at the Site and the design and construction of any required shoring. Shoring and bracing should be provided in accordance with all applicable local, state, and federal safety regulations, including the current Occupational Safety and Health Administration (OSHA) excavation and trench safety standards. Because of the potential for variable soil conditions, field modifications of temporary cut slopes may be necessary. Unstable materials encountered on the slopes during the excavation should be removed.

8.0 FUTURE GEOTECHNICAL SERVICES

To check for conformance with specific recommendations contained in this memorandum and to confirm assumptions made in the preparation of this memorandum, LACO should be retained to perform the following:

- Review project plans and specifications;

- Observe Site grading activities and check exposed grades prior to placement of select engineered fill;
- Observe placement of all select engineered fill and trench backfill with verification by field and laboratory testing;
- Observe foundation excavation prior to placement of any forms or reinforcing steel; and
- Observe subdrain installation.

9.0 LIMITATIONS

This memorandum has been prepared for the exclusive use of the Mendocino-Lake Community College District, their contractors, consultants, and appropriate public authorities for specific application to the planned new developments. LACO has exercised a standard of care equal to that generated for this industry so that the information contained in this memorandum is current and accurate. The opinions presented in this memorandum are based upon information obtained from subsurface excavations, a Site reconnaissance, review of geologic maps and data available to us, and upon local experience and engineering judgment, and have been formulated in accordance with generally accepted geotechnical engineering practices that exist in California at the time of this memorandum. In addition, geotechnical issues may arise that are not apparent at this time. No other warranty, expressed or implied, is made or should be inferred.

Data generated for this memorandum represent information gathered at that time and at the widely spaced locations indicated. Subsurface conditions may be highly variable and difficult to predict. As such, the recommendations included in this memorandum are based, in part, on assumptions about subsurface conditions that may only be observed and/or tested during subsequent project earthwork. Accordingly, the validity of these recommendations is contingent upon review of the subsurface conditions exposed during construction in order to check that they are consistent with those characterized in this memorandum. Upon request, LACO can discuss the extent of (and fee for) observations and tests required to check the validity of the recommendations presented herein.

The opinions presented in this memorandum are valid as of the present date for the property evaluated. Changes in the condition of the property can occur over time, whether due to natural processes or the works of man, on this or adjacent properties. In addition, changes in applicable standards of practice can occur, whether from legislation or the broadening of knowledge. Accordingly, the opinions presented in this memorandum may be invalidated, wholly or partially, by changes outside our control. Therefore, this memorandum is subject to review and should not be relied upon after a period of three years, nor should it be used, or is it applicable, for any property other than that evaluated. This memorandum is valid solely for the purpose, Site, and project described in this document. Any alteration, unauthorized distribution, or deviation from this description will invalidate this memorandum. LACO assumes no responsibility for any third-party reliance on the data presented. Additionally, the data presented should not be utilized by any third party to represent data for any other time or location.

10.0 REFERENCES

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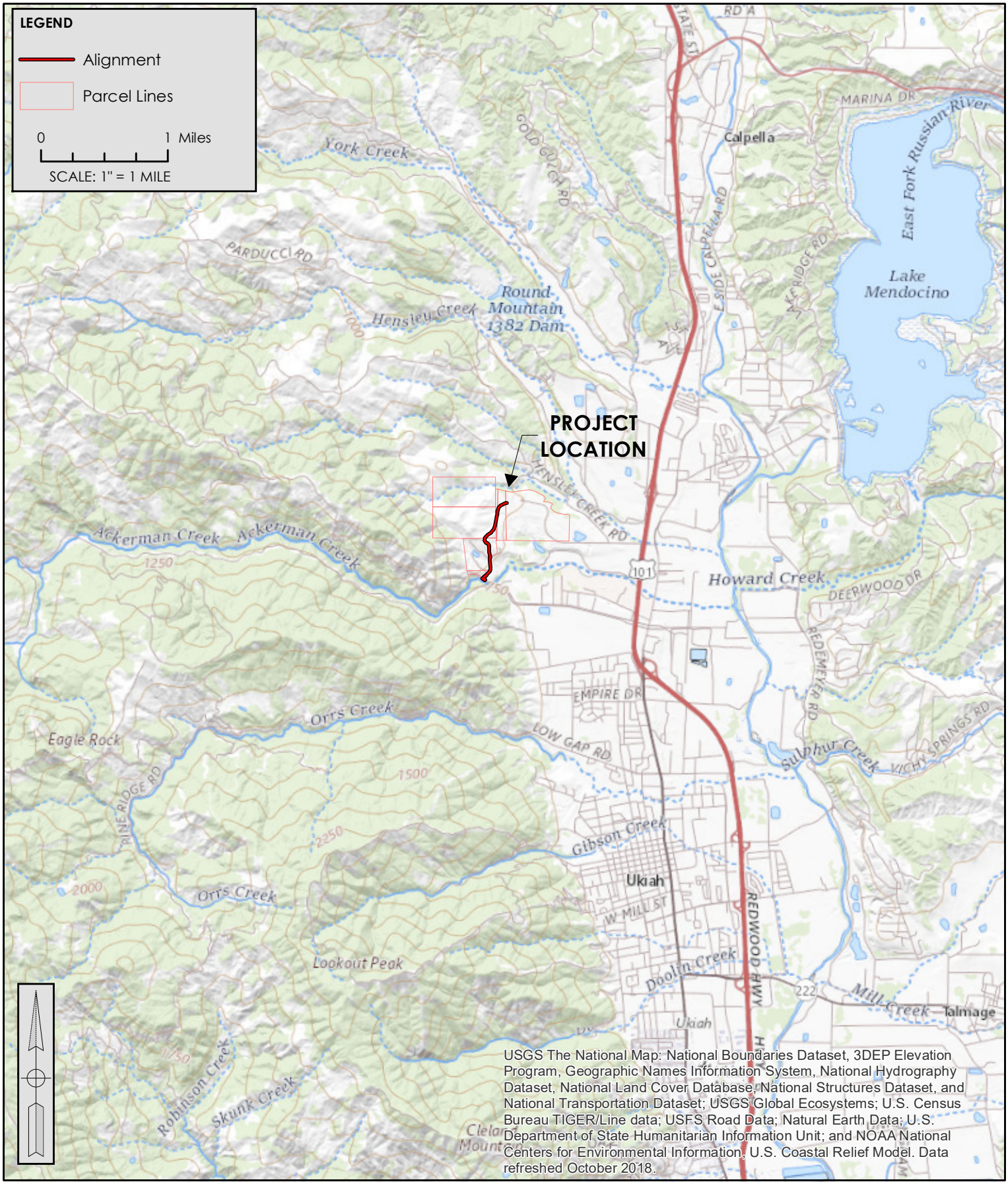
FIGURES

LACO EUREKA • UKIAH • SANTA ROSA 1-800-515-5054 www.lacoassociates.com	PROJECT	SECONDARY ACCESS FEASIBILITY STUDY	BY	JRG	FIGURE 1
	CLIENT	MENDO-LAKE COMMUNITY COLLEGE DISTRICT	CHECK	KRM	
	LOCATION	1000 HENSLEY CREEK ROAD, UKIAH, CA	DATE	08/17/21	JOB NO. 6816.28
		SITE VICINITY			



LACO EUREKA • UKIAH • SANTA ROSA 1-800-515-5054 www.lacoassociates.com	PROJECT SECONDARY ACCESS FEASIBILITY STUDY	BY JRG	FIGURE 2
	CLIENT MENDO-LAKE COMMUNITY COLLEGE DISTRICT	CHECK KRM	
	LOCATION 1000 HENSLEY CREEK ROAD, UKIAH, CA	DATE 08/17/21	JOB NO. 6816.28
	SITE PLAN		

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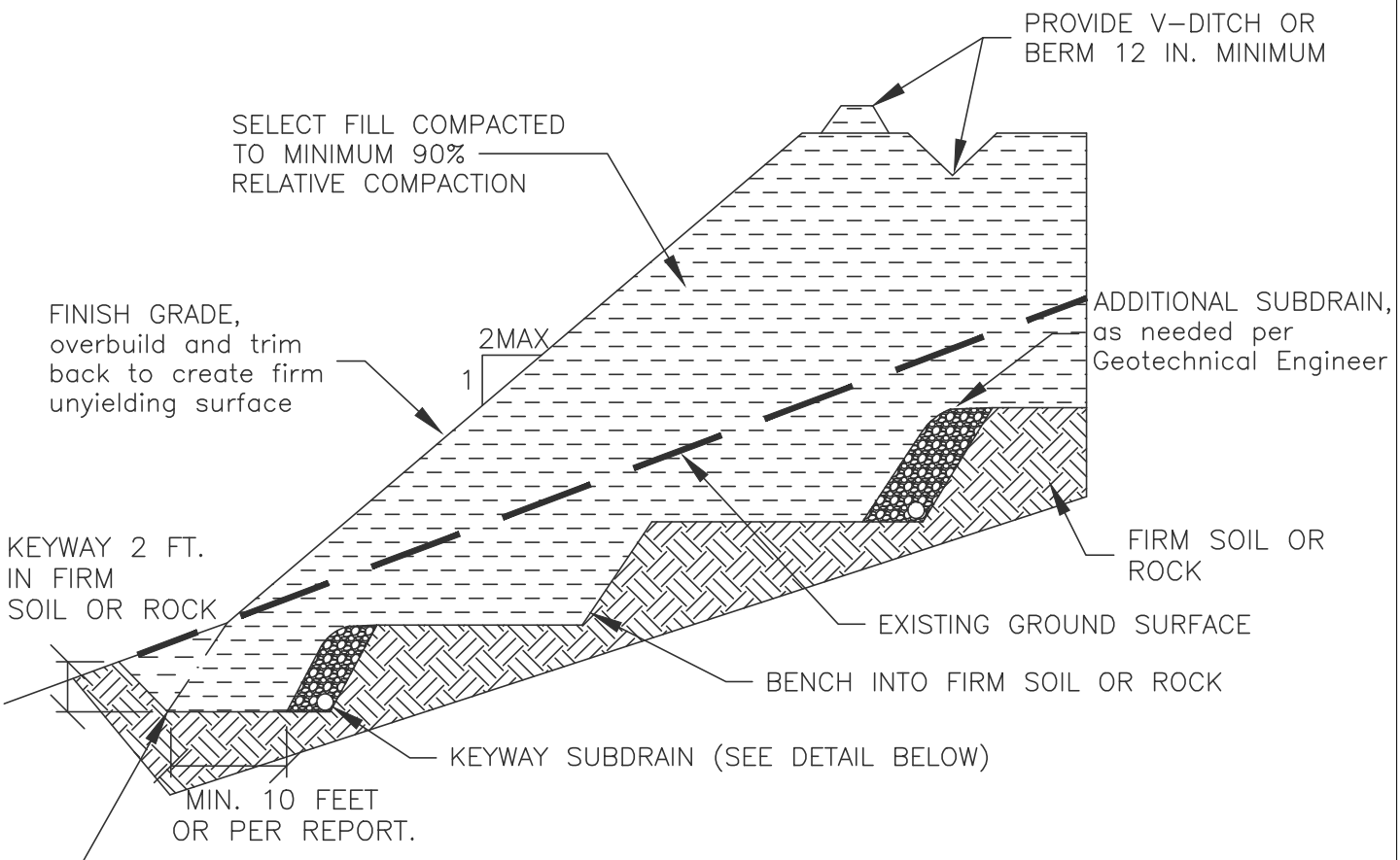
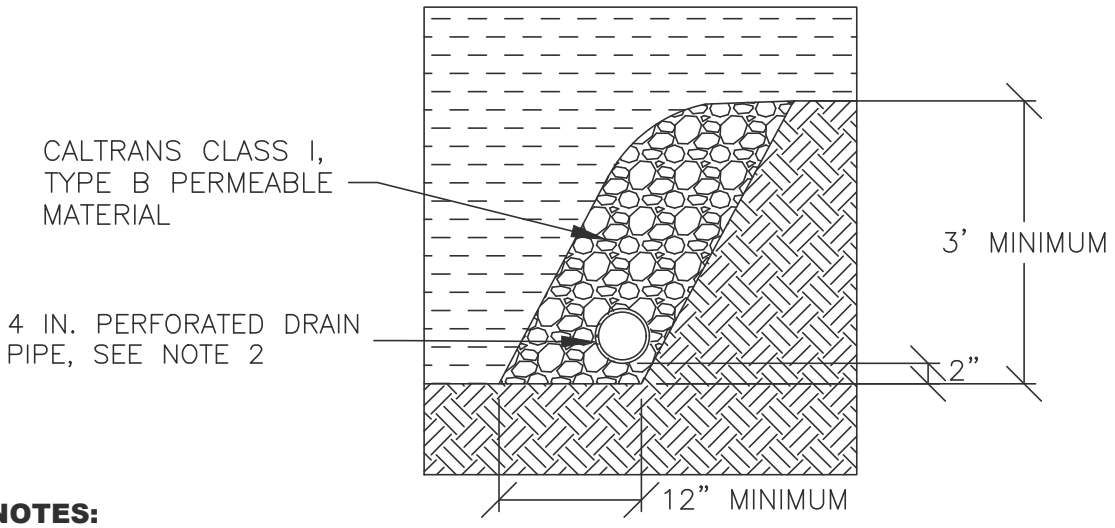
PROJECT	Secondary Access Feasibility Study	BY KRM	FIGURE 3
CLIENT	MCCSD	DATE 8/27/21	
LOCATION	1000 Hensley Creek Road to Orr Springs Road	CHECK JNK	JOB NO. 6816.28
	FILL OVER SLOPE CONSTRUCTION	SCALE N.T.S.	



KEYWAY SUBDRAIN DETAIL



NOTES:

(1) Drain rock should meet the Class 1 Type B permeable material requirements in the latest version of the Caltrans standard specifications.
(2) Drain pipe should be SDR 35 or equivalent, placed with perforation down, and sloped at a minimum of 1% to drain to gravity outlet or sump with automatic pump.
(3) A clean–out pipe with cap should be installed at the up–slope end of perforated pipe, and pipe elbows should be 45 degrees or less (for "snake" access)

May 22,2020–4:39pm T:\Cadfiles\GEOTECHNICAL DETAILS\ FILL OVER SLOPE CONSTRUCTION.dwg

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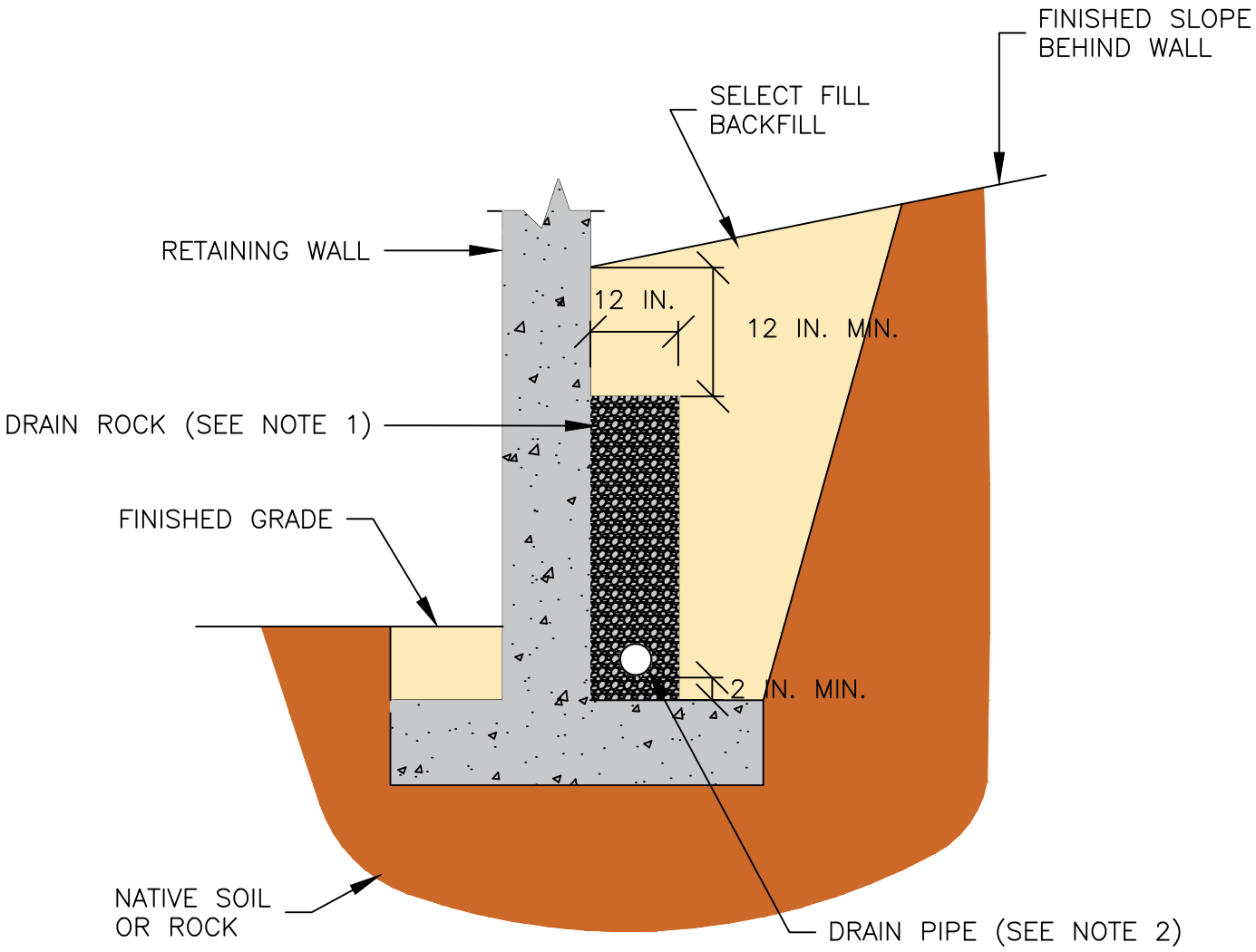
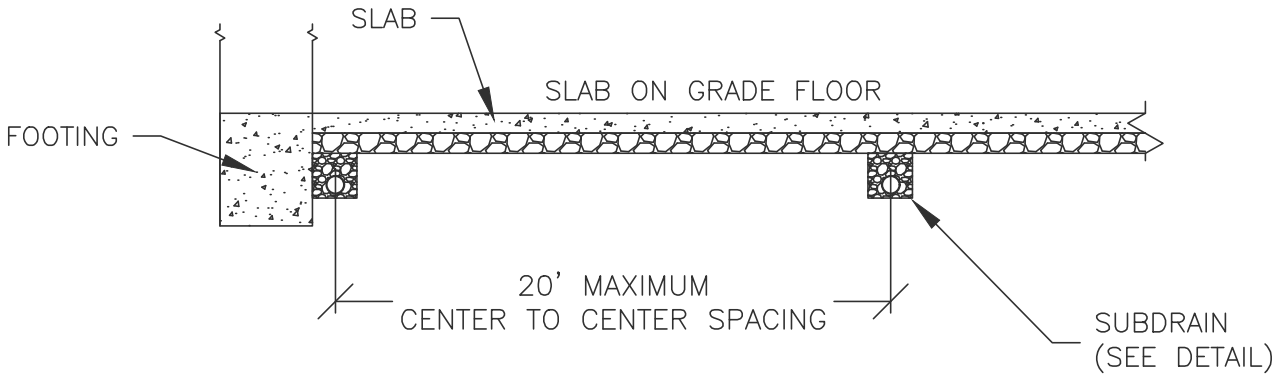
PROJECT	PROJECT	Secondary Access Feasibility	BY KRM	FIGURE 4
CLIENT	CLIENT	MCCSD	DATE 4/30/2020	
LOCATION	ADDRESS	1000 Hensley Creek Road	CHECK JER	JOB NO. 6816.28
	RETAINING WALL BACKDRAIN RECOMMENDATION		SCALE NTS	

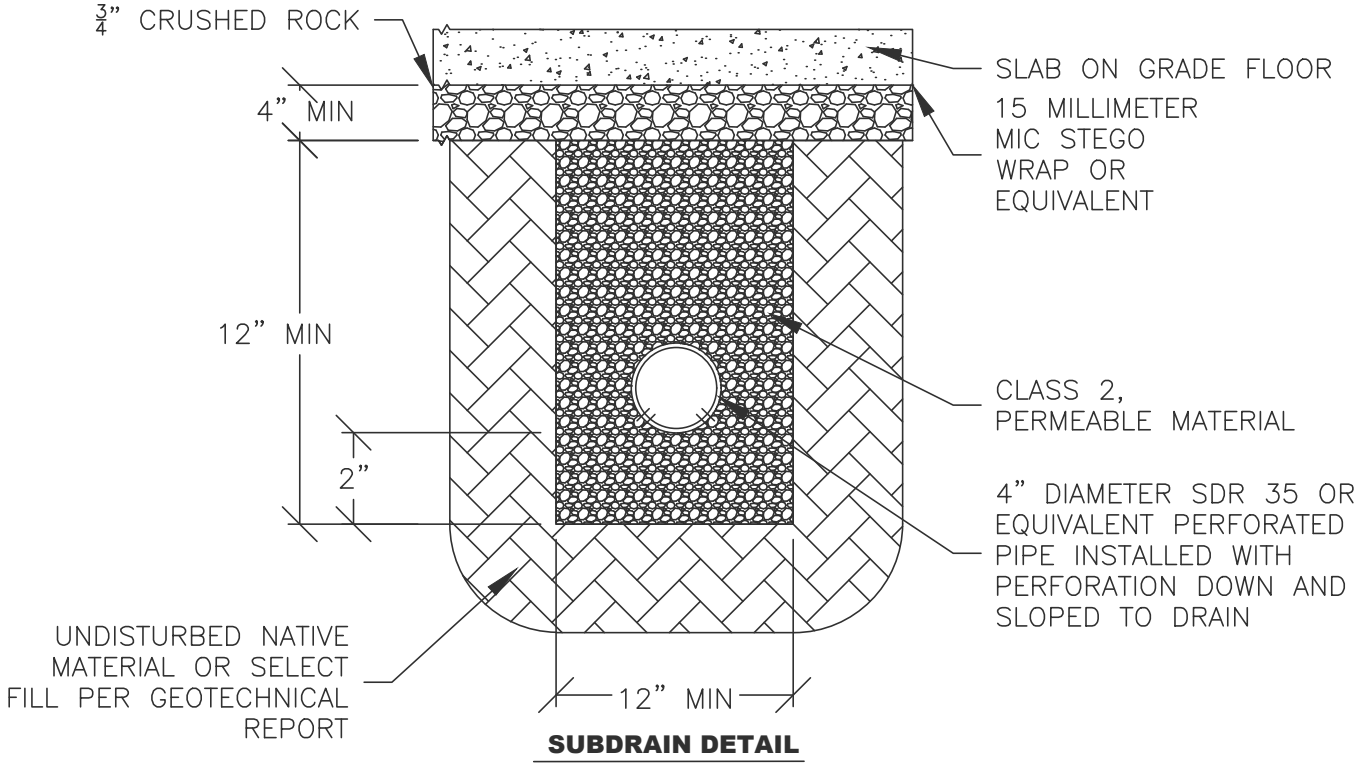


NOTES:

(1) Drain rock should meet Class 2 Permeable Material requirements in the latest edition of the Caltrans Standard Specifications.
(2) Drain pipe should be SDR 35 or equivalent, placed with perforations down, and sloped to drain by gravity to daylight or sump with automatic pump.
(3) A clean–out pipe with cap should be installed at the up–slope end of perforated pipe with pipe elbows 45 degrees or less (for "snake" access).
(4) See the Site Preparation and Grading Section for select fill requirements.

LACO	PROJECT	Secondary Access Feasibility	BY	KRM	FIGURE
EUREKA • UKIAH • SANTA ROSA	CLIENT	MCCSD	DATE	9/2/21	5
1-800-515-5054 WWW.LACOASSOCIATES.COM	LOCATION	1000 Hensley Creek Road	CHECK	JNK	JOB NO. 6816.28
		SLAB-ON-GRADE SUBDRAIN	SCALE	NTS	





SUBDRAIN DETAIL

Jan 09,2020-11:45am
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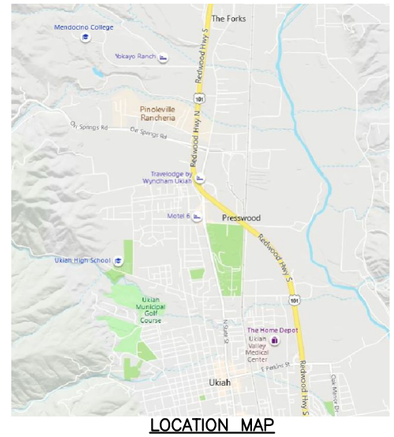
APPENDIX 1

Secondary Access Road Conceptual Design

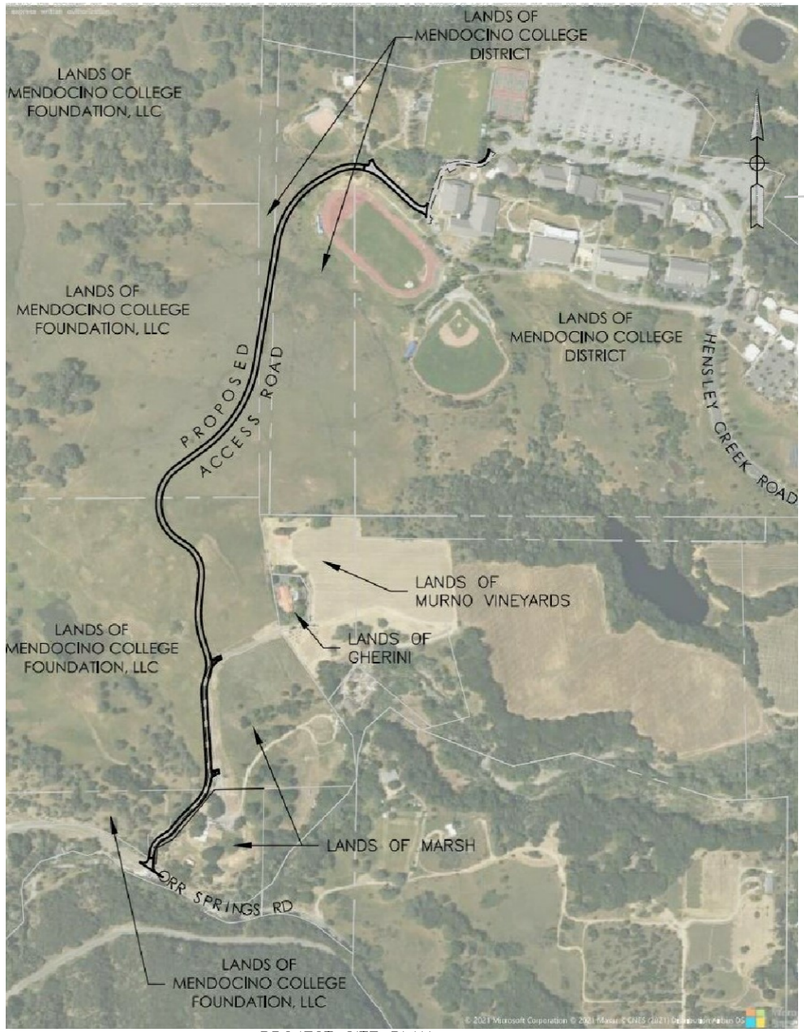
LACO

SECONDARY ACCESS ROAD CONCEPTUAL DESIGN

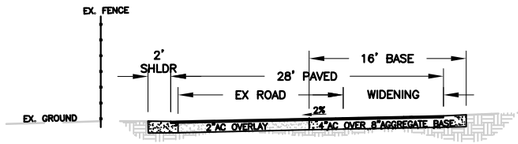
FOR
MENDOCINO COMMUNITY COLLEGE DISTRICT
UKIAH CAMPUS



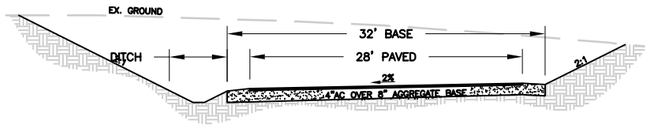
LOCATION MAP



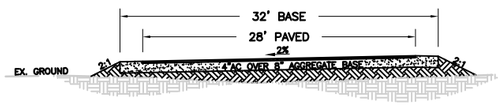
PROJECT SITE PLAN



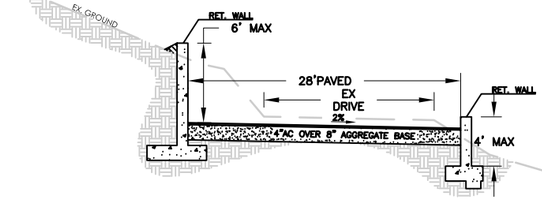
EXISTING ROAD W/ WIDENING
TYPICAL SECTION



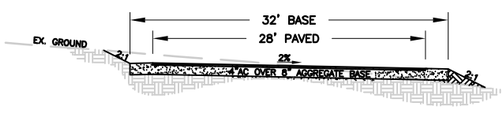
ROAD CUT W/ DITCH
TYPICAL SECTION



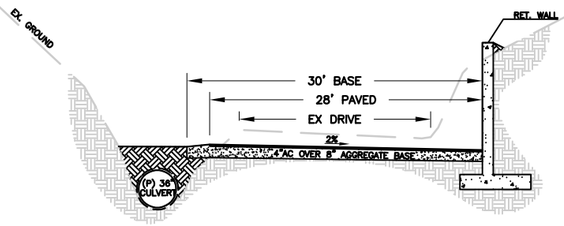
ROAD ON FILL
TYPICAL SECTION



ROAD W/ WALL & WIDENING
TYPICAL SECTION



ROAD CUT/FILL
TYPICAL SECTION



ROAD W/ WALL AT ORR SPRINGS
TYPICAL SECTION

BY	KD
DATE	4/30/2021
CHECK	RLW
SCALE	NO SCALE
SHEET	1
JOB NO.	6816.28

PROJECT: CONCEPTUAL PLAN
CLIENT: MENDO-LAKE COMMUNITY COLLEGE DISTRICT
LOCATION: UKIAH CAMPUS, UKIAH
COVER SHEET

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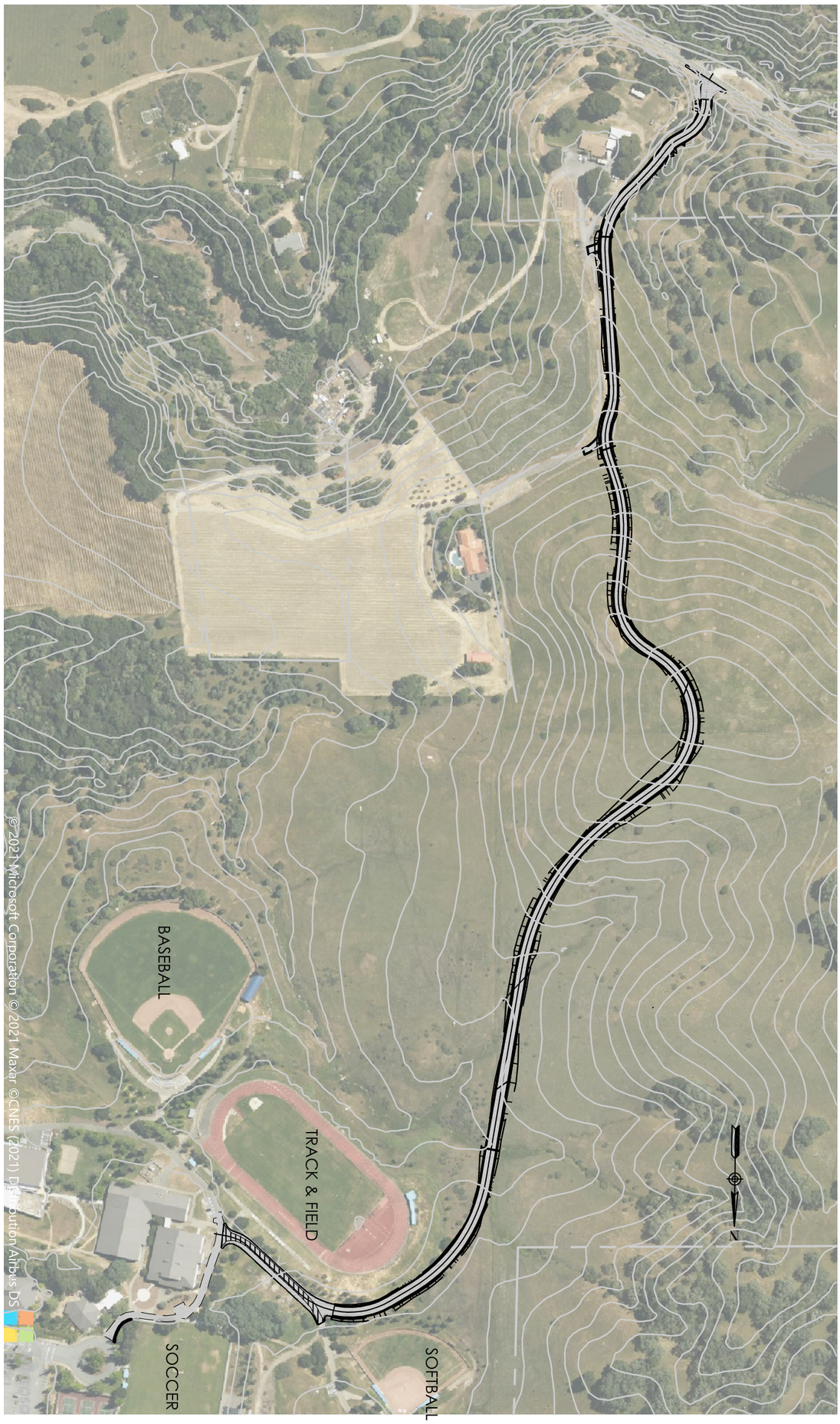

LACO EUREKA • UKIAH • SANTA ROSA 1-800-515-5054 www.lacoassociates.com	PROJECT CONCEPTUAL PLAN	BY KD	SHEET 2
	CLIENT MENDO-LAKE COMMUNITY COLLEGE DISTRICT	DATE 4/30/2021	
	LOCATION UKIAH CAMPUS, UKIAH	CHECK RLW	JOB NO. 6816.28
	SITE PLAN	SCALE 1"=300'	

BY	KD
DATE	4/30/2021
CHECK	RLW
SCALE	1"=80'
SHEET	3
JOB NO.	6816.28

PROJECT: CONCEPTUAL PLAN
CLIENT: MENDO-LAKE COMMUNITY COLLEGE DISTRICT
LOCATION: UKIAH CAMPUS, UKIAH
ROAD PLAN STA. 0+00 TO 9+50

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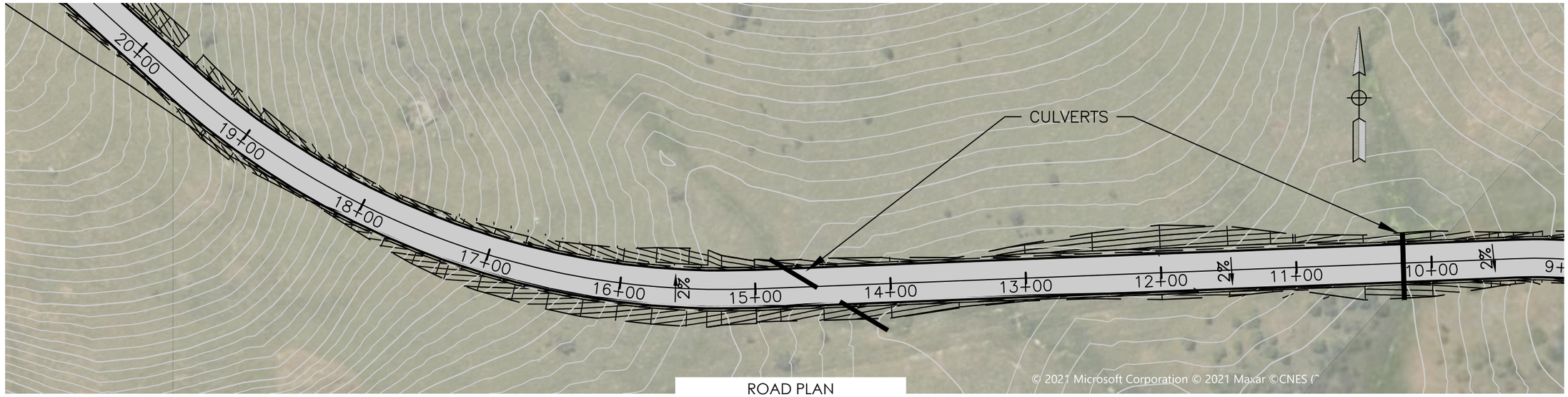

ROAD PLAN
STATION 9+50 TO 20+00

ROAD PLAN
STATION 20+00 TO 32+50

BY	KD
DATE	4/30/2021
CHECK	RLW
SCALE	1"=80'
SHEET	4
JOB NO.	6816.28

PROJECT: CONCEPTUAL PLAN
CLIENT: MENDO-LAKE COMMUNITY COLLEGE DISTRICT
LOCATION: UKIAH CAMPUS, UKIAH
ROAD PLAN STA. 9+50 TO 32+50

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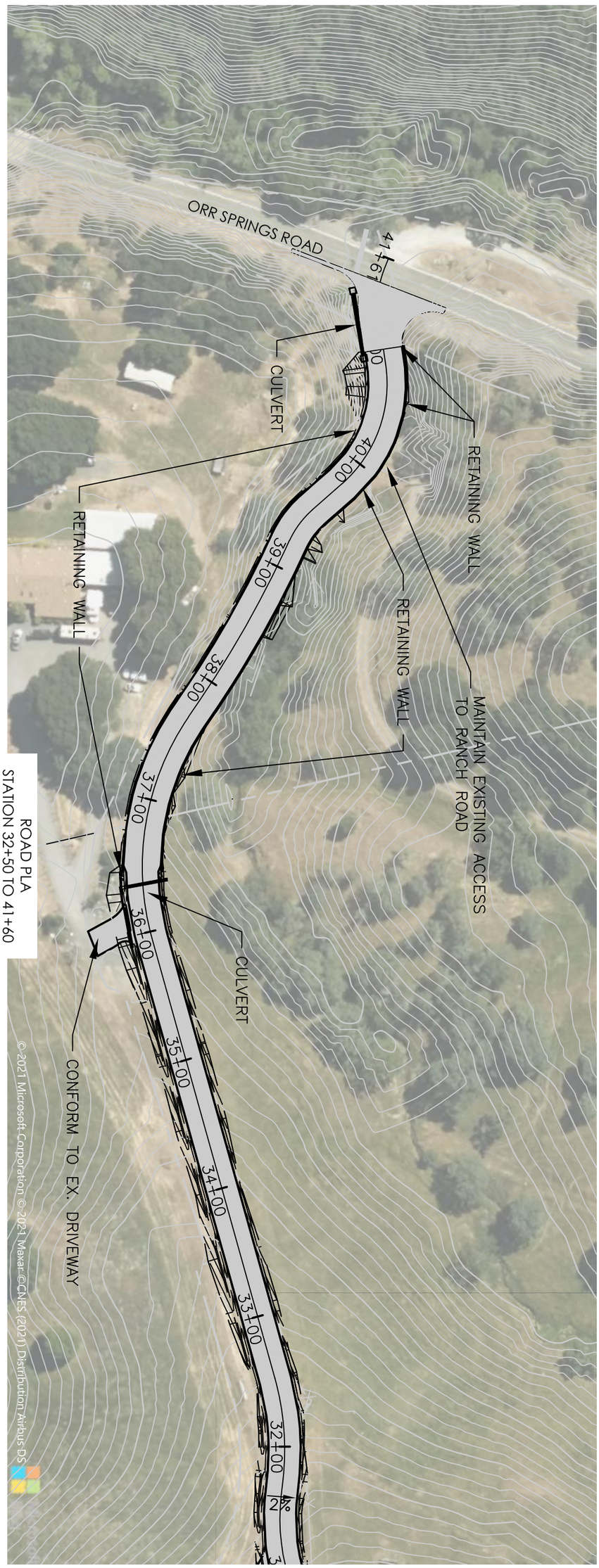

LACO EUREKA • UKIAH • SANTA ROSA 1-800-515-5054 www.lacoassociates.com	PROJECT CONCEPTUAL PLAN	BY KD	SHEET 5
	CLIENT MENDO-LAKE COMMUNITY COLLEGE DISTRICT	DATE 4/30/2021	
	LOCATION UKIAH CAMPUS, UKIAH	CHECK RLW	JOB NO. 6816.28
	ROAD PLAN STA. 32+50 TO 41+60	SCALE 1"=80'	

APPENDIX 2

Boring Logs

BORING NUMBER B1

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/26/21 **COMPLETED** 7/26/21
GROUND ELEVATION _____ **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Stapleton
GROUND WATER LEVELS:
DRILLING METHOD Solid Flight Auger
AT TIME OF DRILLING ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF DRILLING ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SC) Orange Brown Clayey Sand (Topsoil) dry, medium dense fine with some coarse sand, fine to 1/4 inch subangular gravel high plasticity fines											
			MC	57	7-13-14 (27)								
2.5		Orange Brown Sandstone Bedrock well consolidated, very intensely factured moderate weathering fine-grained, dry											
			MC	87	8-13-16 (29)								
5.0		Bottom of borehole at 5.0 feet.											

BORING NUMBER B2

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/26/21 **COMPLETED** 7/26/21
GROUND ELEVATION _____ **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Stapleton
GROUND WATER LEVELS:
DRILLING METHOD Solid Flight Auger
AT TIME OF DRILLING ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF DRILLING ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		Shredded Bark (Landscaping Material)											
		(SC) Orange Brown Clayey Sand (Topsoil) dry, medium dense fine with some coarse sand, fine to 1/2 inch subangular gravel Large chert clast in shoe at 20 to 25 inches bgs	MC	87	12-11-10 (21)		>4.5			30	18	12	46
2.5		Orange Brown Sandstone Bedrock well consolidated, very intensely factured low hardness, deeply weathered											
			MC	83	4-8-9 (17)		3.75 to 4.5						
5.0		Brown with Gray and Black Shale crushed plastic to friable, low hardness, deeply weathered dry, weathered to a sandy lean clay to sandy fat clay with gravel											
			SPT	89	7-11-22 (33)		2.5 to 4						

Bottom of borehole at 7.0 feet.

BORING NUMBER B3

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/26/21 **COMPLETED** 7/26/21
GROUND ELEVATION _____ **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Stapleton
GROUND WATER LEVELS:
DRILLING METHOD Solid Flight Auger
AT TIME OF DRILLING ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF DRILLING ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SC) Orange Brown Clayey Sand dry, medium dense fine with some coarse sand, fine to 1/2 inch subrounded to subangular gravel											
			MC	67	9-24-32 (56)	32 blows over 4 inches	2.5 to >4.5						
2.5		Orange Brown Sandstone moderately consolidated, moderate to strong intensely fractured, moderately weathered fine grained, some dark brown/black staining along fractures											
			SPT	100	50/6"	50 blows over 5.5 inches							
5.0													
			SPT	11	39-50/3"	50 blows over 3 inches							

Bottom of borehole at 6.8 feet.

BORING NUMBER B4

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/26/21 **COMPLETED** 7/26/21
GROUND ELEVATION _____ **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Stapleton
GROUND WATER LEVELS:
DRILLING METHOD Solid Flight Auger
AT TIME OF DRILLING ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF DRILLING ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SM) Light Brown Silty Sand with Gravel (Fill/Topsoil) dry, loose to medium dense fine with some coarse sand, fine to 1/2 inch angular to subangular gravel weak and porous											
		(CL) Orange Sandy Clay (Fill) dry, hard fine sand	MC	83	5-8-11 (19)		>4.5						
2.5		Orange Brown Sandstone moderately consolidated, moderate to strong intensely fractured, moderately weathered fine grained, some dark brown/black staining along fractures	MC	100	32	32 blows over 6 inches (converted from 50 blows)							
5.0													
7.5			SPT	100	31-50	50 blows over 6 inches							

Bottom of borehole at 8.0 feet.

BORING NUMBER B5

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/26/21 **COMPLETED** 7/26/21
GROUND ELEVATION _____ **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Stapleton
GROUND WATER LEVELS:
DRILLING METHOD Solid Flight Auger
AT TIME OF DRILLING ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF DRILLING ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SM) Light Brown Silty Sand with Gravel (Fill) dry, loose to medium dense fine with some coarse sand, fine to 1/2 inch angular to subangular gravel weak and porous											
			MC	90	4-10-12 (22)								
2.5		Orange Brown Sandstone moderately consolidated, moderate to strong intensely fractured, moderately weathered fine grained, some dark brown/black staining along fractures											
			SPT	72	19-28-46 (74)								
5.0		Bottom of borehole at 5.0 feet.											

BORING NUMBER B6

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/26/21 **COMPLETED** 7/26/21
GROUND ELEVATION _____ **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Stapleton
GROUND WATER LEVELS:
DRILLING METHOD Solid Flight Auger
AT TIME OF DRILLING ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF DRILLING ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SM) Light Brown Silty Sand with Gravel (Fill) dry, loose to medium dense fine with some coarse sand, fine to 1/2 inch angular to subangular gravel weak and porous											
			MC	93	3-5-5 (10)		3.5 to 3.75						
2.5		Orange Brown Sandstone moderately consolidated, moderate to strong intensely fractured, moderately weathered fine grained, some dark brown/black staining along fractures											
			MC	50	7-16-25 (41)								
5.0		Bottom of borehole at 5.0 feet.											

BORING NUMBER B7

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/26/21 **COMPLETED** 7/26/21
GROUND ELEVATION _____ **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Stapleton
GROUND WATER LEVELS:
DRILLING METHOD Solid Flight Auger
AT TIME OF DRILLING ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF DRILLING ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SM) Light Brown Silty Sand with Gravel (Fill) dry, loose to medium dense fine with some coarse sand, fine to 1/2 inch angular to subangular gravel weak and porous	MC	67	5-6-6 (12)								
2.5		(CL) Orange Brown Sandstone weathered to a Lean Clay with Sand dry, very stiff fine sand					>4.5						
			MC	80	4-9-14 (23)		3.5 to 3.75			48	19	29	75
5.0													
		Shale crushed, friable deeply weathered	MC	70	9-17-32 (49)	32 blows over 3 inches (converted from 50 blows)							
7.5													
			SPT	100	18-32-50 (82)	50 blows over 5.5 inches							
10.0		Bottom of borehole at 10.5 feet.											

BORING NUMBER B8

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/27/21 **COMPLETED** 7/27/21
GROUND ELEVATION _____ **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Stapleton
GROUND WATER LEVELS:
DRILLING METHOD Solid Flight Auger
AT TIME OF DRILLING ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF DRILLING ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SM) Light Brown Silty Sand with Gravel (Fill) dry, loose fine to coarse sand, fine to 1 inch subangular gravel											
			MC	67	3-4-6 (10)		3.5 to 4.25						
2.5		(CL) Dark Gray Lean Clay (Weathered Franciscan Melange) dry, very stiff to hard very fine to fine sand Not much fabric preserved of bedrock											
			MC	47	6-7-8 (15)		>4.5						
		Dark Gray Franciscan Melange crushed, friable, deeply weathered medium dense, subrounded / polished meta-sandstones in matrix, calcite infilings											
5.0													
			SPT	100	7-10-10 (20)								
7.5													
			SPT	100	9-10-14 (24)								
10.0		Bottom of borehole at 10.0 feet.											

BORING NUMBER B9

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/27/21 **COMPLETED** 7/27/21
GROUND ELEVATION _____ **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Stapleton
GROUND WATER LEVELS:
DRILLING METHOD Solid Flight Auger
AT TIME OF DRILLING ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF DRILLING ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SM) Light Brown Silty Sand with Gravel (Fill) dry, loose fine to coarse sand, fine to 1 inch subangular gravel											
			MC	63	4-3-3 (6)		1.75 to 2.5			42	18	**24**	59
2.5		(CL) Dark Gray Sandy Lean Clay (Weathered Franciscan Melange) moist, very stiff to hard fine sand some fabric preserved of bedrock											
			MC	80	4-10-7 (17)		4.5 to >4.5						
5.0		Dark Gray Fransican Melange crushed weak, friable, deeply weathered medium dense, dry to moist some weathered zones throughout											
7.5			SPT	83	6-8-9 (17)		>4.5						

Bottom of borehole at 8.5 feet.

BORING NUMBER B10

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/27/21 **COMPLETED** 7/27/21
GROUND ELEVATION _____ **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Stapleton
GROUND WATER LEVELS:
DRILLING METHOD Solid Flight Auger
AT TIME OF DRILLING ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF DRILLING ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SM) Light Brown Silty Sand with Gravel (Fill) dry, loose fine to coarse sand, fine to 1 inch subangular gravel weak and porous											
		(CL) Brown Sandy Clay with Gravel (Fill) dry, medium stiff high plasticity fines, weak and porous	MC	87	5-7-8 (15)		>4.5			25	16	9	61
2.5													
			MC	33	5-9-13 (22)		>4.5						
5.0		(CL) Dark Gray Lean Clay (Weathered Franciscan Melange) moist, hard fine sand, minor very fine gravel some fabric preserved of bedrock medium plasticity fines											
		Dark Gray Serpentinite/Shale crushed friable, soft hardness, deeply weathered											
7.5			SPT	61	5-7-6 (13)	Driller notes harder starting at 8.5 feet	>4.5						
		Gray Meta-Sandstone weak, friable, deeply weathered medium dense to dense											
10.0			SPT	100	33-50/4"	50 blows over 4 inches							
		Bottom of borehole at 11.5 feet.											

BORING NUMBER B11

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/27/21 **COMPLETED** 7/27/21
GROUND ELEVATION _____ **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Stapleton
GROUND WATER LEVELS:
DRILLING METHOD Solid Flight Auger
AT TIME OF DRILLING ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF DRILLING ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SM) Light Brown Silty Sand with Gravel (Fill) dry, loose fine to coarse sand, fine to 1/2 inch subrounded to subangular gravel weak and porous											
			MC	78	6-6-10 (16)		4.25 to 4.5						
2.5		(SC) Brown Clayey Sand with Gravel (Fill) dry, medium dense fine to coarse sand, fine to 6 inch subangular to angular gravel some fine roots. Gravel clasts consit of serpentinite, quartz and meta-sanstone. Could be reworked native.											
			MC	73	5-7-8 (15)		>4.5			28	17	11	33
5.0													
		Gray Shale crushed and sheared friable, low hardness, deeply weathered aphanitic				Driller notes that drilling becomes harder at 6.5 feet							
7.5			SPT	69	35-44-36 (80)								
			SPT	25	50/4"	Driller notes that auger only advance 0.5 inches over 6 minutes. Followed with SPT but sample pulverized by sampler. 50 blows over 4 inches							

Refusal at 9.4 feet.
Bottom of borehole at 9.4 feet.

BORING NUMBER B12

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/27/21 **COMPLETED** 7/27/21
GROUND ELEVATION _____ **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Stapleton
GROUND WATER LEVELS:
DRILLING METHOD Solid Flight Auger
AT TIME OF DRILLING ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF DRILLING ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SM) Light Brown Silty Sand with Gravel (Fill) dry, loose fine to coarse sand, fine to 1/2 inch subrounded to subangular gravel weak and porous											
		(GM) Brown Silty Gravel with Sand (Fill) dry, medium dense to dense fine to coarse sand, fine to 6 inch subangular to angular gravel some fine roots. Gravel clasts consit of serpentinite, quartz and meta-sanstone. Could be reworked native.	MC	89	6-13-17 (30)		4.25 to >4.5						
2.5		Gray Meta-Sandstone Bedrock intensely fractured moderately hard (dense) dry	SPT	100	50/5"	50 blows over 4 inches. Sample pulverized by sampler.							

Refusal at 4.0 feet.
Bottom of borehole at 4.0 feet.

BORING NUMBER B13

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/27/21 **COMPLETED** 7/27/21
GROUND ELEVATION _____ **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Stapleton
GROUND WATER LEVELS:
DRILLING METHOD Solid Flight Auger
AT TIME OF DRILLING ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF DRILLING ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SM) Light Brown Silty Sand with Gravel (Fill) dry, loose fine to coarse sand, fine to 1/2 inch subrounded to subangular gravel weak and porous											
			MC	87	7-6-6 (12)		4 to >4.5						
2.5		(GM) Brown Silty Gravel with Sand (Fill - Reworked Native) dry, medium dense to dense fine to coarse sand, fine to 6 inch subangular to angular gravel											
			MC	100	3-4-7 (11)		3.5 to 4.25						
5.0													
						Driller notes occasional gravels while drilling Driller notes that drilling becomes harder at 7 to 7.5							
7.5		Gray Meta-Sandstone Bedrock intensely fractured moderately hard (dense) dry											
			SPT	61	20-23-30 (53)								

Bottom of borehole at 9.5 feet.

BORING NUMBER B14

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/27/21 **COMPLETED** 7/27/21
GROUND ELEVATION _____ **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Stapleton
GROUND WATER LEVELS:
DRILLING METHOD Solid Flight Auger
AT TIME OF DRILLING ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF DRILLING ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SM) Light Brown Silty Sand with Gravel (Fill) dry, loose fine to coarse sand, fine to 1/2 inch subrounded to subangular gravel weak and porous											
			MC	100	28-23-21 (44)								
2.5		(GM) Refusal on Meta-Sandstone boulder at 3.5 feet with drill rig Boring adjacent to creek on driveway near junction with Orr Springs Road. Lots of boulders in road bed and in creek (up to 12 feet in length) derived from bedrock outcrop along road. Top of road to bottom of creek is approximately 5 feet in depth, fill noted to total depth. Bedrock above road is meta-sandstone massive, occasionally fractured, very hard, very strong	SPT	52	50/6"	50 blows over 5.75 inches							

Refusal at 3.5 feet.
Bottom of borehole at 3.5 feet.

BORING NUMBER B15

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/27/21 **COMPLETED** 7/27/21
GROUND ELEVATION _____ **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Stapleton
GROUND WATER LEVELS:
DRILLING METHOD Solid Flight Auger
AT TIME OF DRILLING ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF DRILLING ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SM) Light Brown Silty Sand with Gravel (Fill) dry, loose fine to coarse sand, fine to 1/2 inch subrounded to subangular gravel weak and porous	MC	100	11-13-13 (26)	Sample pulverized by sampler, but large clast in shoe. Followed with SPT							
2.5		Gray Meta-Sandstone Bedrock moderately hard (dense) dry	SPT	56	16-17-22 (39)								
5.0			SPT	72	20-20-18 (38)								

Bottom of borehole at 6.5 feet.

BORING NUMBER B16

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/27/21 **COMPLETED** 7/27/21
GROUND ELEVATION _____ **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Stapleton
GROUND WATER LEVELS:
DRILLING METHOD Solid Flight Auger
AT TIME OF DRILLING ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF DRILLING ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SM) Light Brown Silty Sand with Gravel (Fill) dry, loose fine to coarse sand, fine to 1/2 inch subrounded to subangular gravel weak and porous											
			MC	88	10-27								
2.5		Gray Meta-Sandstone Bedrock moderately hard (dense) dry				rig off center, no blows for last 6 inches							
			SPT	82	36-50/5"	50 blows over 5 inches							

Bottom of borehole at 4.5 feet.

TEST PIT NUMBER TP1

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/23/21 **COMPLETED** 7/23/21
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR Stapleton
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(CL) Brown Gravelly Lean Clay with Sand (Fill) dry, hard fine to coarse sand, fine to 4 inch angular gravel weak and porous	GB				>4.5						
2.5		Dark Brown Meta-Sandstone Bedrock closely fractured, moderately hard, weak to moderately strong deeply weathered, dry	GB										
5.0		Refusal at 5.0 feet. Bottom of test pit at 5.0 feet.											

TEST PIT NUMBER TP2

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/23/21 **COMPLETED** 7/23/21
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR Stapleton
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(CL) Brown Gravelly Clay with Sand (Fill) dry, hard fine to coarse sand, fine to 3 inch angular gravel weak and porous, some trash in matrix	GB				>4.5						
		Dark Brown Meta-Sandstone closely fractured, moderately hard, weak to moderately strong deeply weathered, dry											

Refusal at 2.0 feet.
Bottom of test pit at 2.0 feet.

TEST PIT NUMBER TP3

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/23/21 **COMPLETED** 7/23/21
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR Stapleton
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GC) Brown Clayey Gravel with Sand (Fill/Topsoil) dry, loose fine to coarse sand, fine to 3 inch angular gravel weak and porous	GB				>4.5						
2.5		(CH) Dark Brown mottled with Dark Gray Fat Clay hard, dry very fine sand	GB				4.5						
5.0		(CH) Dark Gray with Purple and Green Serpentinite dry, crushed, low to soft hardness, plastic to friable deeply weathered to a fat clay that ranges from stiff to hard	GB				>4.5 2.5 to 3 3.5 4.5						
7.5		Dark Green/Gray Serpentinite dry, crushed, soft hardness, plastic to friable deeply weathered to a stiff to very stiff fat clay some polished serpentinite nodules in weathered/sheared matrix	GB				3 to 4.5						

Refusal at 5.0 feet.
Bottom of test pit at 7.5 feet.

TEST PIT NUMBER TP4

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/23/21 **COMPLETED** 7/23/21
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR Stapleton
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GC) Brown Clayey Gravel (Fill/Topsoil) dry, loose fine to coarse sand, fine to 3 inch angular gravel					>4.5						
		(CH) Dark Brown Fat Clay with Sand dry, hard very fine sand	GB				>4.5			57	20	37	72
2.5		(CH) Dark Gray with Purple and Green Serpentinite dry, crushed, low to soft hardness, plastic to friable deeply weathered to a fat clay that is very stiff to stiff	GB				4						
5.0			GB				3						
		Dark Green/Gray Serpentinite dry, crushed, soft hardness, plastic to friable deeply weathered some polished serpentinite nodules in weathered/sheared matrix	GB				>4.5						

Bottom of test pit at 7.0 feet.

TEST PIT NUMBER TP5

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/23/21 **COMPLETED** 7/23/21
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR Stapleton
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GM) Brown Silty Gravel with Sand dry, medium dense fine to coarse sand, fine to 18 inch angular gravel (meta-sandstone) non-plastic fines, weak and porous	GB				>4.5						
2.5		(CH) Dark Gray Fat Clay with Sand dry, hard fine to coarse sand, fine to 3 inch angular gravel high plasticity fines	GB				>4.5						
5.0		(CH) Dark Grayish Green Serpentinite dry, crushed, soft hardness, plastic to friable deeply weathered to a fat clay some polished serpentinite nodules in weathered/sheared matrix	GB				>4.5						

Refusal at 5.5 feet.
Bottom of test pit at 5.5 feet.

TEST PIT NUMBER TP6

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/23/21 **COMPLETED** 7/23/21
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR Stapleton
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		Gray Meta-Sandstone dry, closely to intensely fractured very hard, moderately strong moderately weathered Bedrock outcroppings in nearby vicinity											

Refusal at 1.0 feet.
Bottom of test pit at 1.0 feet.

TEST PIT NUMBER TP7

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/23/21 **COMPLETED** 7/23/21
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR Stapleton
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GC) Brown Clayey Gravel with Sand (Topsoil) dry, loose to medium dense fine to coarse sand, fine to 3 inch angular gravel weak and porous	GB				>4.5						
2.5		(CH) Dark Brown Fat Clay (Weathered Franciscan Melange) dry, hard fine sand refusal on very dense/strong meta-sandstone boulder/bedrock at 3 feet. Moved test pit to south and advanced to refusal at 5 feet.	GB				>4.5						
5.0			GB										

Refusal at 5.0 feet.
Bottom of test pit at 5.0 feet.

TEST PIT NUMBER TP8

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/23/21 **COMPLETED** 7/23/21
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR Stapleton
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GC) Brown Clayey Gravel with Sand (Topsoil) dry, loose to medium dense fine to coarse sand, fine to 3 inch angular gravel weak and porous	GB				>4.5						
2.5		Orange Brown Metasandstone dry, closely to intensely fractured moderately hard, weak to moderately strong moderately to deeply weathered											

Refusal at 3.0 feet.
Bottom of test pit at 3.0 feet.

TEST PIT NUMBER TP9

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/23/21 **COMPLETED** 7/23/21
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR Stapleton
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GC) Brown Clayey Gravel with Sand (Topsoil) dry, loose to medium dense fine to coarse sand, fine to 3 inch angular gravel weak and porous	GB				>4.5						
2.5		(CH) Dark Gray Fat Clay (Weathered Meta-Sandstone Bedrock) dry, hard very fine to fine sand, hard some less weathered zones present where bedrock is intact	GB				>4.5						
5.0		(CL) Dark Gray Lean Clay with Sand (Weathered Franciscan Melange) dry, hard fine sand	GB				4 to 4.5			46	14	32	75

Refusal at 5.5 feet.
Bottom of test pit at 5.5 feet.

TEST PIT NUMBER TP10

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/23/21 **COMPLETED** 7/23/21
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR Stapleton
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GC) Brown Clayey Gravel with Sand (Topsoil) dry, loose to medium dense fine to coarse sand, fine to 3 inch angular gravel weak and porous											
		Gray Meta-Sandstone dry, closely to intensely fractured very hard, moderately strong moderately weathered Bedrock outcroppings in nearby vicinity											

Refusal at 2.0 feet.
Bottom of test pit at 2.0 feet.

TEST PIT NUMBER TP11

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/23/21 **COMPLETED** 7/23/21
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR Stapleton
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	ATTERBERG LIMITS (%) PLASTIC LIMIT	ATTERBERG LIMITS (%) PLASTICITY INDEX	FINES CONTENT (%)
0.0		Gray Meta-Sandstone dry, closely to intensely fractured very hard, moderately strong moderately weathered Bedrock outcroppings in nearby vicinity											

Refusal at 2.0 feet.
Bottom of test pit at 2.0 feet.

TEST PIT NUMBER TP12

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/23/21 **COMPLETED** 7/23/21
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR Stapleton
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GC) Brown Clayey Gravel with Sand (Topsoil) dry, loose to medium dense fine to coarse sand, fine to 3 inch angular gravel weak and porous	GB				>4.5						
		(CH) Dark Gray Fat Clay (Weathered Franciscan Melange) dry, hard fine sand											
2.5			GB				>4.5						
		Same as above but less weathered serpentinite bedrock											
5.0													

Refusal at 6.0 feet.
Bottom of test pit at 6.0 feet.

TEST PIT NUMBER TP13

LACO

CLIENT Mendocino-Lake Community College District
PROJECT NAME MLCCD: Secondary Access Feasibility Study
PROJECT NUMBER 6816.28
PROJECT LOCATION 1000 Hensley Creek Road, Ukiah, California
DATE STARTED 7/23/21 **COMPLETED** 7/23/21
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR Stapleton
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY KRM **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GC) Brown Clayey Gravel with Sand (topsoil) dry, loose to medium dense fine to coarse sand, fine to 3 inch angular gravel weak and porous	GB				>4.5						
		(CH) Dark Gray Fat Clay (Weathered Franciscan Melange) dry, hard fine sand											
2.5			GB				>4.5						
		Same as above but less weathered Franciscan Melange bedrock	GB				>4.5						
5.0													

Refusal at 5.5 feet.
Bottom of test pit at 5.5 feet.

APPENDIX 3

Laboratory Test Results

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FINER THAN #200 SIEVE
ASTM C117/ASTM D-1140

PROJECT	Mendocino- Lake Community College		JOB NO. 6816.28		SHEET
CLIENT	MLCCD		SAMPLE ID 176		1 of 1
LOCATION	Ukiah, CA	TEST BY GF		DATE 8/7/21	
		CHECKED BY GF		CHECK DATE 8/12/21	

B2 @ 1.0'-1.5' (SC)

(B)	Net sample (Dry)	157.3	gms
(C)	Dry sample after washing	84.3	gms
	Total Material finer than 200 sieve	73.0	gms
(A)	% Material finer than 200 sieve	**46.4%**	
	A=[(B-C)/B]X100		

B7 @ 3.5'-4.0',4.0'-4.5' (CL)

(B)	Net sample (Dry)	357.9	gms
(C)	Dry sample after washing	91.4	gms
	Total Material finer than 200 sieve	266.5	gms
(A)	% Material finer than 200 sieve	**74.5%**	
	A=[(B-C)/B]X100		

TP4 @ 1.0'-2.0' (CH)

(B)	Net sample (Dry)	374.0	gms
(C)	Dry sample after washing	104.1	gms
	Total Material finer than 200 sieve	269.9	gms
(A)	% Material finer than 200 sieve	**72.2%**	
	A=[(B-C)/B]X100		

TP9 @ 5.0' (CL)

(B)	Net sample (Dry)	457.8	gms
(C)	Dry sample after washing	116.4	gms
	Total Material finer than 200 sieve	341.4	gms
(A)	% Material finer than 200 sieve	**74.6%**	
	A=[(B-C)/B]X100		

0

(B)	Net sample (Dry)	0.0	gms
(C)	Dry sample after washing	0.0	gms
	Total Material finer than 200 sieve	0.0	gms
(A)	% Material finer than 200 sieve	**#DIV/0!**	
	A=[(B-C)/B]X100		

0

(B)	Net sample (Dry)	0.0	gms
(C)	Dry sample after washing	0.0	gms
	Total Material finer than 200 sieve	0.0	gms
(A)	% Material finer than 200 sieve	**#DIV/0!**	
	A=[(B-C)/B]X100		

LACO

FINER THAN #200 SIEVE
ASTM C117/ASTM D-1140

PROJECT	Mendocino- Lake Community College	JOB NO.	6816.28	SHEET	
CLIENT	MLCCD	SAMPLE ID	176	1 of 1	
LOCATION	Ukiah, CA	TEST BY	GF	DATE	8/7/21
		CHECKED BY	GF	CHECK DATE	8/12/21

B9 @ 2.0'-2.5' (CL)

(B)	Net sample (Dry)	278.1	gms
(C)	Dry sample after washing	113.7	gms
	Total Material finer than 200 sieve	164.4	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**59.1%**	

B10 @ 1.5'-2.0' (CL)

(B)	Net sample (Dry)	311.2	gms
(C)	Dry sample after washing	120.5	gms
	Total Material finer than 200 sieve	190.7	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**61.3%**	

B11 @ 4.0'-4.5' (SC)

(B)	Net sample (Dry)	264.5	gms
(C)	Dry sample after washing	177.0	gms
	Total Material finer than 200 sieve	87.5	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**33.1%**	

0

(B)	Net sample (Dry)	0.0	gms
(C)	Dry sample after washing	0.0	gms
	Total Material finer than 200 sieve	0.0	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**#DIV/0!**	

0

(B)	Net sample (Dry)	0.0	gms
(C)	Dry sample after washing	0.0	gms
	Total Material finer than 200 sieve	0.0	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**#DIV/0!**	

0

(B)	Net sample (Dry)	0.0	gms
(C)	Dry sample after washing	0.0	gms
	Total Material finer than 200 sieve	0.0	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**#DIV/0!**	

Pavement Engineering Inc.
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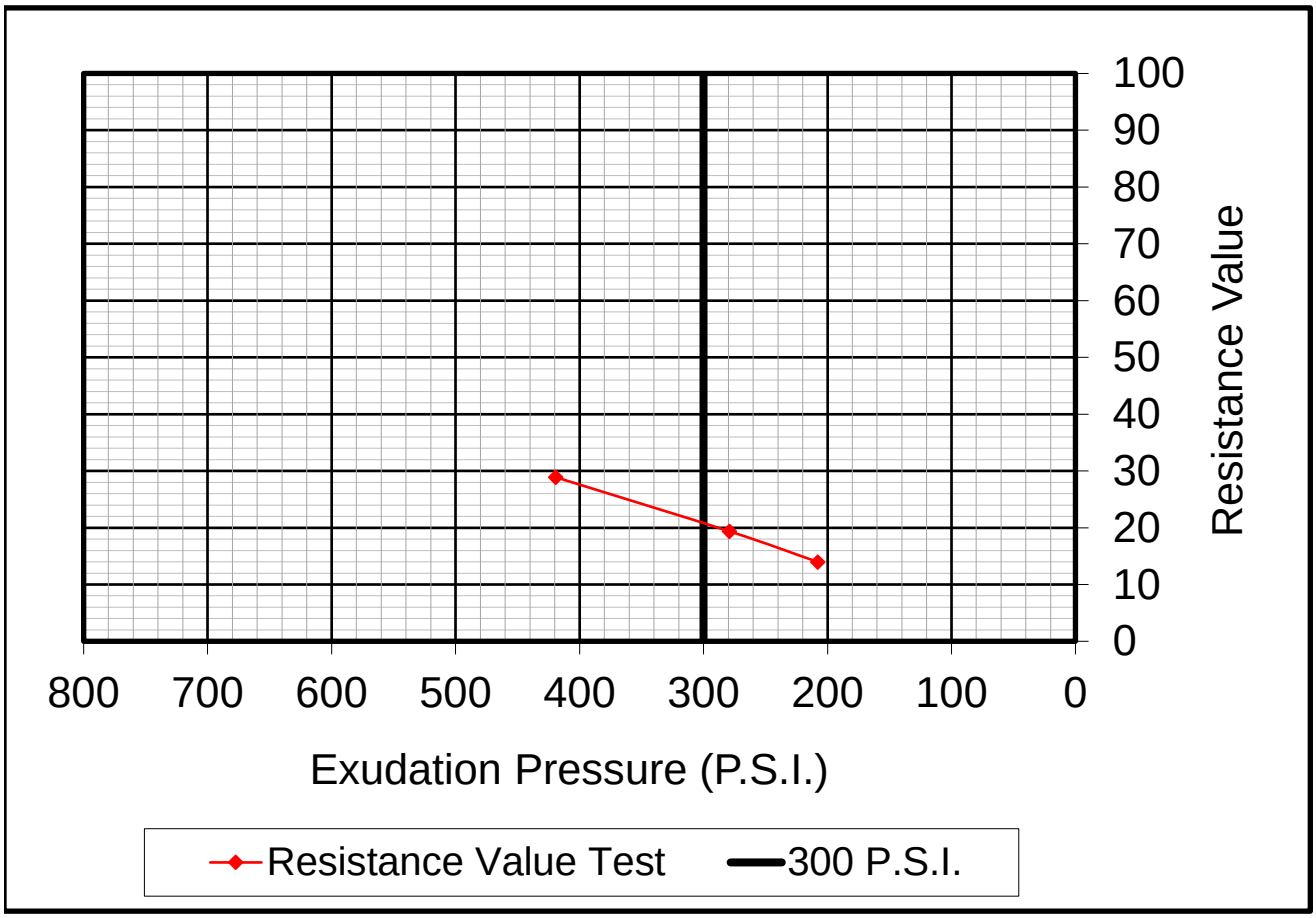
RESISTANCE (R) VALUE TEST

California Test 301

Laboratory No.: L212131
Project No.: 210169 (LACO Project No.: 6816.28)
Sample Date: 7-23-21, 7-26-21, 7-27-21
Report Date: August 26, 2021
Client: LACO Associates
Project Name: 2021 Laboratory Testing
Sample Description: Brown Silty Clay
Sample Location: B1 - B5 @ 0-3 ft.



Specimen No.	1	2	3
Moisture Content (%)	16.2	15.5	16.8
Dry Density (PCF)	113.6	114.6	112.8
Resistance Value (R)	19	29	14
Exudation Pressure (PSI)	279	419	208
Expansion Pressure	26	61	0
As Received Moisture Content (%)	16.2		

RESISTANCE VALUE AT 300 P.S.I. 21

AAP® AASHTO R18

Reviewed By: _____

Brandon Rodebaugh
Materials Engineer

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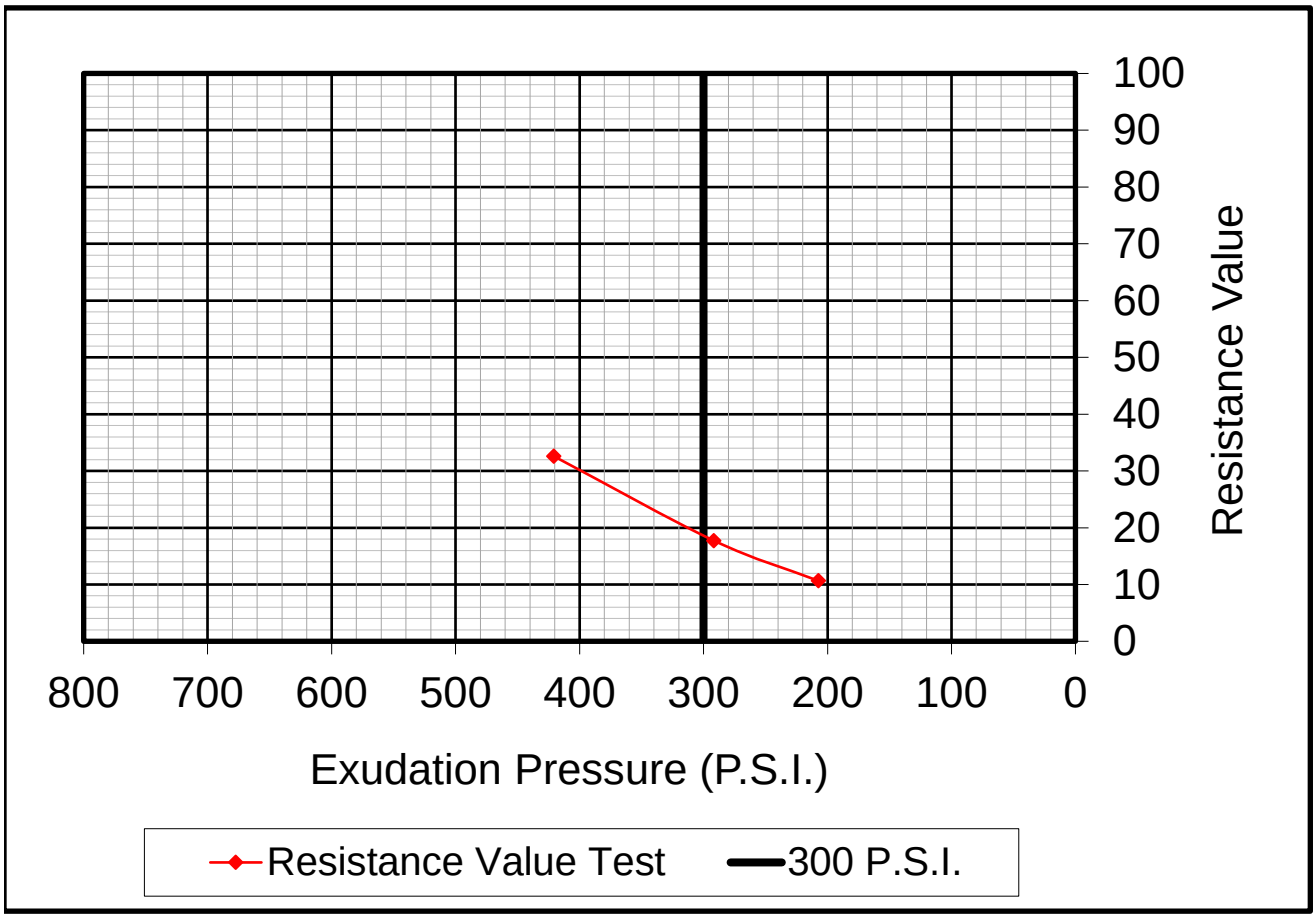
RESISTANCE (R) VALUE TEST

California Test 301

Laboratory No.: L212131
Project No.: 210169 (LACO Project No.: 6816.28)
Sample Date: 7-23-21, 7-26-21, 7-27-21
Report Date: August 26, 2021
Client: LACO Associates
Project Name: 2021 Laboratory Testing
Sample Description: Brown Silty Clay
Sample Location: B8 - B13 @ 0-3 ft.



Specimen No.	1	2	3
Moisture Content (%)	10.7	11.7	12.1
Dry Density (PCF)	127.5	128.3	126.5
Resistance Value (R)	33	18	11
Exudation Pressure (PSI)	421	292	207
Expansion Pressure	238	52	35
As Received Moisture Content (%)	10.7		

RESISTANCE VALUE AT 300 P.S.I. **19**

AAP® AASHTO R18

Reviewed By: _____

Brandon Rodebaugh
Materials Engineer

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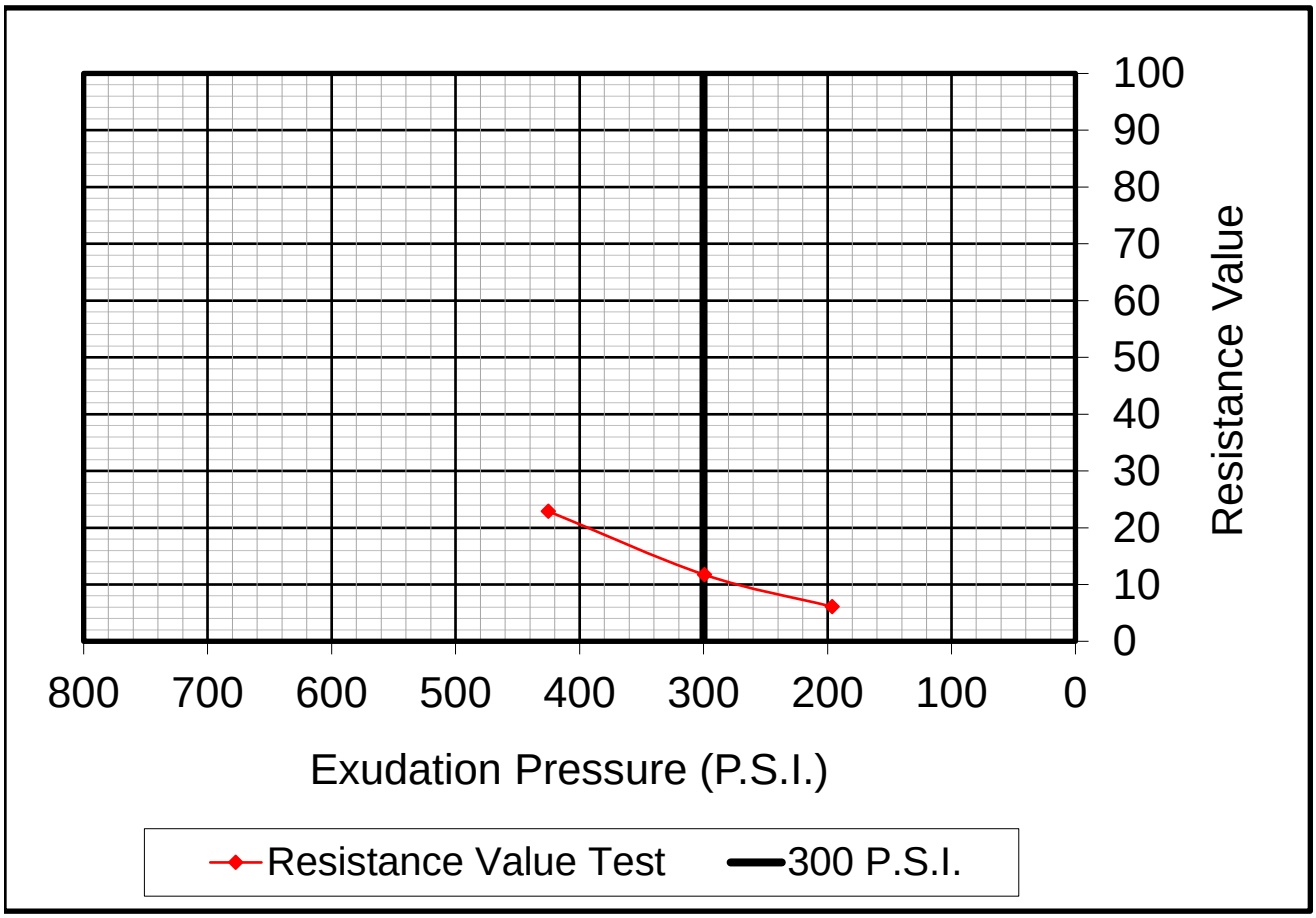
RESISTANCE (R) VALUE TEST

California Test 301

Laboratory No.: L212131
Project No.: 210169 (LACO Project No.: 6816.28)
Sample Date: 7-23-21, 7-26-21, 7-27-21
Report Date: August 26, 2021
Client: LACO Associates
Project Name: 2021 Laboratory Testing
Sample Description: Brown Silty Clay
Sample Location: TP3 & TP4 @ 0.5-2 ft.



Specimen No.	1	2	3
Moisture Content (%)	18.0	18.8	19.4
Dry Density (PCF)	111.2	107.4	106.9
Resistance Value (R)	23	12	6
Exudation Pressure (PSI)	425	299	196
Expansion Pressure	61	22	0
As Received Moisture Content (%)	18.0		

RESISTANCE VALUE AT 300 P.S.I. 12

AASHTO R18

Reviewed By: _____
Brandon Rodebaugh
Materials Engineer

ATTERBERG LIMITS
ASTM D-4318

PROJECT	Mendocino-Lake Community College			JOB NO. 6816.28	SHEET
LOCATION	Ukiah, CA			SAMPLE ID 176	1 of 1
SOURCE	B10 @ 1.5'-2.0'	TEST BY	GF	DATE	8/17/21
SOIL TYPE	Brn Sandy Clay (CL)	CHECKED BY	GF	CHECK DATE	8/18/21

	Point 1	Point 2	Point 3
Tare + Wet Soil (gm)	27.34	23.93	
Tare + Dry Soil (gm)	24.52	21.78	
Water (gm)	2.82	2.15	
Tare (gm)	13.34	13.26	
Dry Soil (gm)	11.18	8.52	
Water Content (%)	**25.2%**	**25.2%**	
* Number of Blows	**25**	**25**	

PLASTIC LIMIT

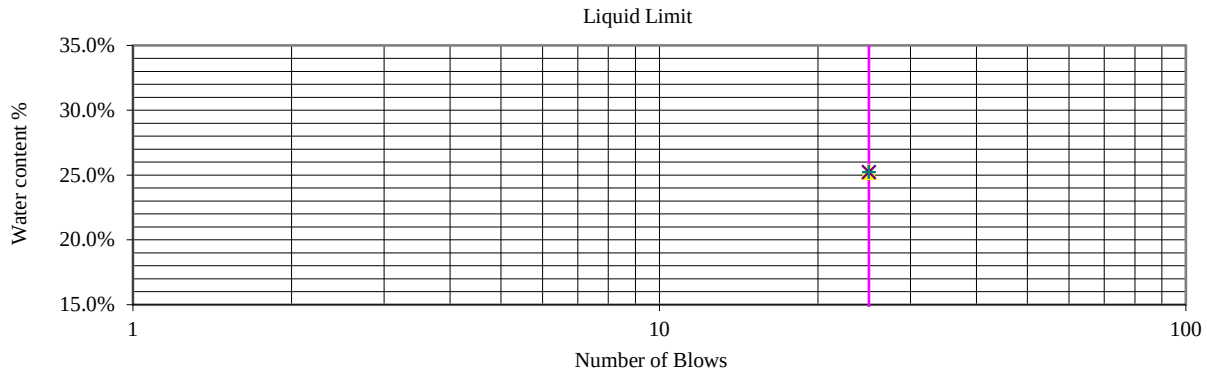
Run 1	Run 2	Run 3
17.22	17.25	
15.86	15.89	
1.36	1.36	
7.45	7.44	
8.41	8.45	
16.2%	**16.1%**	

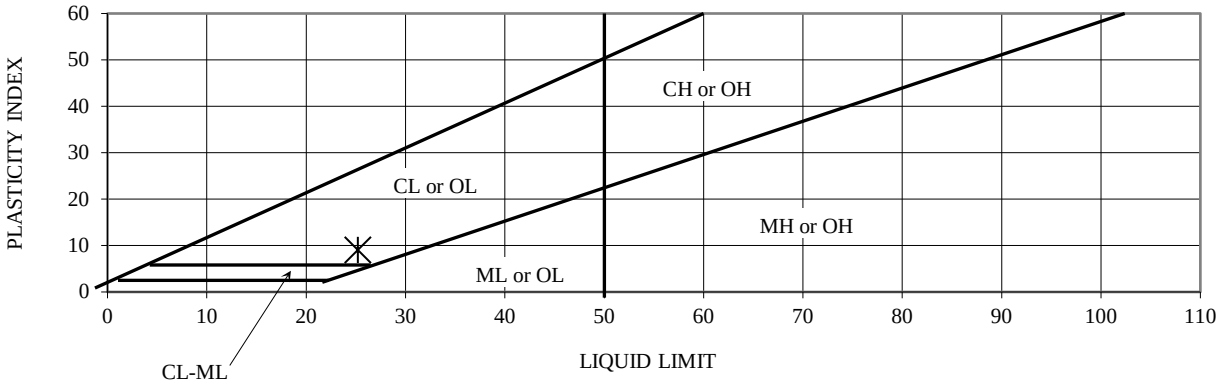
* Groove closure = 13mm

LIQUID LIMIT = **25**

PLASTIC LIMIT = **16**

PLASTIC INDEX = **9**





ATTERBERG LIMITS
ASTM D-4318

PROJECT	Mendocino-Lake Community College			JOB NO. 6816.28	SHEET
LOCATION	Ukiah, CA			SAMPLE ID 176	1 of 1
SOURCE	B11 @ 4.0'-4.5'	TEST BY	GF	DATE	8/17/21
SOIL TYPE	Brn Clayey Sand W/ Gravel (SC)	CHECKED BY	GF	CHECK DATE	8/18/21

	Point 1	Point 2	Point 3
Tare + Wet Soil (gm)	26.51	26.38	
Tare + Dry Soil (gm)	23.60	23.52	
Water (gm)	2.91	2.86	
Tare (gm)	13.29	13.37	
Dry Soil (gm)	10.31	10.15	
Water Content (%)	**28.2%**	**28.2%**	
* Number of Blows	**25**	**25**	

* Groove closure = 13mm

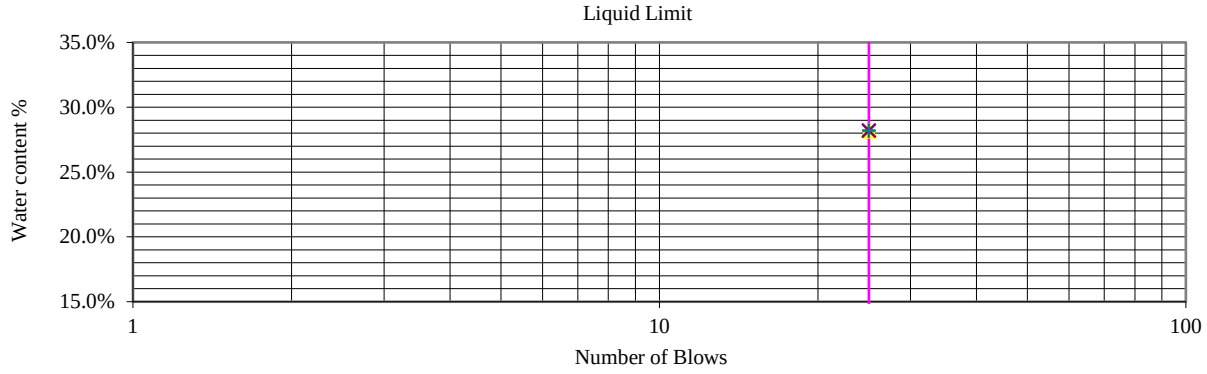
PLASTIC LIMIT

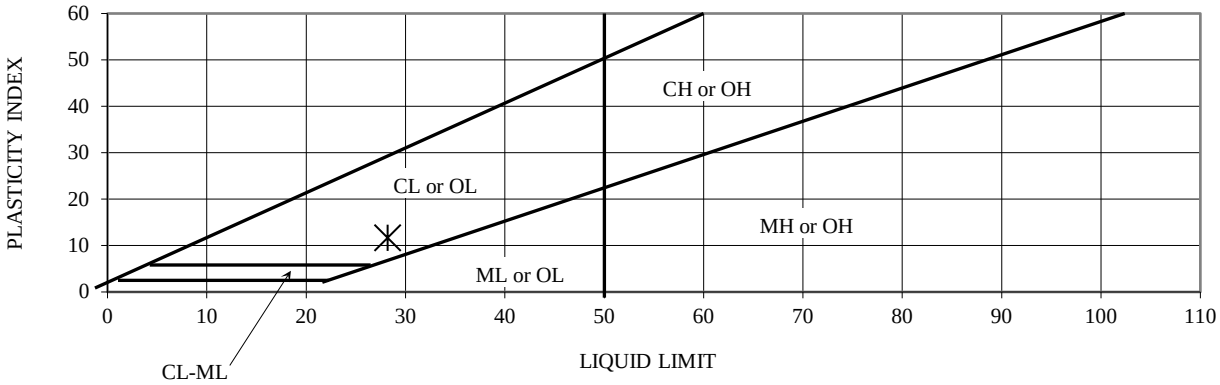
Run 1	Run 2	Run 3
18.03	17.56	
16.51	16.09	
1.52	1.47	
7.29	7.23	
9.22	8.86	
16.5%	**16.6%**	

LIQUID LIMIT = **28**

PLASTIC LIMIT = **17**

PLASTIC INDEX = **12**





ATTERBERG LIMITS
ASTM D-4318

PROJECT	Mendocino-Lake Community College			JOB NO. 6816.28	SHEET
LOCATION	Ukiah, CA			SAMPLE ID 176	1 of 1
SOURCE	B7 @ 3.5'-4.5'	TEST BY	GF	DATE	8/17/21
SOIL TYPE	Brn Clay W/ Sand (CL)	CHECKED BY	GF	CHECK DATE	8/18/21

PLASTIC LIMIT

	Point 1	Point 2	Point 3
Tare + Wet Soil (gm)	23.84	26.63	
Tare + Dry Soil (gm)	20.42	22.24	
Water (gm)	3.42	4.39	
Tare (gm)	13.36	13.16	
Dry Soil (gm)	7.06	9.08	
Water Content (%)	**48.4%**	**48.3%**	
* Number of Blows	**25**	**25**	

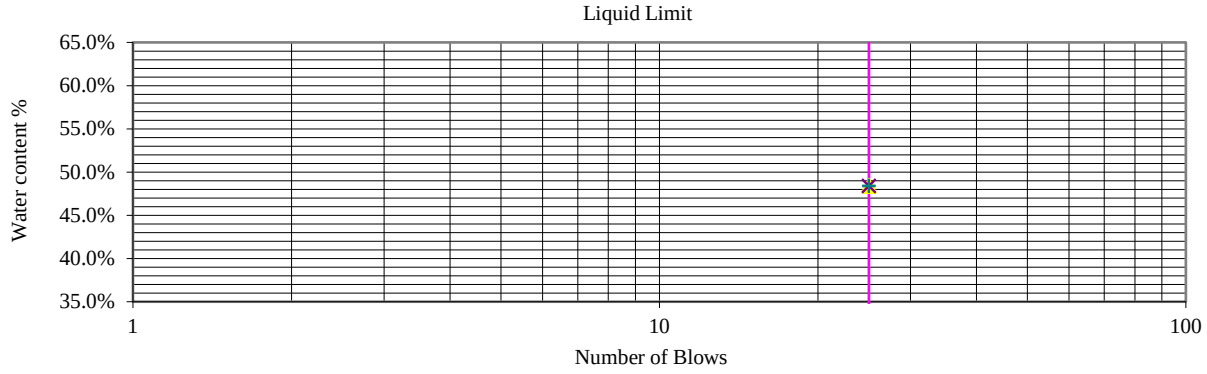
Run 1	Run 2	Run 3
17.29	18.52	
15.68	16.74	
1.61	1.78	
7.27	7.45	
8.41	9.29	
19.1%	**19.2%**	

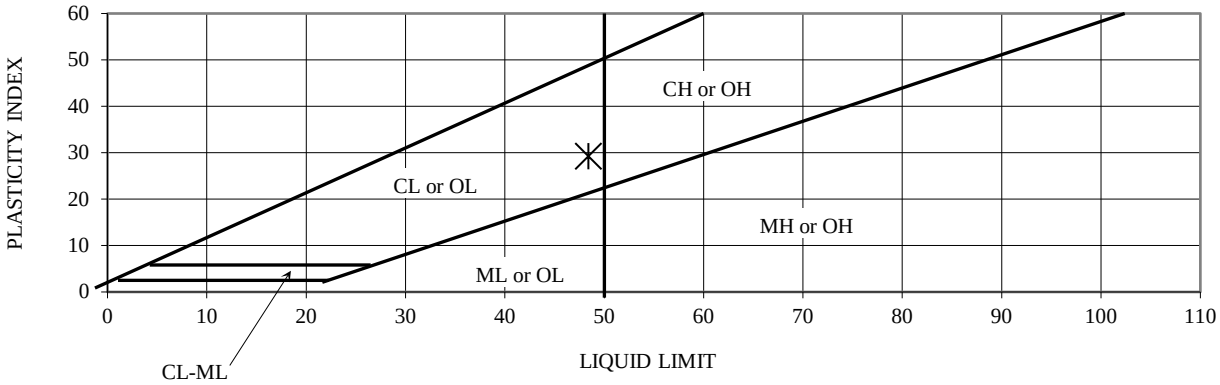
* Groove closure = 13mm

LIQUID LIMIT = 48

PLASTIC LIMIT = 19

PLASTIC INDEX = 29





ATTERBERG LIMITS
ASTM D-4318

PROJECT	Mendocino-Lake Community College			JOB NO. 6816.28	SHEET
LOCATION	Ukiah, CA			SAMPLE ID 176	1 of 1
SOURCE	B9 @ 2.0'-2.5'	TEST BY	GF	DATE	8/17/21
SOIL TYPE	Brn Sandy Clay (CL)	CHECKED BY	GF	CHECK DATE	8/18/21

	Point 1	Point 2	Point 3
Tare + Wet Soil (gm)	23.88	25.11	
Tare + Dry Soil (gm)	20.78	21.69	
Water (gm)	3.10	3.42	
Tare (gm)	13.31	13.42	
Dry Soil (gm)	7.47	8.27	
Water Content (%)	**41.5%**	**41.4%**	
* Number of Blows	**25**	**25**	

* Groove closure = 13mm

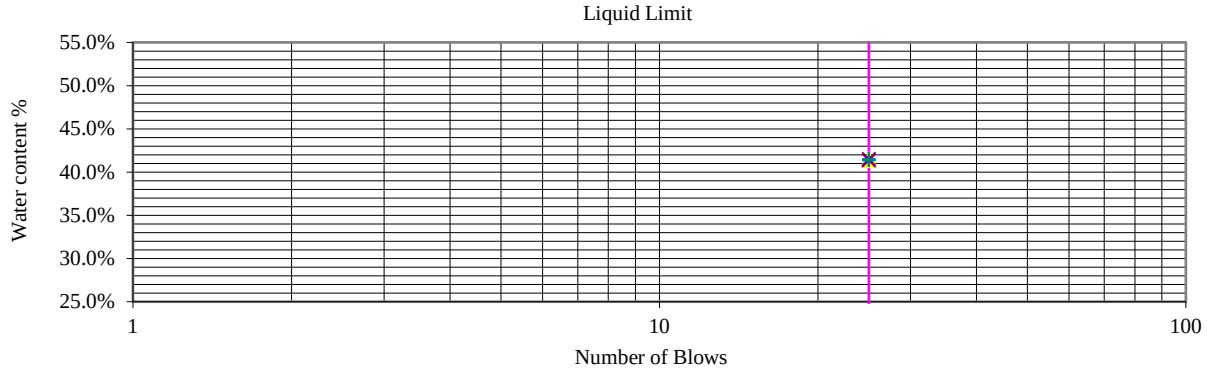
PLASTIC LIMIT

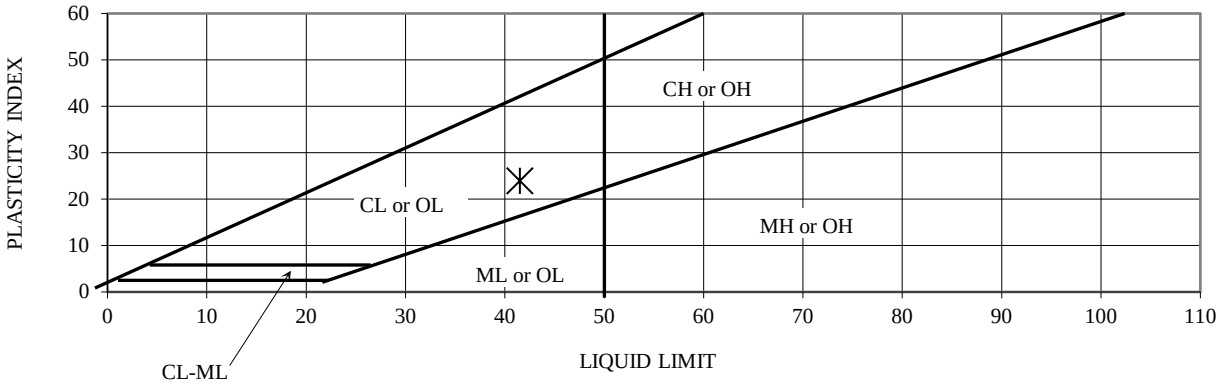
Run 1	Run 2	Run 3
16.89	16.97	
15.47	15.55	
1.42	1.42	
7.41	7.40	
8.06	8.15	
17.6%	**17.4%**	

LIQUID LIMIT = **42**

PLASTIC LIMIT = **18**

PLASTIC INDEX = **24**





ATTERBERG LIMITS
ASTM D-4318

PROJECT	Mendocino-Lake Community College			JOB NO. 6816.28	SHEET
LOCATION	Ukiah, CA			SAMPLE ID 176	1 of 1
SOURCE	TP9 @ 5.0'	TEST BY	GF	DATE	8/17/21
SOIL TYPE	Grey Clay W/ Sand (CL)	CHECKED BY	GF	CHECK DATE	8/18/21

PLASTIC LIMIT

	Point 1	Point 2	Point 3
Tare + Wet Soil (gm)	25.05	24.59	
Tare + Dry Soil (gm)	21.33	21.09	
Water (gm)	3.72	3.50	
Tare (gm)	13.17	13.36	
Dry Soil (gm)	8.16	7.73	
Water Content (%)	**45.6%**	**45.3%**	
* Number of Blows	**25**	**25**	

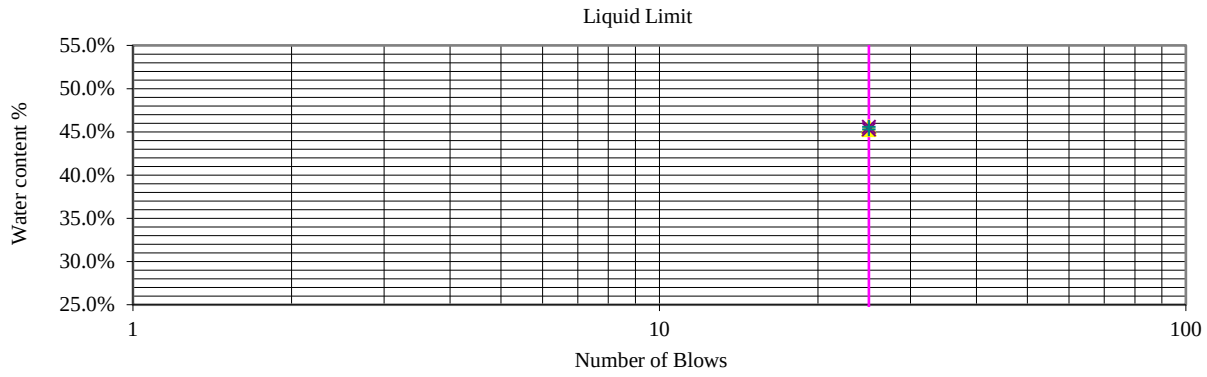
Run 1	Run 2	Run 3
15.92	17.95	
14.84	16.66	
1.08	1.29	
7.30	7.47	
7.54	9.19	
14.3%	**14.0%**	

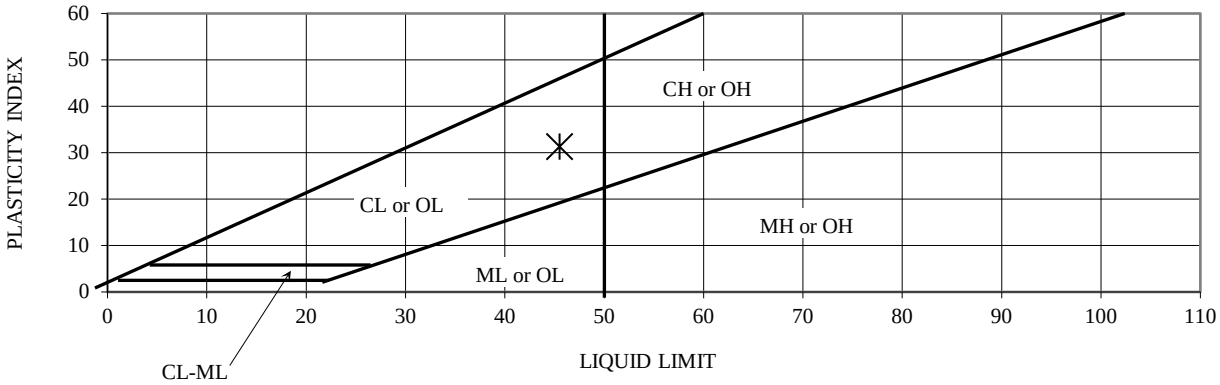
* Groove closure = 13mm

LIQUID LIMIT = 46

PLASTIC LIMIT = 14

PLASTIC INDEX = 31





ATTERBERG LIMITS
ASTM D-4318

PROJECT	Mendocino-Lake Community College			JOB NO. 6816.28	SHEET
LOCATION	Ukiah, CA			SAMPLE ID 176	1 of 1
SOURCE	B2 @ 1.0'-1.5'	TEST BY	GF	DATE	8/17/21
SOIL TYPE	Lt Brn Clayey Sand (SC)	CHECKED BY	GF	CHECK DATE	8/18/21

PLASTIC LIMIT

	Point 1	Point 2	Point 3
Tare + Wet Soil (gm)	25.30	26.81	
Tare + Dry Soil (gm)	22.59	23.71	
Water (gm)	2.71	3.10	
Tare (gm)	13.46	13.28	
Dry Soil (gm)	9.13	10.43	
Water Content (%)	**29.7%**	**29.7%**	
* Number of Blows	**25**	**25**	

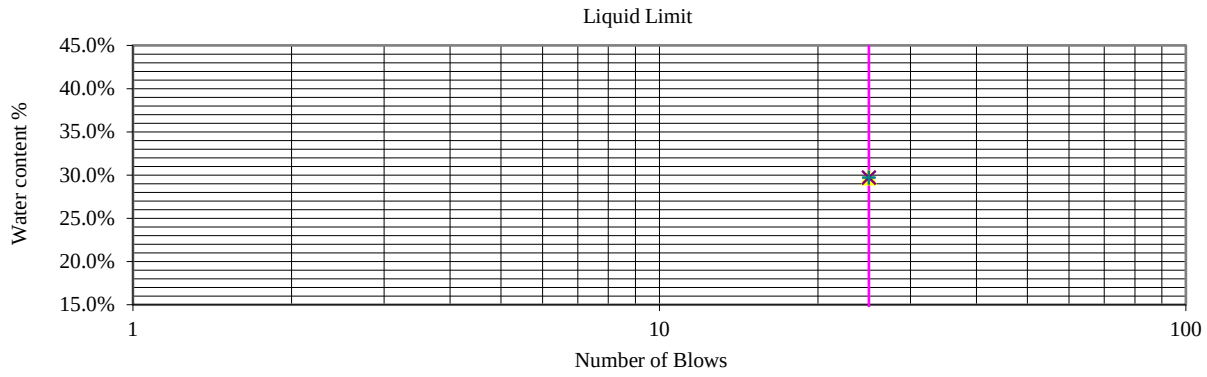
Run 1	Run 2	Run 3
18.50	19.66	
16.80	17.83	
1.70	1.83	
7.37	7.47	
9.43	10.36	
18.0%	**17.7%**	

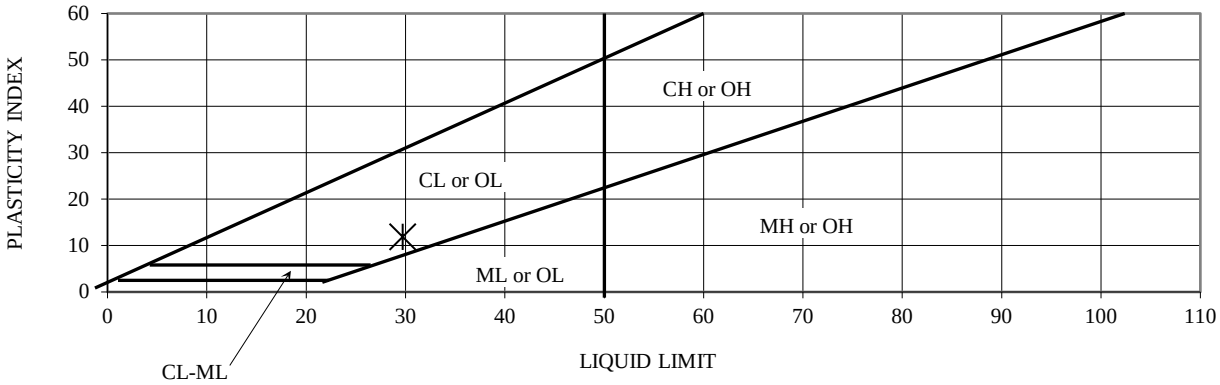
* Groove closure = 13mm

LIQUID LIMIT = 30

PLASTIC LIMIT = 18

PLASTIC INDEX = 12





ATTERBERG LIMITS
ASTM D-4318

PROJECT	Mendocino-Lake Community College			JOB NO. 6816.28	SHEET
LOCATION	Ukiah, CA			SAMPLE ID 176	1 of 1
SOURCE	TP4 @ 1.0'-2.0'	TEST BY	GF	DATE	8/17/21
SOIL TYPE	Brn Clay W/ Sand (CH)	CHECKED BY	GF	CHECK DATE	8/18/21

PLASTIC LIMIT

	Point 1	Point 2	Point 3
Tare + Wet Soil (gm)	22.06	24.07	
Tare + Dry Soil (gm)	18.91	20.15	
Water (gm)	3.15	3.92	
Tare (gm)	13.42	13.32	
Dry Soil (gm)	5.49	6.83	
Water Content (%)	**57.4%**	**57.4%**	
* Number of Blows	**25**	**25**	

Run 1	Run 2	Run 3
13.72	15.21	
12.70	13.94	
1.02	1.27	
7.45	7.47	
5.25	6.47	
19.4%	**19.6%**	

* Groove closure = 13mm

LIQUID LIMIT = 57

PLASTIC LIMIT = 20

PLASTIC INDEX = 38