Appendix B
Mining and Reclamation Plan

MINING AND RECLAMATION PLAN

SKYLINE AGGREGATES
HAT CREEK CONSTRUCTION & MATERIALS, INC.
LASSEN COUNTY, CALIFORNIA

Prepared for

TLT Enterprises LLC

Prepared by

VESTRA Resources Inc.
5300 Aviation Drive
Redding, California 96002

FEBRUARY 2024

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SKYLINE AGGREGATES
HAT CREEK CONSTRUCTION & MATERIALS, INC.
LASSEN COUNTY, CALIFORNIA

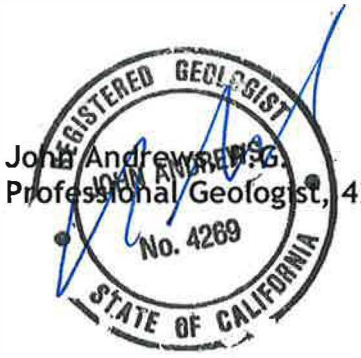
Prepared for

TLT Enterprises LLC

This report was prepared under the direction of a Professional Civil Engineer & a Professional Geologist



Susan Goodwin, P.E.
Civil Engineer, C61687



John Andrews, P.G.
Professional Geologist, 4269

Prepared by

VESTRA Resources Inc.
5300 Aviation Drive
Redding, California 96002

71305

FEBRUARY 2024

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1.0 PROJECT SUMMARY

1.1 Project Name

Skyline Aggregates
Mining and Reclamation Plan

1.2 Mine Operator

Hat Creek Construction & Materials, Inc.
Designated Agent: Perry Thompson, President
24339 Hwy 89
Burney, CA 96013
530-335-5501

1.3 Owner of Property

TLT Enterprises LLC
24339 Hwy 89
Burney, CA 96013
530-335-5501

1.4 Owner of Mineral Rights

TLT Enterprises LLC
24339 Hwy 89
Burney, CA 96013
530-335-5501

1.5 Location

The Skyline Aggregates project site is located northeast of Susanville, east of State Highway 139, and north of Skyline Road.

1.6 Legal Description

The project site is identified as Lassen County APN 101-110-24. The site occupies the North ½ of Section 34 and the South ½ of Section 27, Township 30 North, Range 12 East, MDBM. General site location is shown on Figure 1. Planned site layout is shown on Figure 2. The Preliminary Title Report is included in Appendix A.

1.7 Latitude/Longitude

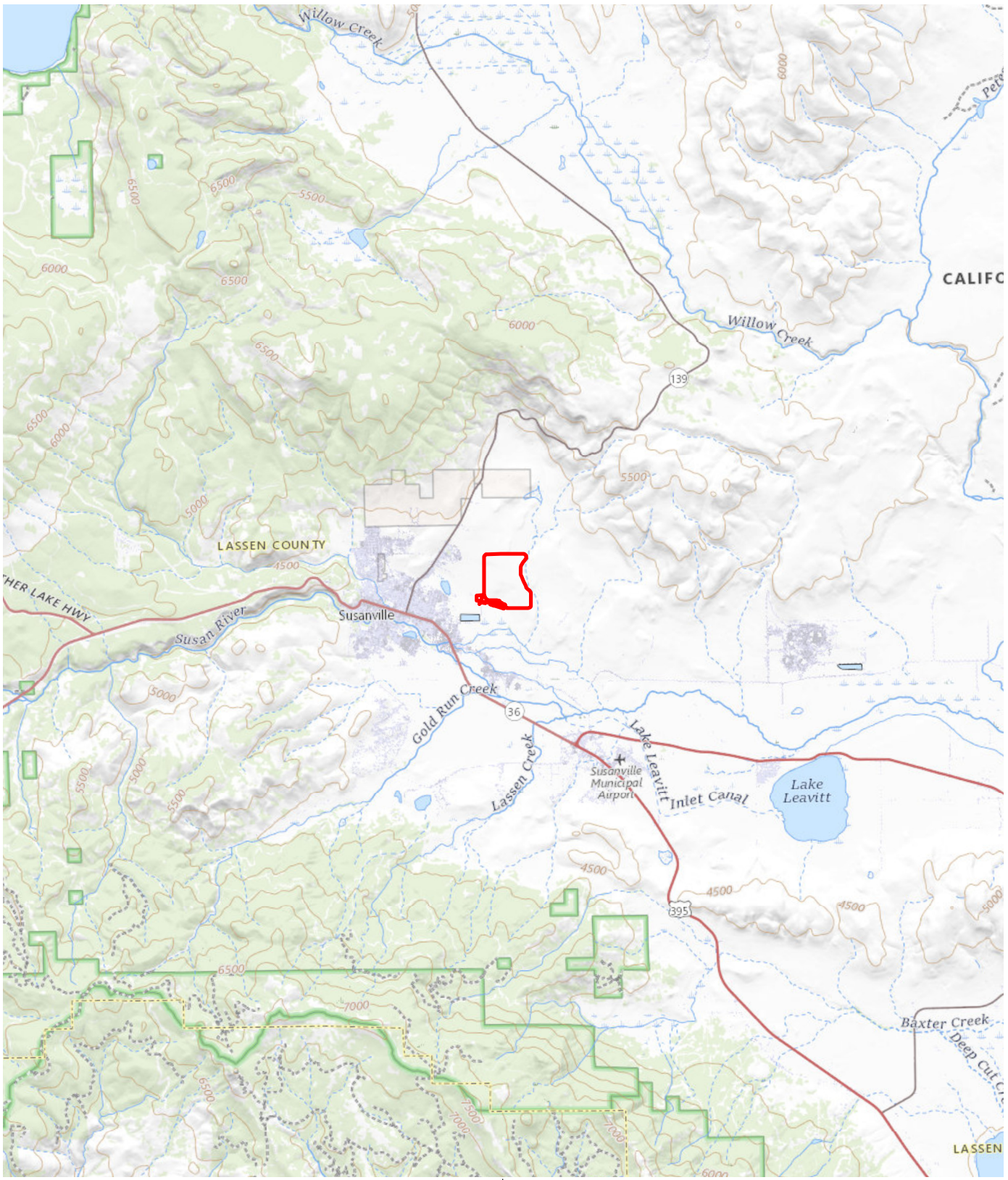
40.424213 / -120.622222

1.8 Directions to Site

From State Highway 139, turn east onto Skyline Road and proceed approximately 1.5 miles east to the site.

1.9 Total Parcel Size

640 acres



Approximate Reclamation Boundary

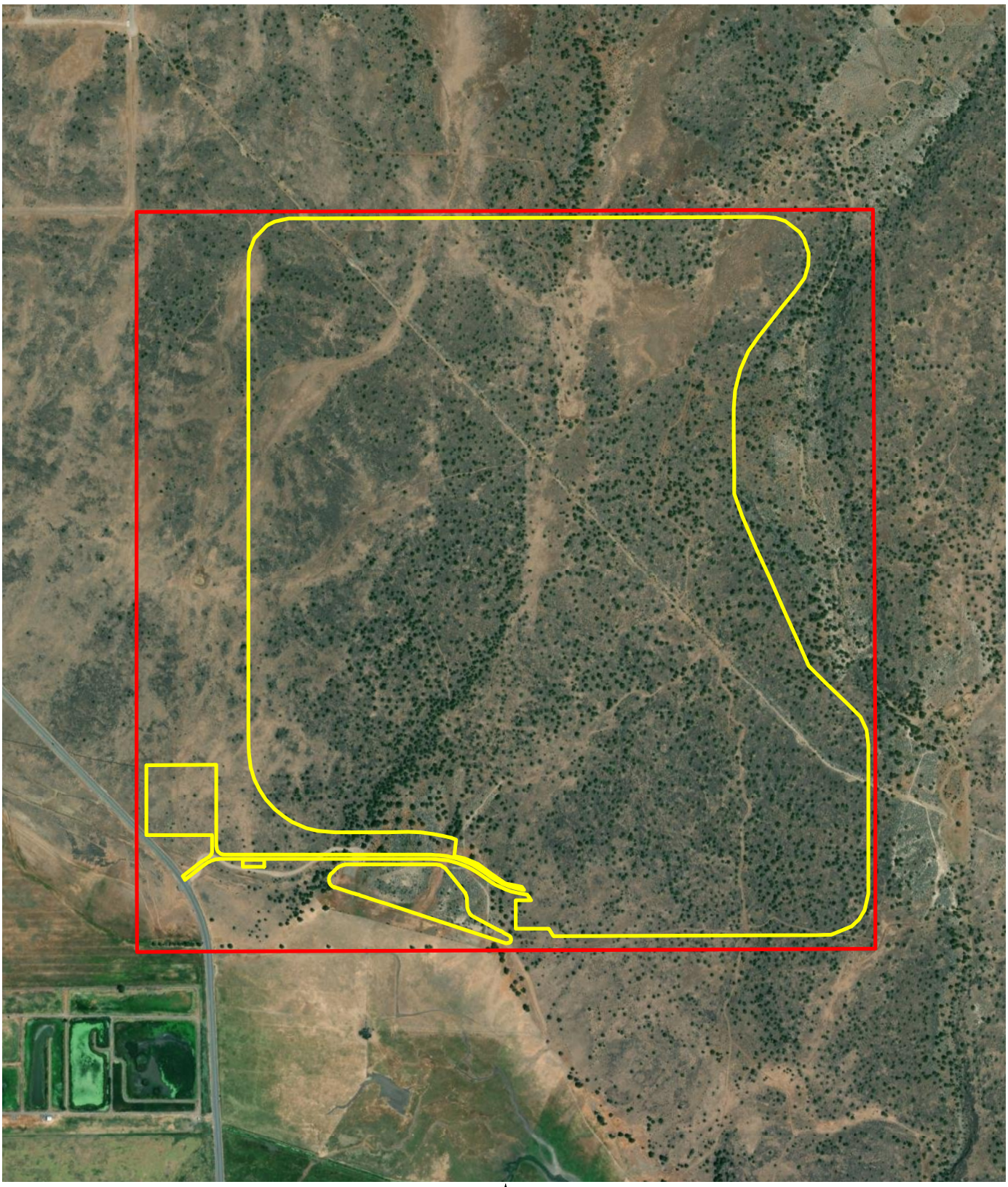
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0 1.25 2.5 5 Miles

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FIGURE 1
GENERAL SITE LOCATION
SKYLINE AGGREGATES
LASSEN COUNTY, CALIFORNIA

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FIGURE 2
SITE LAYOUT
SKYLINE AGGREGATES
LASSEN COUNTY, CALIFORNIA

SOURCE: DIGITALGLOBE 2018 AERIAL PHOTOGRAPH; LASSEN COUNTY 2017

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1.10 Total Area to be Mined

430 acres of excavation area.

1.11 Total Area to be Reclaimed

460 acres will be reclaimed, including 430 acres of excavation area and an additional 30 acres of affected areas used for landscape material sales, shop, stockpile storage, haul road, and the retention pond. Mining operations will use a variety of large machinery to transport material to the processing area and mine the underlying aggregate. The mined aggregate material will be processed using a crusher followed by washing the materials and screening to different sizes. The site will include a crusher, screening machine, washer, asphalt plant, concrete plant, offices, scales, and a stockpile area.

Based on site drilling logs, mining is expected to remove approximately 50 to 65 feet of basalt flow located over previous formations. This flow follows topography. Following rock removal, the site will be put into agricultural use for cattle grazing.

1.12 Quantity/Type of Material to be Mined

39 million cubic yards (approximately 60 million tons) of total aggregate will be mined and removed from the project site. An estimated 450,000 tons of aggregate will be removed per year with a maximum of 10,000 tons per day.

1.13 Proposed Start-Up Date

Spring 2025.

1.14 Proposed Termination Date

Dependent upon demand.

1.15 Proposed Depth of Mining

Approximately 50 to 65 feet.

1.16 Proposed Land Use After Reclamation

Upland Conservation/Agriculture Preserve District

1.17 Hours of Operation

Generally, the facility will operate from 6:00 AM until 6:00 PM, Monday through Saturday, with some operational Sundays. During construction season, the site may operate 24 hours a day to meet construction demand and Caltrans requirements for nighttime work. It is estimated this will be fewer than 150 days per year.

2.0 SITE CONDITIONS

2.1 Land Use

2.1.1 Project Site Planning and Zoning

The Skyline Aggregates site is currently zoned as *Upland Conservation/Agriculture Preserve District* as shown on Figure 3. General Plan land use is *Urban Reserve* and *Intensive Agriculture* as shown on Figure 4.

2.1.2 Surrounding Land Use

The site is directly adjacent to the Susanville Sanitary District Wastewater Treatment Plant, Fairgrounds, and southeast of Lassen Community College. Land use adjacent to the proposed operation boundaries are defined by the Lassen County General Plan as "Planned Development" and "Parks and Recreation" to the north, "Extensive Agriculture" and "Extensive Agriculture/Urban Reserve" to the east, "Intensive" and "Urban Reserve/Intensive" to the west, and "Extensive Agriculture/Urban Reserve", "Urban Reserve/Intensive", and "Intensive" to the south. Zoning designation adjacent to the project area are PD (Planned Development) and O-S (Open Space) to the north, U-C-A-P (Upland Conservation District-Agricultural Preserve Combining District) to the east, U-C-A-P (Upland Conservation District-Agricultural Preserve Combining District), and M-1 (Light Industrial Activity) to the south, A-3 (Agricultural District) and U-C (Upland Conservation District) to the west.

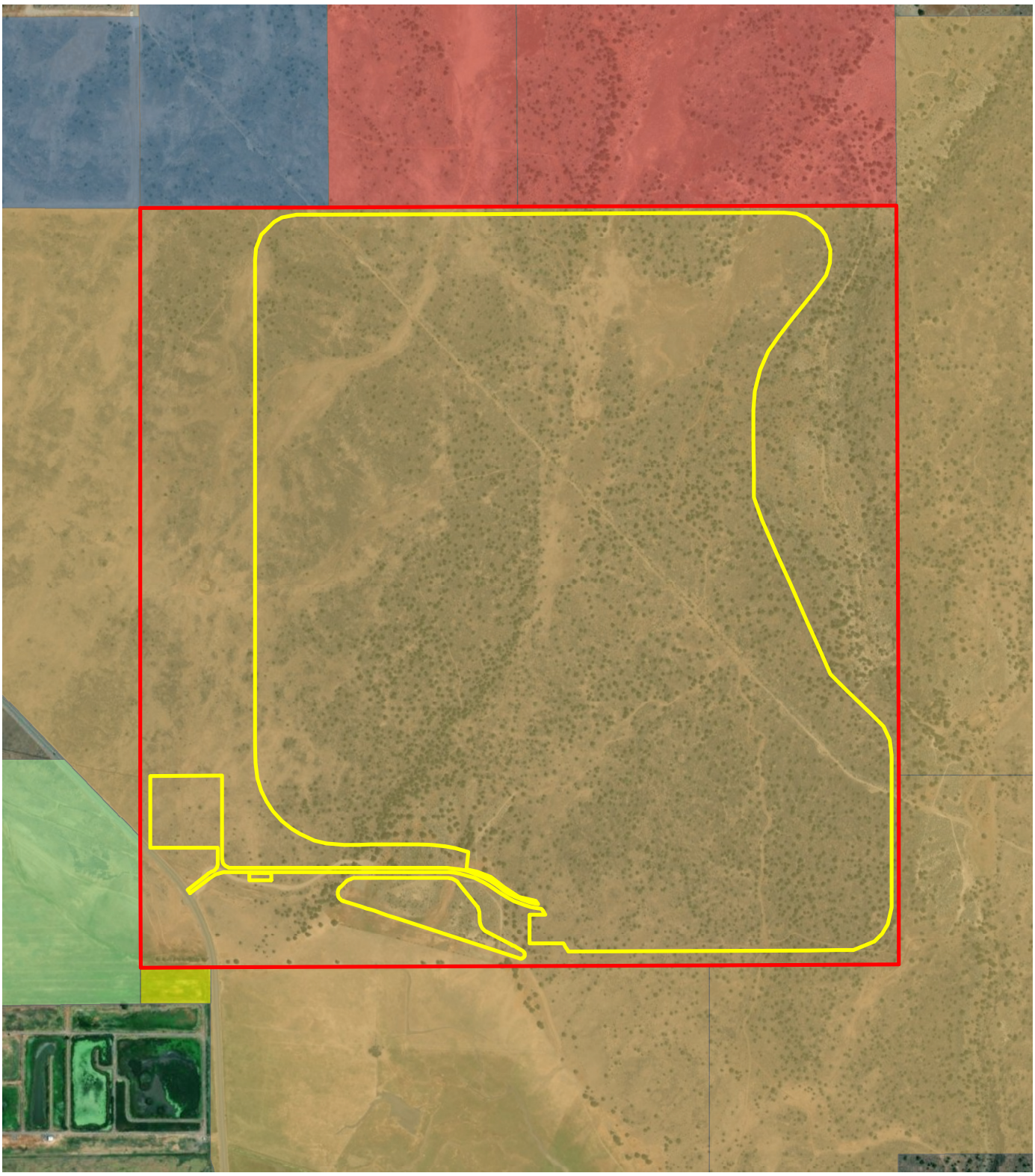
The nearest residence is approximately 4,000 feet (to the south) from the proposed aggregate, concrete, and asphalt plants and 2,300 feet (to the west) from the quarry area. Lassen College is approximately 2,100 feet (to the west) of the proposed quarry area. Banner Lassen Medical Center is approximately 2,700 feet (to the north) of the quarry area. The closest residence and other sensitive receptors (hospitals, schools, nursing facilities, and residences) are shown on Figure 5 and Figure 6.

Surrounding land ownership is shown in Table 2-1.

2.2 Aesthetics

The existing visual characteristics of the site are undeveloped and is composed of low sage and juniper woodland habitats. The undergrowth varies in density but mainly consists of open land with bitterbrush, sage brush, juniper, perennial and annual grasses and forbs.

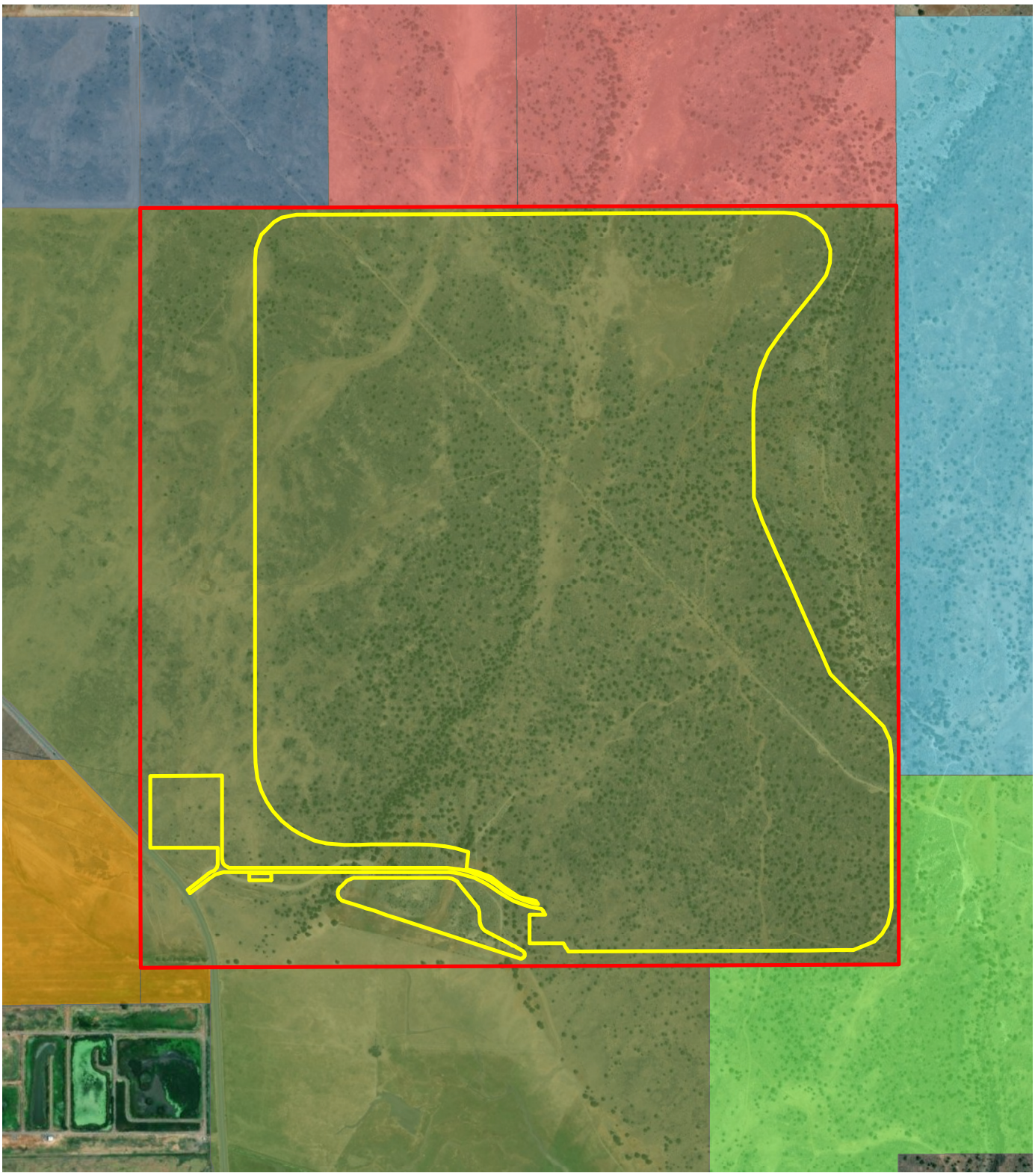
The project will modify the visual characteristics of the parcels over time. The mining area of the proposed operation is 430 acres, plus 30 acres of associated impacts and disturbances including landscape sales stockpiles, shop, parking, stormwater retention pond, roads, and scale house, for a total disturbed area of 460 acres. Mining will result in significant changes to topography viewed from offsite. Mining will occur in five phases over 50 years, and change will be incremental over this time.



SOURCE: DIGITALGLOBE 2018 AERIAL PHOTOGRAPH; LASSEN COUNTY 2017

FIGURE 3
ZONING
SKYLINE AGGREGATES
LASSEN COUNTY, CALIFORNIA

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SOURCE: DIGITALGLOBE 2018 AERIAL PHOTOGRAPH; LASSEN COUNTY 2017

FIGURE 4
GENERAL PLAN LAND USE
SKYLINE AGGREGATES
LASSEN COUNTY, CALIFORNIA

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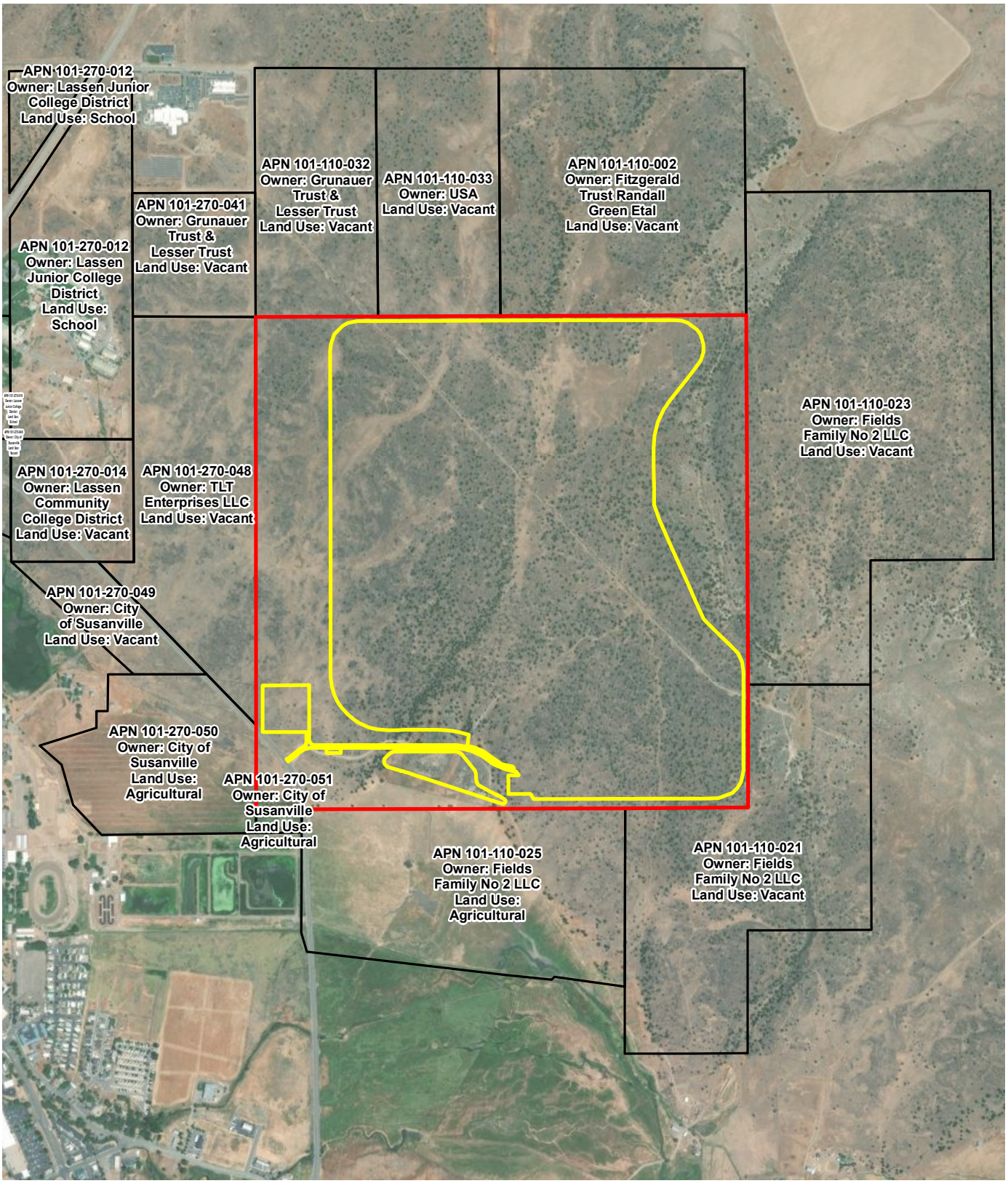
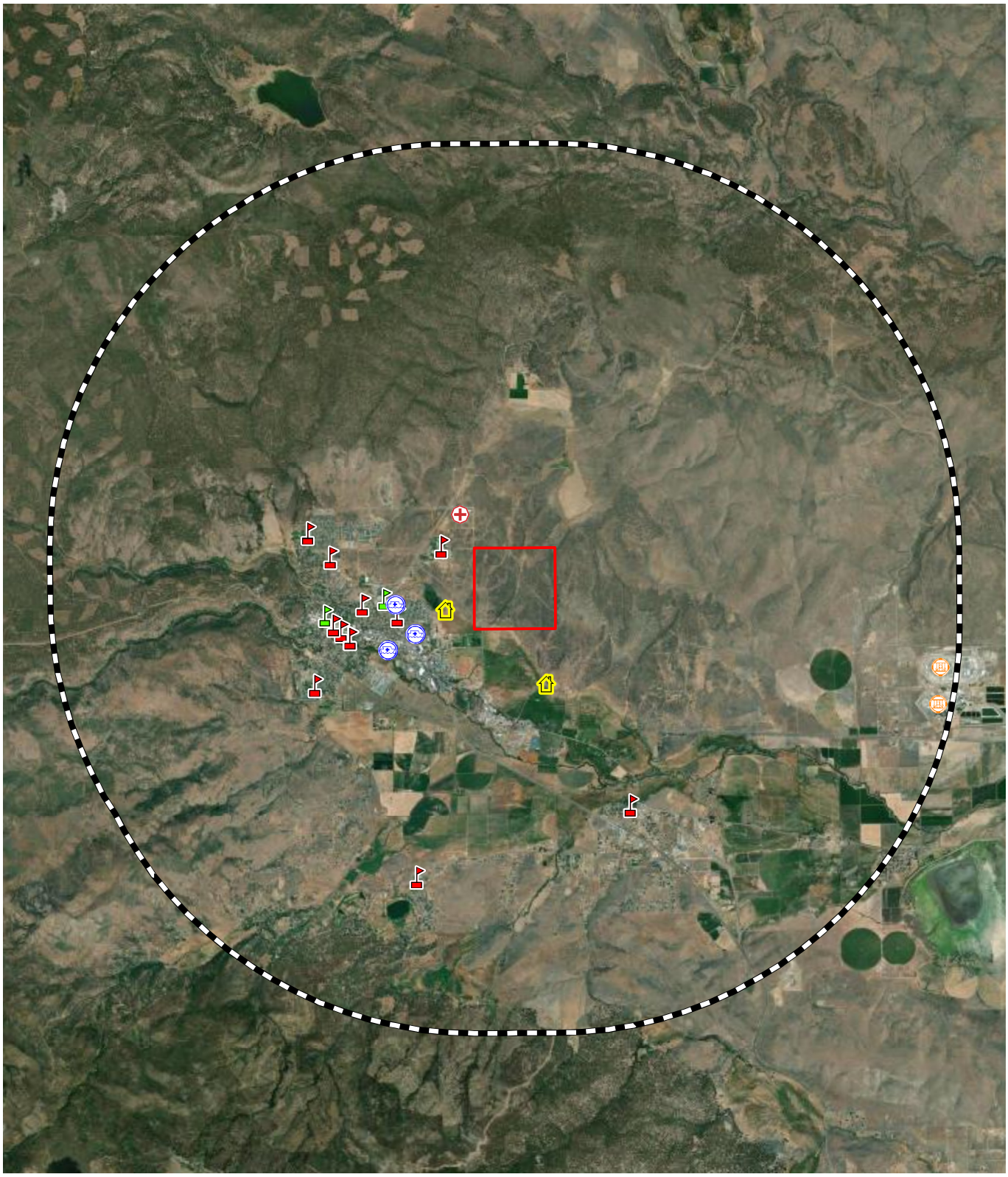


FIGURE 5
SURROUNDING LAND USE
SKYLINE AGGREGATES
LASSEN COUNTY, CALIFORNIA

SOURCE: DIGITALGLOBE 2018 AERIAL PHOTOGRAPH; LASSEN COUNTY 2017

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SOURCE: MAXAR 2021 AERIAL PHOTOGRAPH

FIGURE 6
SENSTIVE RECEPTORS WITHIN 5 MILES
SKYLINE AGGREGATES
LASSEN COUNTY, CALIFORNIA

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Table 2-1 SURROUNDING LANDOWNERS		
APN	**Owner**	**Mailing Address**
101-110-002	Fitzgerald Trust Et Al.	23521 Schoenborn St, West Hills, CA
101-110-021	Fields Family No. 2 LLC	22084 Eden Canyon Rd, Castro Valley CA 94552
101-110-023	Fields Family No. 2 LLC	22084 Eden Canyon Rd, Castro Valley CA 94552
101-110-024	TLT Enterprises LLC	24339 Highway 89 N, Burney CA 96013
101-110-025	Fields Family No. 2 LLC	22084 Eden Canyon Rd, Castro Valley CA 94552
101-110-032	Grunauer Trust & Lesser Trust	1123 Maybrook Dr, Beverly Hills, CA
101-110-033	USA	Unknown
101-270-012	Lassen Junior College	478-200 CA-139 Susanville, CA 96130
101-270-014	Lassen Junior College District	P.O. Box 3000, Susanville, CA
101-270-041	Grunauer Trust & Lesser Trust	1123 Maybrook Dr, Beverly Hills, CA
101-270-048	TLT Enterprises LLC	24339 Highway 89 N, Burney CA 96013
101-270-050	City of Susanville	66 N Lassen St, Susanville CA 96130
101-270-051	City of Susanville	66 N Lassen St, Susanville CA 96130

Permanent lighting on the site will be installed around the asphalt and concrete plant for any required nighttime work. Two 42,000-lumen lights will be installed at the asphalt plant and one 42,000-lumen light will be installed at the concrete plant. The crusher, wash plant, lime plant, and scale house will each have one 21,000-lumen security light installed. The shop area will have six 21,000-lumen lights installed around the building exterior. Two mobile 42,000-lumen lights may be used onsite if lighting for irregular night operations is needed. These units extend up to 20 feet high. All lights will be downcast.

A visual analysis of the site was performed using GIS software and the original and planned topography (see detail in Appendix B). Observations are as follow:

Lassen Community College	Site will be visible as will nighttime lighting
Lassen County Fairgrounds	Site will be visible as will nighttime lighting
Properties to the North	Site will be visible as will nighttime lighting
Properties to the East, West, & South	Portions of the excavation will be visible as will nighttime lighting

2.3 Geologic Description

2.3.1 Geologic Setting

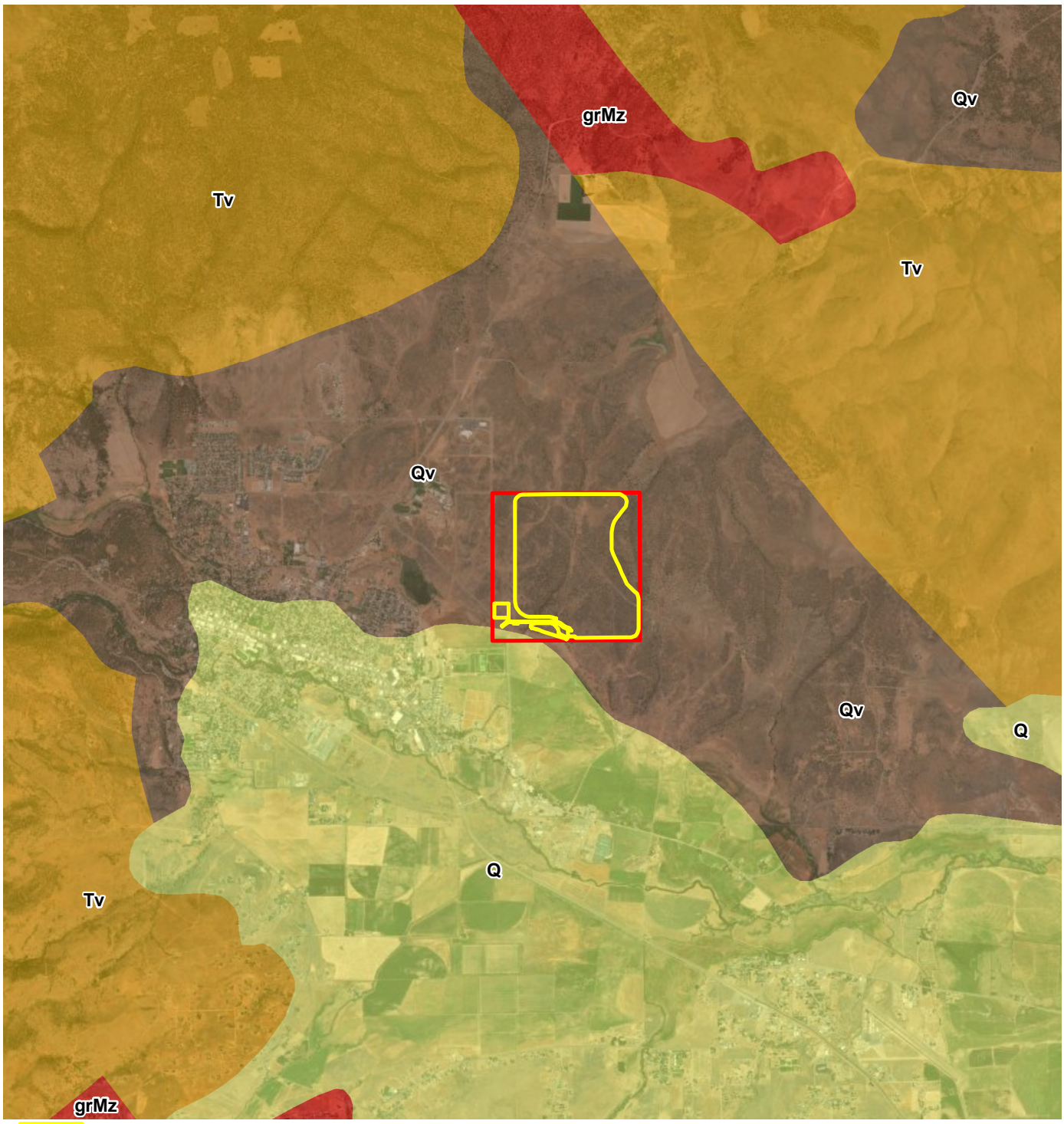
The subject property is located northeast of Susanville, California, along the lower slopes of Antelope Mountain. Susanville lies at the confluence of four major physiographic provinces in California: the Sierra Nevada Mountains, the Cascade Range, the Modoc Plateau, and the Basin and Range. Susanville itself sits in an east-west elongated valley bound to the north by Tertiary volcanic rocks of the Modoc Plateau, to the west by the volcanic rocks of the Cascade Range, to the east by the Basin and Range, and to the south by the Sierra Nevada.

The rocks of these physiographic provinces are of two starkly different types. In the area of Susanville, the rocks of the northern Sierra Nevada Mountains are comprised of complex, thick sequence of metamorphosed marine sedimentary and volcanic rocks. These originated from terranes accreted onto the western margin of North America from the Devonian (400 Mya) to the late Jurassic (160 Mya). They were subsequently intruded during the Cretaceous by multiple sequences of plutonic rocks, primarily granodiorite (Harwood, 1993). The other three provinces are dominated by more recent extrusive volcanic rocks, predominantly of Miocene and younger age. The subject property itself is located within the southeastern-most limit of the Modoc Plateau. The rocks of the Modoc Plateau are a diverse assemblage of extrusive volcanic rocks of Miocene to Recent age derived from over a hundred known volcanic centers (Grose and Porro, 1989).

Geology is shown on Figure 7.

2.3.2 Site-Specific Geology

Recent work by the California Geological Survey (Grose et al, 2013) has mapped only one unit within the bounds of the subject property. Bedrock within the site is entirely mapped as the Basalt of Susanville. This unit, alternatively known as the Susanville Basalt, is Pleistocene in age with a K-Ar radiometric age of 1.3 ± 0.3 Ma (Grose and McKee, 1986). The Susanville Basalt is a dark



Reclamation Boundary

Approximate Parcel Boundary

Q: Quaternary alluvium and marine deposits (Pliocene to Holocene)

Qv: Quaternary volcanic flow rocks, unit 1 (Cascade volcanic field) (Quaternary)

Tv: Tertiary volcanic flow rocks, unit 17 (Cascade Range)

grMz: Mesozoic granitic rocks, unit 3 (Sierra Nevada) (Permian to Tertiary; most Mesozoic)

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0 0.5 1 2 Miles

SOURCE: DIGITALGLOBE 2018 AERIAL PHOTOGRAPH; LASSEN COUNTY 2017

FIGURE 7
GEOLOGY
SKYLINE AGGREGATES
SUSANVILLE, CALIFORNIA

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gray to black diktytaxitic to finely and sparsely olivine porphyritic massive basalt. It occurs as multiple massive flow units, averaging 3 to 5 meters thick that may locally exhibit columnar jointing. Total thickness is unknown but estimated to be greater than 100 meters based on outcrop exposures and bedding orientation (Grose et al, 2013). Thin paleosol and pyroclastic horizons occur between some of the flow units. Unlike many of the other eruptive units in the area, the source for the Susanville Basalt is unknown.

Geological mapping of the Susanville area by C. Wills (Wills, 1990) identified two faults within the subject property. One fault defines a drainage running north-south through the approximate center of the property, while the other defines a steeply incised drainage along the eastern margin of the property. The age and sense of motion of both faults is poorly constrained. Wills interpreted them to be Quaternary in age as the cut and displace the Susanville Basalt, but are deeply weathered and partly overlain by Holocene alluvium, constraining their ages. Neither fault is believed to be recently active. Sense of displacement is similarly poorly constrained due to the weathering of the fault lineaments, but believed to be predominantly dextral strike-slip with a down to the east dip-slip component. These faults are roughly perpendicular to the northwest-striking dextral slip faults of the Honey Lake Fault Zone that dominate local tectonics (Jennings and Saucedo, 2002).

2.3.3 Topography

The project site is located to the southwest of Antelope Mountain in Hidden Valley. Topography generally gently slopes from north to south. Site elevation ranges from 4160 feet above sea level in the southwest corner of the project site to 4350 feet along the northern edge of the project site. Existing topography for the site is included as Figure 8. USGS topography is shown on Figure 9.

2.3.4 Soil Types

A *Custom Soil Resources Report for Susanville Area, Parts of Lassen and Plumas Counties,* produced by the USDA, was used to characterize soils at the proposed site. Soils mapping at the site indicate aggregate at depths of 30 to 40 inches below the surface across the project area. The Natural Resources Conservation Service (2019), formerly the Soil Conservation Service, identified six primary soil types within the project boundary. Soil thickness varies considerably from none (exposed bedrock) to thick (greater than 80 inches). Runoff potential is high to very high, depending on the steepness of the terrain, while ponding potential is very low. Soils occurring on steeper terrain are gravelly to stony clays, with steeper terrain exhibiting little to no soil development. Many soils are also excessively drained and have a low water-holding capacity (<5 inches).

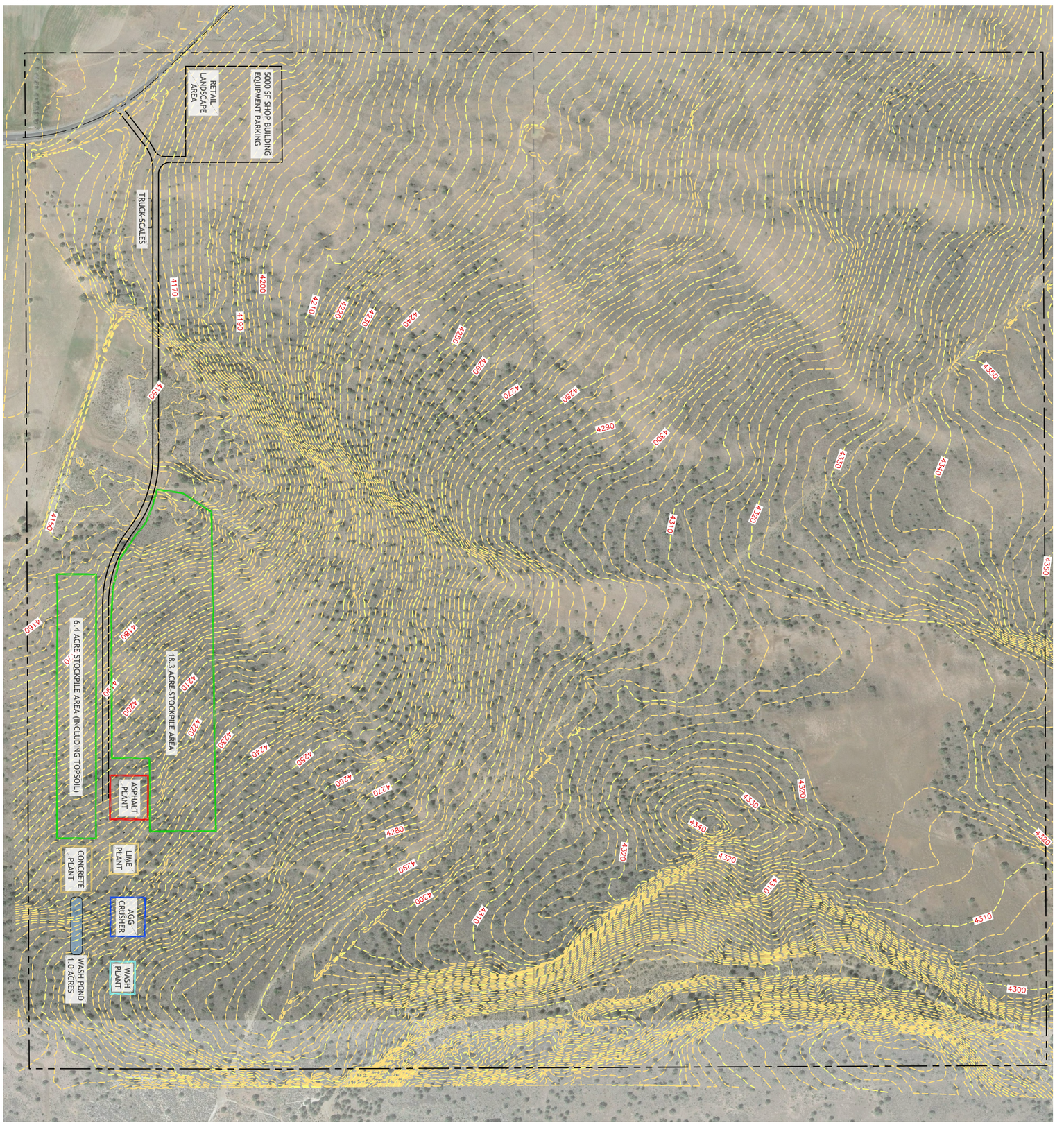
Soil types are shown in Table 2-2 and on Figure 10 and included in more detail in Appendix C.

2.4 Sensitive Species and Habitat

A biological resources assessment was completed for the project area. The Biological Resources Assessment report is included as Appendix D.

PDF\RecPlan\02-15-24_FIGURE 8 RP
P:\CAD\71305 HAT CREEK SKYLINE QUARRY\DWG\SKYLINE PLAN\041023_SKYLINE GRADING PLAN-60 FEET.DWG

250 125 0 250



REGISTERED PROFESSIONAL ENGINEER SUSAN DIANE CUNNINGHAM No. 61882 CIVIL STATE OF CALIFORNIA

JOB NO.	SHEET
71305	FIGURE 8

DATE 02/15/24

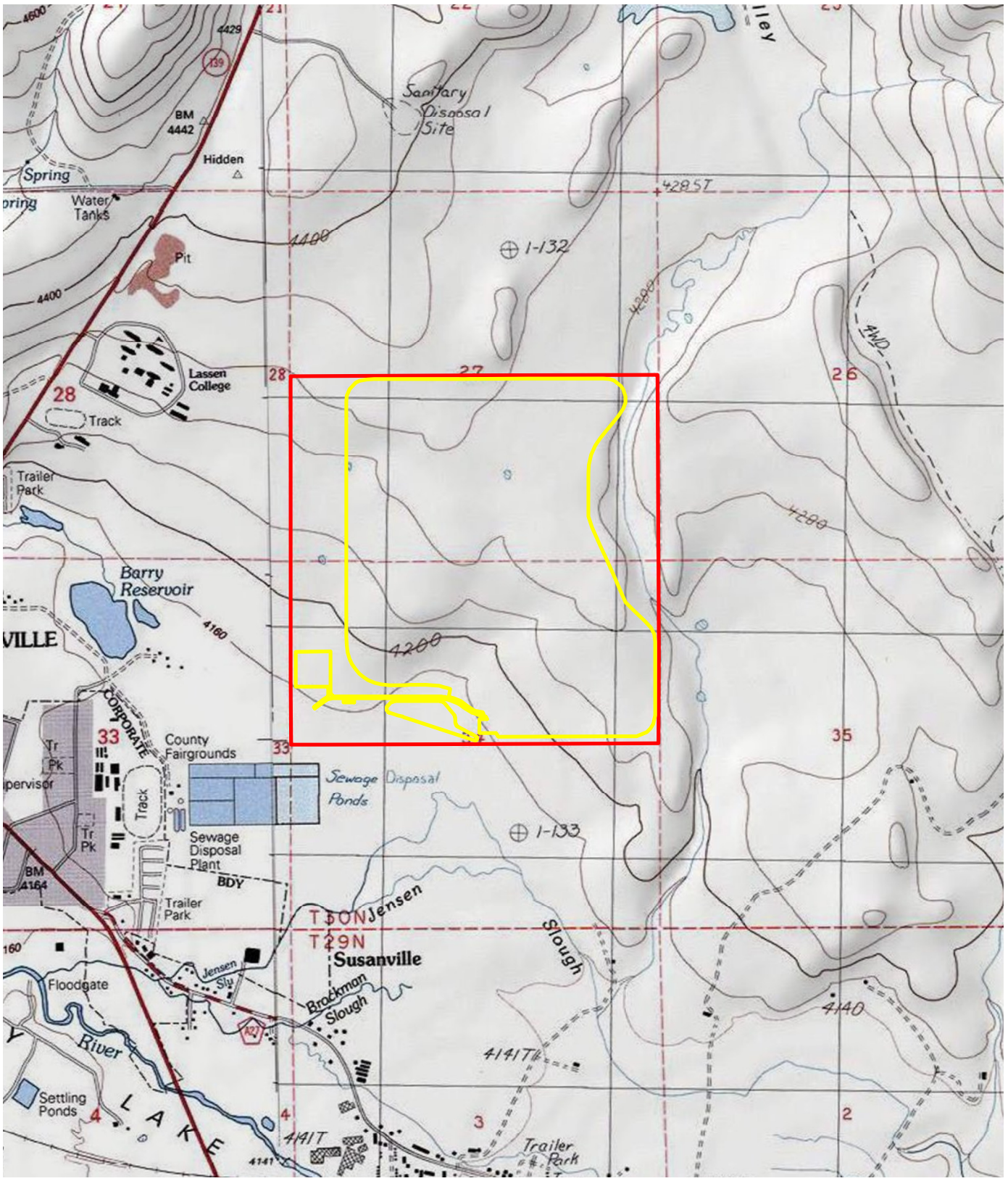
SKYLINE QUARRY
EXISTING TOPOGRAPHY
HAT CREEK CONSTRUCTION & MATERIALS
SUSANVILLE, CALIFORNIA

DSGN: SG
DR: SG
CHK: SG
APVD: SG

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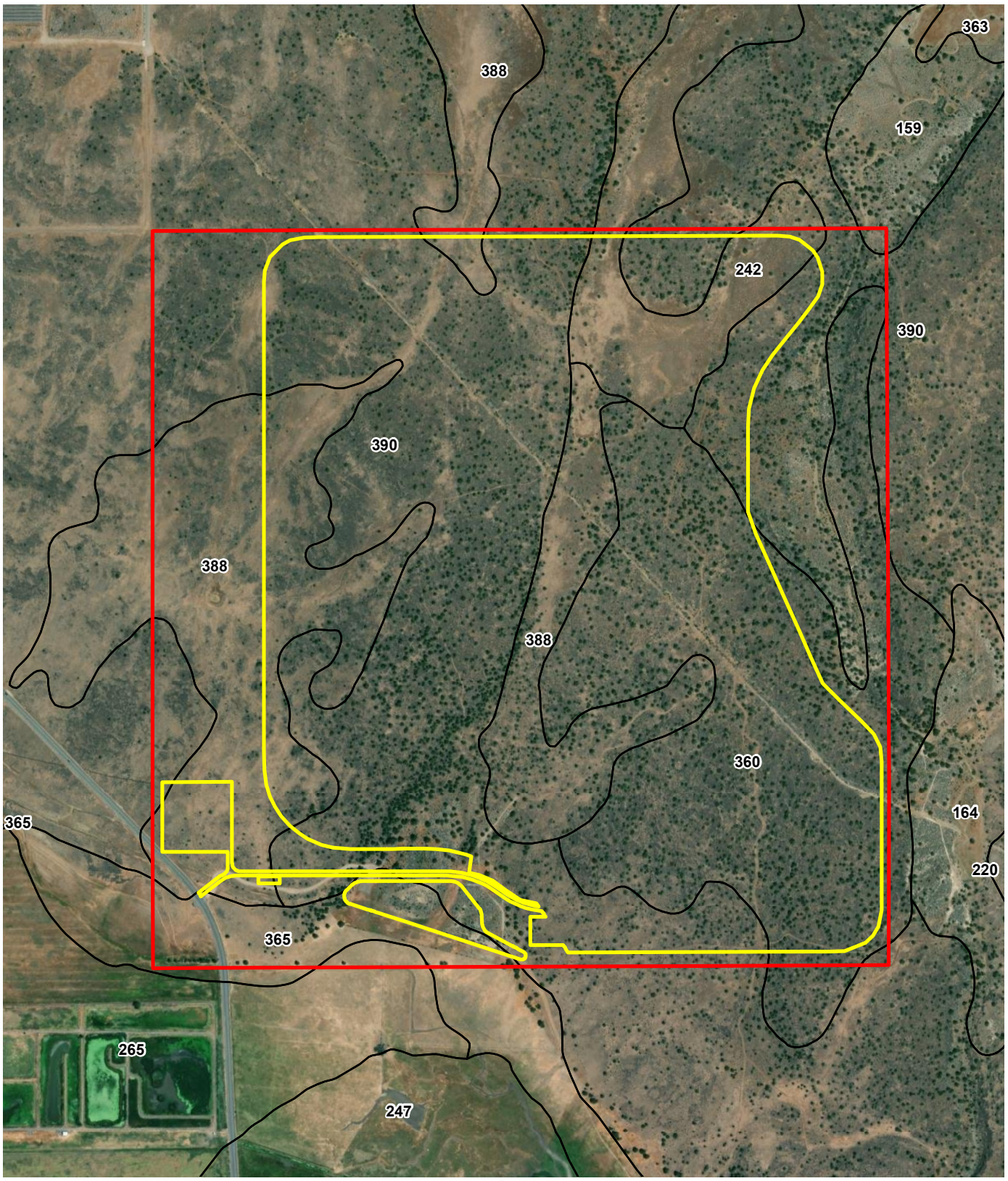


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SOURCE: USGS 7.5' TOPOGRAPHIC MAP, JOHNSTONVILLE QUADRANGLE

FIGURE 9
USGS TOPOGRAPHIC MAP
SKYLINE AGGREGATES
SUSANVILLE, CALIFORNIA

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SOURCE: DIGITALGLOBE 2018 AERIAL PHOTOGRAPH; NRCS 2014

FIGURE 10
SITE SOILS
SKYLINE AGGREGATES
SUSANVILLE, CALIFORNIA

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Table 2-2 SOIL TYPES						
Soil Unit	**Soil Unit Name**	**Acres**	**Percent** %	**Depth to Restrictive Feature (inches)**	**Permeability**	**Typical Profile (inches BGS)**
242	Horsecamp Cobbly Silty Clay 2-9 percent slopes	28	4.4	40-60 inches	Low	0-2 Cobbly Silt Clay 2-27 Silty Clay 27-46 Silty Clay 46-50 Weathered Bedrock
265	Lakeview Loam Warm 0 -2% slope	2.6	0.4	<80 inches	Moderate	0-18 Loam 18-60 Clay Loam
360	Searles-Or Hood-Nevada association	158.9	24.7	20-40 inches	Low	0-13 Very Stony Loam 13-29 Very Cobbly Clay Loam 29-39 Unweathered Bedrock
365	Springmeyer Sandy Loam 0-5 % Slope	26.2	4.1	<80 inches	Moderate	0-11 Sandy Loam 11-25 Clay Loam 25-60 Gravelly Loamy Sand to Sandy Clay Loam
388	Tunnison Very Cobbly Clay 2-9% Slope	141.8	22.1	20-35 inches	Low	0-1 Very Cobbly Clay 1-31 Clay 31-38 Weathered Bedrock 38-48 Unweathered Bedrock
390	Tunnison Devada association 2-9% Slope	283.8	44.2	20-35 inches	Low	Very Stony Clay 1-31 Clay 31-38 Weathered Bedrock 38-48 Weathered Bedrock

2.4.1 Environmental Setting

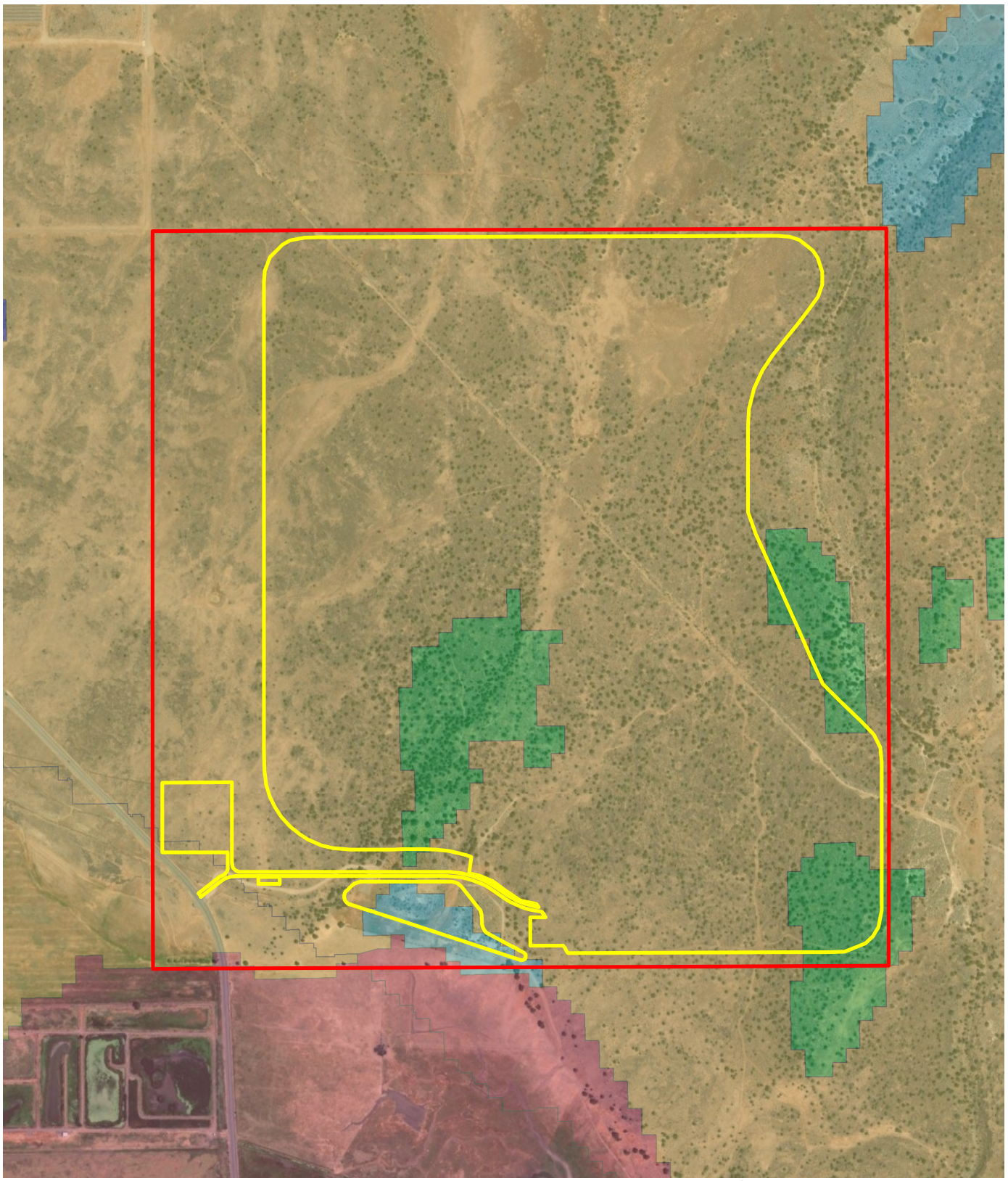
As part of the biological assessment, a reconnaissance-level search of the site was conducted on September 3, 2019. A baseline botanical survey was completed on October 28, 2019. A supplemental survey was completed on April 16, 2020, and on November 10, 2022, to define site-specific vegetation types within the project area.

Vegetation at the project site has been identified via the California Department of Fish and Wildlife's (CDFW) Vegetation Classification and Mapping Program (VegCAMP) data and field surveys, which identifies vegetation communities on a small-scale using definitions published in A Manual of California Vegetation (Sawyer et al. 2009). The vegetation alliances identified onsite in order of dominance onsite are *Artemisia arbuscula* ssp. *arbuscula* Shrubland Alliance, *Juniperus occidentalis* Woodland Alliance, *Bromus tectorum - Taeniatherum caput-medusae* Herbaceous Semi-Natural Alliance, and *Artemisia tridentata* Shrubland Alliance.

Vegetation is shown on Figure 11.

2.4.2 Special-Status Plants and Wildlife

Special-status species identified by the California Natural Diversity Database (CNDDB), California Native Plant Society (CNPS), and California Wildlife Habitat Relationships (CWHR) database searches and literature review were evaluated for their potential to occur within the



SOURCE: DIGITALGLOBE 2018 AERIAL PHOTOGRAPH;USFS CALVEG 2009

FIGURE 11
WHR VEGETATION TYPES
SKYLINE AGGREGATES
SUSANVILLE, CALIFORNIA

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project area. CNDDB occurrences within five miles of the site are shown on Figure 12. Potential for occurrence was based on habitat requirements and proximity to known recorded occurrences of a species.

Special-status species that are known to occur, or have the potential to occur, within the project area include:

- Greater sandhill crane (*Grus canadensis tabida*)
- Prairie falcon (*Falco mexicanus*)
- American badger (*Taxidea taxus*)
- Long-eared myotis (*Myotis evotis*)
- North American porcupine (*Erethizon dorsatum*)
- Morrison's bumble bee (*Bombus morrisoni*)
- Pulsifer's milk-vetch (*Astragalus pulsiferae* var. *pulsiferae*)
- Susanville beardtongue (*Penstemon sudans*)

Measures to avoid and minimize potential impacts to special-status species and their habitat are included in the Biological Resources Assessment (Appendix D).

2.5 Surface and Groundwater Characteristics

2.5.1 Surface Water

No perennial surface water courses are found on the site. One ephemeral drainage exists (as shown on Figure 13) on the eastern portion of the parcel, outside of the proposed mining area. The ephemeral drainage will be protected during mining operations with a buffer of 175 feet to 500 feet. Three stockwater basins also exist on the site; these will be filled.

Surface flow from the site currently is directed to the agricultural land to the south. There is no direct connection to waters of the United States or waters of the State of California. Hat Creek Construction & Materials intends to retain all stormwater that contacts industrial activities onsite.

2.5.2 Flood Plain

No portion of the site is located in a 100-year floodplain or designated floodway.

2.5.3 Groundwater

A preliminary survey of groundwater wells monitored by the Department of Water Resources (DWR) showed no wells within a one-mile radius and four wells within a three-mile radius of the site. Locations of the nearest DWR-monitored wells are shown on Figure 14 and data is summarized in Table 2-3. All wells are located in the agricultural areas of the valley floor south of the site.

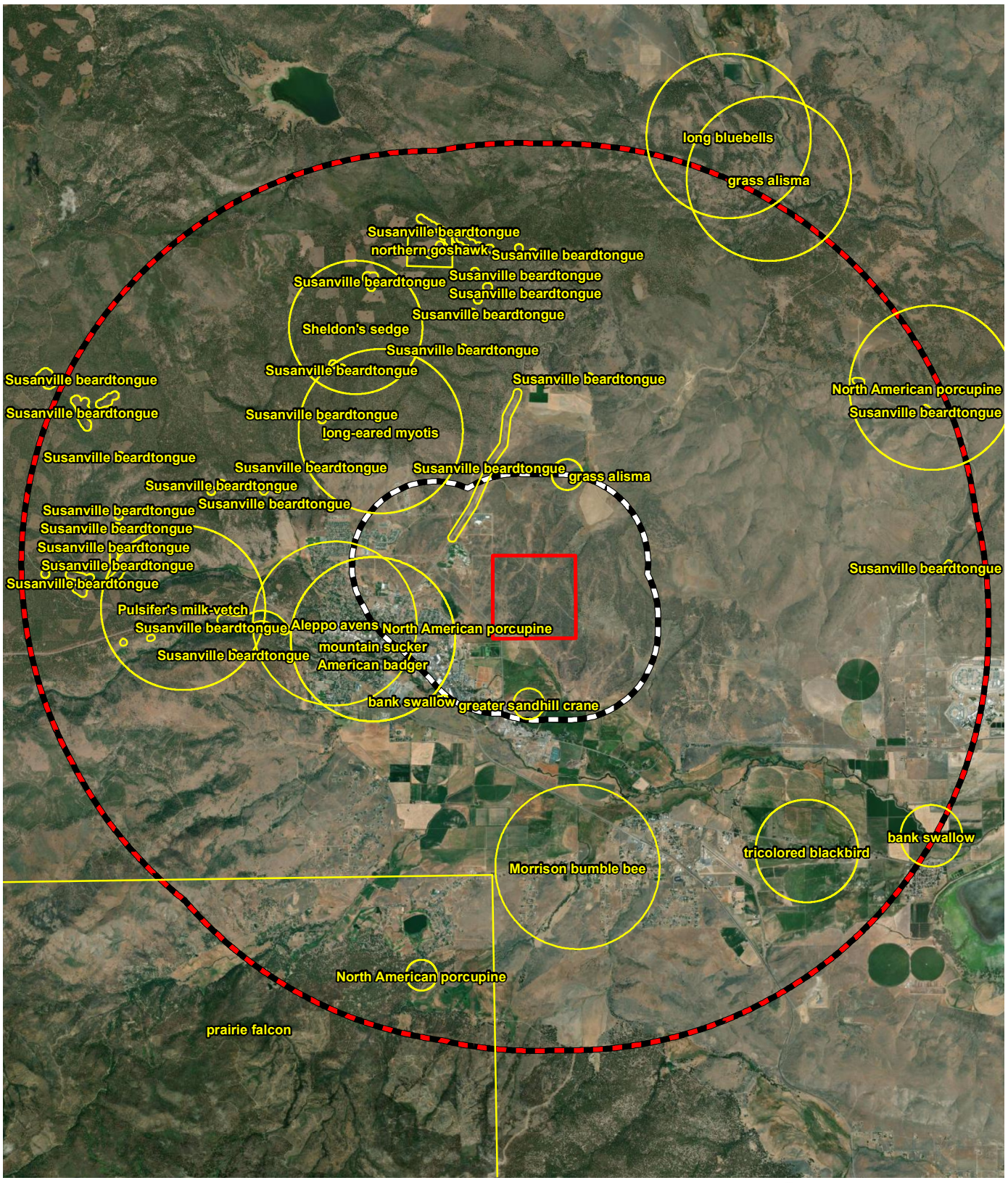
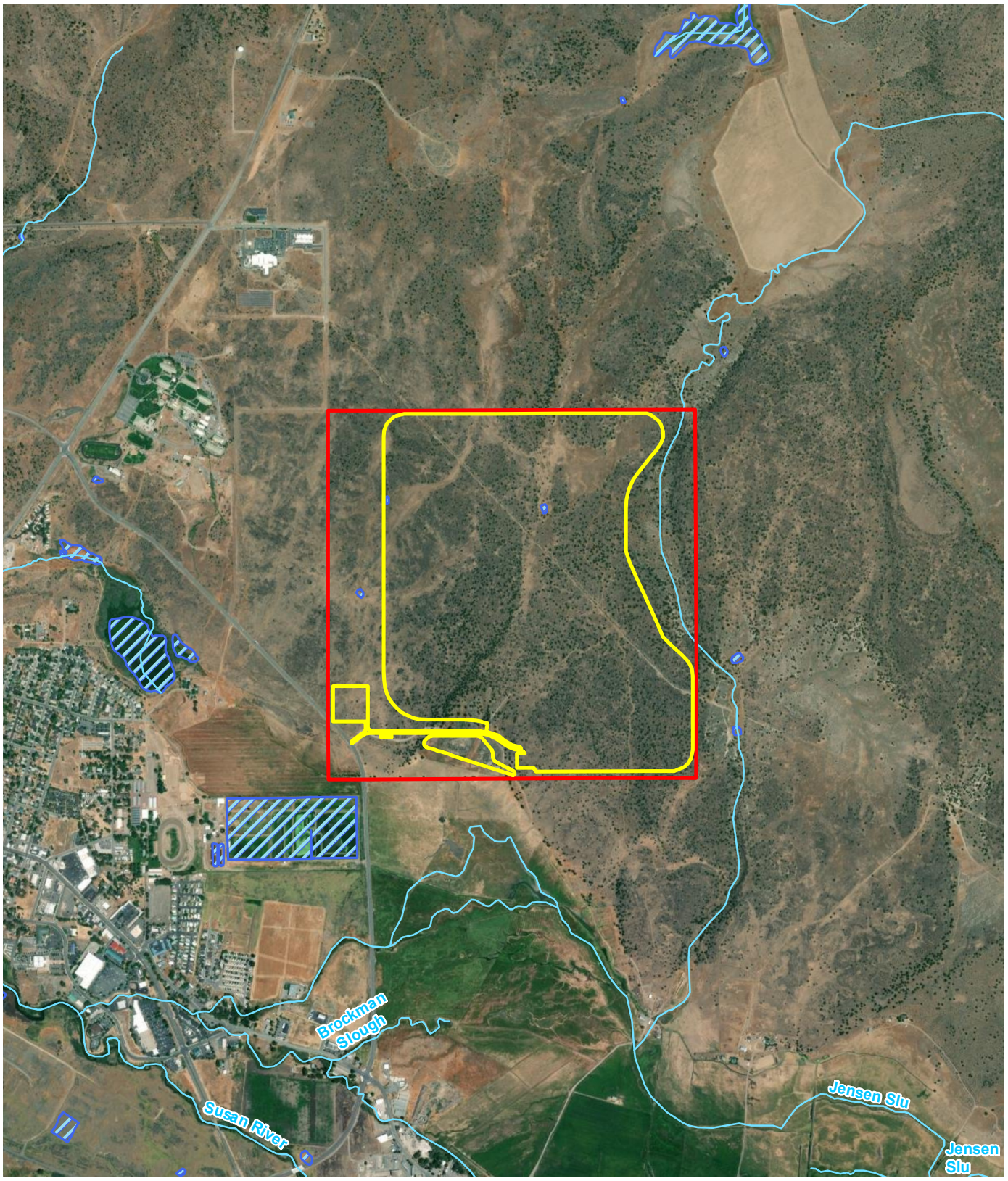


FIGURE 12
CNDDB OCCURRENCES
SKYLINE AGGREGATES
SUSANVILLE, CALIFORNIA

SOURCE: DIGITALGLOBE 2018 AERIAL PHOTOGRAPH; CDFW CNDDB OCTOBER 2022

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Stream
Waterbody
Reclamation Boundary
Approximate Parcel Boundary

0 1,000 2,000 4,000 Feet

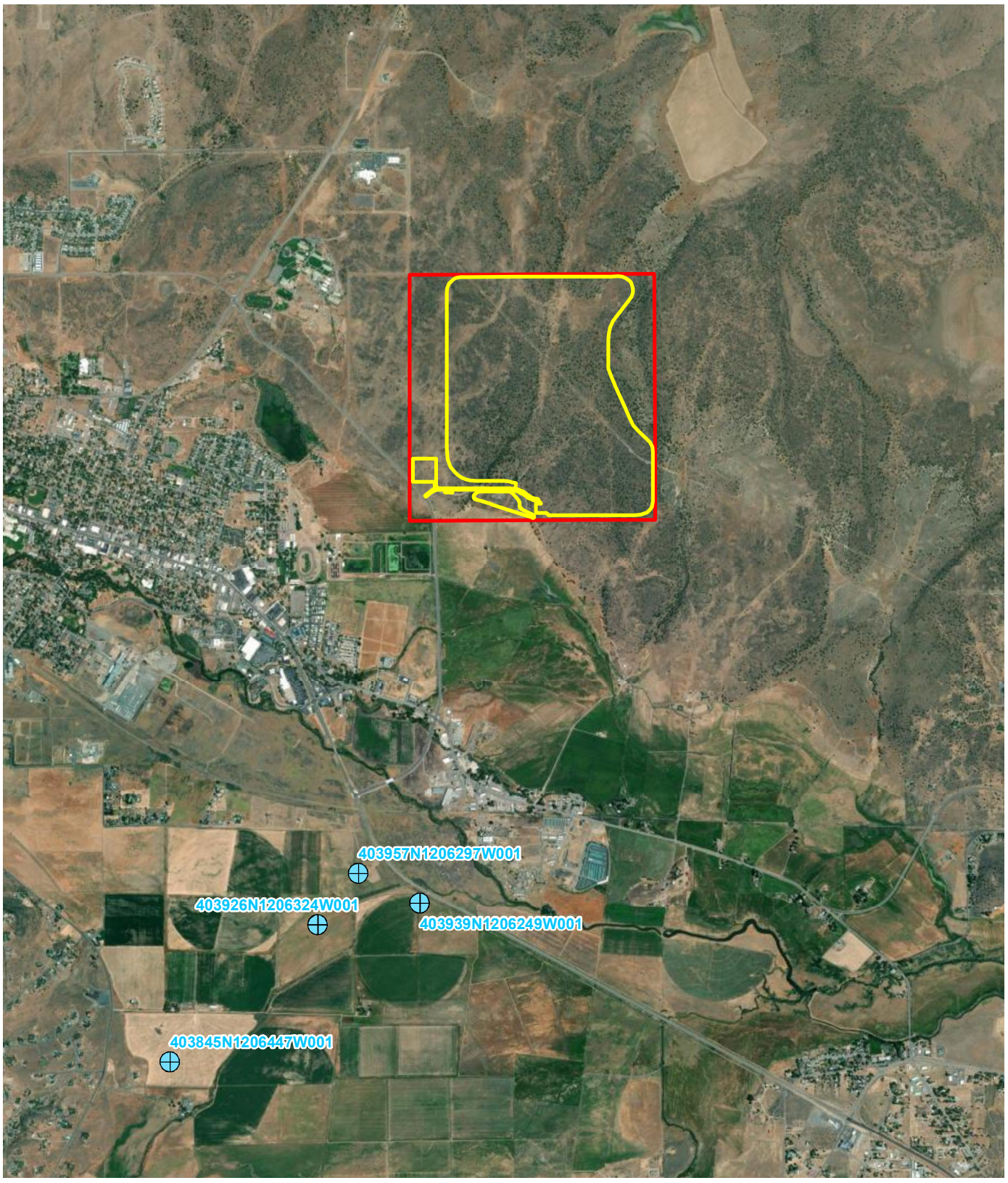
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SOURCE: DIGITALGLOBE 2018 AERIAL PHOTOGRAPH; USGS 2014

FIGURE 13
HYDROLOGY
SKYLINE AGGREGATES
SUSANVILLE, CALIFORNIA

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DWR Periodic Groundwater Measurement Well
Reclamation Boundary
Approximate Parcel Boundary

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0 1,500 3,000 6,000 Feet

SOURCE: DIGITALGLOBE 2018 AERIAL PHOTOGRAPH; USGS 2014

FIGURE 14
DWR GROUNDWATER WELLS
SKYLINE AGGREGATES
SUSANVILLE, CALIFORNIA

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Table 2-3 DWR WELL INFORMATION						
Site Code ID	Distance from Site	Location Relative to Site	Status	Total Depth (feet)	Depth to Water (feet)	Years of Record
403939N1206249W001	<3 mi	South	Active/ Irrigation	--	10-20	1980-2012
403926N1206324W001	<3 mi	South	Active	--	5-10	1993-2012
403957N1206297W001	<3 mi	South	Inactive	--	5-25	1984-1990
403845N1206447W001	<3 mi	South	Active	--	30-70	1994-2008

2.5.4 Water Source Onsite

Water for use in washing material will be supplied by an onsite well to be drilled following project approval.

2.6 Climate

2.6.1 Precipitation

According to precipitation data from the Susanville weather station (No. 048701, 1952 to 1964), the site averages 15.5 inches of rain per year and snowfall averages 32.8 inches per year. Eighty percent of this precipitation falls between the months of November and March. The total value distributed by month based on precipitation average is shown in Table 2-4.

Table 2-4 PRECIPITATION SUMMARY		
Month	Rain (inches)	Snow (inches)
January	2.28	9.4
February	3.12	9.1
March	1.46	4.9
April	0.75	2.1
May	0.83	0.4
June	0.78	-
July	0.33	-
August	0.15	-
September	0.42	-
October	1.65	0.1
November	1.26	1.0
December	2.43	5.8
Average	**15.47**	**32.8**

2.6.2 100-Year Return Period Annual Precipitation

The 100-year return period total annual precipitation was estimated using the same weather station (No. 048701). The calculated 100-year annual precipitation for the project site is estimated at 28.06 inches.

2.6.3 Temperature

Summers are warm and arid. The average summer temperature is between 75 degrees Fahrenheit (°F) and 83°F with lows ranging around 52°F. Average winter temperatures range from 24°F to 41°F. There is more snow than rain in this area. Winds are light and elevation changes rapidly within a ten-mile radius of Susanville.

2.6.4 Design Storm

SMARA requires design calculations for the site to be completed for the 20-year, 24-hour storm event. The next closest year available is the 25-year event. The 25-year, 24-hour storm from the NOAA Atlas 14 is estimated to be 4.04 inches (NOAA, 2022). As a reference, the 100-year, 24-hour storm is 5.41 inches. The pond onsite was designed for the 100-year, 24-hour storm event.

2.6.5 Wind Rose

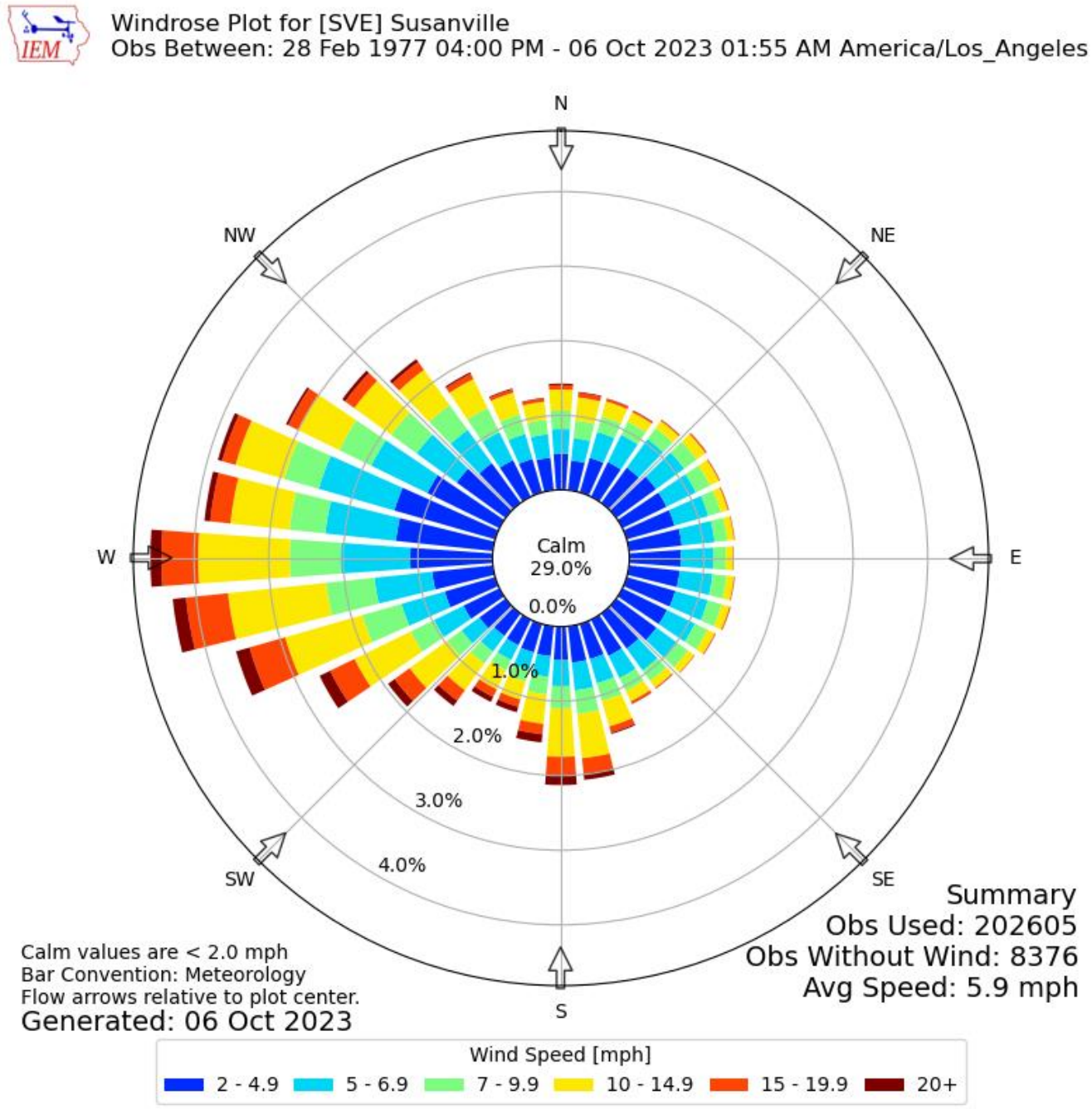
Wind data are available from the RAWS USA Climate Archive Wind Frequency Table (RAWS, 2022). Average wind directions shift from the northeast to the northwest with most wind activity during the months of September through November. Wind speed usually averages less than 5 mph. A wind rose is included as Figure 15.

2.7 Air Quality

The proposed project site is located in the Northeast Plateau Air Basin, which comprises Siskiyou, Modoc, and Lassen counties. The Northeast Plateau Air basin has a climate regime that is distinct from the rest of California. The basin has sharply defined seasons that follow a continental, rather than marine, pattern. Winters are cold and snowy; summers are warm and dry. The basin includes part of the Klamath Mountains to the west and the Cascade Range and Modoc Plateau, plus a slice of the Great Basin along its eastern edge. Mount Shasta rises 14162 feet above MSL, dominating the view from much of the basin. Another volcanic peak, Mount Lassen, stands at 10457 feet in elevation. Extensive forestland runs across saddles between the region's peaks. The volcanic Modoc Plateau extends across the northeastern expanse, with an elevation mostly above 4500 feet (Carle, 2006).

The region receives no transported air pollution from major urban areas. As in many rural areas in California, particulates from dust and wood smoke are sometimes a problem.

Equipment onsite will include loaders, generators, a concrete batch plant, concrete trucks, service truck, man lift, belly dump, articulated dump truck, crusher, and asphalt batch plant. Wet suppression will be used when necessary to control dust caused by excavation, processing activities, and materials transport. The operation plans to operate using power and natural gas



SOURCE: IOWA STATE UNIVERSITY, IOWA ENVIRONMENTAL MESONET

FIGURE 15
WIND ROSE
SKYLINE AGGREGATES
SUSANVILLE, CALIFORNIA

supplied from the City of Susanville. The asphalt plant will be fired with propane until natural gas infrastructure can be developed. Backup generators will be available onsite.

The Lassen County Air Pollution Control District has permitting authority over the proposed project. A source must comply with all District requirements before operating in the County. The District was contacted to determine what permitting requirements would apply to the proposed project.

The material excavated at the proposed project site would be processed onsite at a newly constructed processing plant. In order to build and operate this plant, the applicant will need to obtain an "Authority to Construct" (ATC) from the District, followed by a "Permit to Operate" (PTO). The ATC allows construction to begin, but operation may not begin until the PTO is obtained. The amount of material that the plant would be able to process yearly would be regulated by the District as part of the PTO. The operator would need to notify the District if the increase in processed material from the proposed project would cause the plant to exceed its permitted production levels. Any portable equipment, such as internal combustion engines that would remain in one stationary location for more than six months, would also be covered under the PTO. For such equipment, the facility would be required to list the equipment and the expected hours of operation.

Preliminary analysis based on tonnages described herein and operation of the aggregate facility and asphalt plant are summarized in the following (see detailed summary in Appendix E):

PROPOSED PROJECT MAXIMUM DAILY EMISSIONS (POUNDS)						
Emission Source	**ROG**	**CO**	**NOX**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Onsite Equipment	1.01	36.9	4.36	0.03	0.13	0.13
Generators	0.20	2.20	29.7	18.3	0.26	0.26
Employees	0.03	1.49	0.12	<0.01	0.02	0.01
Haul Trucks	0.25	1.20	15.8	0.36	2.18	0.88
Aggregate Plant	-	-	-	-	16.5	2.48
Wash Plant	-	-	-	-	4.12	0.62
Sand Plant	-	-	-	-	9.38	1.41
Concrete Plant	-	-	-	-	55.8	8.37
Asphalt Plant	46.5	26.4	67.4	36.0	24.3	23.6
Asphalt Silo	53.8	8.86	-	-	21.0	6.82
Lime Slurry	-	-	-	-	2.34	0.35
Material Handling/Stockpiles	-	-	-	-	1.25	0.19
Blasting	-	-	-	-	7.42	1.11
Grand Total	**102**	**77.1**	**117**	**54.7**	**145**	**46.2**
Significance Threshold	**150**	**550**	**150**	**150**	**150**	**150**
Source: RCH Group, 2023.						

PROPOSED PROJECT AVERAGE ANNUAL EMISSIONS (TONS)						
Emission Source	**ROG**	**CO**	**NOX**	**SO2**	**PM10**	**PM2.5**
Onsite Equipment	0.07	2.46	0.29	0.00	0.01	0.01
Generators	0.05	0.69	6.52	2.71	0.08	0.08
Employees	<0.01	0.22	0.02	<0.01	<0.01	<0.01
Haul Trucks	<0.01	0.03	0.36	0.01	0.05	0.02
Aggregate Plant	-	-	-	-	1.05	0.16
Wash Plant	-	-	-	-	0.30	0.04
Sand Plant	-	-	-	-	0.30	0.04
Concrete Plant	-	-	-	-	1.86	0.28
Asphalt Plant	2.66	1.5	3.85	2.06	1.39	1.35
Asphalt Silo	3.08	0.51	-	-	1.15	0.34
Lime Slurry	-	-	-	-	<0.01	<0.01
Material Handling	-	-	-	-	0.22	0.03
Blasting	-	-	-	-	0.02	0.00
Total	**5.86**	**5.42**	**11.0**	**4.78**	**6.24**	**2.37**
Significance Threshold	**27**	**100**	**27**	**27**	**27**	**27**
Source: RCH Group, 2023.						

ANNUAL GREENHOUSE GAS EMISSIONS (METRIC TONS)	
Emission Source	**Annual CO2e Metric Tons**
Construction (30-Year Amortized)	20
Onsite Equipment	207
Generators	414
Employee Vehicles	53
Haul Trucks	772
Total	**9,856**
Significance Threshold	10,000
Exceeds Threshold?	**No**
Source: RCH Group, 2023.	

2.8 Hazardous Materials

The Skyline Aggregates mining project will require the use of petroleum-based products for onsite equipment. These products include oils, diesel fuel, and lubricants and are classified as potentially hazardous. Because the facility will wash gravel, it will be regulated under individual waste discharge requirements or a general order adopted by the Lahontan Regional Water Quality Control Board (R6). A Hazardous Materials Business Plan will be filed with Lassen County.

Motor vehicles and equipment used for operating the facility will be refueled onsite. Used petroleum products will be recycled or properly disposed of at an approved receiving facility. Equipment will be kept in good repair to prevent leakage of petroleum products and antifreeze. Waste spills will be cleaned up immediately.

Hazardous materials, such as diesel fuel, and propane will be stored and managed according to applicable federal, state, and local regulations. All uses involving the storage and handling of hazardous materials are monitored by Lassen County Environmental Health. Local, state, and federal regulations for use and handling of hazardous materials associated with the project will reduce impacts to the public and the environment.

2.9 Transportation/Traffic

Traffic will leave the site via Skyline Road and continue to either Highway 139, Highway 36, or Highway 395. Traffic from the site will vary based on operational demand. Generally, traffic peaks during the construction season and specific construction projects. The maximum daily traffic from the site is estimated to be 400 trucks (400 arriving and 400 departing). Average truck traffic from the site is estimated to be approximately 60 trucks daily. Proposed travel routes are shown on Figure 16.

A Transportation Technical Study was conducted by Headway Transportation in July 2023 and is included in Appendix F. The Transportation Technical Study found no significant impacts to traffic levels or level of service at the surrounding intersections based off of the proposed truck and employee traffic.

2.10 Utilities and Services

The agencies in the following list provide public or private services or utilities to the project site:

Fire Protection:	Lassen County Fire Department
Law Enforcement:	Lassen County Sheriff's Department
Electricity:	Lassen Municipal Utility District
Natural Gas:	City of Susanville
Wastewater:	Onsite septic and portable
Solid Waste:	C&S Waste Solutions of Lassen County

2.11 Slope Stability

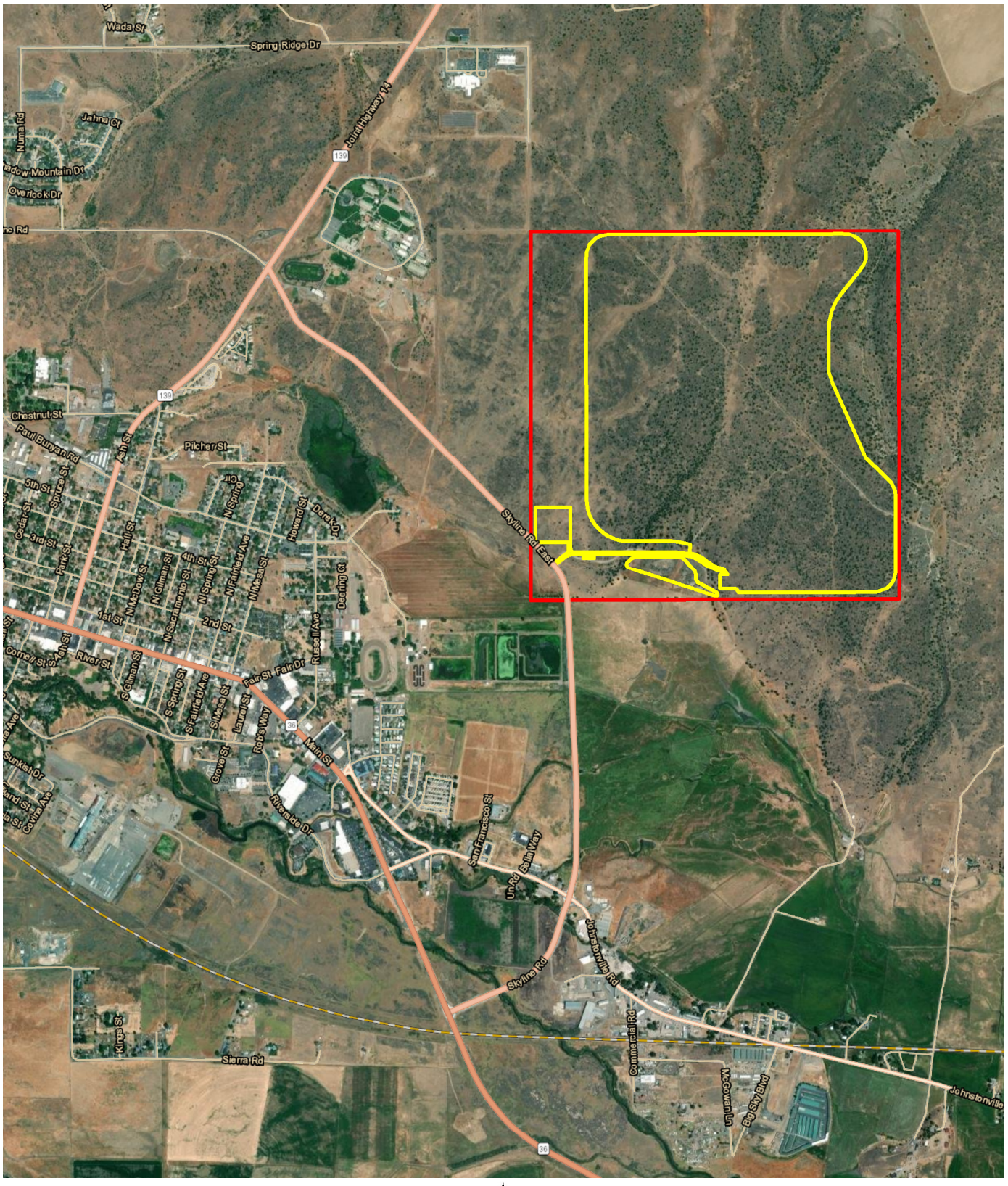
A slope stability analysis was completed by BAJADA Geosciences, Inc., in August 2020. The analysis is included in Appendix G.

The study for proposed quarry slope design considered relevant geotechnical data, limited hydrogeological information, and the results of various stability analyses. Maximum recommended quarry slope geometries are summarized in this section, and some operational considerations related to the recommended slopes were considered.

Based on results of the kinematic evaluations and limit-equilibrium analyses, the recommended bench geometries for the quarry included:

- Maximum bench height: 40 feet
- Minimum bench width: 23 feet
- Maximum design bench face angle: 80 degrees
- Maximum overall slope angle: 53 degrees

Variations on bench width and height can be made as long as the proportion of maximum height to minimum width is maintained (i.e., a 40-foot-tall and 23-foot-wide bench geometry would be equivalent to the recommendations made above) or flatter.



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SOURCE: DIGITALGLOBE 2018 AERIAL PHOTOGRAPH

FIGURE 16
TRAVEL ROUTES
SKYLINE AGGREGATES
SUSANVILLE, CALIFORNIA

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It was recommended that Hat Creek Construction implement a number of operational and maintenance procedures to reduce the potential of backbreak and safety issues associated with local bench-level slope failures. Those procedures included:

- Presplitting all final rock faces;
- Scaling of blasted rock faces to remove loose rocks;
- Maintenance of a 25-foot-wide offset barrier from all inactive rock faces; and
- Complete daily inspections of rock faces.

When bench-level wedge or planar failures occur, it was recommended that debris from those failures be removed from the bench. By implementing these procedures, impacts from backbreak should be reduced to an acceptable level.

Finally, the upper quarry slope face should be inclined no steeper than 1.5:1 (horizontal:vertical) when exposing soil and 1:1 when exposing intensely to moderately weathered rock materials.

2.11.1 Controlled Blasting

Blasting disturbance is one of the controlling factors for rock mass strength and overall slope stability. Slope instabilities are often triggered by the progressive deterioration (raveling) of the wall face and this process is often initiated with the detachment of small rock blocks (key blocks) bounded by the rock mass discontinuities. The preservation of rock mass integrity during mining is critical to reduce the potential of these progressive failures and is required to achieve the steepest bench face angles possible.

Controlled blasting methods will facilitate steeper final quarry slopes by reducing face damage from blasting. Typical controlled blasting strategies utilize small-diameter blast holes detonated as a preshear line in harder, massive rock (pre-splitting) or as a post-shear (cushion) line in weak or heavily fractured rock. In all cases, it is important that blasthole lengths be staggered so the bottom of the hole does not intercept the crest on the bench below. Otherwise, highly fragmented bench crests will develop leading to increased and possibly unacceptable backbreak.

Interim quarry slopes should incorporate some "controlled blasting" to maintain safety, but the requirements in this situation are less rigorous due to shorter operating life of these walls. The initial quarry can be developed with variable slopes and blast patterns to develop optimal blasting design for final quarry walls. Trial blasts are also recommended wherever there is a substantial change in rock mass characteristics, in order to evaluate and optimize blast performance.

2.11.2 Geotechnical Monitoring

Proactive geotechnical monitoring is recommended for all stages of quarry development. The monitoring program should be implemented as a staged approach and include geotechnical and tension crack observation and monitoring, as well as implementation of a surface displacement monitoring program.

Detailed geological mapping should be performed following creation of new benches but at a frequency no longer than quarterly to annually, depending on the rate of resource extraction and bench formation. Detailed information to be noted should include orientations, types, persistence, frequency, infilling, and condition of discontinuities exposed during mining operations. In addition, seepage volumes and relative changes in seepage volumes should be noted as those changes might indicate dilation of discontinuities and a change in the hydrogeologic environment.

Observations of tension cracks should be carried out along all newly formed benches. Detailed information to be noted should include the surveyed location, orientation, aperture, and both vertical and lateral extents of all tension cracks. The development of tension cracks should be very carefully observed. The frequency of observations should be commensurate with the rate of development of individual cracks. A map and database of tension crack information should be compiled and updated as new information becomes available. Areas of slope movement that are associated with development of tension cracks should also be monitored with survey and/or instrumentation, which can consist of time domain reflectometry (TDR), inclinometers, borehole and/or surface extensometers, tiltmeters, and piezometers.

2.11.3 Bench Scaling

It is important that benches be kept clear and that the bench faces be maintained regularly so that they remain functional during mining operations. Scaling will be an important part of the bench maintenance program and may be conducted after blasting in areas where access is still available. Routine scaling may allow the bench widths to be minimized, due to a reduction in the volume of material to be controlled.

2.11.4 Naturally Occurring Asbestos (NOA)

Ultramafic rock, such as serpentinite, amphibolite, peridotite, dunite, pyroxenite, hornblendite, etc., can contain asbestiform minerals, which are fibrous, silica-rich crystals that can cause lung cancer, mesothelioma, asbestosis, and other health-related issues, if present. Typically, six minerals within ultramafic rocks are responsible for the primary, naturally occurring asbestiform concerns for health-related issues: chrysotile, tremolite, actinolite, anthophyllite, crocidolite, and amosite. These minerals may or may not be present in ultramafic rocks; thus, the presence of ultramafic rock does not automatically indicate that there is a health hazard. The presence of asbestiform minerals can sometimes be discerned in the field based on visual examination of rock exposures but, most often, must be confirmed using laboratory testing.

Naturally occurring asbestos can be hazardous to human health if it is disturbed, becomes airborne and is inhaled. If NOA is not disturbed and fibers are not released into the air, then it is typically not considered a health hazard. Inhalation is the primary exposure route of concern because breathing asbestos fibers may cause them to become trapped in the lungs. Ingestion is another, albeit less common, pathway of concern, because swallowing asbestos fibers may also cause the fibers to be trapped in body tissues. Asbestos is not absorbed through the skin, so merely touching it does not pose a significant risk to human health. Asbestos fibers are not water soluble and do not move through groundwater to any appreciable extent. Based on studies of other insoluble particles of similar size, the expected migration rate of an asbestos fiber through soils by the forces of groundwater is approximately 1 to 10 centimeters (0.4 to 4 inches) per 3,000 to 40,000 years (New Hampshire DES, 2010). Thus, asbestos is not considered a groundwater contaminant.

As discussed in Section 3.0, the highwall should expose basalt and volcanic rocks, which are not rock types that typically are considered as generators of NOA. If fibrous rock, or differing rock materials, such as those mentioned above, are encountered during quarrying, we recommend that an assessment of the potential presence of NOA and its associated concentrations be performed.

Basaltic rocks at the site are typically not considered asbestos bearing, since they do not meet the criteria noted above. Thus, testing was not performed to assess the potential presence of NOA.

2.12 Other Permits

- Conditional Use Permit, Lassen County Planning Commission
- Reclamation Plan, Lassen County Planning Commission and Department of Conservation, Division of Mine Reclamation (DMR)
- Permits for Operation, Lassen County Air Pollution Control District (APCD)
- Industrial General Permit, Lahontan Regional Water Quality Control Board
- General Waste Discharge Requirements for Aggregate and Concrete Facilities, State Water Resources Control Boards
- Sewage Disposal Permit, Lassen County Department of Environmental Health

2.13 Archaeological and Historical Resources

An archaeological inventory survey was conducted between April and August 2020 by a qualified professional archeologist. The purpose of the survey was to identify and document any archeological, historical, or cultural resources located within the proposed expansion area. The archeological field survey identified prehistoric cultural resources within the project area and historical resources within the project area. The proponent wishes to remove limited historical resources (rock walls and iron debris). The site will be protected from disturbance until additional evaluation has been completed per County mitigation measures.

3.0 EXCAVATION AND MINING PLAN

3.1 Excavation and Mining Overview

Proposed mining and reclamation operations on the Skyline Aggregates site would be carried out by Hat Creek Construction and Materials, Inc. The project site encompasses approximately 640 acres, of which approximately 460 acres will be directly affected by mining and processing activities. The remaining acreage will serve as setback areas and buffers from surrounding properties, critical habitats, and archeological resources.

Materials mined onsite will consist of hard rock aggregate. Aggregate mined on the site will be crushed, screened, washed, and graded onsite and then used in the production of virgin aggregates, asphalt mix, and ready-mix concrete. These end products are generally associated with roadway construction, but they will also be used by public agencies to improve existing infrastructure.

Proposed mining operations will follow the guidelines established by SMARA and will conform to the monitoring schedule established by the Lead Agency. The site will be mined in phases, taking approximately 50 years to complete. Mining operations will begin in the spring of 2025 following permit approval. The termination date will be based on demand.

3.2 Overburden Removal

"Overburden," the material lying above the aggregate deposits, will be removed and stockpiled to be used in support of site reclamation. Overburden will be used as backfill after mining activities are complete. Overburden varies in nature depending on its location onsite, but is generally a mix of loam and clay and very limited in supply. Rock is generally at the surface. Topsoil will not be mapped prior to mining.

To the extent possible, overburden will be moved directly to its final planned location immediately after excavation. If stockpiling is necessary, stockpiles will be managed to minimize water and wind erosion. Any stockpiles will receive an application of hydroseed/mulch to stabilize the slope. If stockpiled, the topsoil will be clearly identified to distinguish the topsoil material. Topsoil removal will not precede mining by more than one year. Topsoil stockpiles will be maintained, identified, signed, and managed prior to reclamation. Topsoil and overburden will be spread withing the mining footprint as needed for reclamation.

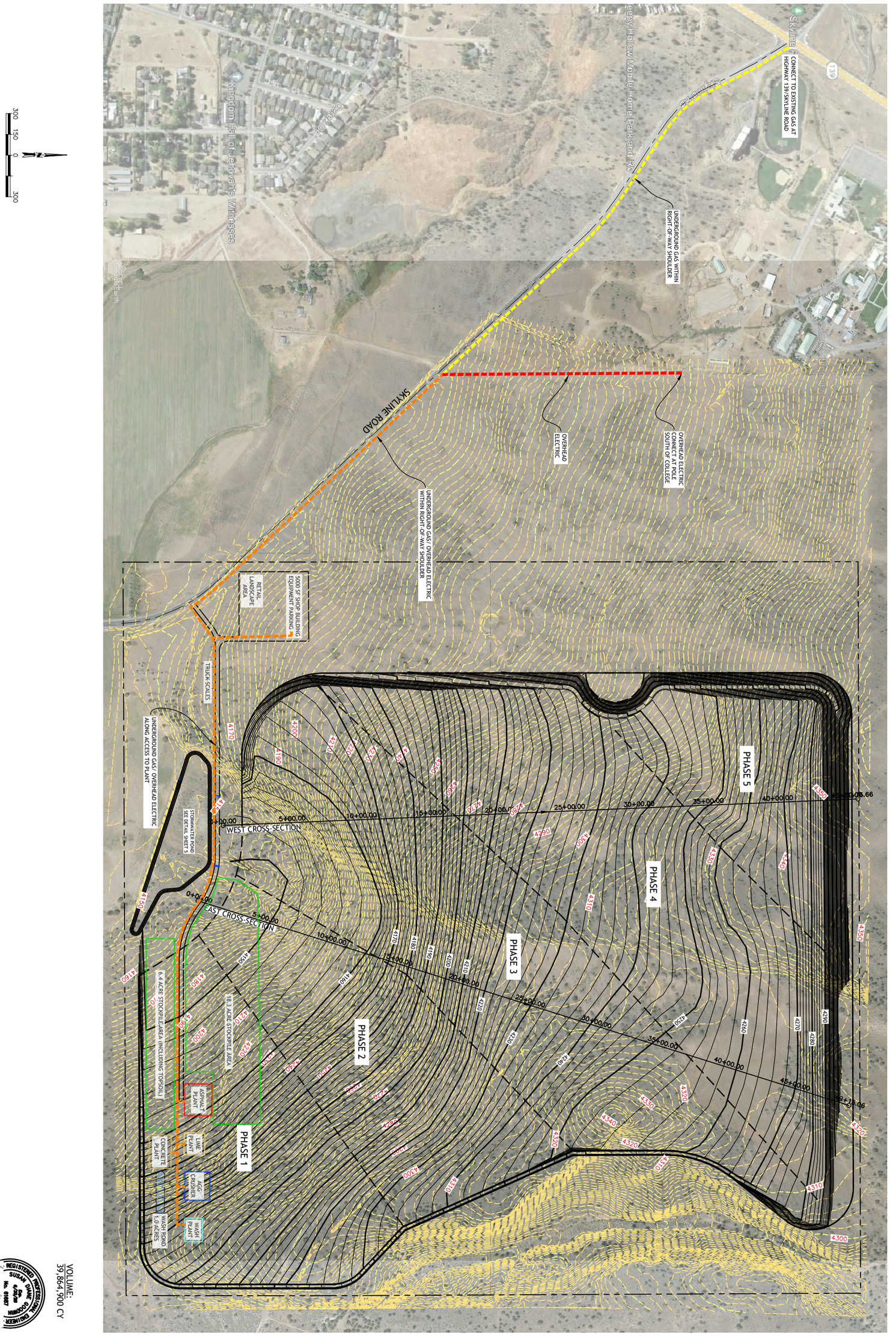
3.3 Mining Operation Plan

3.3.1 Operation Overview

Setbacks and other areas of non-mining activity at the site are shown on the site plan (Figure 17).

Another factor that will determine the amount of material to be removed is the quantity and quality of the aggregate in the gross excavated material. The depth of mining will vary with the depth of the material. Generally, the plan is to remove the 50 to 65 feet of basalt that overlies the base formation. The maximum depth of cut will be at ground surface level of the existing site. The elevation of the final mine grade will be from 4180 to 4272 feet above MSL. The site will include

PDF:RecPlan102-15-24_FIGURE 17.RP
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VOLUME:
39,864,900 CY

REGISTERED PROFESSIONAL ENGINEER
SUSAN GAIL GOODWIN
No. 61987
STATE OF CALIFORNIA

JOB NO. 71305	DATE 02/15/24	SHEET FIGURE 17	SKYLINE QUARRY SITE PLAN / FINAL CONTOURS HAT CREEK CONSTRUCTION & MATERIALS SUSANVILLE, CALIFORNIA	DSGN: SG DR: SG CHK: SG APVD: SG	NO.	DATE	REVISION BY

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(530) 223-2585
FAX (530) 223-1145

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a headwall along the northern, eastern, and western boundaries and sloping topography to the south, as shown on Figure 17 and specified in Section 2.11.

The total volume of material removed per day will fluctuate with seasonal demand. It is estimated that a maximum of 10,000 tons of material will be removed in 24 hours. Estimated excavation of 10,000 tons per day will be on an operating schedule of Monday through Saturday with some operational Sundays. An estimated 450,000 tons will be extracted each year. Drilling reports indicate an excess of 60 million tons of material is available in the basalt flow.

3.3.2 Approach to Mining and Excavation

The mining and excavation will begin with the removal of the topsoil and overburden material in each phase area. All salvageable topsoil will be removed as a separate layer. This material will be used immediately for reclamation in previously mined areas or stockpiled for future use. Stockpiles will be seeded or covered.

Following the removal and placement of overburden materials, the mining and processing of underlying aggregate materials will begin. The plan is to follow the 50 to 65 feet of overlying basalt upslope to a final slope at the north portion of the site.

The mining operation will result in small amounts of dust that will be controlled through the use of water trucks and/or dust suppressants.

Mine phasing and final contours are shown on Figure 17. Mining will commence in the southeast corner of the site and move to the north. Cross-section is included on Figure 18. Pond detail is provided on Figure 19.

3.3.3 Employees and Equipment Use

Employees will be operating various types of equipment and machinery on the Skyline Aggregates site. The equipment to be used for the mining and excavation of materials will generally be diesel-powered, hydraulically operated wheel and track-mounted machines. Power for the crushing equipment will be supplied by the local utility.

The following equipment will be used on the project site:

- One water truck for dust control;
- Two front-end loaders to feed the crusher and load trucks;
- One hydraulic excavator to harvest raw material from extraction areas;
- Two off-highway trucks to transport raw material from extraction areas to the processing area;
- One self-loading scraper to remove and transport overburden;
- One track dozer to level fill;
- One HP300 cone crusher (300 hp drive motor)
- One GP200 cone crusher (200 hp drive motor)
- One JCl 7 x 20 3-deck wash screen 40 hp drive motor on stand with 15 hp drive motor

WEST CROSS-SECTION

EAST CROSS-SECTION

REGISTERED PROFESSIONAL ENGINEER
SUSAN DIANE GOODRICH
Exp. 6/30/25
No. 61687
CIVIL
STATE OF CALIFORNIA

P:\CAD\71305 HAT CREEK SKYLINE QUARRY\DWG\SKYLINE PLAN\041023_SKYLINE GRADING PLAN-60 FEET.DWG
PDF\RecPlan\02-15-24 FIGURE 18 RP

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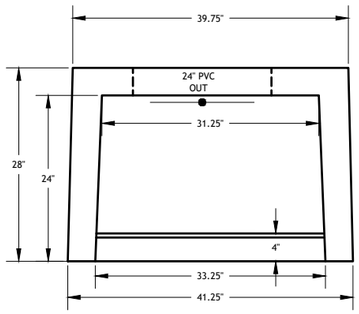
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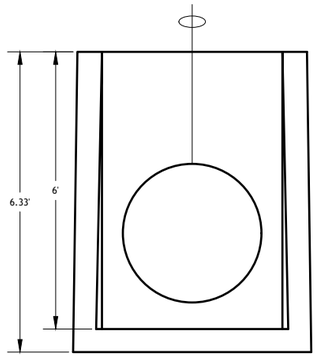
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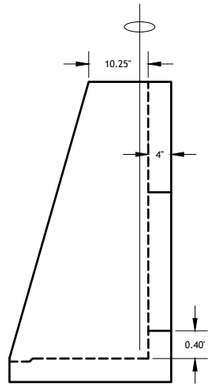
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SKYLINE QUARRY
CROSS SECTIONS
HAT CREEK
SUSANVILLE, CALIFORNIA

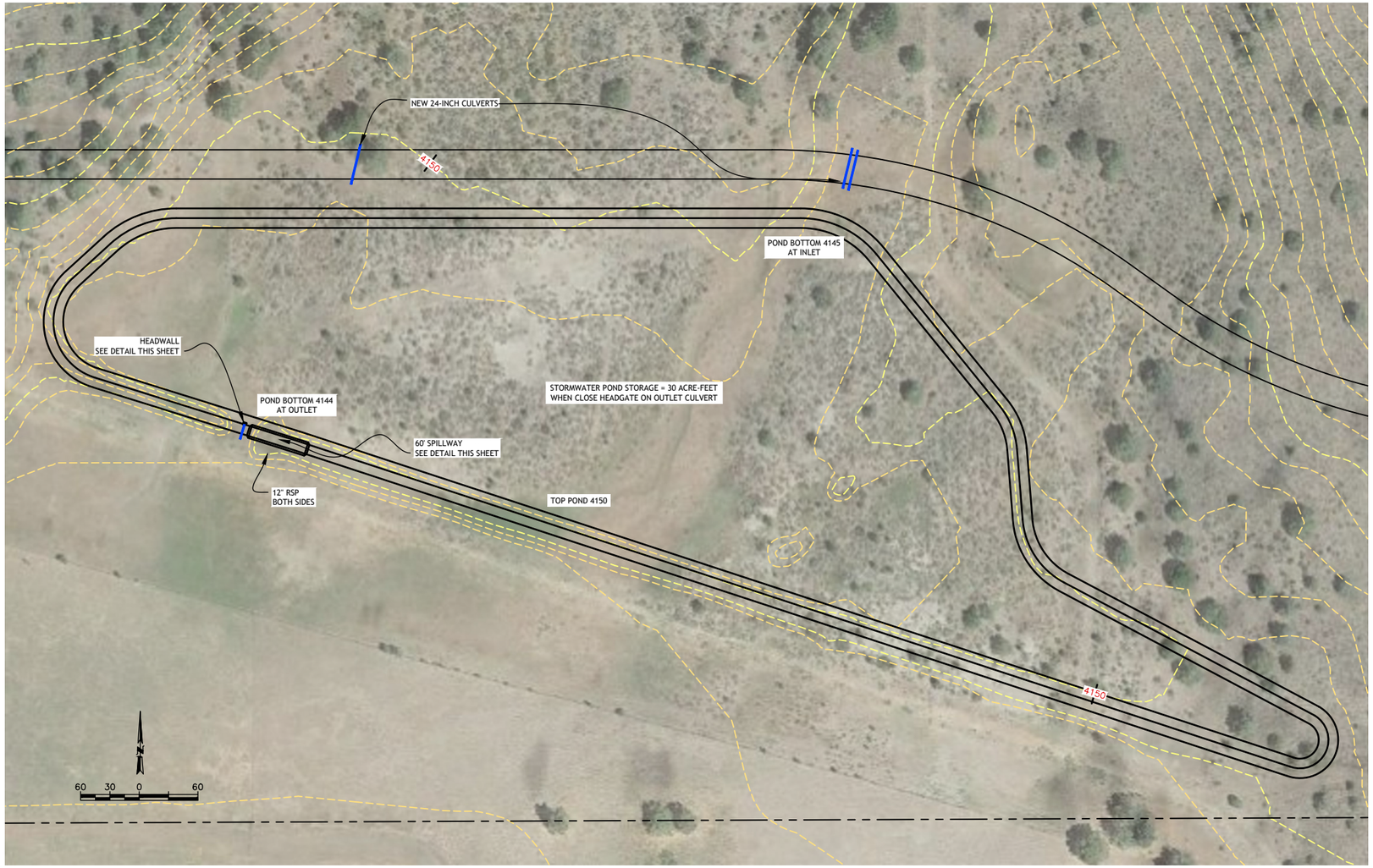
SHEET
FIGURE 18
DATE 04/12/23
JOB NO. 71305



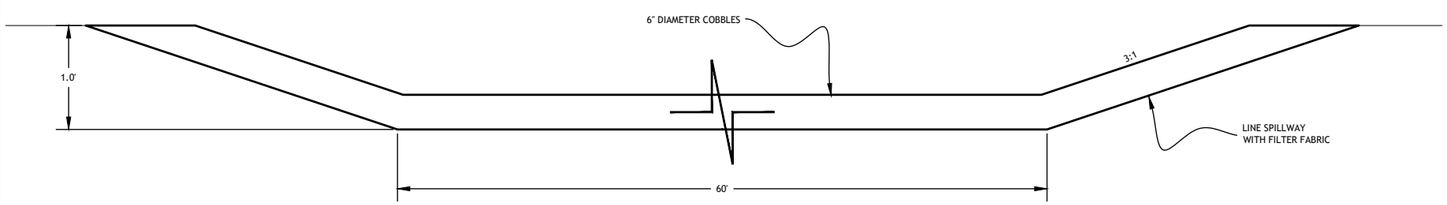




HEADWALL (TYPICAL)
BRIGGS MANUFACTURING OR APPROVED EQUAL
NOT TO SCALE



STORMWATER POND DETAIL
1" = 60'



SPILLWAY DETAIL
NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER
SUSAN DIANE GOODWIN
Exp. 6/30/25
No. 61687
CIVIL
STATE OF CALIFORNIA

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

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NO.	DATE	BY	REVISION

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DR: AJ
CHK: SG
APVD: SG

SKYLINE QUARRY
STORMWATER POND & DETAILS
HAT CREEK
SUSANVILLE, CALIFORNIA

SHEET
FIGURE 19
DATE 04/12/23
JOB NO. 71305

P:\CAD\71305 HAT CREEK SKYLINE QUARRY\DWG\SKYLINE PLAN\041023_SKYLINE GRADING PLAN-60 FEET.DWG
P:\PRelPlan\02-15-24 FIGURE 19.RP

- One El Jay 7 x 20 3-deck wash screen 40 hp drive motor on stand
- One 35-yard feeder bin with 36" feed belt 20 hp drive motor
- One 15-yard feeder bin for wet screen 15 hp motor drive
- One 15-yard supplemental feeder bin 15 hp motor
- One 44-inch sand screw 20 hp drive motor
- One 8-inch by 6-inch volume water pump 15 hp drive motor
- One 8-inch by 6-inch high-pressure water pump 100 hp drive motor
- Three 24-inch x 60-foot stacker conveyors 10hp drive motors
- Two superior 30-inch x 60-foot radial stacker conveyors 10hp drive motors
- Two 30-inch x 90-foot radial stacker conveyors 25hp drive motors
- Two 36-inch x 55-foot conveyors 15hp drive motors
- Two 30-inch x 55-foot conveyors 15hp drive motors
- One 30-inch x 60-foot conveyor 15hp drive motor
- One 36-inch x 10-foot stub conveyor 10hp drive motor
- One 75-foot truck scale
- One scale office trailer

The general equipment locations are illustrated on the site plan. A centralized processing plant is proposed to reduce traffic and dust generation (see Figure 17). Tracked equipment will be parked in the area designated for processing or material storage when not in use. Personnel vehicles will be parked at the entrance area during working hours. Daily fueling, maintenance (lubing), and repairs will take place near the processing facility, until the onsite shop is constructed. Minor occurrences of breakdowns may require equipment to be repaired away from the processing facility or shop.

3.3.4 Processing Plant Operations and Aggregate Transport

Processing Plant Operations

Processing plant operations will include the stockpiling of aggregate, loading of raw aggregate into conveyor chutes, washing the aggregate, sorting and crushing the aggregate to market specifications, and delivery into stockpiles or into hauling trucks for delivery. In general, the proposed mining operations would normally occur between the hours of 6:00 am and 6:00 pm, Monday through Saturday, with occasional need to operate on Sundays. Depending on demand, processing may occasionally operate 24 hours per day a maximum of 150 day per year.

Loaders will deliver raw mined aggregate to the plant chutes, which will carry the aggregate into a jaw crusher. Aggregate will then enter a cone crusher, followed by screening and washing into its final form for delivery via hauling trucks, or be further processed into concrete or asphalt.

The aggregate plant would be rated at 250 tons per hour. During typical operations, the aggregate plant would operate for 12 hours per day (3,000 tons per day) and 450,000 tons per year. The aggregate plant would have one jaw crusher, two cone crushers, two screen decks, and nine secondary conveyers. The wash plant may operate for 12 hours per day (3,000 tons per day) and will process approximately 90,000 tons of aggregate annually. The wash plant would have one

feeder, eight conveyors, one deck screen, and two sand screws. It is estimated aggregate material extracted onsite will weigh 1.8 tons per cubic yard.

The concrete plant would be rated at 150 tons per hour. During typical operations, the concrete plant would operate for 10 hours per day (1,500 tons per day) and 100,000 tons per year. The concrete plant would have one feeder, an aggregate hopper, a Portland cement silo, and a fly ash silo. A lime plant will be directly adjacent to the concrete plant.

The asphalt drum hot mix plant (natural gas/propane fired) would be rated at 350 tons per hour. During typical operations, the asphalt hot mix plant would operate for 10 hours per day (3,500 tons per day) and 400,000 tons per year. The material would be metered from the hoppers onto a conveyer belt and transported into a rotary natural gas/propane-fired dryer. The asphalt hot mix plant would contain a bag house for emissions control and a 100 million British Thermal Units (BTU) per hour natural gas-fueled burner. The lime slurry plant would be rated at 400 tons per hour (4,000 tons per day) and 400,000 tons per year. The lime slurry mix plant would have a single hopper/pug mill/surge/conveyor. The facility would require three backup diesel (two hours per day and 500 hours per year and 10 days per year) generators: 755 horsepower (hp) generator (aggregate plant), 475 hp generator (aggregate plant), and 350 hp generator (asphalt plant).

Processing plant operations will primarily occur below grade. All processing plants will be located on a below-grade flat within the boundaries of Phase One. Operations will excavate the area required within the first two years of operation.

Aggregate Transport

Haul trucks will generally deliver aggregate processed at the Skyline Aggregates site to nearby road construction jobs. Project traffic is expected to occur as follows:

- Aggregate hauling will occur 300 days/year;
- Approximately 90 percent of the processed aggregate will be hauled to nearby job sites and approximately 10 percent will be hauled to the open market;
- Aggregate generally will be hauled between the hours of 6:00 AM and 6:00 PM, with nighttime and off-hour deliveries during high-demand or in peak periods, or as required by the project contract;
- 20 employees will be onsite;
- A single truckload will carry approximately 25 tons of aggregate;
- Typical operations would occur 12 hours per day (6 AM to 6 PM), Monday through Saturday, with maximum operations of 24 hours per day, six days a week;
- Annual average daily truck trips of 60 truck trips (60 arriving and 60 departing) throughout the calendar year and a daily maximum of 400 truck trips (400 arriving and 400 departing); and
- The access road into the site back to the plant will be paved.

3.3.5 Water Usage

An onsite groundwater well will be utilized for washing the aggregate and dust suppression. Assuming an operational period of 300 days per year, 10,000 gallons per day would be used for dust suppression (total 3,000,000 gallons for dust suppression annually). Washing will occur at the site on average 30 days per year with an estimated 6,000 gallons of water used per day. The combined water usage of dust suppression and washing would result in approximately 3,180,000 gallons of water used per year (9.76 acre-feet per year).

3.3.6 Pollution Prevention

The potential source for pollution on the site will be from the fuels and oils used in equipment. The maximum amount of fluids stored onsite will be 10,000 gallons of fuel in an aboveground storage tank and approximately five 55-gallon drums of lubricants and transmission oil. The tank and drums will have the appropriate secondary containment measures.

Storage of fuels and oils will comply with the state guidelines for pollution prevention near water bodies. The vehicles and equipment used in the operation of the project would be maintained to prevent any possible leaks. Routine maintenance will be conducted onsite. Major repairs, other than emergency repairs, will be conducted at an offsite facility. Since onsite drainage will be designed to stay on the site and erosion control measures will be used to control offsite erosion, offsite drainage of potential leaks from operations would not occur. A Hazardous Materials Business Plan and Spill Prevention, Control, and Countermeasures (SPCC) Plan will be prepared for the project following reclamation plan approval.

3.3.7 Waste Disposal

Portable toilets will be provided onsite for sewage at the active quarry face and serviced/pumped at regular intervals. The shop will have facilities with a septic system. Domestic waste generated by workers at the site will be disposed of in trashcans with lids or a dumpster. Solid waste will be picked up by C&S Waste Solutions of Lassen County. No mining waste material will be generated.

3.3.8 Disposal of Mine Wastes

No mining waste material will be generated.

3.3.9 Dust and Noise Control

Water trucks will be used during the mining operation to control dust created by vehicle movement.

The potential sources of noise on the site will be from the operation of the heavy equipment and processing plant during the mining operation. The earth-moving and processing plant equipment would operate in accordance with the Lassen County Noise Ordinance. Noise control measures are incorporated into the project. The mobile machinery and equipment used on the site would be fitted with noise suppression mufflers in accordance with the applicable federal, state, and local regulations. The processing plant would use Teflon-coated aggregate chutes to reduce noise levels. Other measures that could be used to comply with the Lassen County ordinance could include

noise curtains installed around operating equipment and trucks operating within the property using strobe lights rather than warning beepers. Noise mitigation measures would be implemented to the extent necessary to ensure that noise levels would remain within Lassen County and Mine Safety and Health Administration (MSHA) standards.

The project is designed to comply with federal, state, and local laws pertaining to air quality control standards and regional air quality plans. The Lassen County Air Pollution Control District will issue permits for facility operations after review and approval of this mining and reclamation plan.

3.3.10 Public Safety

The issue of public safety will be addressed in accordance with California Code of Regulations Section 3502 (b)(2). Fencing and signage would be installed to limit public access to the site. Future development surrounding the project site will increase public exposure to onsite hazards. Therefore, as future development occurs near the site, additional public safety measures would be installed to prevent entry to the site.

3.3.11 Stormwater

Site stormwater will be directed to retention pond onsite. Water will be reused for dust suppression. The pond was designed for the 25-year, 24-hour storm event plus average annual precipitation. The pond will have an emergency spillway should capacity be breached.

The pond will allow settlement of solids. Discharge is not planned; however, if discharge should occur, it will be directed to adjacent pastureland, not directly to surface water. A Stormwater Pollution Prevention Plan (SWPPP) will be prepared and coverage obtained under Order 2014-0057-DWQ, as amended.

4.0 RECLAMATION PLAN

4.1 Reclamation Process

4.1.1 Overview of Reclamation Process

The Skyline Aggregates site encompasses approximately 640 acres, of which approximately 460 acres will be disturbed for aggregate material or used for processing activities. The rest of the acreage will remain undisturbed. In accordance with SMARA requirements, this reclamation plan identifies the means by which the areas disturbed by proposed mining activities will be restored for beneficial use. For the project site, proposed reclamation activities would restore the site for agricultural use.

Reclamation of the project site will be carried out following proposed mining activities to the extent possible. In areas where mining activities are complete and future disturbance can be avoided, reclamation will commence.

4.1.2 Schedule

The schedule for the interim and final reclamation will be driven by the volume of material excavated during the proposed mining phases. This schedule would initially follow or occur concurrently with the mining of each phase, but would be periodically reviewed as mining progresses. Reclamation would occur where feasible in each completed phase. These areas will serve as test plots for future reclamation. Reclamation of the project site would be complete within three years of the completion of mining activities.

4.2 Engineering Data

4.2.1 Final Slope of Project Area

The Geotechnical Report prepared for the site by BAJADA Geosciences, Inc., and included in Appendix G, recommends the following bench geometries for the quarry headwall:

- Maximum bench height: 40 feet
- Minimum bench width: 23 feet
- Maximum design bench face angle: 80 degrees
- Maximum overall slope angle: 53 degrees

Variations on bench width and height can be made as long as the proportion of maximum height to minimum width is maintained (i.e., a 40-foot-tall and 23-foot-wide bench geometry would be equivalent to the recommendations made above) or flatter.

Hat Creek Construction & Materials should implement a number of operational and maintenance procedures to reduce the potential of backbreak and safety issues associated with local bench-level slope failures. Those procedures include:

- Pre-splitting all final rock faces;
- Scaling of blasted rock faces to remove loose rocks;
- Maintenance of a 25 foot-wide offset barrier from all inactive rock faces; and
- Complete daily inspections of rock faces.

Furthermore, when bench-level wedge or planar failures occur, debris from those failures should be removed from the bench. By implementing these procedures, impacts from backbreak should be reduced to an acceptable level.

Finally, the upper quarry slope phase should be inclined no steeper than 1.5:1 (horizontal:vertical) when exposing soil and 1:1 when exposing intensely to moderately weathered rock materials. The remaining areas to the north and west will be sloped at 3:1. Retained overburden will be used as fill as is necessary. Extensive fill is not anticipated as slopes will be mined to the above specifications. Overburden and topsoil will be spread as needed, and soil amendments may be added as needed to assist in revegetation.

4.2.2 Reclaimed Land Use

The final site use is to be agricultural land used for cattle grazing. Upon completion of mining operations, all machinery, waste, scrap, and excess materials would be dismantled and removed from the site. Processing and stockpile areas will be ripped or disced as needed to facilitate revegetation. The site will be revegetated with a dryland pasture seed mix. Seed will be applied until the vegetation is self-sustaining. The Phase 1 area will include a 5-acre area replanted with bitterbrush and cattle exclusion fencing shall be installed to prohibit cattle grazing in this area during the winter months (November-April) when mule deer or pronghorn may be present. Agricultural land use would not preclude the site from future mining.

The onsite well retention pond and wash pond will remain to support cattle grazing and provide a water source for wildlife and cattle. The pond will be revegetated with a mix of native riparian species to control erosion.

4.2.3 Erosion and Drainage Control

Erosion will be controlled during each mining and reclamation phase. Overburden piles and soils in the mining areas exposed to wind and storm conditions will require treatment with a hydroseed/mulch preparation to restore the structure of the bare soil on an as-needed basis or covered as needed. A seed mixture would be selected so that germination occurs rapidly in the disturbed native material or stockpiled overburden. This type of application would reduce the movement of soil due to erosion from heavy rainfall.

Drainage control will occur through grading of areas surrounding the active mining area of each phase to contain drainage to that phase. Sloping of the area surrounding the mining area will direct drainage to the retention pond onsite. This will minimize the potential for runoff of sediments to other areas of the project site. Drainage controls were designed for the 25-year, 24-hour storm event estimated at 4.04 inches.

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A SWPPP will be developed for the site. The distribution of any fertilizers or soil amendments used for the enhancement for revegetation would be placed to avoid contact with surface water. The operator will conduct inspections to ensure that the procedures outlined in the SWPPP and Mining and Reclamation Plan are being implemented, and that the above-described measures are properly controlling erosion and sedimentation in all disturbed areas.

4.3 Financial Assurance

A financial assurance estimate and the estimated reclamation costs will be prepared by the project applicant and submitted to the County following approval of the Reclamation Plan.

4.4 Statement of Responsibility

"I, the undersigned, hereby agree to accept full responsibility for reclaiming all mined lands described and submitted herein with any modification requested by the administering agency as conditions of approval."

Signed this 15 day of February, 2024.

DocuSigned by:
Perry Thompson
88B4DE871134453...

Perry Thompson, Owner
TLT Enterprises LLC/Hat Creek Construction & Materials, Inc.

4.5 Landowner Notification

The owner of the property is a party to the permits being acquired and is aware the final land use is to be agricultural land for cattle grazing.

5.0 REFERENCES

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