POWERFLEX
SOLAR GROUND MOUNT SYSTEM AT OMYA - LUCERNE VALLEY

LUCERNE VALLEY SAN BERNARDINO COUNTY, CALIFORNIA

Biological Resources Assessment

Prepared For:

PowerFlex
15445 Innovation Drive
San Diego, California 92128
Attention: *Michael Landler*

Prepared By:

ELMT Consulting, Inc.
2201 N. Grand Avenue #10098
Santa Ana, California 92711
Contact: *Travis J. McGill*

March 2025

POWERFLEX
SOLAR GROUND MOUNT SYSTEM AT
OMYA - LUCERNE VALLEY

LUCERNE VALLEY SAN BERNARDINO COUNTY, CALIFORNIA

Biological Resources Assessment

The undersigned certify that the statements furnished in this report and exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented is a complete and accurate account of the findings and conclusions to the best of our knowledge and beliefs.

Travis J. McGill
Director/Biologist

Thomas J. McGill, Ph.D.
Managing Director

March 2025

Table of Contents

EXHIBITS

APPENDIX

Section 1 Introduction

This report contains the findings of ELMT Consulting's (ELMT) biological resources assessment prepared for PowerFlex's Solar Ground Mount System at OMYA - Lucerne Valley (Project site or site) located in Lucerne Valley, San Bernardino County, California. ELMT biologists Travis J. McGill, Rachael A. Lyons, Jacob H. Llyod Davies, and Megan E. Peukert conducted field surveys and evaluated the condition of the habitat within the project site on April 3, and 11, 2024.

The purpose of the biological resources assessment is to characterize existing site conditions on the entire project site and to assess the probability of occurrence of special-status[1] plant and wildlife species that could pose a constraint to project implementation. Special attention was given to the suitability of the project site to support burrowing owl (*Athene cunicularia*), desert tortoise (*Gopherus agassizii*), Joshua tree (*Yucca brevifolia*), and other special-status plant and wildlife species identified by the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB), and other electronic databases as potentially occurring in the general vicinity of the project site.

Additionally, the report also addresses resources protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (FGC), federal Clean Water Act (CWA) regulated by the United States Army Corps of Engineers (Corps) and Regional Water Quality Control Board (Regional Board) respectively, and Section 1602 of the FGC administered by CDFW.

1.1 PROJECT LOCATION

The project site is generally located north of the San Bernardino Mountains, west and south of State Route 18, and east of Interstate 15 in the census-designated place Lucerne Valley, San Bernardino County, California (refer to Exhibit 1, *Regional Vicinity*). The site is depicted on both the Lucerne Valley and Fawnskin quadrangles of the United States Geological Survey's (USGS) 7.5-minute map series within Section 1 of Township 3 North, Range 1 West (Exhibit 2, *Site Vicinity*). Specifically, the project site is located at the northeast corner of the intersection of Crystal Creek Road and Crescent Road within Assessor Parcel Numbers 0446-033-18, and -19, and within portions of the existing OMYA facility located at 7225 Crystal Creek Road (Exhibit 3, *Project Site*).

1.2 PROJECT DESCRIPTON

The project proposes the installation of a 5 MW AC - 6.5 MW DC ground-mounted solar system on approximately 29 acres of vacant land and 0.6-mile of a new interconnection for the purpose of power generation for onsite consumption by the OMYA mining plant, located at 7225 Crystal Creek Road in the unincorporated community of Lucerne Valley. Refer to Appendix A, *Site Plan*.

[1] As used in this report, "special-status" refers to plant and wildlife species that are federally or State listed, proposed, or candidates; plant species that have been designated a California Native Plant Society (CNPS) Rare Plant Rank; wildlife species that are designated by the California Department of Fish and Wildlife (CDFW) as fully protected, species of special concern, or watch list species; California Department of Forestry and Fire Protection sensitive species.

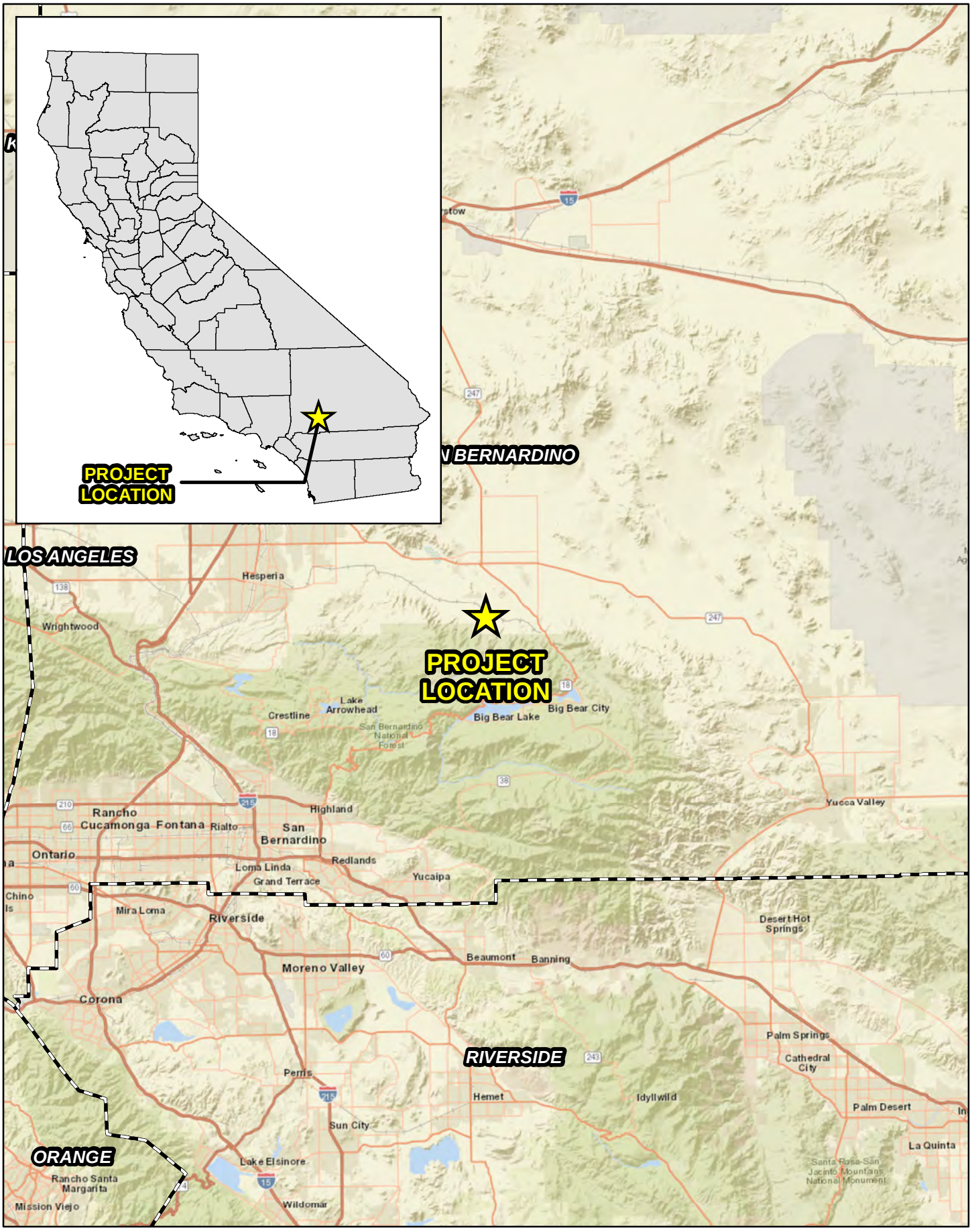
The Project would be located in the unincorporated community of Lucerne Valley in San Bernardino County. The OMYA mine and SCE interconnection point is located at 7225 Crystal Creek Road, Lucerne Valley, CA 92356, at the intersection of Crystal Creek Road and Furnace Creek Road, Lucerne Valley; Assessor Parcel Numbers: 0446-033-39, -06, -07, -09, -11, -13.

- APN: 0446-033-39 (26.37 AC, Project acreage: 0.2 AC): Point of interconnection at SCE meter in the 115 kV substation at ground level, and solar medium voltage (MV) Switchgear pad-mounted outside this substation at ground level. This parcel is not owned by the OMYA, however, the interconnection facilities would be located within an existing SCE easement.

- •APN 0446-033-08, -09, -17: 5 kV new underground duct bank (Project acreage: 0.14 AC). Duct bank to be 2 feet wide and 3 feet deep and approximately 3,168 linear feet (0.6 mile) to connect the solar field with the OMYA plant facilities. The total acres of the parcels where the ductbank would occur are as follows.
    - -08: 4.94 AC
    - -09: 4.94 AC
    - -17: 29.04 AC

- •APN: 0446-033-18 (38.95 AC). 0446-033-19 (38.95 AC): solar array, transformers, switchgear, and inverters. These parcels are owned by Pluess-Staufer, now known as OMYA. Of the 77.90 total acres, approximately 29.3 AC would be used for the solar field and facilities, and approximately 1 acre would be used for construction staging and storage.

Ground disturbance for Project development includes approximately 4.9 acres of trenching for the interconnection, road improvements adjacent to the solar field, stormwater basin development and minor grading for some of the ground mount system. Overall, the solar field would be installed via a small pile driver on native ground.



ELMT CONSULTING

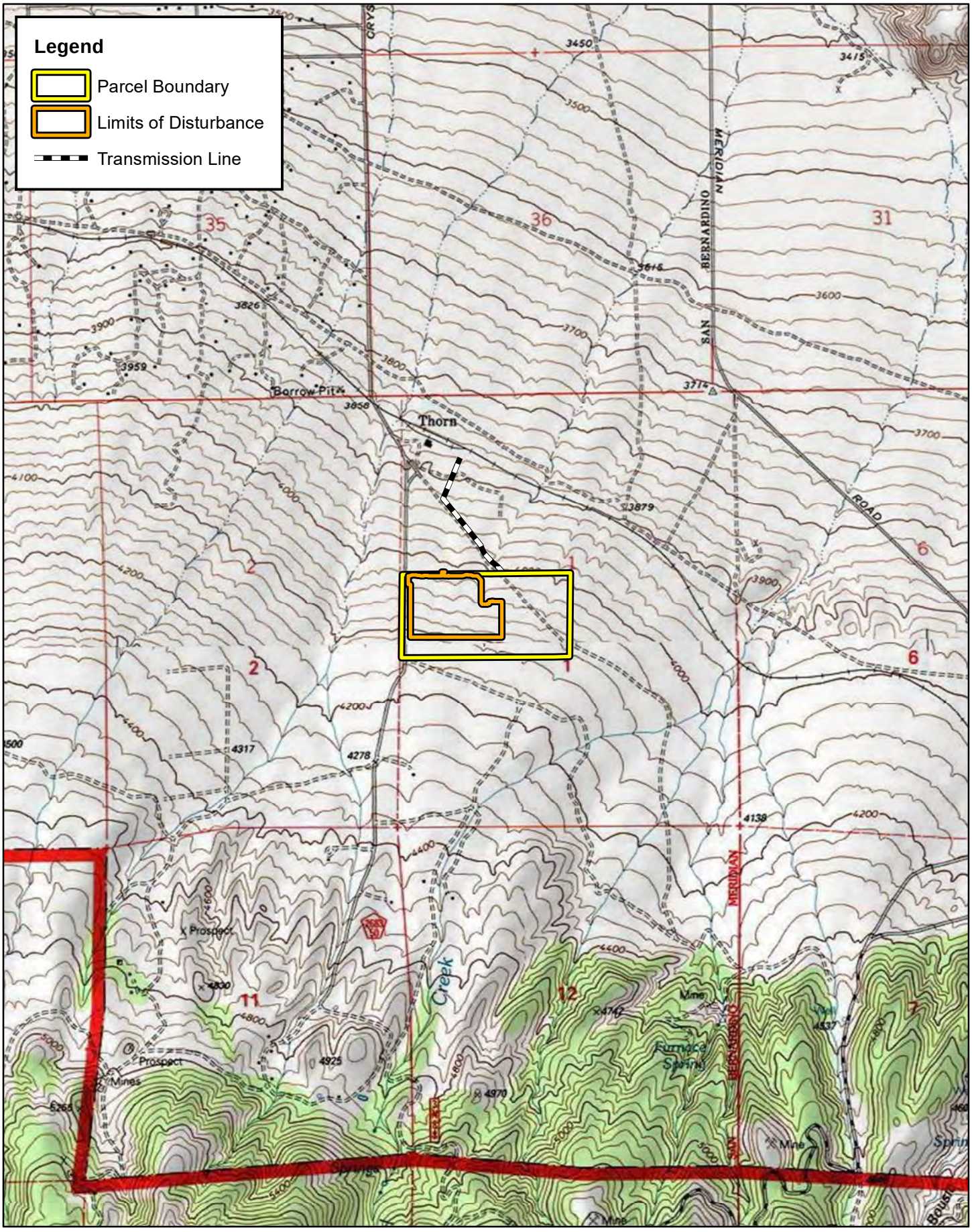
0 2.5 5 10 Miles

Source: World Street Map, San Bernardino County

POWERFLEX - SOLAR (OMYA - LUCERNE VALLEY)

Regional Vicinity

Exhibit 1



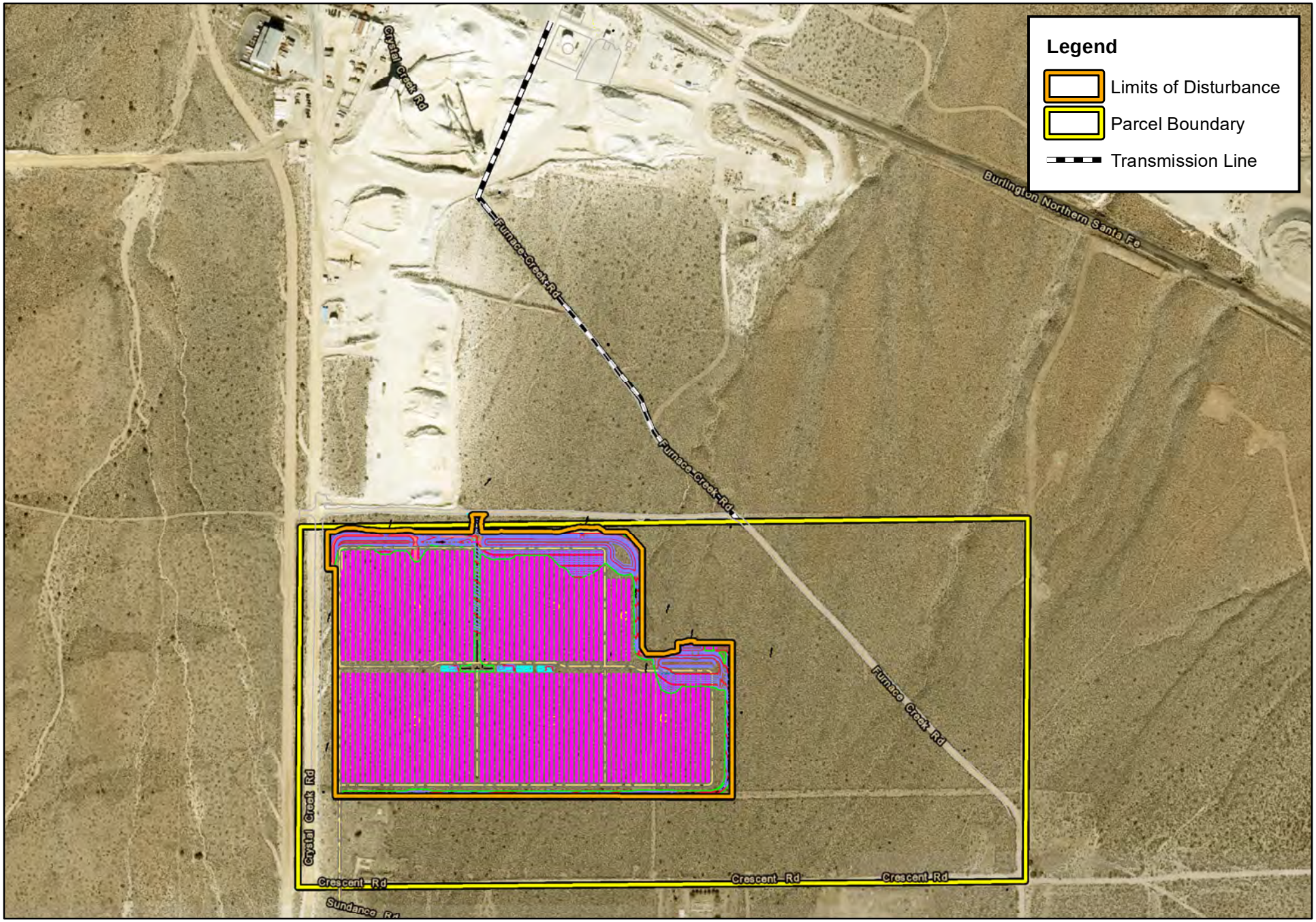
POWERFLEX - SOLAR (OMYA - LUCERNE VALLEY)

Site Vicinity

0 1,000 2,000 4,000 Feet

Source: USA Topographic Map, San Bernardino County

Exhibit 2



ELMT CONSULTING

0 250 500 1,000 Feet

Source: Google Earth Aerial Imagery, San Bernardino County

POWERFLEX - SOLAR (OMYA - LUCERNE VALLEY)

Project Site

Exhibit 3

Section 2 Methodology

A literature review and records search were conducted to determine which special-status biological resources have the potential to occur on or within the general vicinity of the project site. In addition to the literature review, a general habitat assessment or field investigation of the project site was conducted. The field investigation was conducted to document existing conditions within the project site and assess the potential for special-status biological resources to occur.

2.1 LITERATURE REVIEW

Prior to conducting the field study, species and habitat information were gathered from relevant databases for the Fawnskin and Lucerne Valley USGS 7.5-minute quadrangles to identify species and habitats known to occur locally. These quadrangles were queried due to the proximity of the project site to quadrangle boundaries and regional topography. The literature review sources included:

- U.S. Fish and Wildlife (USFWS) threatened and endangered species occurrence GIS overlay;
- USFWS Designated Critical Habitat Maps;
- California Natural Diversity Database (CNDDB) *Rarefind 5*;
- CNDDB Biogeographic Information and Observation System (BIOS);
- California Native Plant Society Electronic Inventory (CNPSEI) database;
- Calflora Database;
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey;
- USFWS National Wetland Inventory;
- Environmental Protection Agency (EPA) Water Program "My Waters" data layers;
- Google Earth Pro historic aerial imagery (1985-2023);
- USFWS Critical Habitat designations for Threatened and Endangered Species;
- USFWS National Wetlands Inventory (NWI); and

The literature review provided a baseline from which to inventory the biological resources potentially occurring on the subject property. The CNDDB database was used, in conjunction with ArcGIS software, to locate the nearest recorded occurrences of special-status species and determine the distance from the project site.

2.2 FIELD INVESTIGATION

ELMT biologists Travis J. McGill, Rachael A. Lyons, Jacob H. Lloyd Davies, and Megan E. Peukert evaluated the extent and conditions of the plant communities found within the proposed project footprint and surrounded parcel boundary on April 3 and 11, 2024. Plant communities identified on aerial photographs during the literature review were verified in the field by walking meandering transects through the on-site plant communities and along boundaries between plant communities. The plant communities were evaluated for their potential to support special-status plant and wildlife species. In addition, field staff identified any natural corridors and linkages that may support the movement of wildlife through the area.

Special attention was given to special-status habitats and/or undeveloped areas, which have higher potentials to support special-status plant and wildlife species.

All plant and wildlife species observed, as well as dominant plant species within each plant community, were recorded. Wildlife detections were made through observation of scat, trails, tracks, burrows, nests, and/or visual and aural observation. In addition, site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, condition of on-site plant communities, and presence of potential jurisdictional drainage and/or wetland features were noted.

2.3 SOIL SERIES ASSESSMENT

On-site and adjoining soils were researched prior to the field investigation using the USDA NRCS Soil Survey for San Bernardino County, California, Mojave River Area. In addition, a review of the local geological conditions and historical aerial photographs was conducted to assess the ecological changes that the project site has undergone.

2.4 PLANT COMMUNITIES

Plant communities were mapped using 7.5-minute USGS topographic base maps and aerial photography. The plant communities were classified in accordance with Sawyer, Keeler-Wolf and Evens (2009), CDFW (2010) and Holland (1986), delineated on an aerial photograph, and then digitized into ArcGIS. The ArcGIS application was used to compute the area of each plant community in acres.

2.5 PLANTS

Common plant species observed during the field survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Unusual and less familiar plants were photographed in the field and identified in the laboratory using taxonomic guides. Taxonomic nomenclature used in this study follows the 2012 Jepson Manual (Hickman 2012). In this report, scientific names are provided immediately following common names of plant species (first reference only).

2.6 WILDLIFE

Wildlife species detected during field surveys by sight, calls, tracks, scat, or other sign were recorded during surveys in a field notebook. Field guides were used to assist with identification of wildlife species during the survey included The Sibley Field Guide to the Birds of Western North America (Sibley 2003), A Field Guide to Western Reptiles and Amphibians (Stebbins 2003), and A Field Guide to Mammals of North America (Reid 2006). Although common names of wildlife species are fairly well standardized, scientific names are provided immediately following common names in this report (first reference only).

2.7 JURISDICTIONAL DRAINAGES AND WETLANDS

Aerial photography was reviewed prior to conducting a field investigation in order to locate and inspect any potential natural drainage features, ponded areas, or water bodies that may fall under the jurisdiction of the Corps, Regional Board, and/or CDFW. In general, surface drainage features indicated as blue-line

streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential riparian/riverine habitat and are also subject to state and federal regulatory jurisdiction. In addition, ELMT reviewed jurisdictional waters information through examining historical aerial photographs to gain an understanding of the impact of land-use on natural drainage patterns in the area. The USFWS NWI and Environmental Protection Agency (EPA) Water Program "My Waters" data layers were also reviewed to determine whether any hydrologic features and wetland areas have been documented on or within the vicinity of the project site.

Waters of the United States

In the absence of adjacent wetlands, the limits of the Corps jurisdiction in non-tidal waters extend to the OHWM, which is defined as "*. . . that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*"[2] Indicators of an OHWM are defined in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Corps 2008). In addition to characteristics listed above, wracking; vegetation matted down, bent, or absent; sediment sorting; leaf litter disturbed or washed away; scour; deposition; multiple observed flow events; bed and banks; water staining; and/or change in plant community.

Pursuant to the Corps Wetland Delineation Manual (Corps 1987), the identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. In order to qualify as a wetland, a feature must exhibit at least minimal characteristics within each of these three parameters. It should also be noted that both the Regional Board and CDFW follow the methods utilized by the Corps to identify wetlands. For this Project , Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008).

Waters of the State

Regional Water Quality Control Board

The California *Porter-Cologne Water Quality Control Act* gives the Regional Board very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Regional Board shares the Corps' methodology for delineating the limits of jurisdiction based on the identification of OHWM indicators and utilizing the three parameter approach for wetlands.

California Department of Fish and Wildlife

Sections 1600 *et seq*. of the California Fish and Game Code applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. CDFW Regulations define "stream" as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or

[2] CWA regulations 33 CFR §328.3(e).

has supported riparian vegetation" (14 Cal. Code Regs., § 1.72.). For this Project location, CDFW jurisdictional limits were delineated using this definition of "stream."

Section 3 Existing Conditions

3.1 LOCAL CLIMATE

The Mojave Desert is found at elevations of 2,000 to 5,000 feet above mean sea level (msl) and is characterized by cool winter temperatures and warm summer temperatures, with its rainfall occurring almost entirely in the winter. Climatological data obtained from nearby weather stations indicates the annual precipitation in Lucerne Valley averages 7.0 inches per year. Almost all of the precipitation occurs December through March, with hardly any occurring between May and September. The wettest month is February, with a monthly average total of 1.5 inches. The average maximum and minimum temperatures for Lucerne Valley are 73- and 51-degrees Fahrenheit (°F), respectively, with July being the hottest month (93°F average) and December being the coldest (45°F average). Temperatures during the site visits were in the high-50's to low-70's (degrees Fahrenheit) with light winds and little to no cloud cover.

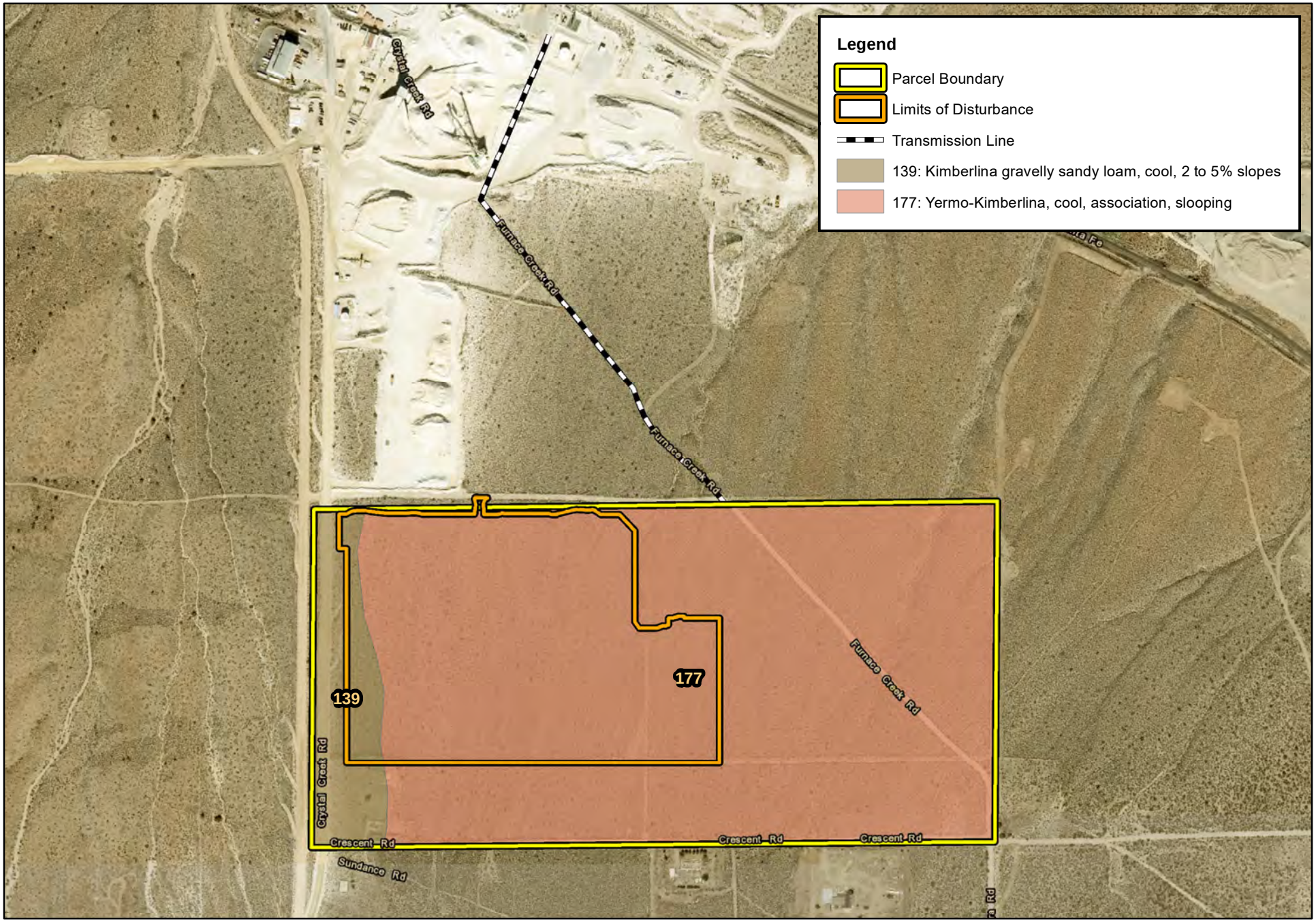
3.2 TOPOGRAPHY AND SOILS

According to the topographic map, the project site occurs within the Lucerne Valley and Fawnskin 7.5-minute quadrangles. The topographic map indicates that the site is entirely undeveloped, with access roads along the western boundary and permeating the eastern portion of the site. On-site elevation ranges from approximately 4,006 to 4,153 feet above mean sea level and slopes marginally from southwest to northeast, with topography being generally flat except for shallow, undulating depressions in the northern portion.

Based on the NRCS USDA Web Soil Survey, the project site is historically underlain by Kimberlina gravelly sandy loam (cool, 2 to 5 percent slopes) and Yermo-Kimberlina (cool, associated sloping). Soils along site boundaries have been compacted by development and disturbances associated with the adjacent and on-site roadways and development. Soils underlying portions of the site that occur outside of these areas are relatively undisturbed. Refer to Exhibit 4, *Soils*.

3.3 SURROUNDING LAND USES

The project site is located in a predominantly undeveloped area in the southern limits of Lucerne Valley, at the base of the San Bernardino Mountains foothills. Predominant development in the vicinity of the site consists of commercial aggregate mining, stockpiling, and processing facilities to the north and east of the site and sparse residential development to the south. The project site is bounded to the west by Crystal Creek Road with undeveloped, vacant land beyond; to the south by Crescent Road with scattered residential developments and undeveloped, vacant land; to the east by Ladera Road, with undeveloped, vacant land beyond; and to the north by undeveloped, vacant land and the existing OMYA quarries and materials plant. In addition, the site is transected by Furnace Creek Road which enters the northern boundary and leads southeast through the site before exiting the site at the eastern boundary.



ELMT CONSULTING

0 250 500 1,000 Feet

Source: Google Earth Aerial Imagery, Soil Survey Geographic Database, San Bernardino County

POWERFLEX - SOLAR (OMYA - LUCERNE VALLEY)

Soils

Exhibit 4

Section 4 Discussion

4.1 SITE CONDITIONS

The project site consists of approximately 29.64 acres of vacant land (within multiple parcels totaling approximately 117 acres), of which 0.2 acre occurs within the 26.3-acre developed OMYA mine site. The majority of the project site is comprised of vacant, undeveloped land which has been subjected to anthropogenic disturbances including surrounding development, installation of Furnace Creek Road, and other unpaved access roads which transect the site. Additionally, the site, primarily where the 5kV underground duct bank will be installed will tie in with existing OMYA power infrastructure that has been heavily disturbed or developed.

4.2 VEGETATION

The project site supports one (1) plant community: Mojavean desert scrub. In addition, the site supports two (2) land cover types that would be classified as disturbed and developed. Refer to Attachment B, *Site Photographs*, for representative site photographs.

4.2.1 Mojavean Desert Scrub

The majority of the project site supports a Mojavean desert scrub plant community consistent with other lowland plant communities in the vicinity. This plant community is dominated by large perennial shrub species such as black brush (*Coleogyne ramosissima*) and Mojave yucca (*Yucca schidigera*) and supports an intermittent to consistent shrub layer and sparse to robust herbaceous layer. Other common plant species observed in this plant community include purple three awn (*Aristida purpurea*), hoary saltbush (*Atriplex canescens*), sticky leaved rabbitbrush (*Chrysothamnus viscidiflorus*), silver cholla (*Cylindropuntia echinocarpa*), pencil cholla (*Cylindropuntia ramosissima*), purple-nerve cymopterus (*Cymopterus multinervatus*), hedgehog cactus (*Echinocereus engelmannii*), Acton encelia (*Encelia actoni*), Nevada ephedra (*Ephedra nevadensis*), green ephedra (*Ephedra viridis*), goldenbush (*Ericameria linearifolia*), flat topped buckwheat (*Eriogonum deflexum*), California buckwheat (*Eriogonum fasciculatum*), desert trumpet (*Eriogonum inflatum*), red-stemmed filaree (*Erodium cicutarum*), sticky snakeweed (*Gutierrezia microcephala*), chaparral yucca (*Hesperoyucca whipplei*), California juniper (*Juniperus californica*), winter fat (*Krascheninnikovia lanata*), creosote (*Larrea tridentata*), desert pepperweed (*Lepidium fremontii*), Mohave lomatium (*Lomatium mohavense*), Cooper's box thorn (*Lycium cooperi*), white stemmed blazing star (*Mentzelia albicaulis*), Veatch's blazing star (*Mentzelia veatchiana*), beavertail prickly pear (*Opuntia basilaris*), desert almond (*Prunus fasciculata*), mediterranean grass (*Schismus barbatus*), apricot mallow (*Sphaeralcea ambigua*), Parish's needlegrass (*Stipa parishii*), desert needle grass (*Stipa speciosa*), desert aster (*Xylorhiza tortifolia*), and western Joshua tree (*Yucca brevifolia*).

4.2.2 Disturbed

The project site supports disturbed land within access roads that bound and permeate the site. These areas vary in vegetative density from typically barren to intermittent according to the type and degree of routine

disturbance, and primarily support weedy/early successional species observed in the aforementioned plant communities.

4.2.3 Developed

Developed land generally encompasses all buildings/structures and paved or otherwise impervious surfaces. The project site supports developed land where site boundaries overlap with existing OMYA quarries and facilities, and within a remnant building foundation found in the southwest corner. These areas are generally barren due to impermeable substrates and routine disturbance, but may support especially hardy weedy/early successional species.

4.3 GENERAL WILDLIFE

Plant communities provide foraging habitat, nesting and denning sites, and shelter from adverse weather or predation. This section provides a discussion of those wildlife species that were observed during the field survey or that are expected to occur within the project site. The discussion is to be used as a general reference and is limited by the season, time of day, and weather condition in which the field survey was conducted. Wildlife detections were based on calls, songs, scat, tracks, burrows, and direct observation.

4.3.1 Fish

No fish or hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, reservoirs) that would provide suitable habitat for fish were observed on or within the vicinity of the project site. Therefore, no fish are expected to occur and are presumed absent from the project site.

4.3.2 Amphibians

No amphibians or hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, reservoirs) that would provide suitable habitat for amphibian species were observed on or within the vicinity of the project site. Therefore, no amphibians are expected to occur on the project site and are presumed absent.

4.3.3 Reptiles

The survey area provides suitable foraging and cover habitat for local reptile species adapted to conditions within the Mojave Desert. Reptilian species observed on-site during the field investigation include Great Basin gopher snake (*Pituophis catenifer deserticola*), southern sagebrush lizard (*Sceloporus graciosus vandenburgianus*), and western side-blotched lizard (*Uta stansburiana elegans*). Other common reptilian species that could be expected to occur on-site include southern Pacific rattlesnake (*Crotalus oreganus helleri*), southwestern speckled rattlesnake (*Crotalus pyrrhus*), Great Basin fence lizard (*Sceloporus occidentalis longipes*), and long-nosed leopard lizard (*Gambelia wislizenii*).

4.3.4 Birds

The project site and surrounding area provide suitable foraging and nesting habitat for bird species adapted to conditions within the Mojave Desert. Avian species observed during the field investigation include black-throated sparrow (*Amphispiza bilineata*), Bell's sparrow (*Artemisiospiza belli*), California quail (*Callipela*

californica), Costa's hummingbird (*Calypte costae*), cactus wren (*Campylorhynchus brunneicapillus*), common raven (Corvus corax), greater roadrunner (*Geococcyx californianus*), house sparrow (*Passer domesticus*), and rock wren (*Salpinctes obsoletus*). Additional bird species which have the potential to occur onsite include turkey vulture (*Cathartes aura*), lark sparrow (*Chondestes grammacus*), and red-tailed hawk (*Buteo jamaicensis*).

4.3.5 Mammals

The survey area provides suitable foraging and cover habitat for mammalian species adapted to conditions within the Mojave Desert. Mammalian species detected during the field investigation include white-tailed antelope ground squirrel (*Ammospermophilus leucurus*), coyote (*Canis latrans*), black-tailed jackrabbit (*Lepus californicus*), woodrat (*Neotoma* sp.). In addition, free-roaming domestic dog (*Canis familiarus*) were observed that were associated with adjacent residential developments to the south. No bat species are expected to roost on-site due to the lack of suitable roosting opportunities.

4.4 NESTING BIRDS

No active nests were directly observed during the field investigation; however, several passerine species were observed exhibiting nest building behavior and territorial displays. The project site provides suitable nesting opportunities for year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area that area adapted to urban environments. In addition, tall electrical poles that surround the site provide suitable nesting opportunities for local raptor species.

Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests or eggs). If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction.

4.5 WILDLIFE CORRIDORS AND LINKAGES

Habitat linkages provide links between larger undeveloped habitat areas that are separated by development. Wildlife corridors are similar to linkages but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet inadequate for others. Wildlife corridors are significant features for dispersal, seasonal migration, breeding, and foraging. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

According to the San Bernardino County General Plan, the project site has not been identified as occurring within a Wildlife Corridor or Linkage. As designated by the San Bernardino County General Plan Open Space Element, the nearest corridor/linkage documented in the vicinity of the site is Grapevine Creek, located approximately 7.69 miles southeast of the site. The site is separated from this identified regional

wildlife corridors and linkages by existing development and there are no riparian corridors or creeks connecting the project site to these areas.

The project site primarily supports undeveloped land that merges with other undeveloped open spaces to the west and east, and beyond adjacent residential developments to the south. However, due to the proximity of the site to the existing OMYA quarries and facilities and the disturbances associated with their ongoing operation, the site is not expected to contribute meaningfully to local wildlife movement. Further, the ample open space surrounding the site to the west, south, and east provide more suitable conditions for wildlife movement. As such, implementation of the proposed project is not expected to have a significant impact on wildlife movement opportunities.

4.6 STATE AND FEDERAL JURISDICTIONAL AREAS

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates discharge of dredge and/or fill materials into "waters of the United States" pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act and the CDFW regulates alterations to streambed and associated plant communities pursuant to Section 1602 of the California Fish and Game Code.

On April 3 and 11, 2024. ELMT conducted a field delineation to determine the jurisdictional limits of the "waters of the United States", "waters of the State" and jurisdictional streambed (including potential wetlands), located within the boundaries of the Project site. While in the field, jurisdictional features were recorded on an aerial base map at a scale of 1" = 50' using topographic contours and visible landmarks as guidelines. Data points were obtained with a Garmin Map62 Global Positioning System to record and identify specific widths for ordinary high water mark (OHWM) indicators and the locations of photographs, soil pits, and other pertinent jurisdictional features, if present. This data was then transferred as a .shp file and added to the Project's jurisdictional exhibits. The jurisdictional exhibits were prepared using ESRI ArcInfo Version 10 software.

Five (5) unnamed ephemeral drainage features (Drainages 1-5) were observed within the boundaries of the project site during the field investigation (refer to Exhibit 6, *Drainage Features*). Drainage 1 is located on the western boundary of the project site and generally flows from north to south before terminating at the existing OMYA facility near the northwest corner of the project site. Drainages 2-5 generally flow in a southwest to northeast direction where the drainages converge into a larger drainage feature offsite that eventually terminates into the High Grade Materials Quarry, approximately 2 miles northwest of the project site. The onsite features only convey surface flow in direct response to precipitation, and are not expected to be intermittent or permanent water features.

The onsite ephemeral drainage features are not relatively permanent, standing, or continuously flowing bodies of water and, therefore, will not qualify as waters of the United States under the regulatory authority of the Corps (*Sackett v. EPA* (2022) 143 S. Ct. 1322, 1336). However, the onsite drainage features will qualify as waters of the State and fall under the regulatory authority of the Regional Board and CDFW. Therefore, the project applicant will likely be required to obtain the following regulatory approvals prior to

impacts occurring within the identified jurisdictional areas: Corps Approved Jurisdictional Determination/Waiver; Regional Board CWA Section Report of Waste Discharge; and CDFW Section 1602 Streambed Alteration Agreement (SAA).

Table 1: Jurisdictional Area and Impacts

Jurisdictional Feature	Stream Flow	Cowardin Class	Class of Aquatic Resource	Regional Board Jurisdiction		CDFW Jurisdictional Streambed	
				On-Site Jurisdiction Acreage (Linear Feet)	**Jurisdictional Impacts** Acreage (Linear Feet)	**On-Site Jurisdiction** Acreage (Linear Feet)	**Jurisdictional Impacts** Acreage (Linear Feet)
Drainage 1	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.057 (740)	0.018 (211)	0.057 (740)	0.018 (211)
Drainage 2	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.05 (470)	–	0.05 (470)	–
Drainage 3	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.062 (730)	0.005 (105)	0.062 (730)	0.005 (105)
Drainage 4	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.077 (1,476)	–	0.077 (1,476)	–
Drainage 5	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.094 (365)	–	0.094 (365)	–
			TOTALS	**0.34 (3,781)**	**0.023 (316)**	**0.34 (3,781)**	**0.023 (316)**

4.7 SPECIAL-STATUS BIOLOGICAL RESOURCES

The CNDDB Rarefind 5 and the CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California were queried for reported locations of special-status plant and wildlife species as well as special-status natural plant communities in the Fawnskin and Lucerne Valley USGS 7.5-minute quadrangles. The habitat assessment evaluated the conditions of the habitat(s) within the boundaries of the project site to determine if the existing plant communities, at the time of the survey, have the potential to provide suitable habitat(s) for special-status plant and wildlife species.

The literature search identified seventy-seven (77) special-status plant species, thirty-three (33) special-status wildlife species, and one (1) special status plant community as having potential to occur within the Fawnskin and Lucerne Valley USGS 7.5-minute quadrangles. Special-status plant and wildlife species were evaluated for their potential to occur within the project site based on habitat requirements, availability, and quality of suitable habitat, and known distributions. Species determined to have the potential to occur within the general vicinity are presented in *Table C-1: Potentially Occurring Special-Status Biological Resources*, provided in Appendix C. Refer to Table C-1 for a determination regarding the potential occurrence of special-status plant and wildlife species within the project site.

4.7.1 Special-Status Plants

According to the CNDDB and CNPS, seventy-seven (77) special-status plant species have been recorded in the Fawnskin and Lucerne Valley quadrangles (refer to Appendix C). Two special-status species were observed on-site during the field investigation: purple-nerve cymopterus and western Joshua tree. The majority of the site supports undisturbed natural plant communities consistent with those occurring in open spaces nearby. Based on habitat requirements for specific special-status plant species and the availability and quality of habitats needed by each species, it was determined that the project site has a low potential to support Cushenbury milk-vetch (*Astragalus albens*), San Bernardino milk-vetch (*Astragalus bernardinus*), Big Bear Valley woollypod (*Astragalus leucolobus*), alkali mariposa-lily (*Calochortus striatus*), white pygmy-poppy (*Canbya candida*), Mojave paintbrush (*Castilleja plagiotoma*), Mojave spineflower (*Chorizanthe spinosa*), desert birds-beak (*Cordylanthus eremicus* ssp. *eremicus*), Mt. Pinos larkspur (*Delphinium parryi* ssp. *purpureum*), Parish's daisy (*Erigeron parishii*), slender bedstraw (*Galium angustifolium* ssp. *gracillimum*), winged cryptantha (*Johnstonella holoptera*), Mojave monardella (*Monardella exilis*), and Latimer's woodland-gilia (*Saltugilia latimeri*). It was further determined that the site does not have the potential to support any of the other special-status plant species known to occur in the vicinity and all are presumed to be absent.

Of the aforementioned species, Cushenbury milk-vetch is federally listed as endangered, and Parish's daisy is federally listed as threatened. In addition, western Joshua tree is protected under the Western Joshua Tree Conservation Act. None of the remaining aforementioned species are federally or state listed as endangered or threatened.

Due to listing status and/or relevant protections, the potential occurrence of purple-nerve cymopterus, western Joshua tree, Cushenberry milk-vetch and Parish's daisy and the occurrence of western Joshua tree are discussed in further detail below.

Purple-Nerve Cymopterus

Puple-nerve cymopterus is a perennial herb that blooms from March to April. It is neither federally nor state listed but is designated by the CNPS as a Rare Plant Rank 2B.2 species, indicating that it rare, threatened, or endangered in California but more common elsewhere with 20 to 80 percent of known occurrences threatened. This species is native to the desert regions of the southwestern United States and is known to occur from 2,590 to 5,905 feet above mean sea level. It is sometimes found on gravelly and sandy soils and is associated with Mojavean desert scrub and pinyon and juniper woodland plant communities.

A group comprising four (4) individuals of this species were observed within the southeast corner of the parcel boundary, outside the project footprint. No other individuals were observed during the 2024 focused surveys conducted on April 11 and May 17, 2024 (refer to Appendix D). Therefore, this species is presumed to be absent from the proposed limits of disturbance.

Cushenberry Milk-vetch

Cushenberry milk-vetch is a perennial herb that blooms from March and June. It is federally listed as endangered and is designated by the CNPS as a Rare Plant Rank 1B.1 species, indicating that it is rare, threatened, or endangered in California and elsewhere, and is seriously threatened in California with over

80% of known occurrences threatened. It is endemic to San Bernardino County, California and is only known from the northeast slopes of the San Bernardino Mountains and foothills, primarily between Big Bear Lake and Lucerne Valley, from 3,595 to 6,560 feet. It is usually found on carbonate soils, and occasionally granitic soils, within Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland habitats.

The plant communities supported by the site provide suitable habitat for this species, and local records indicate this species occurs along the slopes to the south. Therefore, the project site was determined to have a low potential to support Cushenberry milk-vetch. According to the CNDDB, the nearest occurrences of Cushenberry milk-vetch to the site are located approximately 1.67 miles to the east and south, observed in 2021 and 2008, respectively.

A focused survey was conducted on April 11 and May 17, 2024 (refer to Appendix D), during the blooming season for this plant species. No individuals were observed onsite. Therefore, this species is presumed absent from the project site.

Parish's Daisy

Parish's daisy is a perennial herb that blooms from May to August. It is federally listed as threatened and is designated by the CNPS as a Rare Plant Rank 1B.1 species, indicating that it is rare, threatened, or endangered throughout its range with over 80% of known occurrences threatened. This species is endemic to California and is known to occur along the northern slopes of the San Bernardino and Little San Bernardino Mountain Ranges from 2,625 to 6,560 feet above mean sea level. It is usually found on carbonate soils, sometimes granitic soils, and is associated with Mojavean desert scrub and pinyon and juniper woodland plant communities. It is commonly found growing on limestone substrates, or on granite with a limestone layer, and is very tolerant of alkaline soils.

Parish's daisy was not observed during the field investigation, which was conducted in April, 2024 outside of the blooming period for this species. The plant communities supported by the project site provide suitable habitat for this species. In addition, limestone deposits are present immediately to the north of the site and off-site to the south, indicating the likely presence of preferred soil composition. Therefore, the project site was determined to have a low potential to support Parish's daisy. According to the CNDDB, the nearest mapped occurrences of Parish's daisy to the project site occur approximately 1.72 miles southeast and 1.68 miles to the south, observed in 2021 and 1991, respectively.

Focused surveys were conducted on April 11, and May 17, 2024 (refer to Appendix D), during blooming season for this plant species. No individuals were observed onsite. Therefore, this species is presumed absent from the project site.

Western Joshua Tree

The California Fish and Game Commission (Commission) designated the western Joshua tree as a candidate for listing under the California Endangered Species Act (CESA) in October 2020. This action afforded the western Joshua tree the same CESA protections as listed species, which means that removal of the desert trees was subject to fines and criminal penalties unless authorized by a "take" permit issued by the CDFW under CESA. The Western Joshua Tree Conservation Act (WJTCA), which became effective July 1, 2024

streamlines the western Joshua Tree take permit process and broadens the purposes for which a permit may be issued. A western Joshua tree may now be removed for any purpose, so long as a permit is obtained and the removal is fully mitigated, or alternatively, an in-lieu mitigation fee is paid. Relocation may also be required. The table below summarizes the new rules for the area in which the project site is located.

Location	Mitigation Fees
Project is not located within the reduce fee area.	Full mitigation, or in-lieu fee as follows: • $2,544.75 per tree > 5 meters tall • $509 per tree 1 to 5 meters tall • $346 per tree < 1 meter tall

A total of six hundred twenty-three (623) western Joshua trees were observed within the proposed limits of disturbance during the field investigation, including four hundred four (404) individuals measuring less than one meter in height and two hundred nineteen (219) individuals measuring between one and five meters in height (refer to Exhibit 5 in Appendix D). The table below provides a summary of the Joshua trees documented onsite and their associated mitigation fee according to the WJTCA

Size Classification	Count	Fee per Tree	Fees
A (<1 meter)	404	$346.00	$139,784.00
B (1 to 5 meters)	219	$509.00	$111,471.00
C (> 5 meters)	0	$2,544.75	$0.00
TOTALS	**623**		**$ 251,255.00**

Additionally, a total of ninety-four (94) western Joshua trees were observed within 50 feet of the project site (outside of the proposed project footprint) during the field investigation, including forty-two (42) individuals measuring less than one meter in height, and fifty-two (52) individuals measuring between one and five meters in height. These 94 western Joshua trees will not be impacted by project implementation, however, the CDFW may require payment of additional mitigation fees because the trees lie within 50 feet of the area of disturbance. The CDFW considers 50 feet as a potential root zone, the impact of which could require mitigation.

4.7.2 Special-Status Wildlife

According to the CNDDB, thirty-three (33) special-status wildlife species have been reported in the Fawnskin and Lucerne Valley quadrangles (refer to Appendix C). Two special-status wildlife species were observed during the field investigation: Costa's hummingbird and Bell's sparrow. However, these species were not listed by the CNDDB for the Fawnskin and Lucerne Valley quadrangles. The majority of the site supports undisturbed natural plant communities consistent with those occurring in open spaces nearby and provides suitable foraging and nesting/denning opportunities for local wildlife species. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that

the proposed project site has a high potential to support Cooper's hawk (*Accipiter cooperii*) and loggerhead shrike (*Lanius ludovicianus*); and a low potential to support Crotch bumble bee (*Bombus crotchii*), Morrison bumble bee (*Bombus morrisoni*), pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*), Andrew's marble butterfly (*Euchloe hyantis andrewsi*), western mastiff bat (*Eumops perotis californicus*), prairie falcon (*Falco mexicanus*), desert tortoise (*Gopherus agassizii*), Fringed myotis (*Myotis thysandodes*), long-legged myotis (*Myotis volans*), desert bighorn sheep (*Ovis canadensis nelsoni*), and Le Conte's thrasher (*Toxostoma lecontei*). It was further determined that the site does not have the potential to support any of the other special-status wildlife species known to occur in the vicinity and all are presumed to be absent.

Of the aforementioned special-status wildlife species, desert tortoise is both federally and state listed as threatened and Crotch bumble bee is a candidate species for state listing. None of the other special-status wildlife species are state or federally listed as threatened or endangered. In order to ensure impacts to special-status avian species do not occur from implementation of the proposed project, a pre-construction nesting bird clearance survey shall be conducted prior to ground disturbance. With implementation of the pre-construction nesting bird clearance survey, impacts to special-status avian species will be less than significant and no mitigation will be required.

Due to regional significance, the potential occurrence of burrowing owl, desert tortoise, and Mohave ground squirrel, and Crotch's bumble bee are discussed in further detail below.

Burrowing Owl

Burrowing owl is currently listed as a Candidate for Endangered status in California. It is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with well-drained, level to gently-sloping areas characterized by sparse vegetation and bare ground (Haug and Didiuk 1993; Dechant et al. 1999). Burrowing owls are dependent upon the presence of burrowing mammals (such as ground squirrels) whose burrows are used for roosting and nesting (Haug and Didiuk 1993). The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. Burrowing mammals may burrow beneath rocks and debris or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. They also require open vegetation allowing line-of-sight observation of the surrounding habitat to forage as well as watch for predators.

Despite a systematic search of the project site, no burrowing owls or sign (i.e., pellets, feathers, castings, or whitewash) were observed during the field investigation. Portions of the project site are unvegetated and/or vegetated with a variety of low-growing plant species that allow for line-of-sight observation favored by burrowing owls and the site does support suitable burrows (>4 inches in diameter) and man-made features capable of providing roosting and nesting opportunities. However, the majority of suitable burrows supported on-site tend to be situated within or adjacent to dense vegetation, which burrowing owls avoid as these barriers provide potential predators cover from which to ambush the owls upon exiting their burrow; or occur adjacent to active quarries or haul roads that connect the central OMYA facility with off-

site quarries to the southeast. Routine disturbances associated with the haul road and adjacent facilities and quarries are expected to preclude burrowing owl from establishing on-site.

Based on the results of the field investigation, it was determined that the project site does not have potential to support burrowing owl, and focused surveys are not recommended. Out of an abundance of caution, and to ensure burrowing owl remain absent from the project site, a pre-construction burrowing owl clearance survey is recommended to be conducted prior to project implementation to ensure burrowing owl remains absent from the site.

Desert Tortoise

The Mojave population of the desert tortoise inhabits areas north and west of the Colorado River in the Mojave Desert of California, Nevada, Arizona, and southwestern Utah, and in the Sonoran Desert in California. Throughout the majority of the Mojave Desert, desert tortoises occur most commonly on gentle sloping soils characterized by an even mix of sand and gravel and sparsely vegetated low-growing vegetation where there is abundant inter-shrub space. Typical habitat for the Mojave desert tortoise has been characterized as Mojavean and Sonoran desert scrub below 5,500 feet in elevation with a high diversity of perennial and ephemeral plants. The dominant shrub commonly associated with desert tortoise habitat is creosote bush; however, other shrubs including burrobush (*Ambrosia dumosa*), Mojave yucca, cheesebush (*Ambrosia salsola*), and Mojave prickly pear (*Opuntia mojavensis*) also provide suitable habitat. The desert tortoise spends 95 percent of its life underground and will opportunistically utilize burrows of various lengths, deep caves, rock and caliche crevices, or overhangs for cover. Therefore, moderately friable soil is required to allow for burrow construction and ensure that burrows do not collapse.

No live desert tortoises, suitable burrows, or other sign were observed during the field investigation. The plant communities supported by the project site and adjacent undeveloped parcels provide suitable foraging and burrowing habitat for desert tortoise. In addition, while routine seismic disturbances associated with the adjacent OMYA facility preclude desert tortoise from establishing in the northern portion of the site, the southern portion of the site is likely far enough removed from the facilities that desert tortoise may tolerate limited disturbance. In addition, the site occurs adjacent to undeveloped open spaces to the south and east, and west beyond the haul road. Therefore, the project site was determined to have a low potential to support desert tortoise. According to the CNDDB, no desert tortoise observations have been mapped within 5 miles of the project site.

Since no suitable burrows or burrowing conditions are present within the limits of disturbance for the proposed project, focused surveys for desert tortoise are not recommended. Instead, a pre-construction desert tortoise clearance survey is recommended to be conducted prior to development to ensure desert tortoise remains absent.

Mohave Ground Squirrel

The Mohave ground squirrel is endemic to the western Mojave Desert, California. It occupies portions of Inyo, Kern, Los Angeles, and San Bernardino counties in the western Mojave Desert. In general, the species ranges from near Palmdale on the southwest to Lucerne Valley on the southeast, Olancha on the northwest and the Avawatz Mountains on the northeast (Gustafson 1993). The historical range of suitable habitat for this species as decreased by 10 to 16% due to urbanization and range-wide declines in trapping success

over the last few decades suggesting that their populations are declining. This species was listed as threatened under the California Endangered Species Act in 1985.

The Mohave ground squirrel is a medium-sized ground squirrel that measures 8.3 to 9.1 inches (in; 21 to 23 centimeters; cm) in total length, 2.2 to 2.8 in (5.7 to 7.2 cm) in tail length, and 1.3 to 1.5 in (3.2 to 3.8 cm) in hind foot length (Hall 1981). The Mohave ground squirrel occupies all major desert scrub habitats in the western Mojave Desert. It has been observed in the following habitats described by Holland (1986) as:

- Mojave creosote scrub, dominated by creosote bush and burrobush,
- Desert saltbush scrub, dominated by various species of saltbush (*Atriplex*),
- Desert sink scrub, which is similar in composition to saltbush scrub, but is sparser and grows on poorly drained soils with high alkalinity,
- Desert greasewood scrub, with very sparse vegetation generally located on valley bottoms and dry lake beds,
- Shadscale scrub, which is dominated by *Atriplex confertifolia* and/or *A. spinescens,* and
- Joshua tree woodland, which includes Joshua trees widely scattered over a variety of shrub species (Gutafson 1993).

Mohave ground squirrel was not observed during the field investigation. Although a focused trapping survey was not performed, the field investigation and review of available information provided, allowed ELMT to offer its professional opinion as to the presence or absence of this species within the proposed project footprint.

Three criteria are typically used in assessing potential impacts to the Mohave ground squirrel:

Criteria 1: Is the site within the range of the species?

Per the *Current Status of the Mohave Ground Squirrel: an update covering the period 2013-2020* (Leitner 2021) the project site is located just outside the southeast portion of the historic range of Mohave ground squirrel. Further, the site is not located within any core areas, nor is it located within or immediately adjacent to any corridors or other known populations identified by Leitner.

The project supports plant communities suitable for Mohave ground squirrel habitat. Based on the data provided in *Current Status of the Mohave Ground Squirrel: an update covering the period 2013-2020* MGS have not been detected in the immediate vicinity of the project site during protocol grid and regional surveys. Several areas in the northern portion of Lucerne Valley, and west of the stie near Victorville have been surveyed to protocol level and regionally on several occasions, yet all of the surveys have been negative for Mohave ground squirrel in the immediate vicinity of the project site.

Criteria 2: Is there native habitat with a relatively diverse shrub component?

The majority of the project site supports a Mojavean desert scrub plant community. However, hoary saltbush, spiny hopsage, and winterfat were not observed during the investigation. These plant species are considered important forage for Mohave ground squirrel. Dr. Leitner postulated, based on trapping surveys

in the southern portion of the Mohave ground squirrel range, that densities of < 24/ha for spiny hopsage and < 100/ha of winterfat on a site was considered poor forage and may be related to the absence of Mohave ground squirrel. Further, no wildlife corridors are expected to exist between the closest core MGS population and the project site since the project site is located near the southeastern portion of the species range. The maximum documented movement of MGS is 3.9 miles (Harris and Leitner 2005). Therefore, Mohave ground squirrel is presumed absent from the project site.

Criteria 3: Is the site surrounded by development and therefore isolated from potentially occupied habitat?

The project site is located in a predominantly undeveloped area in the southern limits of Lucerne Valley, at the base of the San Bernardino Mountains foothills. Predominant development in the vicinity of the site consists of commercial aggregate mining, stockpiling, and processing facilities to the north and east of the site and sparse residential development to the south. The project site is bounded to the west by Crystal Creek Road with undeveloped, vacant land beyond; to the south by Crescent Road with scattered residential developments and undeveloped, vacant land; to the east by Ladera Road, with undeveloped, vacant land beyond; and to the north by undeveloped, vacant land and the existing OMYA quarries and materials plant. In addition, the site is transected by Furnace Creek Road which enters the northern boundary and leads southeast through the site before exiting the site at the eastern boundary.

Based on habitat requirements for Mohave ground squirrel, known distributions, site conditions, and regional trapping studies, it was determined this species is presumed absent from the project site. No further focused surveys are recommended.

Crotch Bumblebee

The Crotch bumblebee is a candidate species for listing status by the CESA. It is a colonial species that lives almost exclusively from coastal California east towards the Sierra-Cascade Crest and can be found uncommonly in western Nevada and south through Baja California. The Crotch bumblebee inhabits grassland and scrub habitats in hotter and drier climates than most other bumblebee species and is only capable of tolerating a narrow range of climatic conditions. This species feeds on a variety of annual and perennial plant species, classifying it as a dietary generalist. It usually nests underground, often in abandoned rodent dens. Queens are active from March to May, with peak activity occurring in April; workers are active from April to August, with peak activity occurring between May and June; and males are active from May to September, with peak activity occurring in July.

A records search was conducted for Crotch's bumble bee occurrences within a 5-mile radius of the project site. No Crotch's bumble bee have been documented within 5 miles of the project site.

Generally, for all bumble bee species, high-quality habitat have three major components: a diverse supply of flowers for nectar and pollen, nesting locations, and subterranean spaces for overwintering queens (Hatfield et al. 2012). Based on the results of this assessment, the project site and immediately surrounding areas were determined to provide low plant diversity for nectar sources. The available native plant diversity supported by the creosote bush scrub plant community provides limited foraging habitat for Crotch bumblebee due to this species being a dietary generalist. Further, no bumble bees have been recorded in the immediate vicinity of the project site. Due to existing anthropogenic disturbances north of the project site, low plant diversity for nectar sources, and lack of recorded occurrences in the immediate vicinity of the

project site Crotch bumble bee was determined to have a low potential to support Crotch bumblebee, and is presumed absent from the site. No further surveys are recommended

4.7.3 Special-Status Plant Communities

According to the CNDDB, one (1) special-status plant community has been reported in the Fawnskin and Lucerne Valley quadrangles: Pebble Plains (refer to Attachment C). No special-status plant communities were observed during the field investigation. Therefore, no impacts to special-status plant communities will occur from project implementation.

4.8 CRITICAL HABITAT

Under the federal Endangered Species Act, "Critical Habitat" is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. Maintenance of these physical and biological features requires special management considerations or protection, regardless of whether individuals or the species are present or not. All federal agencies are required to consult with the USFWS regarding activities they authorize, fund, or permit which may affect a federally listed species or its designated Critical Habitat. The purpose of the consultation is to ensure that projects will not jeopardize the continued existence of the listed species or adversely modify or destroy its designated Critical Habitat. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing is on federal lands, uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highways Administration or a Clean Water Act Permit from the United States Army Corps of Engineers). If a there is a federal nexus, then the federal agency that is responsible for providing the funding or permit would consult with the USFWS.

The project site is not located within federally designated Critical Habitat. The nearest Critical Habitat designations is located approximately 1.2 miles southeast for Parish's daisy (*Erigeron parishii*), 1.39 miles southwest for Cushenbury milkvetch (*Astragalus albens*), and 1.78 miles southwest for Cushenbury buckwheat (*Eriogonum ovalifolium* var. *vineum*). Refer to Exhibit 7, *Critical Habitat*. Therefore, no impacts to federally designated Critical Habitat will occur from implementation of the proposed project.

4.9 SAN BERNARDINO COUNTY DEVELOPMENT CODE

The California Desert Native Plants Act (CDNPA) protects California desert native plants from unlawful harvesting on both public and privately owned lands within Imperial, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego Counties. The following native plants, or any part thereof, may not be harvested except under a permit issued by the commissioner or the sheriff of the county in which the native plants are growing: all species of the Agavaceae (century plants, nolinas, and yuccas); all species of the family Cactaceae; all species of the family Fouquieriaceae (ocotillo, candlewood); all species of the genus *Prosopis* (mesquites); all species of the genus *Cercidium* (palo verdes); catclaw acacia (*Acacia greggii*); desert holly (*Atriplex hymenelytra*); smoke tree (*Dalea spinosa*); and desert ironwood (*Olneya tesota*), both dead and alive (provision 80073). This provision excludes any plant that is declared to be a rare, endangered,

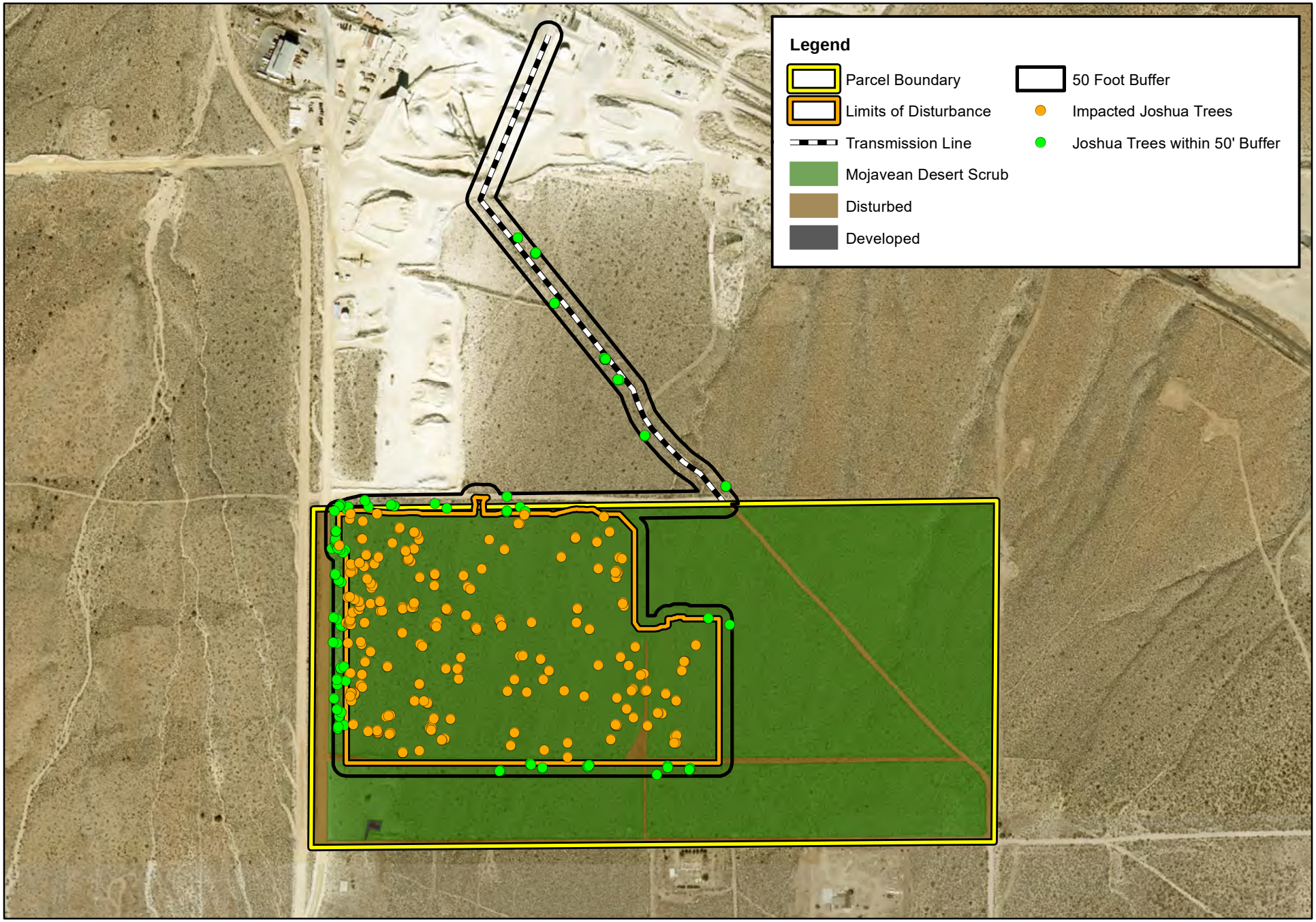
or threatened species by federal or State law or regulations, including, but not limited to, the California State Fish and Game Code.

In addition, Section 88.01.060 of the County of San Bernardino Development Code provides regulations for the removal or harvesting of specified desert native plants in order to preserve and protect the plants and to provide for the conservation and wise use of desert resources. The provisions are intended to coincide with the Desert Native Plants Act (Food and Agricultural Code Section 8001 et seq.) and the State Department of Food and Agriculture to implement and enforce the Act.

Pursuant to Section 88.01.060 of the Development Code, the following desert native plants or any part of them, except the fruit, shall not be removed except under a Tree or Plant Removal Permit:

1) The following desert native plants with stems two inches or greater in diameter or six feet or greater in height:
    (A) *Dalea spinosa* (smoke tree)
    (B) All species of the genus *Prosopis* (mesquites)
2) All species of the family *Agavaceae* (century plants, nolinas, yuccas)
3) Creosote Rings, 10 feet or greater in diameter
4) All Joshua trees (*Yucca brevifolia*)
5) Any part of any of the following species, whether living or dead:
    (A) *Olneya tesota* (desert ironwood)
    (B) All species of the genus *Prosopis* (mesquites)
    (C) All species of the genus *Parkinsonia* (palos verdes)

Based on the results of the field investigation, multiple species covered by the CDNPA and the County of San Bernardino Development Code were observed within project boundaries during the field investigation, including silver cholla, pencil cholla, hedgehog cactus, chaparral yucca, beavertail prickly pear, western Joshua tree, and Mohave yucca. Impacts to these species should be avoided in all instances. In the event that avoidance is not feasible, the project applicant will need an inventory of covered species within the project site completed and a Tree or Plant Removal Permit will need to be obtained from the County of San Bernardino prior to removal of any regulated tree or plant.



ELMT CONSULTING

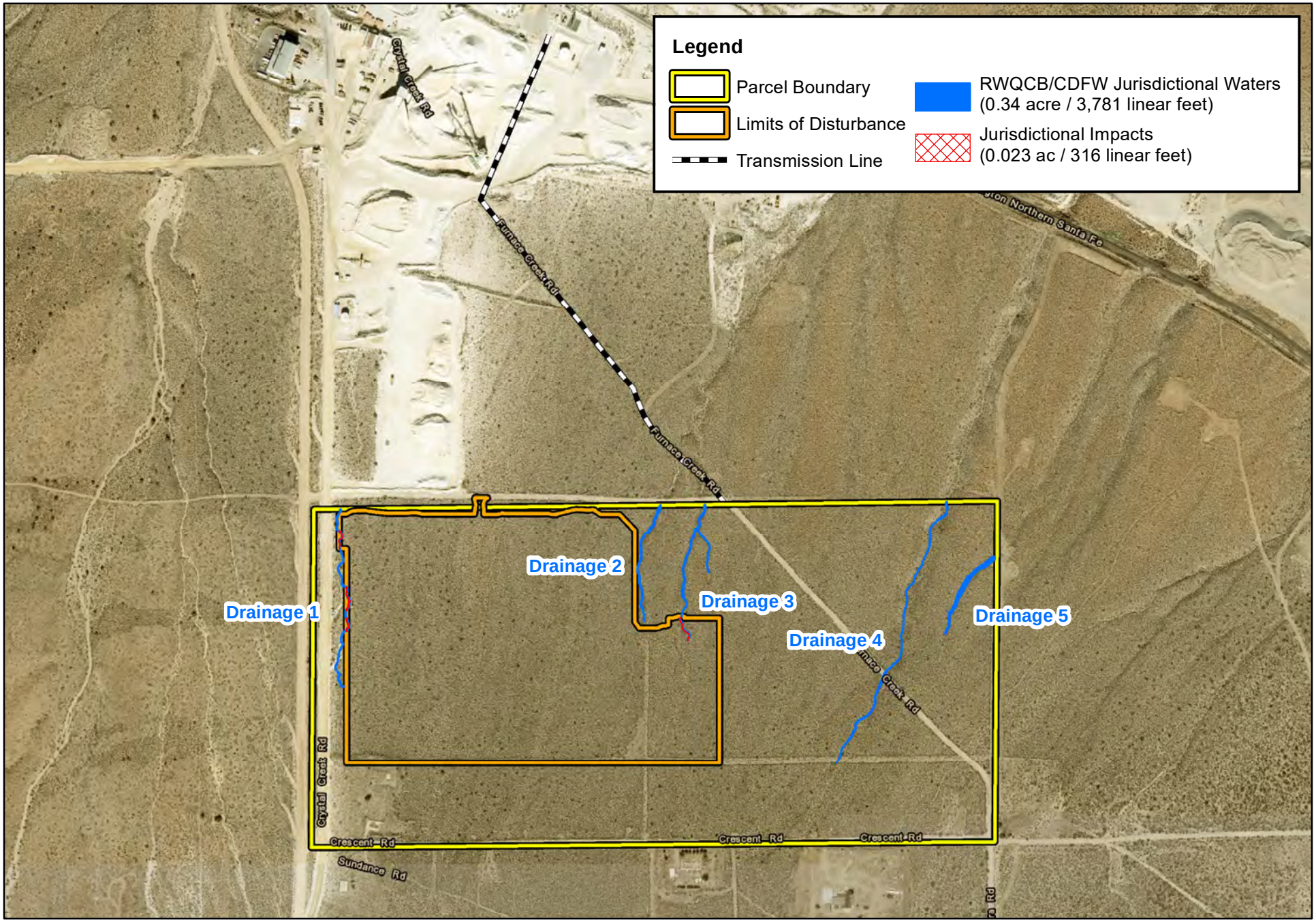
0 250 500 1,000 Feet

Source: Google Earth Aerial Imagery, San Bernardino County

POWERFLEX - SOLAR (OMYA - LUCERNE VALLEY)

Vegetation

Exhibit 5

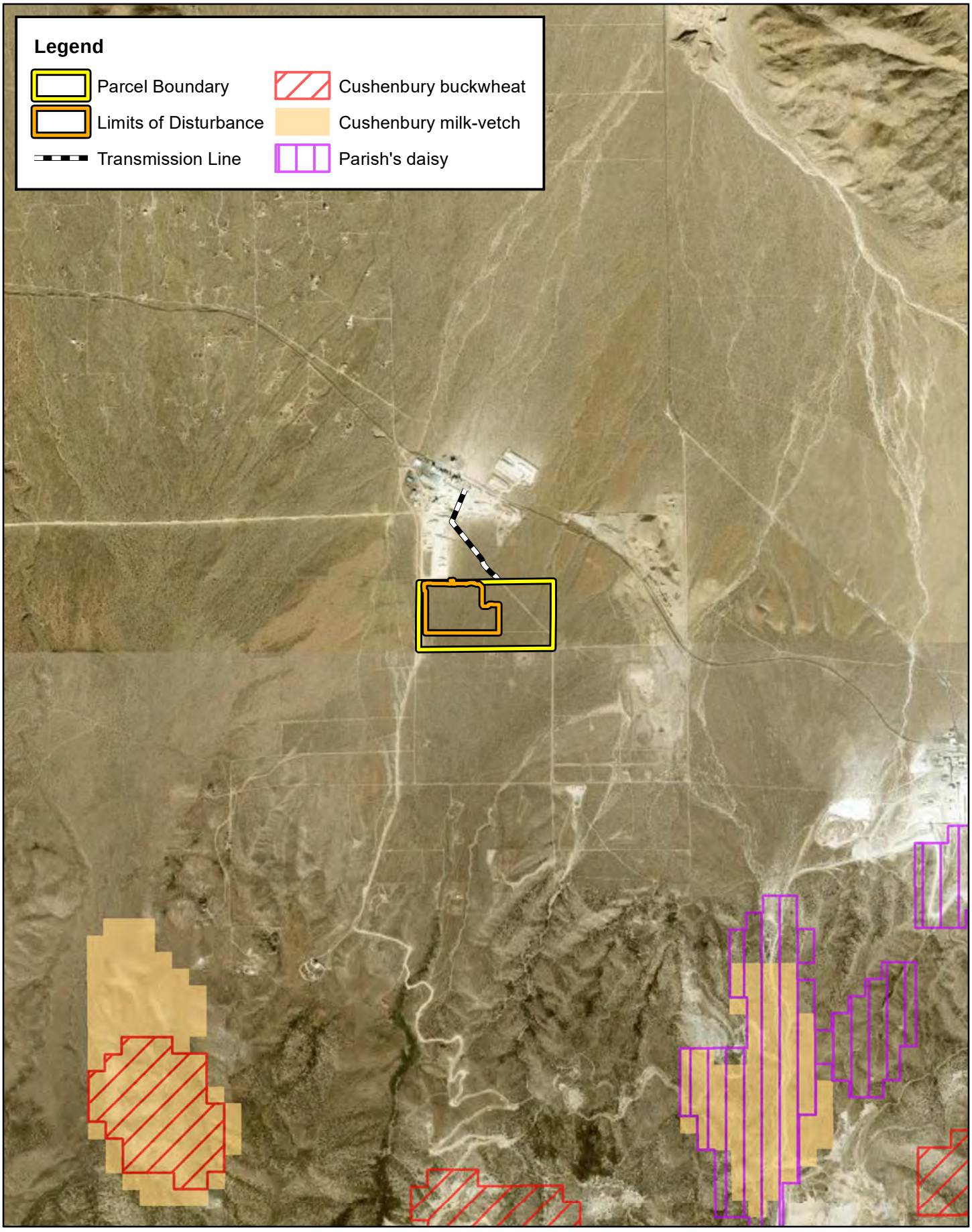


POWERFLEX - SOLAR (OMYA - LUCERNE VALLEY)

Drainage Features

Source: Google Earth Aerial Imagery, San Bernardino County

Exhibit 6



ELMT CONSULTING

0 1,000 2,000 4,000 Feet

Source: ESRI Aerial Imagery, USFWS Critical Habitat, San Bernardino County

POWERFLEX - SOLAR (OMYA - LUCERNE VALLEY)

Critical Habitat

Exhibit 7

Section 5 Conclusion and Recommendations

The discussion below provides a summary of survey results; avoidance and minimization efforts; direct, indirect, and cumulative project impacts; and compensatory mitigation measures for each biological resource area required to be analyzed according to CEQA, based on Appendix G (Environmental Checklist Form) of the CEQA Guidelines:

***CEQA Threshold**: Would the proposed Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?*

Special-Status Plant Species

Two special-status species were observed on-site during the 2024 focused surveys: purple-nerve cymopterus (CNPS 2B.2) and western Joshua tree (State Candidate Endangered). Based on habitat requirements for specific special-status plant species and the availability and quality of habitats needed by each species, it was determined that the project site has a low potential to support the following species:

- Cushenbury milk-vetch (Federally Endangered, CNPS 1B.1)
- San Bernardino milk-vetch (CNPS 1B.1)
- Big Bear Valley woollypod (CNPS 1B.2)
- alkali mariposa-lily (CNPS 1B.1)
- white pygmy-poppy (CNPS 4.2)
- Mojave paintbrush (CNPS 4.3)
- Mojave spineflower (CNPS 4.2)
- desert birds-beak (CNPS 4.3)
- Mt. Pinos larkspur (CNPS 4.3)
- Parish's daisy (Federally Threatened, CNPS 1B.1))
- slender bedstraw (CNPS 4.2)
- winged cryptantha (CNPS 4.3)
- Mojave monardella (CNPS 4.2)
- Latimer's woodland-gilia (CNPS 1B.2).

With the exception of Cushenbury milk-vetch and Parish's daisy, the aforementioned plant species are not federally or state listed as endangered or threatened. No further studies or mitigaiton is recommended.

Recommendations for avoidance and minimization:

Western Joshua Tree

A total of six hundred twenty-three (623) western Joshua trees were observed within the proposed limits of disturbance during the field investigation, including four hundred four (404) individuals measuring less than one meter in height and two hundred nineteen (219) individuals measuring between one and five meters

in height. Impacts to the on-site Joshua trees will require a total mitigation fee of $251,255 to be paid into the Western Joshua Tree Mitigation Tree fund, and a Western Joshua Tree Incidental Take Permit to be prepared and processed with CDFW.

Special-Status Wildlife Species

Two special-status wildlife species were observed during the field investigation: Costa's hummingbird and Bell's sparrow. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the proposed project site has the potential to support the following species:

- Cooper's hawk (California Watch List)
- Loggerhead shrike (California Species of Special Concern)
- Crotch bumble bee (State Candidate Endangered)
- Morrison bumble bee (no formal status)
- Pallid San Diego pocket mouse (no formal status)
- Andrew's marble butterfly (no formal status)
- Western mastiff bat (California species of special concern)
- Prairie falcon (California Watch List)
- Desert tortoise (Federally Threatened, State Endangered)
- Fringed myotis (no formal status),
- Long-legged myotis (no formal status)
- Desert bighorn sheep (State Fully Protected)
- Le Conte's thrasher (California Species of Special Concern).

Of the aforementioned special-status wildlife species, desert tortoise is both federally and state listed as threatened and Crotch bumble bee is a candidate species for state listing. None of the other special-status wildlife species are state or federally listed as threatened or endangered. In order to ensure impacts to special-status avian species do not occur from implementation of the proposed project, a pre-construction nesting bird clearance survey shall be conducted prior to ground disturbance. With implementation of the following avoidance and minimization measures, impacts to special-status species will be less than significant and no mitigation will be required.

Recommendations for avoidance and minimization:

Migratory Bird Treaty Act and Fish and Game Code

Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests or eggs). In order to protect migratory bird species, a nesting bird clearance survey should be conducted prior to any ground disturbance or vegetation removal activities that may disrupt the birds during the nesting season.

If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the

clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a no-disturbance buffer. The size of the no-disturbance buffer will be determined by the wildlife biologist and will depend on the level of noise and/or surrounding anthropogenic disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors will be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest will be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel will be instructed on the sensitivity of nest areas. A biological monitor should be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

Pre-construction Burrowing Owl Clearance Survey

To ensure burrowing owl remain absent from the project site, a pre-construction burrowing owl clearance survey shall be conducted in accordance with CDFW's 2012 Staff Report on Burrowing Owl Mitigation. Two surveys shall be conducted, the first 14-30 days prior to ground disturbing activities and the second within 24 hours immediately before ground disturbing activities. If no burrowing owls are observed onsite, no further review will be required.

Although not anticipated, if burrowing owl are found onsite during the pre-construction clearance surveys, coordination will need to occur with the CDFW to determine if avoidance and minimization measures can be implemented to avoid any direct or indirect impacts to burrowing owl, or if an Incidental Take Permit Under Section 2081 of the CESA will need to be prepared and approved by CDFW.

Pre-construction Desert Tortoise Clearance Survey

A pre-construction clearance survey shall be conducted thirty (30) days prior to ground disturbing areas in undeveloped areas to confirm the absence of desert tortoise within the boundaries of the survey area. All burrows, if present, will be thoroughly inspected for the presence of desert tortoise or evidence of recent use using non-intrusive methods (i.e., mirror, digital camera). Burrow characteristics including class, shape, orientation, size, and evidence of deterioration will be recorded on field data sheets.

To ensure desert tortoise remain absent from the project site during operation of the project, a desert tortoise exclusionary fence is recommended to be installed around the perimeter of the project site following the pre-construction survey.

Although not anticipated, if desert tortoise are found onsite during the pre-construction clearance survey, coordination will need to occur with the USFWS and CDFW to determine if avoidance and minimization measures can be implemented to avoid any direct or indirect impacts to desert tortoise, or if "Take" permits will need to be obtained prepared and approved by the USFWS and CDFW.

CEQA Threshold: *Would the proposed Project 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 US Fish and Wildlife Service?*

Riparian Habitat and Special-Status Natural Communities

Five (5) unnamed ephemeral drainage features (Drainages 1-5) were observed within the boundaries of the project site during the field delineation. The onsite ephemeral drainage features are not relatively permanent, standing, or continuously flowing bodies of water and, therefore, will not qualify as waters of the United States under the regulatory authority of the Corps (*Sackett v. EPA* (2022) 143 S. Ct. 1322, 1336). However, the onsite drainage features will qualify was waters of the State and fall under the regulatory authority of the Regional Board and CDFW.

Impacts to the on-site jurisdictional areas will require a Corps Approved Jurisdictional Determination or Waiver, Regional Board CWA Section Report of Waste Discharge, and a CDFW Section 1602 Lake and Streambed Alteration Agreement prior to Project implementation. A formal jurisdictional delineation was prepared by ELMT to calculate impacts to the jurisdictional drainages based on the project footprint. (*PowerFlex Solar Ground Mount System at OMYA-Lucerne Valley, Jurisdictional Delineation, March* 2025). Additionally, no sensitive habitats were identified within the Project site. Thus, no sensitive natural communities will be impacted from Project implementation.

CEQA Threshold: *Would the proposed Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

Federally Protected Wetlands

No inundated areas, wetland features, or wetland plant species that would be considered wetlands as defined by Section 404 of the Clean Water Act occur within the proposed Project footprint. As a result, implementation of the proposed Project would not result in any impacts or have substantial adverse effect on federally protected wetlands.

CEQA Threshold: *Would the proposed Project 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?*

Wildlife Corridors

The project site has not been identified as occurring in a wildlife corridor or linkage. The nearest corridor/linkage documented in the vicinity of the site is Grapevine Creek, located approximately 7.69 miles southeast of the site. The site is separated from this identified regional wildlife corridors and linkages by existing development and there are no riparian corridors or creeks connecting the project site to these areas. The project site primarily supports undeveloped land that merges with other undeveloped open spaces to the west and east, and beyond adjacent residential developments to the south. However, due to the proximity of the site to the existing OMYA quarries and facilities and the disturbances associated with their ongoing operation, the site is not expected to contribute meaningfully to local wildlife movement. Further, the ample

open space surrounding the site to the west, south, and east provide more suitable conditions for wildlife movement. As such, implementation of the proposed project is not expected to have a significant impact on wildlife movement opportunities.

Additionally, the project site does not provide any native wildlife nursery site (e.g., bat maternity site).

CEQA Threshold: *Would the proposed Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Local Policies or Ordinances

Section 88.01.060 of the County of San Bernardino Development Code provides regulations for the removal or harvesting of specified desert native plants in order to preserve and protect the plants and to provide for the conservation and wise use of desert resources. The provisions are intended to coincide with the Desert Native Plants Act (Food and Agricultural Code Section 8001 et seq.) and the State Department of Food and Agriculture to implement and enforce the Act.

Based on the results of the field investigation, multiple species covered by the CDNPA and the County of San Bernardino Development Code were observed within project boundaries during the field investigation, including silver cholla, pencil cholla, hedgehog cactus, chaparral yucca, beavertail prickly pear, western Joshua tree, and Mohave yucca. Impacts to these species should be avoided in all instances. In the event that avoidance is not feasible, the project applicant will need an inventory of covered species within the project site completed and a Tree or Plant Removal Permit will need to be obtained from the County of San Bernardino prior to removal of any regulated tree or plant.

CEQA Threshold: *Would the proposed Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan?*

Local, Regional, and State Plans

The project site is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan. Therefore, impacts to any local, regional, or state habitat conservation plans are not expected to occur from development of the proposed project, and mitigation is not required.

Section 6 References

California Department of Fish and Wildlife. 2010. List of Vegetation Alliances and Associations (Natural Communities List). Available online at http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp.

California Department of Fish and Wildlife. 2024. RareFind 5, California Natural Diversity Data Base, California. Data Base report on threatened, endangered, rare or otherwise sensitive species and communities for the Fawnskin and Lucerne Valley 7.5-minute USGS quadrangle.

California Native Plant Society. 2024. Inventory of Rare and Endangered Plants of California. Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society. Sacramento, California. Available at: http://www.cnps.org/inventory.

eBird. 2018. Online at http://ebird.org/content/ebird/.

Google, Inc. 2024. Google Earth Pro Imagery version 7.3.6.9796 build date 2/22/2024. Historical Aerial Imagery from 1985 to 2023.

Guzy, Gary S. and R.M. Andersen. 2001. Memorandum on Supreme Court ruling concerning CWA jurisdiction over isolated waters. U.S. EPA and U.S. Army Corps of Engineers.

Hickman, J.C., ed. 2012. *The Jepson Manual: Higher Plants of California*. University of California Press.

Holland, R. F. 1986. Preliminary descriptions of the Terrestrial Natural Communities of California. Calif. Dept. of Fish and Game, Sacramento, CA.

Sibley, D.A. 2014. The Sibley Guide to Birds, Second Edition. Alfred A. Knopf, Inc., New York, New York.

State Water Resources Control Board. 2019. *State wetland Definition and procedures for Discharges of Dredged or Fill Material to Waters of the State*. Adopted May 28, 2020.

Stebbins, R.C. 2003. A Field Guide to Western Reptiles and Amphibians, Third Edition. Houghton Mifflin Company, New York, New York.

U.S. Climate Data. 2023. Mountain Gate, California. Online at http://www.usclimatedata.com

U.S. Army Corps of Engineers (Corps). 2006. *Distribution of Ordinary High Water Mark Indicators and their Reliability in Identifying the Limits of "Waters of the United States" in the Arid Southwestern Channels*. February 2006.

Corps. 2008. *A Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States*. August 2008.

Corps. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, ed. J.S. Wakeley, R. W. Lichvar, and C. V. Nobel. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

Corps. 2016. *Arid West 2016 Regional Wetland Plant List.* 2016 NWPL v3.3. Accessed online at http://wetland-plants.usace.army.mil/nwpl_static/index.html.

Corps. 2016. *Updated Map and Drawing Standards for the South Pacific Regulatory Division Regulatory Program*. February 2016.

Corps. 2017. *Minimum Standards for Acceptance of Aquatic Resources Delineation Reports*. March 2017.

Corps. 2017. *Reissuance of the Nationwide Permits and Issuance of Final Regional Conditions for the Los Angeles District.* March 2017.

Corps. 2020. *The Navigable Waters Protection Rule: Definition of "Waters of the United States*. 33 CFR Part 328. April 2020.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2024. *Web Soil Survey*. Online at http://websoilsurvey.nrcs.usda.gov/app/.

Appendix A Site Plan

PLOT DATE: 2/6/2024 7:33 AM

OMYA

SITE GRADING PLANS FOR PROPOSED SOLAR PLANT
7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356
6.49 MW DC RATED SOLAR ELECTRIC SYSTEM

GENERAL NOTES

1. AS CONTAINED HEREIN, "CONTRACTOR" IS ASSUMED TO BE POWERFLEX, LLC AND "SUBCONTRACTOR" IS POWERFLEX, LLC'S INSTALLATION SUBCONTRACTOR.
2. THESE NOTES SET MINIMUM TECHNICAL STANDARDS FOR CONSTRUCTION. THE DRAWINGS GOVERN OVER THESE NOTES TO THE EXTENT SHOWN.
3. ALL WORK SHELL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING: LOCAL BUILDING CODE, LOCAL ELECTRICAL CODE, ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK AND THOSE CODES AND STANDARDS LISTED IN THESE DRAWINGS AND IN THE SUBCONTRACTOR AGREEMENT.
4. EXCEPTIONS TO THE CONTRACT DOCUMENTS ARE PERMITTED ONLY WITH THE APPROVAL OF POWERFLEX, LLC.
5. COORDINATE THESE DRAWINGS WITH SPECIFICATIONS AND MANUFACTURER INSTALLATION AND OPERATION MANUALS AND NOTIFY POWERFLEX, LLC. OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.
6. DRAWINGS HAVE BEEN DETAILED IN COMPLIANCE WITH U.L. LISTING REQUIREMENTS AND THE BUILDING CODE FOR THE MATERIALS SPECIFIED. IF AN ALTERNATIVE OR SUBSTITUTED MATERIAL IS ACCEPTED AS AN EQUAL BY POWERFLEX, LLC., THE SUBCONTRACTOR WILL ASSUME THE RESPONSIBILITY FOR WHATEVER CONSTRUCTION MODIFICATION AND/OR ADDITIONAL COST THAT IS REQUIRED BY REASON OF THIS ACCEPTANCE.
7. PRIOR TO THE COMMENCEMENT OF ANY WORK, EACH TRADE SHALL VERIFY EXISTING CONDITIONS AND NOTIFY POWERFLEX, LLC. OF ANY DISCREPANCIES TO THAT WHICH IS SHOWN IN THESE DRAWINGS, INCLUDING BUT NOT LIMITED TO DIMENSIONS OF THE WORK AREA, STRUCTURE, EXISTING ELECTRICAL SERVICE, CONDUIT PATHS, OBSTRUCTIONS, ACCESSIBILITY ISSUES, AND WORKING CLEARANCES. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE SUBCONTRACTOR AT HIS OWN EXPENSE.
8. SUBCONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO POWERFLEX, LLC. FOR APPROVAL PRIOR TO MAKING ANY CHANGES. APPROVED CHANGED REQUIRE A DRAWING REVISION TO MAINTAIN CONTROL OVER THE APPROVED DESIGN. DEVIATION FROM THESE PLANS PRIOR TO POWERFLEX, LLC. APPROVAL PLACES ALL LIABILITY ON THE SUBCONTRACTOR.
9. UNLESS INDICATED AS EXISTING (E), ALL PROPOSED MATERIALS AND EQUIPMENT ARE NEW.
10. ALL ITEMS TO BE REMOVED AND RELOCATED OR REPLACED SHALL BE HANDLED WITH PROPER CARE AND STORED IN A SAFE PLACE TO PREVENT DAMAGE, OR BE REPLACED AT THE SUBCONTRACTOR'S EXPENSE.
11. ALL EQUIPMENT SHALL BE MOUNTED AS SHOWN, WHERE DETAILS ARE NOT PROVIDED, THE SUBCONTRACTOR SHALL USE DILIGENT EFFORTS TO MOUNT EQUIPMENT SUCH THAT IT WILL BE CLEAN, LEVEL AND SOLID.
12. ALL SURFACES SHALL BE PATCHED AND PAINTED AROUND NEW DEVICES AND EQUIPMENT TO MATCH EXISTING FINISHES.
13. ANY METAL SHAVINGS RESULTING FROM SITE WORK SHALL BE CLEANED FROM ROOF SURFACES, ENCLOSURES AND ANY ADDITIONAL AREAS WHERE OXIDIZED OF CONDUCTIVE METAL SHAVINGS MAY CAUSE RUST, ELECTRICAL SHORT CIRCUITS OR OTHER DAMAGE.
14. NO STRUCTURAL MEMBER SHALL BE DRILLED UNLESS SPECIFICALLY AUTHORIZED BY POWERFLEX, LLC..
15. SUBCONTRACTOR ACKNOWLEDGES THAT THE SYSTEM AS INDICATED ON THE PLANS REQUIRES ALL COMPONENTS TO BE INSTALLED TO PROPERLY RESIST WIND LOADS, SUCH AS BALLAST, WIND DEFLECTORS, ETC. IT IS THE RESPONSIBILITY OF THE SUBCONTRACTOR TO PROVIDE TEMPORARY MEANS TO RESIST WIND LOADS FOR ALL COMPONENTS NOT YET INSTALLED DURING AND AFTER REGULAR WORKING HOURS. THIS MAY INCLUDE TEMPORARY TIE DOWNS, COVERING, BALLAST OR ANY OTHERS, DAMAGE TO ANY INSTALLED SYSTEM COMPONENT OR THE EXISTING FACILITY AS A RESULT OF THE UNFINISHED CONDITION NOT ADEQUATELY RESISTING WIND SHALL BE THE RESPONSIBILITY OF THE SUBCONTRACTOR TO REPAIR OR REPLACE AT THE SUBCONTRACTOR'S COST.
16. TREES MAY GROW DURING THE LIFE OF THE SYSTEM AND IMPACT THE PRODUCTION.

PROJECT SCOPE

THIS PROJECT CONSISTS OF THE INSTALLATION OF SOLAR MODULES PER THE SYSTEM DESCRIPTION, BELOW. THE MODULES WILL BE INSTALLED ON A GROUND MOUNTED RACKING SYSTEM. THE MODULES WILL BE WIRED IN SERIES STRINGS AND CONNECTED IN PARALLEL TO THE INVERTERS, WHICH CONVERT THE PHOTOVOLTAIC OUTPUT POWER FROM DC TO AC. THE SOLAR ELECTRIC SYSTEM WILL BE INTERCONNECTED WITH THE EXISTING SITE ELECTRICAL SYSTEM IN ACCORDANCE WITH THE APPLICABLE ELECTRIC CODE AND UTILITY REQUIREMENTS.

SYSTEM DESCRIPTION

SYSTEM SIZE (DC STC)	6.49 MW	SYSTEM SIZE (AC)	5.00 MW
MODULES	(14,420) CANADIAN SOLAR CS3W-450MB-AG	STC RATED OUTPUT	450W
MODULES PER FRAME	23-28	# OF FRAMES	N/A
RACKING	PER MODULE MFG.	TILT ANGLE	30° (MAX.)
INVERTER	CPS SCH125KTL-DO/US-600	# OF INVERTERS	40
AZIMUTH	180° (SOUTH = 180°)	PARCEL ACREAGE	20.07 AC

PROJECT DIRECTORY

OWNER/OPERATOR
OMYA NORTH AMERICA
ADDRESS: 7225 CRYSTAL CREEK ROAD,
LUCERNE VALLEY CA 92356
PHONE NUMBER: (760) 248-5200

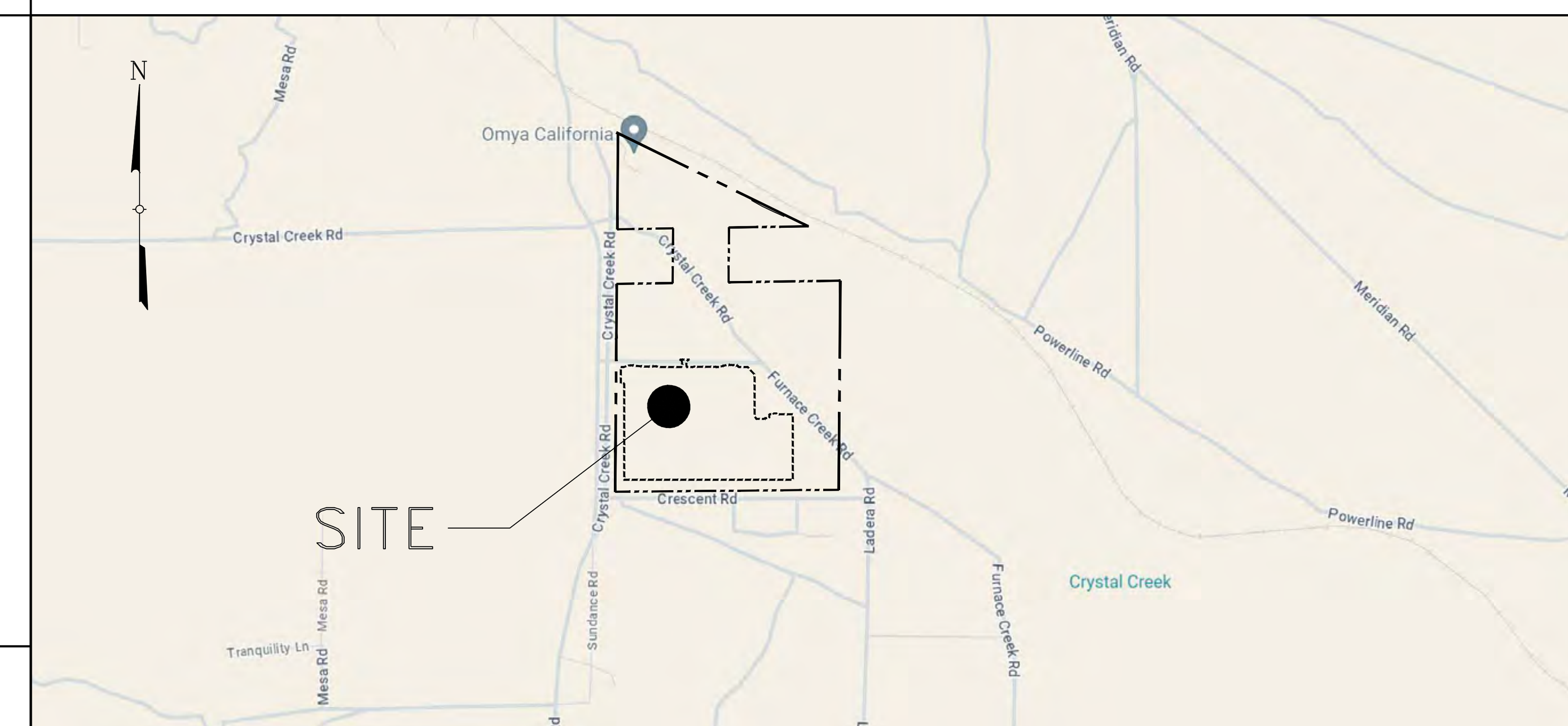
AUTHORITY HAVING JURISDICTION
COUNTY OF SAN BERNADINO
385 N. ARROWHEAD AVE.
SAN BERNADINO, CA 92415

PROJECT MANAGER
FIRM: POWERFLEX
CONTACT: NICHOLAS BUDZYNSKI
PHONE: (917) 410-6420

CIVIL ENGINEER
FIRM: TECTONIC ENGINEERING CONSULTANTS
CONTACT: J. MARK PRIVETTE, P.E.
PHONE: (845) 534-5959

ELECTRICAL ENGINEER
FIRM: PURE POWER ENGINEERING
CONTACT: RICHARD A. IVINS, P.E.
PHONE: (978) 610-2864

LOCATION MAP



AERIAL VIEW

DRAWING LIST

APPLICABLE CODES AND STANDARDS

THE FOLLOWING DOCUMENTS WERE UTILIZED IN THE DESIGN PROCESS:

- SAN BERNANDO COUNTY HYDROLOGY MANUAL (AUGUST 1986) AND COUNTY OF SAN BERNARDINO HYDROLOGY MANUAL ADDENDUM FOR ARID REGIONS (APRIL 2010).
- SAN BERNARDINO COUNTY DETENTION BASIN DESIGN MEMO (SEPT 1987).
- NOAA ATLAS 14, VOLUME 6, VERSION 2 – POINT PRECIPITATION FREQUENCY ESTIMATES, (SOURCED ON 5/22/2024).
- OMYA LUCERNE VALLEY, GEOTECHNICAL ENGINEERING REPORT AS PREPARED BY TERRACON CONSULTANTS, INC., DATED 5/07/24 (PROJECT #60245013).
- OMYA LUCERNE VALLEY, STORMWATER MANAGEMENT REPORT, BY TECTONIC ENGINEERING, DATED 7/30/24.
- BOUNDARY AND TOPOGRAPHIC SURVEY BY PBLA SURVEYING, INC., DATED MAY 17, 2024 (JOB #5061-1).
- 2022 CALIFORNIA BUILDING STANDARDS CODE, TITLE 24
- 2022 CALIFORNIA FIRE CODE, TITLE 24, PART 9

SITE DATA:

ZONING: LV-IC

PROPERTY I.D.: APN: 446-033-18

OWNER/OPERATOR: OMYA NORTH AMERICA
ADDRESS: 7225 CRYSTAL CREEK ROAD,
LUCERNE VALLEY CA 92356
PHONE NUMBER: (760) 248-5200

JURISDICTION: SAN BERNADINO COUNTY

FLOOD ZONE: D, PANELS 06071C6575H 8/88/2008

PROPERTY AREA: 158.03 ACRES

PROJECT AREA: 26.3± ACRES

SURVEY BY PBLA SURVEYING, INC.
(JOB.NO. 5061-1) PLS 8403
SURVEY FIELD WORK COMPLETED ON 05/17/2024

GENERAL ABBREVIATIONS

(E)	EXISTING
AHJ	AUTHORITY HAVING JURISDICTION
AL	ALUMINUM
APPROX	APPROXIMATE
ARY	ARRAY
BLDG	BUILDING
AES	AES DISTRIBUTED ENERGY
CL	CENTERLINE
DAS	DATA ACQUISITION SYSTEM
DIA	DIAMETER
DO	DITTO
EW	EAST-WEST
FBO	FURNISHED BY OTHERS
FF	FORWARD FACING
GALV	GALVANIZED
HDG	HOT DIP GALVANIZED
HVAC	HEATING VENTILATION AND AIR CONDITIONING
ID	INSIDE DIAMETER
MFR	MANUFACTURER
MOD	SOLAR MODULE
NA	NORTH-SOUTH
NTS	NOT TO SCALE
OAE	OR APPROVED EQUAL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PV	PHOTOVOLTTAIC
PVC	POLY VINYL CHLORIDE
SCH	SCHEDULE
SS	STAINLESS STEEL
SSS	SOLAR SUPPORT STRUCTURE
STC	STANDARD TEST CONDITIONS
TBD	TO BE DETERMINED
TP	TAMPER PROOF
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VIF	VERIFIED IN FIELD
WP	WEATHER PROOF

DATE	REVISION DESCRIPTION	PM	ENG	CHK
05/22/24	FOR COMMENT	–	JMP	GB
07/24/24	PER COMMENTS	–	JMP	GB

SEAL

ENGINEER
Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants
Project Contact Info
2415 Campus Drive
Suite 265
Irvine, CA 92612
Phone: (949) 502-8555
(800) 829-6531
www.tectonicengineering.com

DEVELOPER:
powerflex
EDF Renewables
805 THIRD AVENUE
NEW YORK, NEW YORK 10022
WWW.POWERFLEX.COM

PAGE SIZE
36" x 24"

SYSTEM
DC SYSTEM SIZE: 6.49 MW
AC SYSTEM SIZE: 5.00 MW
MODULE TYPE: CSI SOLAR, CS3W-450MB-AG
MODULE QUANTITY: 14,420
ORIENTATION: 30° TILT, 180° AZIMUTH

PROJECT
SOLAR GROUND MOUNT SYSTEM AT
OMYA
7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356

WORK ORDER # 11550.07

DRAWING TITLE
TITLE SHEET

SHEET NO. T-1

PLOT DATE: 2/6/2024 7:53 AM

GENERAL CONSTRUCTION NOTES

A. IN THESE DOCUMENTS THE DEVELOPER IS POWERFLEX.

B. ALL SPECIFICATIONS AND DOCUMENTS REFERRED TO IN THESE PLANS SHALL BE OF THE CURRENT REVISION.

C. ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.

D. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL PRE-CAST AND MANUFACTURED ITEMS TO THE OWNER'S ENGINEER FOR APPROVAL. FAILURE TO OBTAIN APPROVAL BEFORE FABRICATION AND/OR INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT CONTRACTOR'S EXPENSE.

E. WORK PERFORMED UNDER THIS CONTRACT SHALL INTERFACE SMOOTHLY WITH OTHER WORK BEING PERFORMED BY OTHER CONTRACTORS AND UTILITY COMPANIES. IT WILL BE NECESSARY FOR THE CONTRACTOR TO COORDINATE AND SCHEDULE HIS ACTIVITIES, WHERE NECESSARY, WITH CONTRACTORS AND UTILITY COMPANIES (INCLUDING, BUT NOT LIMITED TO LIGHTING, POWER, TELEPHONE, CABLE, GAS, ETC...).

F. CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE NPDES PERMIT FROM CALIFORNIA STATE WATER RESOURCES BOARD. CONTRACTOR SHALL COORDINATE ALL ENVIRONMENTAL ISSUES WITH THE ENVIRONMENTAL CONSULTANT.

G. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED BY THE CONTRACTOR CALLED FOR IN THIS CONTRACT.

H. ALL UNDERGROUND UTILITIES, INCLUDING DUCTBANKS NOT UNDER THE DRIVEWAY/TRAVELWAYS, MUST BE IN PLACE AND TESTED OR INSPECTED PRIOR TO BASE AND PAVEMENT CONSTRUCTION.

I. SEVEN (7) DAYS NOTICE IS REQUIRED TO THE PERTINENT GOVERNMENT AGENCIES AND THE ENGINEER PRIOR TO SITE INSPECTIONS AND/OR WITNESSING ANY SITE/CIVIL TESTING.

J. POWERFLEX WILL SCHEDULE PRE-CONSTRUCTION MEETINGS WITH OTHER JURISDICTIONAL AGENCIES AS NECESSARY.

K. CONSTRUCTION SHALL ADHERE TO APPLICABLE AGENCY CRITERIA, PERMIT CONDITIONS, AS WELL AS SPECIFICATIONS PROVIDED BY OWNER.

L. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH POWERFLEX CONCERNING LIMITS OF CONSTRUCTION, TRANSITIONS, ETC. WHICH MAY NOT BE SHOWN ON THESE PLANS.

M. CONTRACTOR SHALL VERIFY LOCATIONS AND DEPTHS OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE OWNER OR ENGINEER IMMEDIATELY FOR RESOLUTION.

SAFETY NOTES

A. DURING THE CONSTRUCTION AND MAINTENANCE OF THIS PROJECT, ALL OSHA AND NY STATE SAFETY REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS PERSONNEL.

B. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION AND CONSTRUCTION WORK PER STANDARD 1910.12.

C. CONTRACTOR SHALL PROVIDE AND MAINTAIN ITS OWN SAFETY EQUIPMENT IN ACCORDANCE WITH ITS HEALTH & SAFETY PROGRAM AND ALL OTHER APPLICABLE LEGAL AND HEALTH AND SAFETY REQUIREMENTS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR PROVIDING ITS EMPLOYEES AND SUB CONTRACTORS WITH ADEQUATE INFORMATION AND TRAINING TO ENSURE THAT ALL EMPLOYEES AND SUB CONTRACTORS AND SUB CONTRACTOR'S EMPLOYEES COMPLY WITH ALL APPLICABLE REQUIREMENTS. CONTRACTOR SHALL REMAIN IN COMPLIANCE WITH ALL OCCUPATION SAFETY AND HEALTH REGULATIONS AS WELL AS THE ENVIRONMENTAL PROTECTION LAWS. THE FOLLOWING IS NOT TO BE PERCEIVED AS THE ENTIRE SAFETY PROGRAM BUT JUST BASIC REQUIREMENTS.

D. ALL EXCAVATIONS BY THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF THE DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. PARTICULAR ATTENTION MUST BE PAID TO THE CONSTRUCTION STANDARDS FOR EXCAVATIONS, 29 CFR PART 1926, SUBPART P.

E. ALL TRAFFIC CONTROL MARKINGS AND DEVICES SHALL CONFORM TO THE PROVISIONS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES PREPARED BY THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION.

F. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS. THE ABOVE INFORMATION HAS BEEN PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATIONS.

G. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL LOCATE ALL EXISTING BURIED UTILITIES BY HAND-DIG METHODS. THE CONTRACTOR SHALL OBTAIN PERTINENT APPROVALS AND PERMITS FROM THE LOCAL JURISDICTION PRIOR TO ALL EXCAVATIONS.

CONSTRUCTION SEQUENCING

CONSTRUCTION SEQUENCING WILL BEGIN WITH SITE MOBILIZATION, INCLUDING ESTABLISHMENT OF SITE SAFETY AND SECURITY MEASURES, SURVEY AND STAKING OF THE SITE PERIMETER TO ESTABLISH THE LIMITS OF DISTURBANCE. ALL STORMWATER POLLUTION PREVENTION PLAN (SWPPP) MEASURES WILL THEN BE PUT IN PLACE AROUND THE PERIMETER AND IN OTHER AREAS AS INDICATED IN THE SWPPP PRIOR TO ANY SITE DISTURBANCES TO MANAGE STORMWATER THROUGHOUT CONSTRUCTION. SITE ACCESS ROADS AND TEMPORARY CONSTRUCTION ROADS WILL THEN BE CONSTRUCTED FOLLOWED BY ANY REQUIRED TREE CLEARING, REMOVAL OF VEGETATION AND REMOVAL OF ANY DEBRIS OR OTHER MATERIALS FROM SITE THAT CAN NOT BE USED ON THE PROJECT.

CIVIL EARTHWORKS WILL BEGIN BY GRADING THE PROPOSED ROADS & EQUIPMENT AREAS TO THE FINAL DESIGN TOPOGRAPHY THROUGHOUT THE ARRAY. THE INSTALLATION OF THE ARRAY RACKING SYSTEM WILL THEN BEGIN WITH THE INSTALLATION OF THE VERTICAL PILES, WITH TRENCHING FOR BURIED CABLING ALSO BEING DONE IN PARALLEL. SUPPORTING STRUCTURES FOR THE SOLAR PANELS WILL BE INSTALLED ON THE PILES ONCE A SIGNIFICANT PORTION OF PILES ARE INSTALLED. CIVIL CREWS WILL CONTINUE BY PREPARING EQUIPMENT SLABS AND FOUNDATIONS FOR MAJOR EQUIPMENT SUCH AS INVERTERS, TRANSFORMERS AND OTHER PAD MOUNTED EQUIPMENT.

WITH A SIGNIFICANT PORTION OF THE PANEL SUPPORT STRUCTURE IN PLACE, CREWS WILL THEN BEGIN INSTALLING THE SOLAR PANELS ON THE STRUCTURES AS WELL AS THE INSTALLATION OF ELECTRICAL CABLING WITHIN THE ARRAY AND INSTALLATION OF COMBINER BOXES AND EQUIPMENT INSTALLED WITHIN THE ARRAY ITSELF. CONSTRUCTION AT THE POINT OF INTERCONNECTION (POI) WILL BEGIN NEAR THE END OF TRENCHING TO ALIGN WITH THE MEDIUM VOLTAGE RUN FROM THE ARRAY TO THE POI. ONCE THE POI IS ESTABLISHED, EQUIPMENT AT THE POI WILL BE INSTALLED AND COORDINATION WITH THE UTILITY TO HAVE UTILITY OWNED EQUIPMENT INSTALLED WILL OCCUR. WHEN THE EQUIPMENT IS COMPLETELY INSTALLED AND ALL ELECTRICAL CABLING IS COMPLETE, ALL FINAL TERMINATIONS WITHIN EQUIPMENT CABINETS WILL BE COMPLETED AND ALL ELECTRICAL CHECKS AND TESTING WILL BE CONDUCTED. NOTE THAT, THE POI INSTALLATION TIME LINE MAY BE ADJUSTED SUBJECT TO COORDINATION WITH THE UTILITY.

THE SYSTEM WILL BE INSPECTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) TO ENSURE THE SYSTEM IS INSTALLED PER THE DESIGN AND ALL RELEVANT CODES. THE UTILITY WILL THEN CONDUCT TESTING PRIOR TO ALLOWING THE SYSTEM TO BE ENERGIZED FOR TESTING UNDER LOAD. WITH THE APPROVAL OF THE AHJS AND THE UTILITY, THE SYSTEM WILL THEN REMAIN ENERGIZED FOR PERFORMANCE TESTING WHILE ANY SITE RESTORATION ACTIVITIES ARE COMPLETED. ONCE THE SYSTEM HAS BEEN FULLY TESTED AND ALL DESIGN REQUIREMENTS HAVE BEEN MET, THE SITE WILL UNDERGO FINAL INSPECTIONS BY ALL AHJS. AFTER ALL FINAL INSPECTIONS ARE CARRIED OUT AND PERMITS ARE CLOSED, THE SWPPP MEASURES WILL BE REMOVED AND ANY REMAINING CONSTRUCTION ASSETS WILL BE DEMOBILIZED, CONCLUDING ALL CONSTRUCTION ACTIVITIES.

NOTE:

ALL CONSTRUCTION SHALL CONFROM TO THE COUNTY OF SAN BERNADINO DESIGN & CONSTRUCTION STANDARDS.

PROJECT SPECIFIC NOTES

A. THE CONTRACTOR IS TO COORDINATE HIS WORK AND SITE ACCESS WITH THE OTHER ENTITIES THAT MAY BE WORKING ON SITE. ANY CONFLICTS ON COORDINATION ISSUES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND/OR ENGINEER FOR MUTUAL RESOLUTION.

B. THE PROPOSED PROJECT WILL NOT ADVERSELY AFFECT SIGNIFICANT HISTORICAL OR ARCHEOLOGICAL RESOURCES UNDER THE PROVISIONS OF SECTION 106 AND 36 CFR PART 800 OR OTHER APPLICABLE STATE AND FEDERAL STATUTES. IF EVIDENCE OF THE EXISTENCE OF HISTORIC OR ARCHEOLOGICAL RESOURCES IS DISCOVERED OR OBSERVED AT DEVELOPMENT SITES OR DURING DEVELOPMENT ACTIVITIES AFTER FINAL APPROVAL, ALL WORK SHALL CEASE IN THE AREA OF EFFECT AS DETERMINED BY THE DIRECTOR. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER IMMEDIATELY, AND THE DEPARTMENT OF HISTORICAL RESOURCES WITHIN TWO WORKING DAYS. EXAMPLES OF EVIDENCE OF HISTORIC RESOURCES INCLUDE WHOLE OR FRAGMENTARY STONE TOOLS, SHELL TOOLS, ABORIGINAL OR HISTORIC POTTERY, HISTORIC GLASS, HISTORIC BOTTLES, BONE TOOLS, HISTORIC BUILDING FOUNDATIONS, SHELL MOUNDS, SHELL MIDDENS, OR SAND MOUNDS. THE APPROPRIATE NY STATE AGENCY SHALL ASSESS THE SIGNIFICANCE OF THE FINDS AND MITIGATE ANY ADVERSE EFFECTS AS SOON AS POSSIBLE, BUT NO LATER THAN THIRTY DAYS OF NOTIFICATION.

C. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND SHALL NOT SCALE FROM DRAWINGS. THE DIMENSIONS OF SPECIFIED AND FURNISHED PRODUCTS AND MATERIALS TAKE PRECEDENCE OVER DIMENSIONS AND NOTES SHOWN ON THE DRAWINGS.

D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING OR PROPOSED UTILITIES, STRUCTURES, AND OTHER IMPROVEMENTS CAUSED BY HIS/HER ACTIVITIES.

E. THE CONTRACTOR IS RESPONSIBLE FOR BRACING, SHORING, OR PROVIDING OTHER MEANS NECESSARY TO PROTECT AND SUPPORT EXISTING AND PROPOSED UTILITIES AND STRUCTURES EXPOSED OR UNEXPOSED DURING CONSTRUCTION.

F. REFERENCES TO CALTRANS SPECIFICATIONS SHALL REFER TO THE CURRENT EDITION OF THE CAL TRANS ROADWAY AND TRAFFIC DESIGN STANDARDS.

G. CALTRANS INDICES SHALL REFER TO THE CURRENT EDITION OF THE CALIFORNIA STATE DEPARTMENT OF TRANSPORTATION HIGHWAY SAFETY ADMINISTRATION DESIGN STANDARDS.

TESTING SCHEDULE

ITEM	TEST
PIPE TRENCH BACK FILL (SEE NOTE 1 BELOW) OVER PIPELINES AND AROUND STRUCTURES FROM R.O.W. LINE TO R.O.W. LINE AND IN STRUCTURAL AREAS	OPTIMUM MOISTURE/MAXIMUM DENSITY GRADATION (1 TEST PER 50 CY) DETERMINED BY AASHTO T180-57 (ASTM 95% OF MAXIMUM DENSITY AS D1557-70)
STABILIZED SUB GRADE	SCARIFIED AND COMPACTED TO A MINIMUM OF NINETY-FIVE PERCENT (95%) OF THE MAXIMUM STANDARD PROCTOR DENSITY (ASTM D698).
BASE COURSE (AASHTO #57 COARSE AGGREGATE)	OPTIMUM MOISTURE/MAXIMUM DENSITY MINIMUM 100 LBR COMPACTION OF OPEN GRADED AGGREGATE BY VIBRATORY OR PLATE COMPACTOR FOR A DUMPED HEIGHT REDUCTION OF 1" GRADATION: 100% PASSING 1-1/2" SCREEN, 95-100% PASSING 1" SCREEN, 25-60% PASSING ½" SCREEN, 0-10% PASSING #4 SCREEN, AND 0-5% #8 SCREEN
CONCRETE (SEE NOTE 3 BELOW) (PER AASHTO & ASTM SPECS)	SLUMP TEST MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS COMPRESSIVE STRENGTH CYLINDERS AIR CONTENT
RECLAIMED CRUSHED CONCRETE	OPTIMUM MOISTURE/MAXIMUM DENSITY GRADATION

1. ALL TESTING SHALL BE PERFORMED BY AN INDEPENDENT 3RD PARTY AND SUBSEQUENT REPORTS FURNISHED TO POWERFLEX. WITHIN FOURTEEN (14) DAYS OF COMPLETION.
2. PIPE TRENCH BACKFILL SHALL BE TESTED EVERY 50 FEET FOR EACH 12 INCH LIFT. TESTS SHALL BE PERFORMED ON EACH LIFT, EXCEPT THAT TESTS SHALL NOT BE FURTHER APART THAN ONE (1) FOOT VERTICALLY. FIELD DENSITIES SHALL BE TAKEN OVER ALL ROAD CROSSINGS. FIELD DENSITIES FOR SANITARY LINES SHALL BE STAGGERED TO INCLUDE RESULTS OVER SERVICE LATERALS. THERE SHALL BE A MINIMUM OF ONE (1) TEST SERIES FOR EACH 6 INCHES OF LIFT OVER PIPELINE BETWEEN MANHOLES. TESTS AROUND STRUCTURES SHALL BE SPIRALED IN 6 INCH LIFTS.
3. FOR FLEXIBLE PIPE (CORRUGATED STEEL OR ALUMINUM), 95% OF MAXIMUM DENSITY (AASHTO-T99) PER NYSDOT SPECIFICATIONS AS MODIFIED.
4. APPLIES TO SITE CONCRETE SUCH AS CURBS, GUTTERS, FLUMES, DRIVEWAYS AND SIDEWALKS.
5. ENGINEER OF RECORD SHALL RECEIVE MATERIAL TESTING REPORTS NO LATER THAN ONE (1) WEEK FROM THE TEST DATE.
6. EMBANKMENT, FILL, AND BACKFILL MATERIAL SHALL BE PLACED AND COMPACTED IN LIFTS NOT TO EXCEED TWELVE (12) INCHES VERTICALLY. ONE TEST PER 2,500 SQUARE FEET. EACH COMPACTED LIFT SHALL PASS THE AFOREMENTIONED TESTING CRITERIA BEFORE PROCEEDING TO THE NEXT VERTICAL LIFT.
6. IF SUCCESSIVE VERTICAL LIFTS ARE PLACED, THE DENSITY TESTS SHALL BE STAGGERED SO AS TO NOT BE REPEATED IN THE SAME LOCATION.

SURVEY NOTES

(AS PROVIDED BY SURVEYOR)

FIELD SURVEY DATE: 05/17/2024

SURVEY BY PBLA SURVEYING, INC.

FLOOD ZONE INFORMATION:

THE SUBJECT PROPERTY FALLS WITHIN FLOOD ZONE 'D' AS PER THE NATIONAL FLOOD INSURANCE RATE MAP FOR THE COUNTY OF SAN BERNADINO, STATE OF CALIFORNIA, COMMUNITY PANEL NO's PANELS 06071C6575H, 8/28/2008 THIS DETERMINATION IS BASED ON SCALED MAP LOCATION AND GRAPHIC PLOTTING.

GENERAL FIRE PROTECTION NOTES

1. AREAS WITHIN THE SOLAR ARRAY MUST BE MAINTAINED FREE OF FLAMMABLE MATERIALS; ANNUAL VEGETATION MUST BE MAINTAINED AT A HEIGHT OF LESS THAN THREE (3) INCHES.
2. A CLEAR, BRUSH-FREE AREA OF TEN FEET (THIRTY FEET IN THE SRA) SHALL BE REQUIRED AROUND GROUND-MOUNTED PHOTOVOLTAIC ARRAYS. THIS AREA SHALL ALSO BE CLEARED OF ALL DRY GRASS, WEEDS, RUBBISH, TRASH, LITTER, TIRES, TREE STUMPS, AND OTHER WASTE MATERIAL, OR ANY FLAMMABLE MATERIAL.
3. OWNER SHALL PROVIDE TRAINING FOR FIRE PERSONNEL TO BE ABLE TO INTERRUPT ELECTRICAL POWER SAFELY FOR EMERGENCY INCIDENTS REQUIRING FIRE SUPPRESSION OR RESCUE ACTIVITIES.
4. THE FIRE PROTECTION SYSTEM, INCLUDING FIXED AND PORTABLE EXTINGUISHING SYSTEMS MUST BE UP TO DATE ON REQUIRED ANNUAL FIRE INSPECTIONS AND TESTS AND BE APPROVED BY DFD.

DATE	REVISION DESCRIPTION	PM	ENG	CHK
05/22/24	FOR COMMENT	-	JMP	GB
07/24/24	PER COMMENTS	-	JMP	GB

SEAL

ENGINEER

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants
Project Contact Info
2415 Campus Drive
Suite 265
Irvine, CA 92612
Phone: (949) 502-8555
(800) 829-6531
www.tectonicengineering.com

DEVELOPER:

powerflex
EDF Renewables
805 THIRD AVENUE
NEW YORK, NEW YORK 10022
WWW.POWERFLEX.COM

PAGE SIZE
36" x 24"

SYSTEM
DC SYSTEM SIZE: 6.49 MW
AC SYSTEM SIZE: 5.00 MW
MODULE TYPE: CSI SOLAR, CS3W-450MB-AG
MODULE QUANTITY: 14,420
ORIENTATION: 25° TILT, 180° AZIMUTH

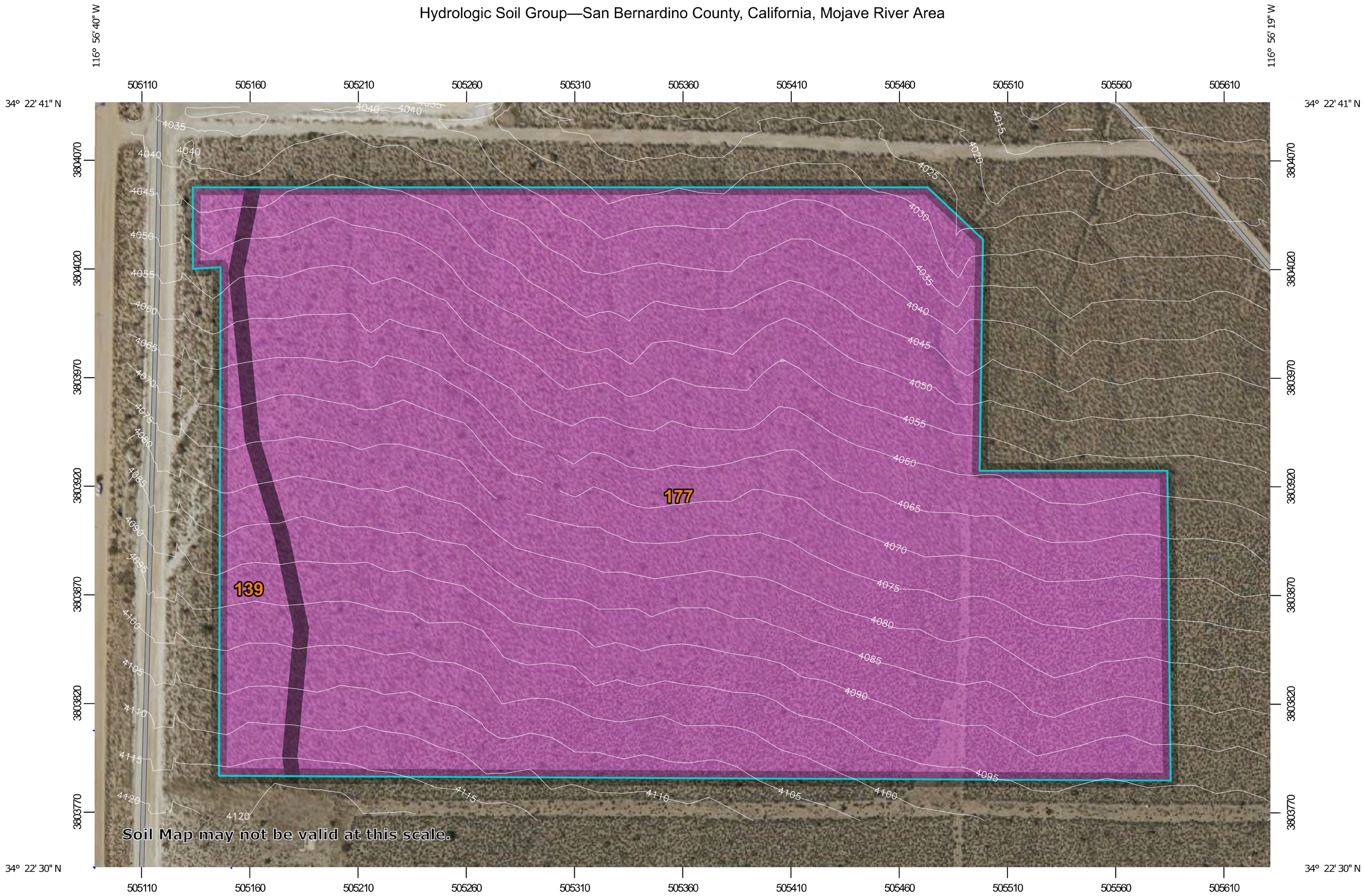
PROJECT
SOLAR GROUND MOUNT SYSTEM AT
OMYA
7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356

WORK ORDER # 11550.07

DRAWING TITLE
GENERAL CONSTRUCTION NOTES

SHEET NO. GN-3

Hydrologic Soil Group—San Bernardino County, California, Mojave River Area



Map Scale: 1:2,480 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0, 35, 70, 140, 210

Feet: 0, 100, 200, 400, 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
139	KIMBERLINA GRAVELLY SANDY LOAM, COOL, 2 TO 5 PERCENT SLOPES	A	1.6	6.0%
177	YERMO-KIMBERLINA, COOL, ASSOCIATION, SLOPING*	A	25.2	94.0%
Totals for Area of Interest			26.8	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive

DATE	REVISION DESCRIPTION	PM	ENG	CHK
05/22/24	FOR COMMENT	–	JMP	GB
07/24/24	PER COMMENTS	–	JMP	GB

SEAL

ENGINEER

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants
Project Contact Info
2415 Campus Drive
Suite 265
Irvine, CA 92612
Phone: (949) 502-8555
(800) 829-6531
www.tectonicengineering.com

DEVELOPER:
powerflex
EDF Renewables
805 THIRD AVENUE
NEW YORK, NEW YORK 10022
WWW.POWERFLEX.COM

PAGE SIZE
36" x 24"

SYSTEM
DC SYSTEM SIZE: 6.49 MW
AC SYSTEM SIZE: 5.00 MW
MODULE TYPE: CSI SOLAR, CS3W-450MB-AG
MODULE QUANTITY: 14,420
ORIENTATION: 25° TILT, 180° AZIMUTH

PROJECT
SOLAR GROUND MOUNT SYSTEM AT
OMYA
7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356

WORK ORDER # 11550.07

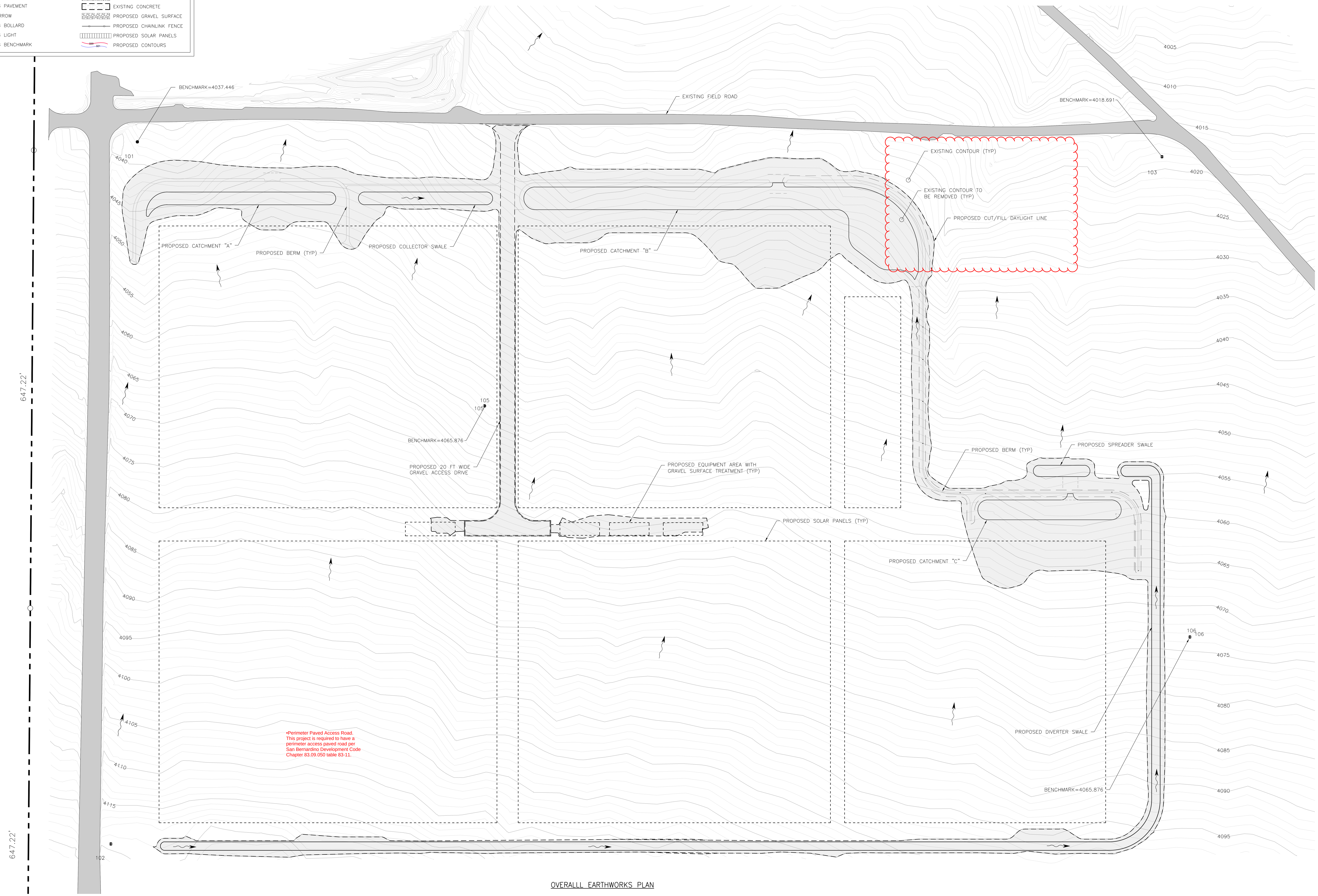
DRAWING TITLE
PROJECT AREA
TOPOGRAPHY & SOILS

SHEET NO. C-1

PLOT DATE: 7/30/2024 2:39 PM

SHEET LEGEND:

- EXISTING PROPERTY LINE
- EXISTING ROW LINE
- EXISTING CENTER LINE
- EXISTING ROAD STRIPING
- EXISTING PAVEMENT
- FLOW ARROW
- EXISTING BOLLARD
- EXISTING LIGHT
- EXISTING BENCHMARK
- EXISTING GRAVEL
- EXISTING HYDRANT
- EXISTING CONTOURS
- EXISTING BUILDING
- EXISTING CONCRETE
- PROPOSED GRAVEL SURFACE
- PROPOSED CHAINLINK FENCE
- PROPOSED SOLAR PANELS
- PROPOSED CONTOURS



OVERALLL EARTHWORKS PLAN

SCALE: 1" = 120' (11X17)
1" = 60' (22X34)

DATE	REVISION DESCRIPTION	PM	ENG	CHK
05/22/24	FOR COMMENT	-	JMP	GB
07/24/24	PER COMMENTS	-	JMP	GB

SEAL

ENGINEER

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants
Project Contact Info
2415 Campus Drive
Suite 265
Irvine, CA 92612
Phone: (949) 502-8555
(800) 829-6531
www.tectonicengineering.com

DEVELOPER:

powerflex
EDF Renewables
805 THIRD AVENUE
NEW YORK, NEW YORK 10022
WWW.POWERFLEX.COM

PAGE SIZE
36" x 24"

PROJECT

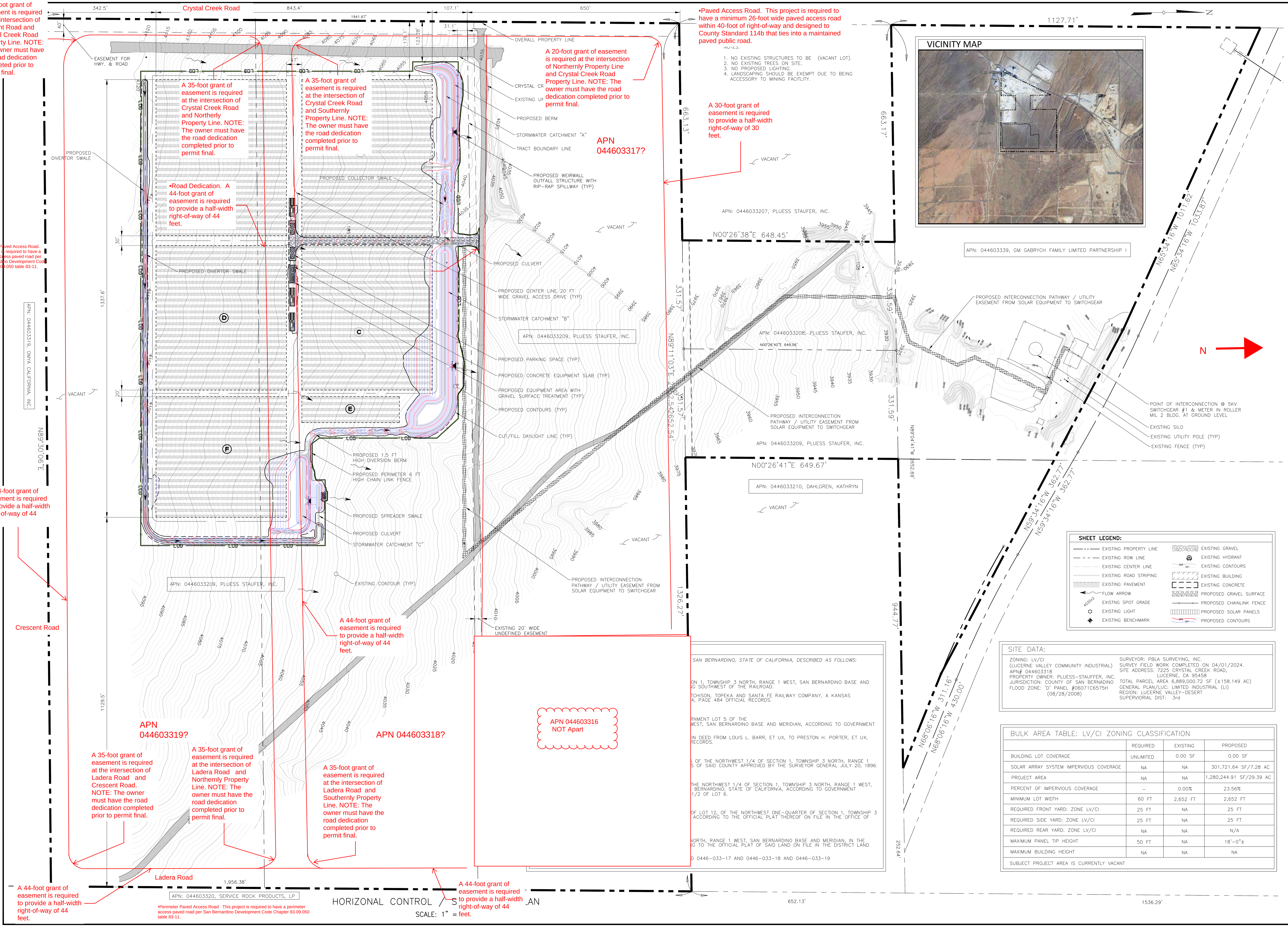
SOLAR GROUND MOUNT SYSTEM AT
OMYA
7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356

SYSTEM
DC SYSTEM SIZE: 6.49 MW
AC SYSTEM SIZE: 5.00 MW
MODULE TYPE: CSI SOLAR, CS3W-450MB-AG
MODULE QUANTITY: 14,420
ORIENTATION: 30° TILT, 180° AZIMUTH

WORK ORDER # 11550.07

DRAWING TITLE
OVERALL
EQARTHWORKS PLAN

SHEET NO. **C-2**



A 35-foot grant of easement is required at the intersection of Cresent Road and Crystal Creek Road Property Line. NOTE: The owner must have the road dedication completed prior to permit final.
Crystal Creek Road
A 35-foot grant of easement is required at the intersection of Crystal Creek Road and Northerly Property Line. NOTE: The owner must have the road dedication completed prior to permit final.
A 35-foot grant of easement is required at the intersection of Crystal Creek Road and Southerly Property Line. NOTE: The owner must have the road dedication completed prior to permit final.
A 20-foot grant of easement is required at the intersection of Northerly Property Line and Crystal Creek Road Property Line. NOTE: The owner must have the road dedication completed prior to permit final.
•Paved Access Road. This project is required to have a minimum 26-foot wide paved access road within 40-foot of right-of-way and designed to County Standard 114b that ties into a maintained paved public road.
A 30-foot grant of easement is required to provide a half-width right-of-way of 30 feet.
APN 044603317?
•Road Dedication. A 44-foot grant of easement is required to provide a half-width right-of-way of 44 feet.
•Perimeter Paved Access Road. This project is required to have a perimeter access paved road per San Bernardino Development Code Chapter 83.09.050 table 83-11.
A 44-foot grant of easement is required to provide a half-width right-of-way of 44 feet.
Crescent Road
A 44-foot grant of easement is required to provide a half-width right-of-way of 44 feet.
APN 044603319?
APN 044603318?
APN 044603316 NOT Apart
A 35-foot grant of easement is required at the intersection of Ladera Road and Crescent Road. NOTE: The owner must have the road dedication completed prior to permit final.
A 35-foot grant of easement is required at the intersection of Ladera Road and Northerly Property Line. NOTE: The owner must have the road dedication completed prior to permit final.
A 35-foot grant of easement is required at the intersection of Ladera Road and Southerly Property Line. NOTE: The owner must have the road dedication completed prior to permit final.
Ladera Road
A 44-foot grant of easement is required to provide a half-width right-of-way of 44 feet.
A 44-foot grant of easement is required to provide a half-width right-of-way of 44 feet.
•Perimeter Paved Access Road. This project is required to have a perimeter access paved road per San Bernardino Development Code Chapter 83.09.050 table 83-11.
OVERALL PROPERTY LINE
EASEMENT FOR HWY. & ROAD
PROPOSED DIVERTOR SWALE
PROPOSED COLLECTOR SWALE
PROPOSED DIVERTOR SWALE
PROPOSED BERM
STORMWATER CATCHMENT "A"
TRACT BOUNDARY LINE
PROPOSED WEIRWALL OUTFALL STRUCTURE WITH RIP-RAP SPILLWAY (TYP)
PROPOSED CULVERT
PROPOSED CENTER LINE 20 FT WIDE GRAVEL ACCESS DRIVE (TYP)
STORMWATER CATCHMENT "B"
PROPOSED PARKING SPACE (TYP)
PROPOSED CONCRETE EQUIPMENT SLAB (TYP)
PROPOSED EQUIPMENT AREA WITH GRAVEL SURFACE TREATMENT (TYP)
PROPOSED CONTOURS (TYP)
CUT/FILL DAYLIGHT LINE (TYP)
PROPOSED 1.5 FT HIGH DIVERSION BERM
PROPOSED PERIMETER 6 FT HIGH CHAIN LINK FENCE
PROPOSED SPREADER SWALE
PROPOSED CULVERT
STORMWATER CATCHMENT "C"
EXISTING CONTOUR (TYP)
PROPOSED INTERCONNECTION PATHWAY / UTILITY EASEMENT FROM SOLAR EQUIPMENT TO SWITCHGEAR
EXISTING 20' WIDE UNDEFINED EASEMENT
APN: 0446033207, PLUESS STAUFER, INC.
APN: 0446033209, PLUESS STAUFER, INC.
APN: 0446033208, PLUESS STAUFER, INC.
APN: 0446033210, DAHLGREN, KATHRYN
APN: 044603339, GM GABRYCH FAMILY LIMITED PARTNERSHIP I
APN: 044603319, OMYA CALIFORNIA, INC.
APN: 044603320, SERVICE ROCK PRODUCTS, LP
VACANT
NOTES:
1. NO EXISTING STRUCTURES TO BE (VACANT LOT).
2. NO EXISTING TREES ON SITE.
3. NO PROPOSED LIGHTING.
4. LANDSCAPING SHOULD BE EXEMPT DUE TO BEING ACCESSORY TO MINING FACITLITY.
VICINITY MAP
PROPOSED INTERCONNECTION PATHWAY / UTILITY EASEMENT FROM SOLAR EQUIPMENT TO SWITCHGEAR
POINT OF INTERCONNECTION @ 5KV SWITCHGEAR #1 & METER IN ROLLER MIL 2 BLDG. AT GROUND LEVEL
EXISTING SILO
EXISTING UTILITY POLE (TYP)
EXISTING FENCE (TYP)
N
N00°26'38"E 648.45'
N00°26'41"E 649.67'
N89°11'03"E 2652.54'
N89°30'00"E
N65°34'16"W 1011.62'
N65°34'16"W 1033.87'
N59°34'16"W 362.77'
N68°06'16"W 311.16'
N68°06'16"W 430.00'
1127.71'
1941.67'
1956.38'
652.13'
1536.29'
HORIZONAL CONTROL / SITE LAYOUT PLAN
SCALE: 1" =
SHEET LEGEND:
EXISTING PROPERTY LINE
EXISTING ROW LINE
EXISTING CENTER LINE
EXISTING ROAD STRIPING
EXISTING PAVEMENT
FLOW ARROW
EXISTNG SPOT GRADE
EXISTING LIGHT
EXISTING BENCHMARK
EXISTING GRAVEL
EXISTING HYDRANT
EXISTING CONTOURS
EXISTING BUILDING
EXISTING CONCRETE
PROPOSED GRAVEL SURFACE
PROPOSED CHAINLINK FENCE
PROPOSED SOLAR PANELS
PROPOSED CONTOURS

SITE DATA:

ZONING: LV/CI
(LUCERNE VALLEY COMMUNITY INDUSTRIAL)
APN# 044603318
PROPERTY OWNER: PLUESS-STAUFFER, INC.
JURISDICTION: COUNTY OF SAN BERNADINO
FLOOD ZONE: 'D' PANEL #06071C6575H (08/28/2008)

SURVEYOR: PBLA SURVEYING, INC.
SURVEY FIELD WORK COMPLETED ON 04/01/2024.
SITE ADDRESS: 7225 CRYSTAL CREEK ROAD, LUCERNE, CA 95458
TOTAL PARCEL AREA 6,889,000.72 SF (±158.149 AC)
GENERAL PLAN/LUC: LIMITED INDUSTRIAL (LI)
REGION: LUCERNE VALLEY-DESERT
SUPERVIORIAL DIST: 3rd

BULK AREA TABLE: LV/CI ZONING CLASSIFICATION

	REQUIRED	EXISTING	PROPOSED
BUILDING LOT COVERAGE	UNLIMITED	0.00 SF	0.00 SF
SOLAR ARRAY SYSTEM IMPERVIOUS COVERAGE	NA	NA	301,721.64 SF/7.28 AC
PROJECT AREA	NA	NA	1,280,244.91 SF/29.39 AC
PERCENT OF IMPERVIOUS COVERAGE	–	0.00%	23.56%
MINIMUM LOT WIDTH	60 FT	2,652 FT	2,652 FT
REQUIRED FRONT YARD: ZONE LV/CI	25 FT	NA	25 FT
REQUIRED SIDE YARD: ZONE LV/CI	25 FT	NA	25 FT
REQUIRED REAR YARD: ZONE LV/CI	NA	NA	N/A
MAXIMUM PANEL TIP HEIGHT	50 FT	NA	18'-0"±
MAXIMUM BUILDING HEIGHT	NA	NA	NA
SUBJECT PROJECT AREA IS CURRENTLY VACANT			

DATE	REVISION DESCRIPTION	PM	ENG	CHK
05/22/24	FOR COMMENT	–	JMP	GB
07/24/24	PER COMMENTS	–	JMP	GB

SEAL

ENGINEER: Tectonic — PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants
Project Contact Info
2415 Campus Drive
Suite 265
Irvine, CA 92612
Phone: (949) 502-8555
(800) 829-6531
www.tectonicengineering.com

DEVELOPER: powerflex EDF Renewables
805 THIRD AVENUE
NEW YORK, NEW YORK 10022
WWW.POWERFLEX.COM

PAGE SIZE: 36" x 24"

PROJECT: SOLAR GROUND MOUNT SYSTEM AT OMYA
7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356

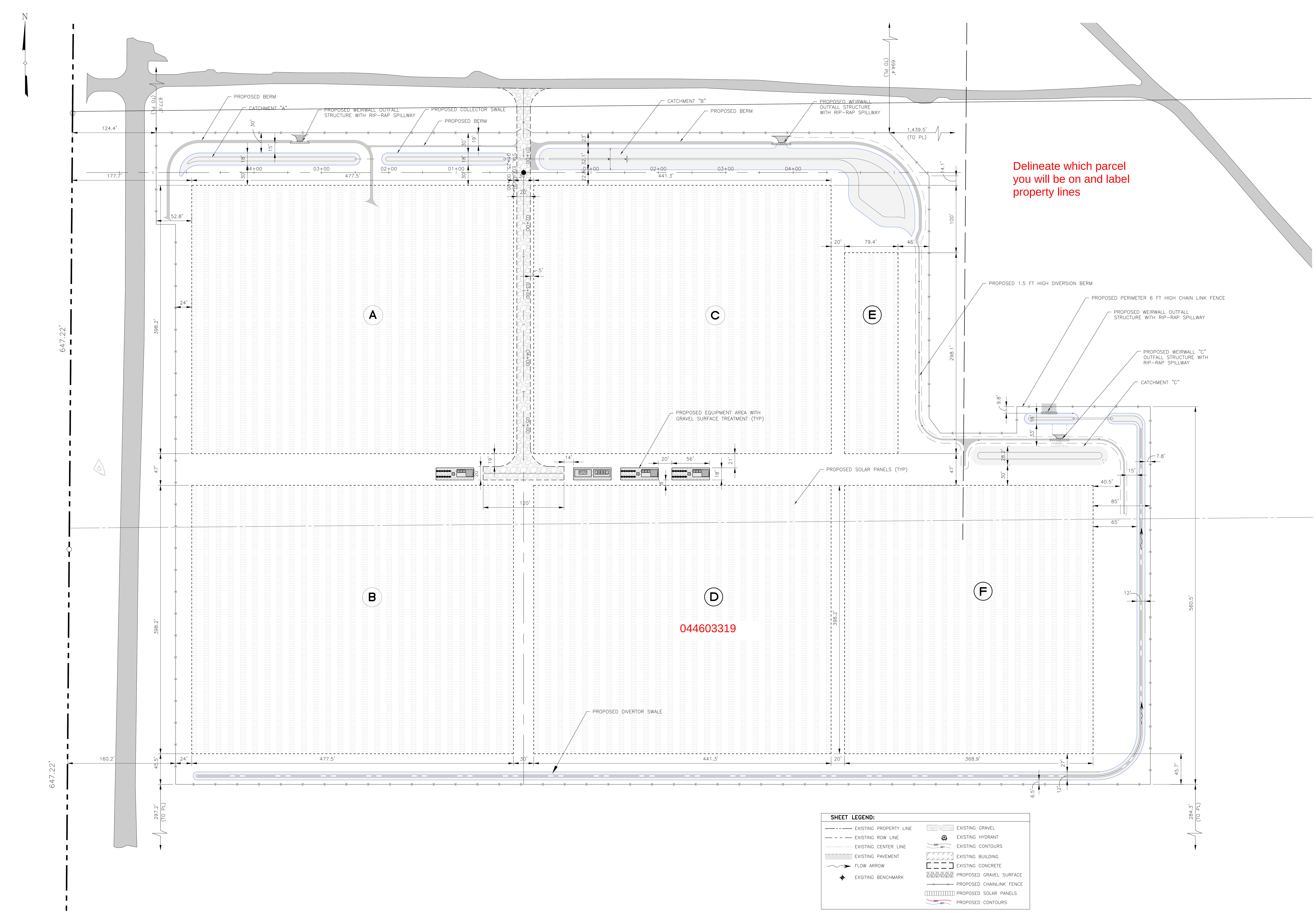
SYSTEM
DC SYSTEM SIZE: 6.49 MW
AC SYSTEM SIZE: 5.00 MW
MODULE TYPE: CSI SOLAR, CS3W-450MB-AG
MODULE QUANTITY: 14,420
ORIENTATION: 25° TILT, 180° AZIMUTH

WORK ORDER # 11550.07

DRAWING TITLE: HORIZONAL CONTROL / SITE LAYOUT PLAN

SHEET NO. C3

PLOT DATE: 7/30/2024 2:30 PM



HORIZONTAL CONTROL / SITE LAYOUT PLAN
SCALE: 1" = 60'

DATE	REVISION DESCRIPTION	PM	ENG	CHK
05/22/24	FOR COMMENT	–	JMP	GB
07/24/24	PER COMMENTS	–	JMP	GB

SEAL

ENGINEER
Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants
Project Contact Info
2415 Campus Drive
Suite 265
Irvine, CA 92612
Phone: (949) 502-8555
(800) 829-6531
www.tectonicengineering.com

DEVELOPER:
powerflex
EDF Renewables
805 THIRD AVENUE
NEW YORK, NEW YORK 10022
WWW.POWERFLEX.COM

PAGE SIZE
36" x 24"

PROJECT
SOLAR GROUND MOUNT SYSTEM AT
OMYA
7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356

SYSTEM
DC SYSTEM SIZE: 6.49 MW
AC SYSTEM SIZE: 5.00 MW
MODULE TYPE: CSI SOLAR, CS3W-450MB-AG
MODULE QUANTITY: 14,420
ORIENTATION: 30° TILT, 180° AZIMUTH

WORK ORDER # 11550.07

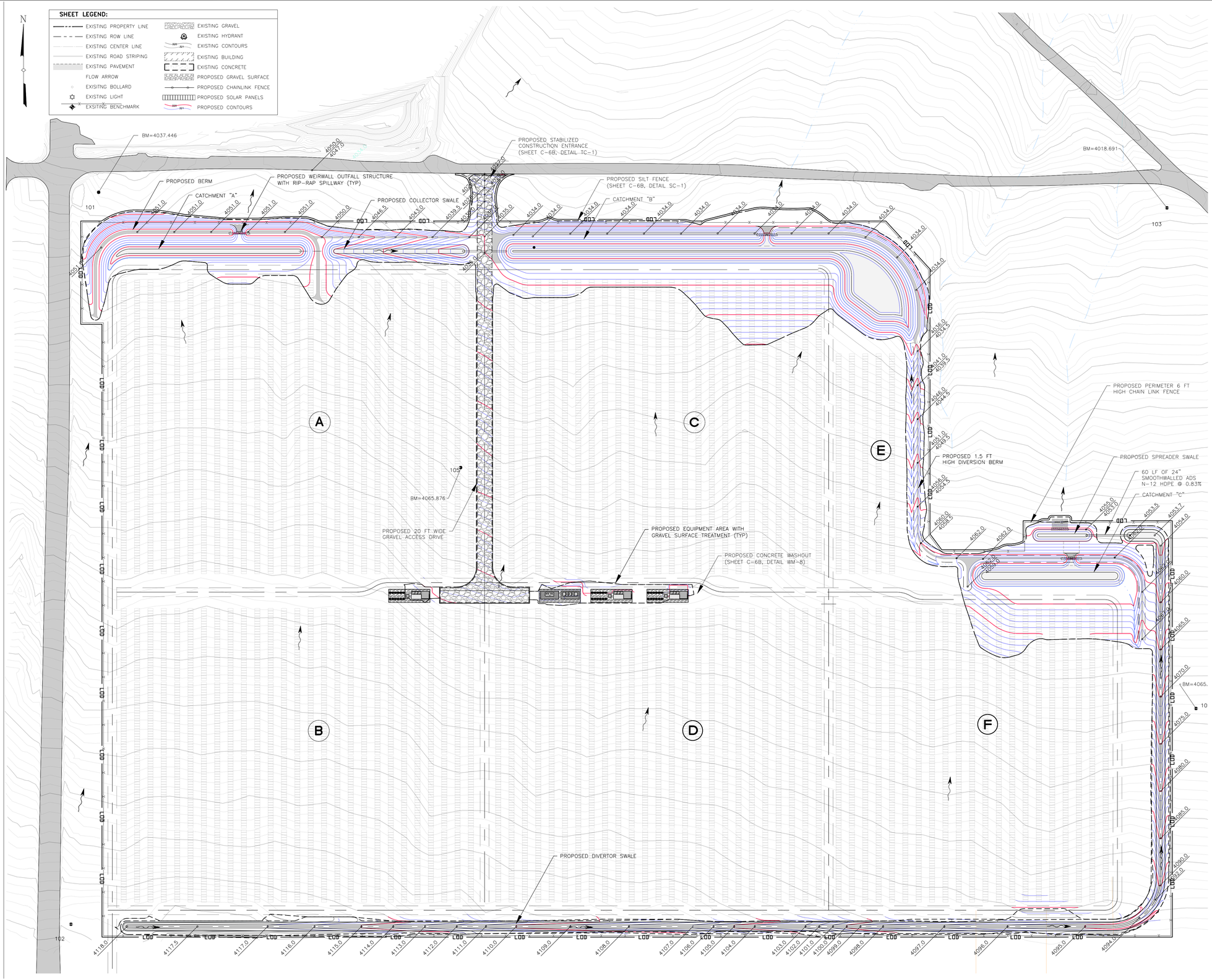
DRAWING TITLE
HORIZONTAL CONTROL/SITE LAYOUT PLAN

SHEET NO. C4

PLOT DATE: 7/30/2024 3:43 PM

SHEET LEGEND:

EXISTING PROPERTY LINE	EXISTING GRAVEL
EXISTING ROW LINE	EXISTING HYDRANT
EXISTING CENTER LINE	EXISTING CONTOURS
EXISTING ROAD STRIPING	EXISTING BUILDING
EXISTING PAVEMENT	EXISTING CONCRETE
FLOW ARROW	PROPOSED GRAVEL SURFACE
EXISITNG BOLLARD	PROPOSED CHAINLINK FENCE
EXISTING LIGHT	PROPOSED SOLAR PANELS
EXISITNG BENCHMARK	PROPOSED CONTOURS



DRAINAGE & GRADING PLAN

SCALE: 1" = 60'

GRADING NOTES

1) ALL GRADING SHALL CONFORM TO THE LATEST CALIFORNIA BUILDING CODE (CBC) CHAPTERS 17, 18, APPENDIX– J AND ALL APPLICABLE SECTIONS.

2) A GRADING PERMIT SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF ANY WORK ON THE SITE.

3) ISSUANCE OF A GRADING PERMIT DOES NOT ELIMINATE THE NEED FOR PERMITS FROM OTHER REGULATORY AGENCIES WITH REGULATORY RESPONSIBILITIES FOR CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE WORK AUTHORIZED IN THIS PLAN.

4) ALL WORK UNDER THIS PERMIT SHALL BE LIMITED TO WORK WITHIN THE PROPERTY LINES. A SEPARATE CONSTRUCTION, EXCAVATION OR ENCROACHMENT PERMIT FROM THE DEPARTMENT OF PUBLIC WORKS MAY BE REQUIRED FOR ANY WORK WITHIN THE COUNTY RIGHT–OF–WAY.

5) APPROVAL OF THESE PLANS DOES NOT AUTHORIZE ANY WORK OR GRADING TO BE PERFORMED UNTIL A VALID GRADING PERMIT HAS BEEN ISSUED.

6) THIS PLAN IS FOR GRADING PURPOSES ONLY AND IS NOT TO BE USED FOR THE PURPOSE OF CONSTRUCTING ONSITE OR OFFSITE IMPROVEMENTS. ISSUANCE OF A PERMIT BASED ON THIS PLAN DOES NOT CONSTITUTE APPROVAL OF DRIVEWAY LOCATIONS OR SIZES, PARKING LOT STRUCTURAL SECTIONS OR LAYOUT, ADA–RELATED REQUIREMENTS, BUILDING LOCATIONS OR FOUNDATIONS, WALLS, CURBING, OFFSITE DRAINAGE FACILITIES OR OTHER ITEMS NOT RELATED DIRECTLY TO THE BASIC GRADING OPERATION. ONSITE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE APPROVED BUILDING PERMIT PLANS. OFFSITE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE TO PLANS APPROVED FOR THIS PURPOSE BY THE PUBLIC WORKS DEPARTMENT.

7) MAXIMUM CUT AND FILL SLOPE = 2:1 (HORIZONTAL TO VERTICAL) AND MAXIMUM VERTICAL HEIGHT = 30 FEET, UNLESS AN APPROVED GEOTECHNICAL REPORT CAN JUSTIFY A STEEPER AND TALLER SLOPE.

8) NO FILL SHALL BE PLACED ON EXISTING GROUND UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, DEBRIS, TOPSOIL AND OTHER DELETERIOUS MATERIAL.

9) FILL SLOPES SHALL NOT HAVE LESS THAN 90% RELATIVE COMPACTION, OR AS RECOMMENDED ON THE APPROVED GEOTECHNICAL REPORT.

10) IT IS THE GRADING CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ADEQUATE COMPACTION HAS BEEN ATTAINED ON THE ENTIRE GRADING SITE, INCLUDING FILL AREAS OUTSIDE THE BUILDING PADS AND ON ALL FILLSLOPES.

11) UNLESS OTHERWISE RECOMMENDED IN AN APPROVED GEOTECHNICAL REPORT, OVER–EXCAVATION SHALL BE AT LEAST 24 INCHES MINIMUM BELOW THE BOTTOM OF FOOTINGS OR TO COMPETENT NATIVE SOIL OR BEDROCK MATERIALS, WHICHEVER IS DEEPER, AS APPROVED BY THE PROJECT'S GEOTECHNICAL ENGINEER OR GEOLOGIST.

12) EARTHWORK VOLUMES:
CUT 3,456 (CY), FILL 1,352 (CY), TOTAL DISTURBED AREA 213,367 (SF)

13) EARTHWORK QUANTITIES ARE SHOWN FOR GRADING PERMIT PURPOSES ONLY, AND SAN BERNARDINO COUNTY IS NOT RESPONSIBLE FOR THEIR ACCURACY.

14) A COPY OF THE GRADING PERMIT AND APPROVED GRADING PLANS MUST BE IN THE POSSESSION OF A RESPONSIBLE PERSON AND AVAILABLE AT THE SITE AT ALL TIMES.

15) ANY ONSITE RETAINING WALLS SHOWN ON THE GRADING PLANS THAT ARE OVER 4' IN HEIGHT, MEASURED FROM TOP OF WALL TO BOTTOM OF FOOTING, ARE FOR REFERENCE ONLY. RETAINING WALLS OVER 4' IN HEIGHT ARE NOT CHECKED, PERMITTED, OR INSPECTED PER THE GRADING PERMIT. A SEPARATE RETAINING WALL PERMIT IS REQUIRED FOR ALL RETAINING WALLS OVER 4' IN HEIGHT.

16) ANY WALLS, FENCES, STRUCTURES AND/OR APPURTENANCES ADJACENT TO THIS PROJECT ARE TO BE PROTECTED IN PLACE. IF GRADING OPERATIONS DAMAGE OR ADVERSELY AFFECT SAID ITEMS IN ANY WAY, THE CONTRACTOR AND/OR DEVELOPER IS RESPONSIBLE FOR WORKING OUT AN ACCEPTABLE SOLUTION TO THE SATISFACTION OF THE AFFECTED PROPERTY OWNER(S).

17) FOR SITES WITH PROTECTED SPECIES OR TREES, THE PROPOSED GRADING MAY BE SUBJECT TO A SEPARATE PERMIT.

18) ADEQUATE FIRE ACCESS AROUND BUILDINGS (INCLUDING GARAGES) SHOULD BE PROVIDED AS APPROVED BY COUNTY FIRE.

19) EXISTING DRAINAGE COURSES SHALL NOT BE OBSTRUCTED, ALTERED, OR DIVERTED WITHOUT PRIOR APPROVAL FROM THE COUNTY OF SAN BERNARDINO, LAND DEVELOPMENT DIVISION. A STREAMBED ALTERATION AGREEMENT MAY ALSO BE REQUIRED FROM THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE.

20) DRAINAGE EASEMENTS SHALL NOT BE OBSTRUCTED, ALTERED OR DIVERTED WITHOUT PRIOR APPROVAL OF THE COUNTY OF SAN BERNARDINO, LAND DEVELOPMENT DIVISION.

21) SETBACKS AND BUILDING LOCATIONS SHOWN ON THIS PLAN ARE FOR REFERENCE ONLY AND MUST BE REVIEWED AND APPROVED UNDER A SEPARATE BUILDING PERMIT.

22) UTILITY AND SEPTIC IMPROVEMENTS SHOWN ON THIS PLAN ARE FOR REFERENCE ONLY AND MUST BE REVIEWED AND APPROVED UNDER A SEPARATE BUILDING PERMIT.

23) ON PROJECTS DISTURBING ONE ACRES OR MORE, THE FOLLOWING NOTE MUST BE ADDED: A NOTICE OF INTENT (NOI) HAS BEEN, OR WILL BE FILED WITH THE STATE WATER RESOURCES CONTROL BOARD (SWRCB) AND A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN OR WILL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF CALIFORNIA GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY (PERMIT NO. CAS000002) FOR ALL OPERATIONS ASSOCIATED WITH THESE PLANS. THE PERMITTEE SHALL KEEP A COPY OF THE SWPPP ON SITE AND AVAILABLE FOR REVIEW BY THE COUNTY.

24) IN CONJUNCTION WITH THE CALIFORNIA GENERAL PERMIT FOR PROPOSED DISTURBANCE OVER ONE ACRE, AN ACTIVE WASTEWATER DISCHARGE ID # (WDID) MUST BE INCLUDED ON THE FINAL GRADING PLAN.

25) A FINAL GRADING CERTIFICATION WILL BE COLLECTED BY THE BUILDING INSPECTOR AT THE FINAL BUILDING INSPECTION OR PRIOR TO A GRADING FINAL STATUS ON THE PERMIT. THE FINAL GRADING CERTIFICATION IS TO BE COMPLETED BY THE ENGINEER OF RECORD.

26) THE SOILS ENGINEER SHALL PROVIDE A FINAL SOIL GRADING REPORT INCLUDING LOCATIONS AND ELEVATIONS OF FIELD DENSITY TESTS, SUMMARIES OF FIELD AND LABORATORY TESTS AND OTHER SUBSTANTIATING DATA AND COMMENTS ON ANY CHANGES MADE DURING GRADING AND THEIR EFFECT ON THE RECOMMENDATIONS MADE IN THE SOIL ENGINEERING INVESTIGATION REPORT. IT SHALL ALSO PROVIDE INFORMATION AS TO LOCATION AND

REVISION DESCRIPTION	DATE	PM	ENG CHK
FOR COMMENT	05/22/24	-	JMP GB
PER COMMENTS	07/24/24	-	JMP GB

SEAL

ENGINEER

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants
A Corporation
24751 Crestview Drive
Suite 250
Lake Elsinore, CA 92532
Phone: (949) 362-8555
Fax: (800) 829-6531
www.tectonicengineering.com

DEVELOPER:

powerflex
EDF Renewables
805 THIRD AVENUE
NEW YORK, NY 10022
WWW.POWERFLEX.COM

PAGE SIZE: 36" x 24"

PROJECT

SOLAR GROUND MOUNT SYSTEM AT
OMYA
7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356

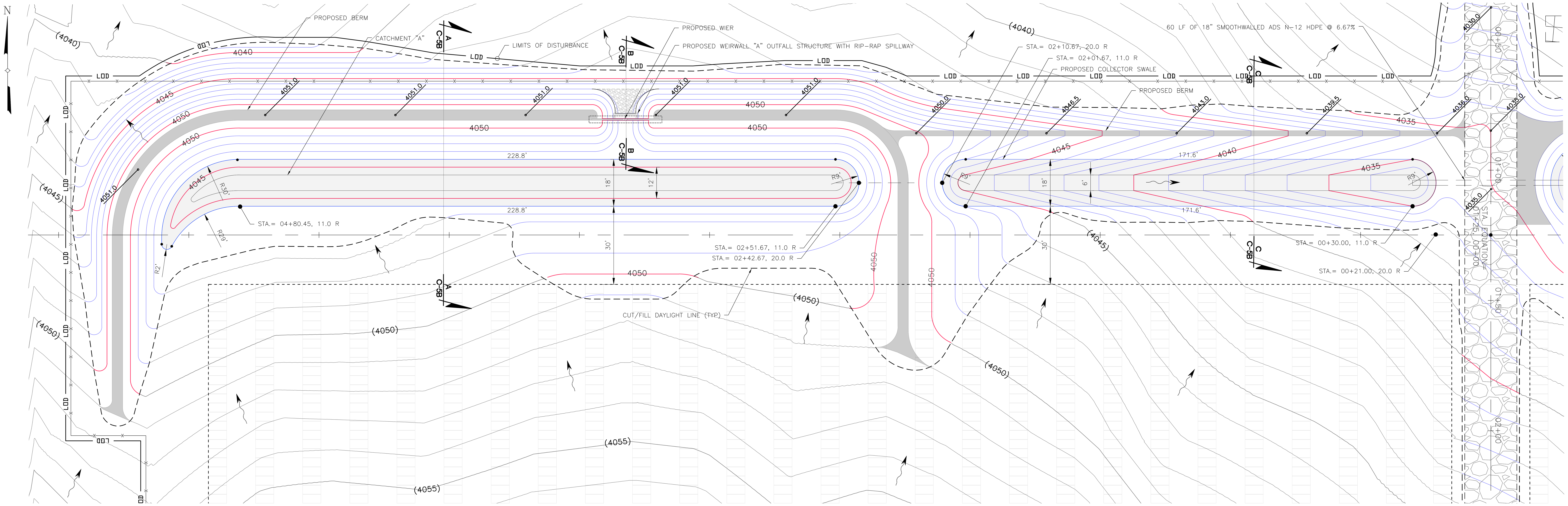
SYSTEM SIZE: 6.49 MW
DC SYSTEM SIZE: 5.00 MW
AC SYSTEM SIZE: (4) SMA CORE2-450MB-AG
MODULE QUANTITY: 14,420
ORIENTATION: 30° TILT, 180° AZIMUTH

WORK ORDER # 11550.07

DRAWING TITLE:
DRAINAGE & GRADING PLAN

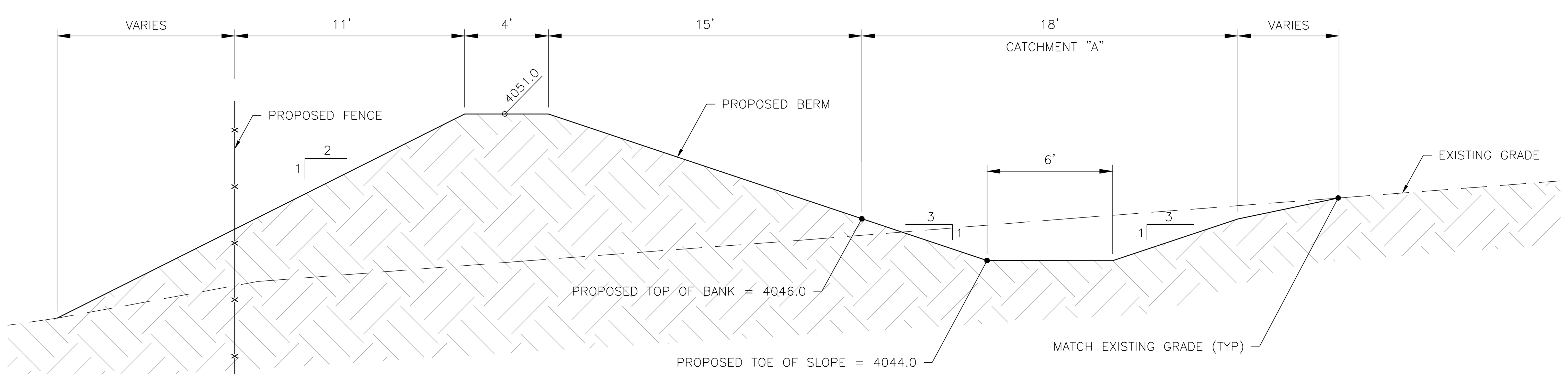
SHEET NO. C5A

PLOT DATE: 7/30/2024 3:41 PM



ENLARGED DRAINAGE & GRADING PLAN

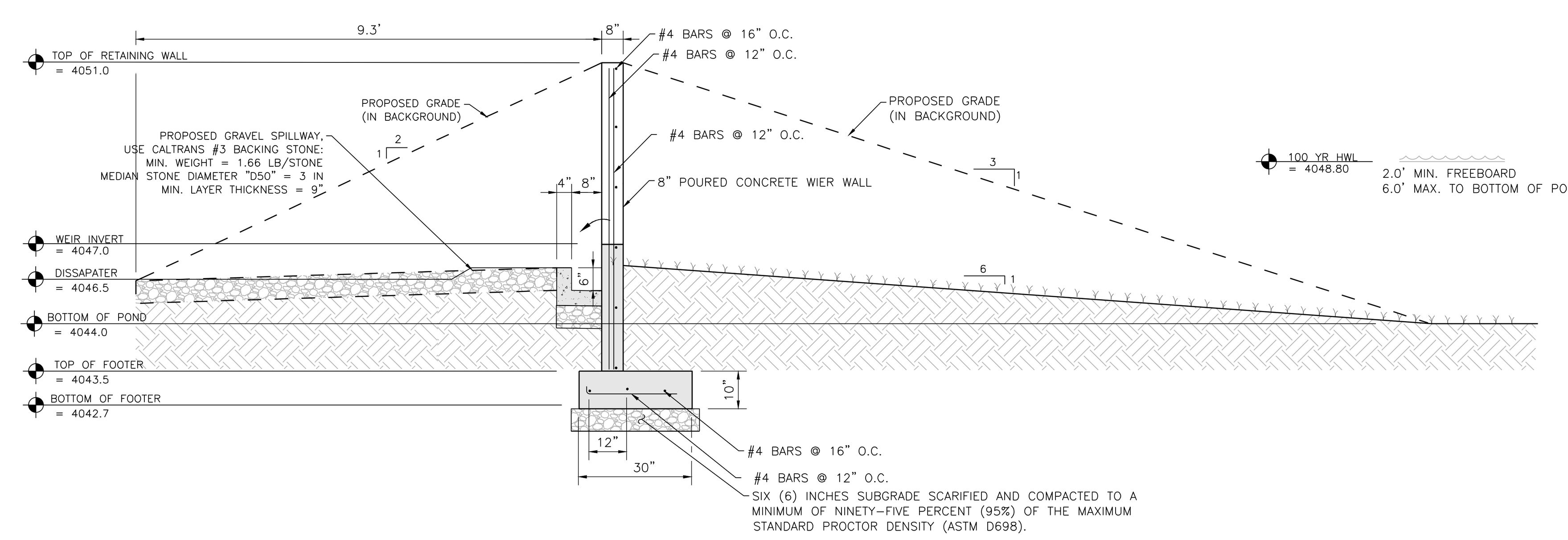
SCALE: 1" = 20'



SECTION CUT "A-A"

CATCHMENT "A"

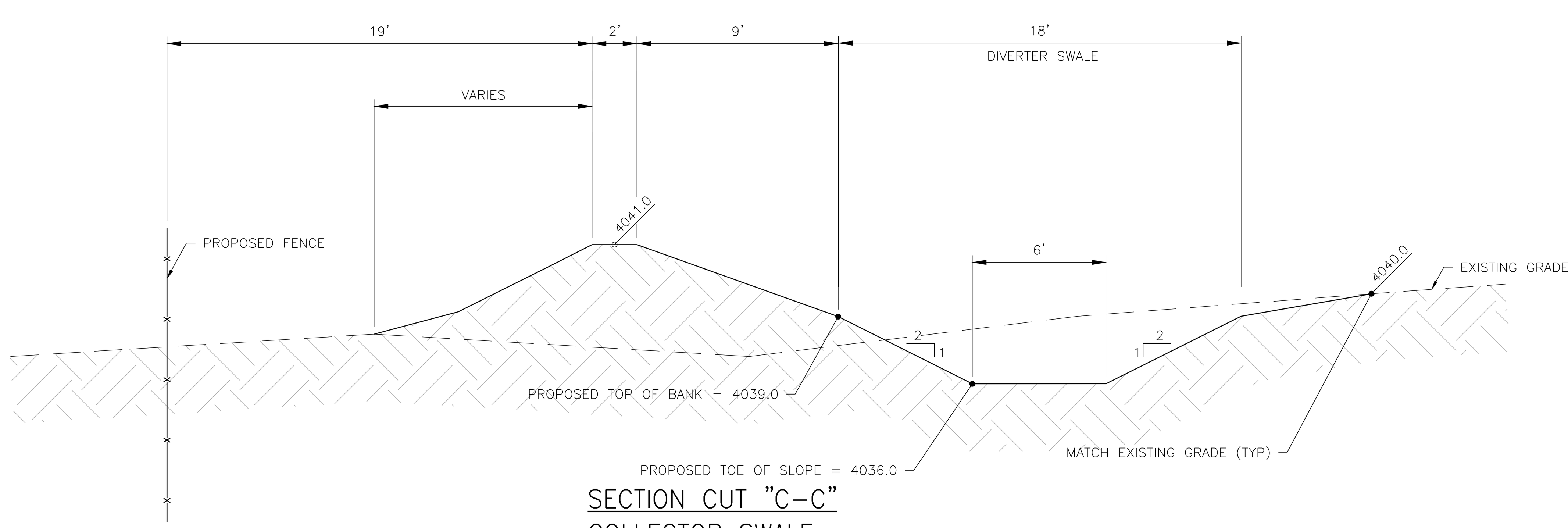
SCALE: 1" = 5'



SECTION CUT "B-B"

WIER WALL CROSS SECTION

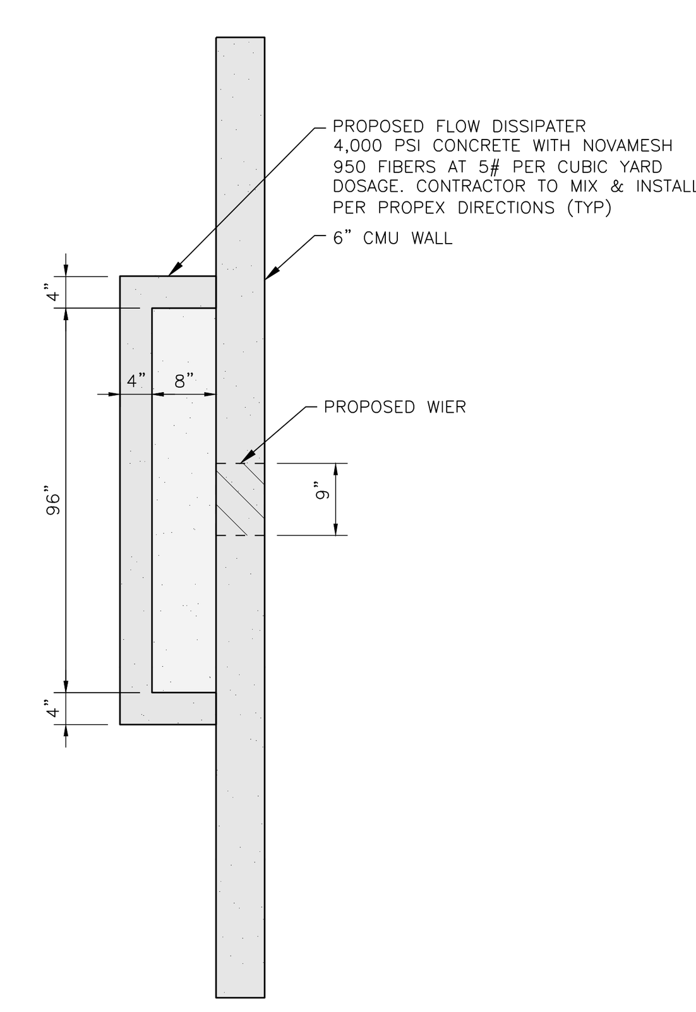
SCALE: NTS



SECTION CUT "C-C"

COLLECTOR SWALE

SCALE: 1" = 5'



DISSIPATER DETAIL

SHEET LEGEND:

EXISTING PROPERTY LINE	EXISTING GRAVEL
EXISTING ROW LINE	EXISTING HYDRANT
EXISTING CENTER LINE	EXISTING CONTOURS
EXISTING PAVEMENT	EXISTING BUILDING
FLOW ARROW	EXISTING CONCRETE
EXISITNG BENCHMARK	PROPOSED GRAVEL SURFACE
	PROPOSED CHAINLINK FENCE
	PROPOSED SOLAR PANELS
	PROPOSED CONTOURS

DATE	REVISION DESCRIPTION	PM	ENG	CHK
05/22/24	FOR COMMENT	-	JMP	GB
07/24/24	PER COMMENTS	-	JMP	GB

SEAL

ENGINEER

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants
2415 Campus Drive Suite 245 Irvine, CA 92612
Phone: (949) 502-8555
www.tectonicengineering.com

DEVELOPER:

powerflex
EDF Renewables
805 THIRD AVENUE
NEW YORK, NEW YORK 10022
WWW.POWERFLEX.COM

PAGE SIZE
36" x 24"

SYSTEM
DC SYSTEM SIZE: 6.49 MW
AC SYSTEM SIZE: 5.00 MW
MODULE TYPE: CSI SOLAR CS3W-450MB-AG
MODULE QUANTITY: 14,420
ORIENTATION: 30° TILT, 180° AZIMUTH

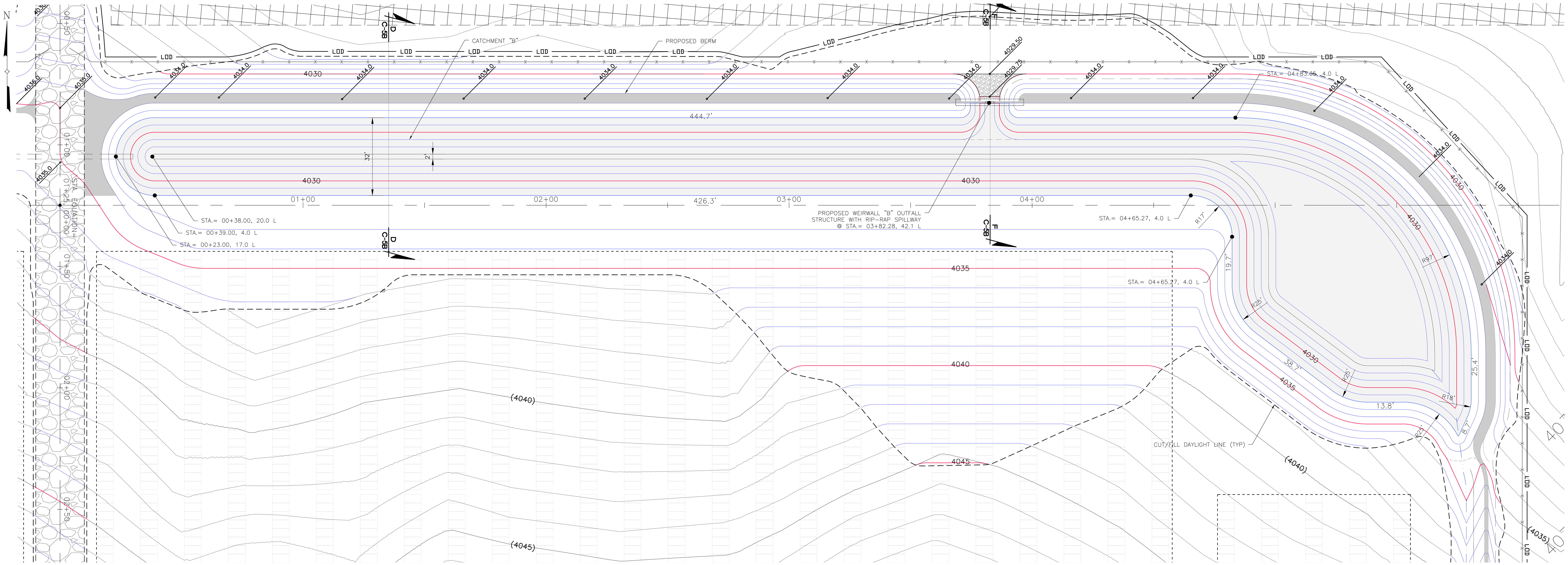
PROJECT
SOLAR GROUND MOUNT SYSTEM AT
OMYA
7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356

WORK ORDER # 11550.07

DRAWING TITLE
DRAINAGE & GRADING PLAN

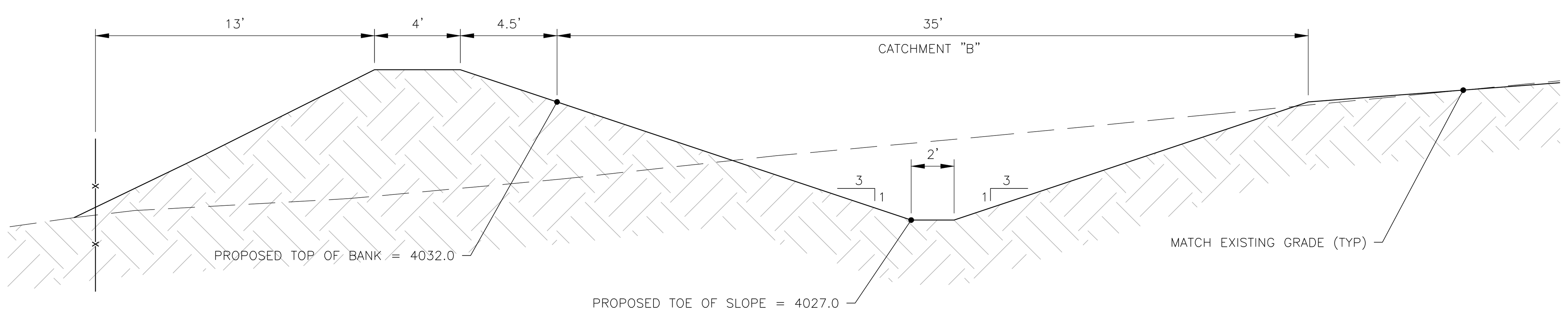
SHEET NO. C5B

PLOT DATE: 7/30/2024 3:40 PM



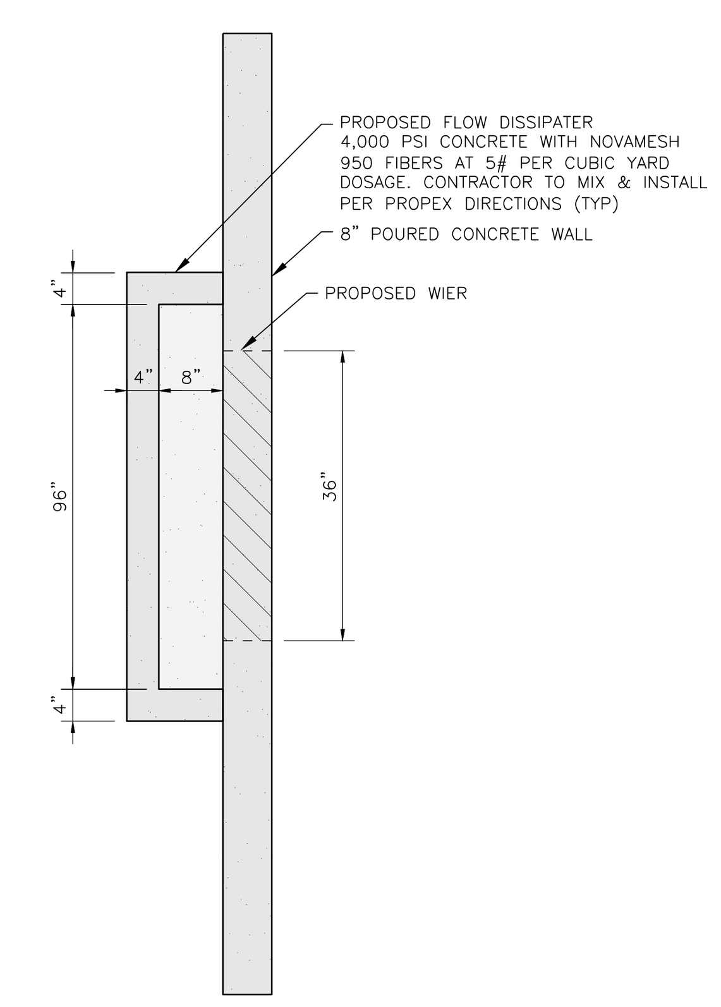
ENLARGED DRAINAGE & GRADING PLAN

SCALE: 1" = 20'

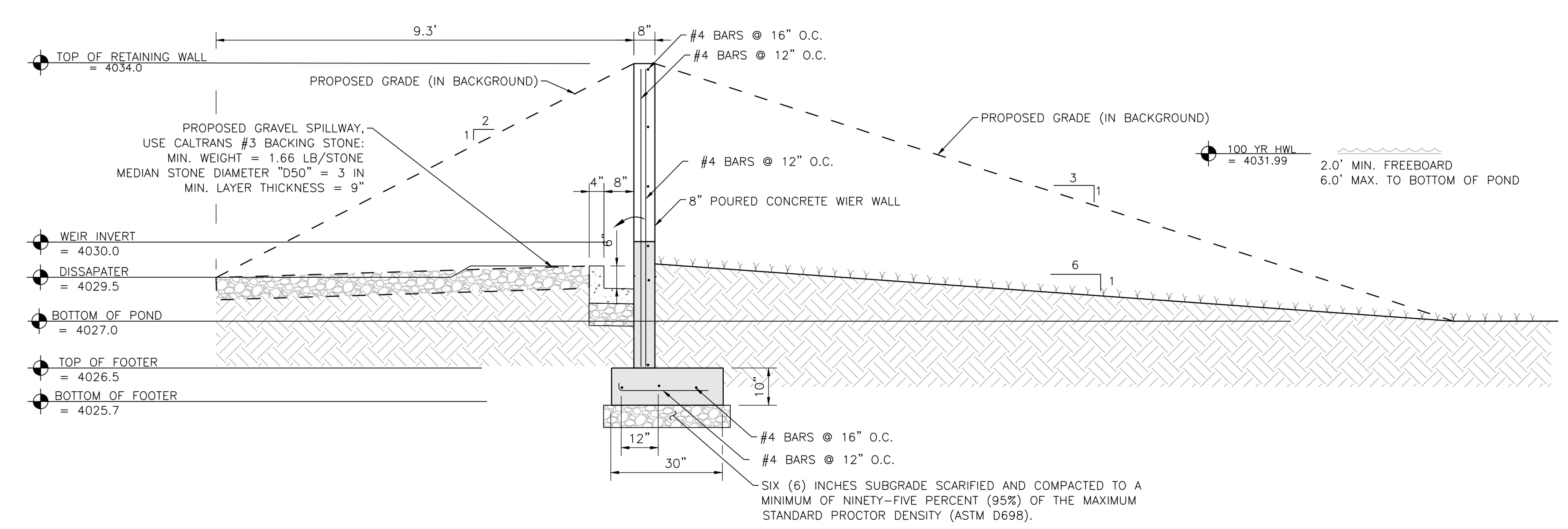


SECTION CUT "D-D"
CATCHMENT "B"

SCALE: 1" = 5'

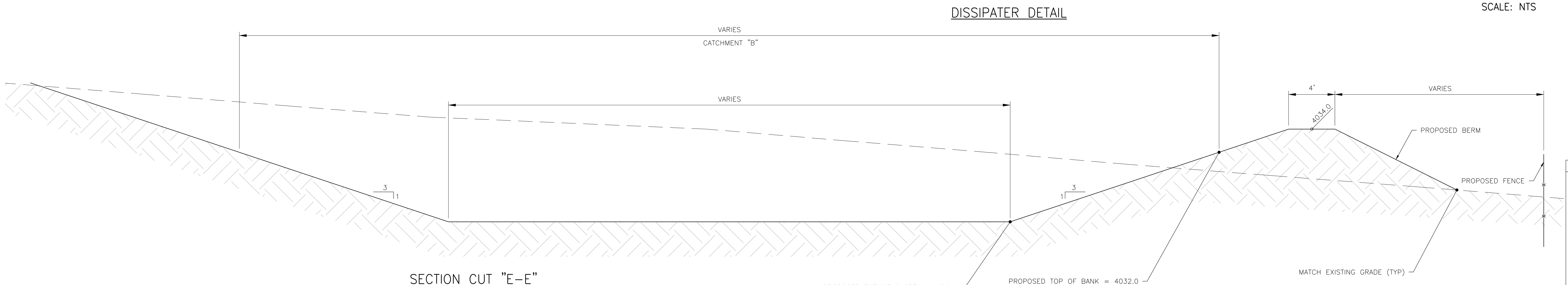


DISSIPATER DETAIL



SECTION CUT "F-F"
WIER WALL CROSS SECTION

SCALE: NTS



SECTION CUT "E-E"
CATCHMENT "B"

SCALE: 1" = 5'

SHEET LEGEND:

EXISTING PROPERTY LINE	EXISTING GRAVEL
EXISTING ROW LINE	EXISTING HYDRANT
EXISTING CENTER LINE	EXISTING CONTOURS
EXISTING PAVEMENT	EXISTING BUILDING
FLOW ARROW	EXISTING CONCRETE
EXSITING BENCHMARK	PROPOSED GRAVEL SURFACE
	PROPOSED CHAINLINK FENCE
	PROPOSED SOLAR PANELS
	PROPOSED CONTOURS

DATE	REVISION DESCRIPTION	PM	ENG	CHK
05/22/24	FOR COMMENT	-	JMP	GB
07/24/24	PER COMMENTS	-	JMP	GB

SEAL

ENGINEER

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants
Project Contact Info
2415 Campus Drive
Suite 265
Irvine, CA 92612
Phone: (949) 502-8555
(800) 829-6531
www.tectonicengineering.com

DEVELOPER:

powerflex
EDF Renewables
805 THIRD AVENUE
NEW YORK, NEW YORK 10022
WWW.POWERFLEX.COM

PAGE SIZE
36" x 24"

PROJECT

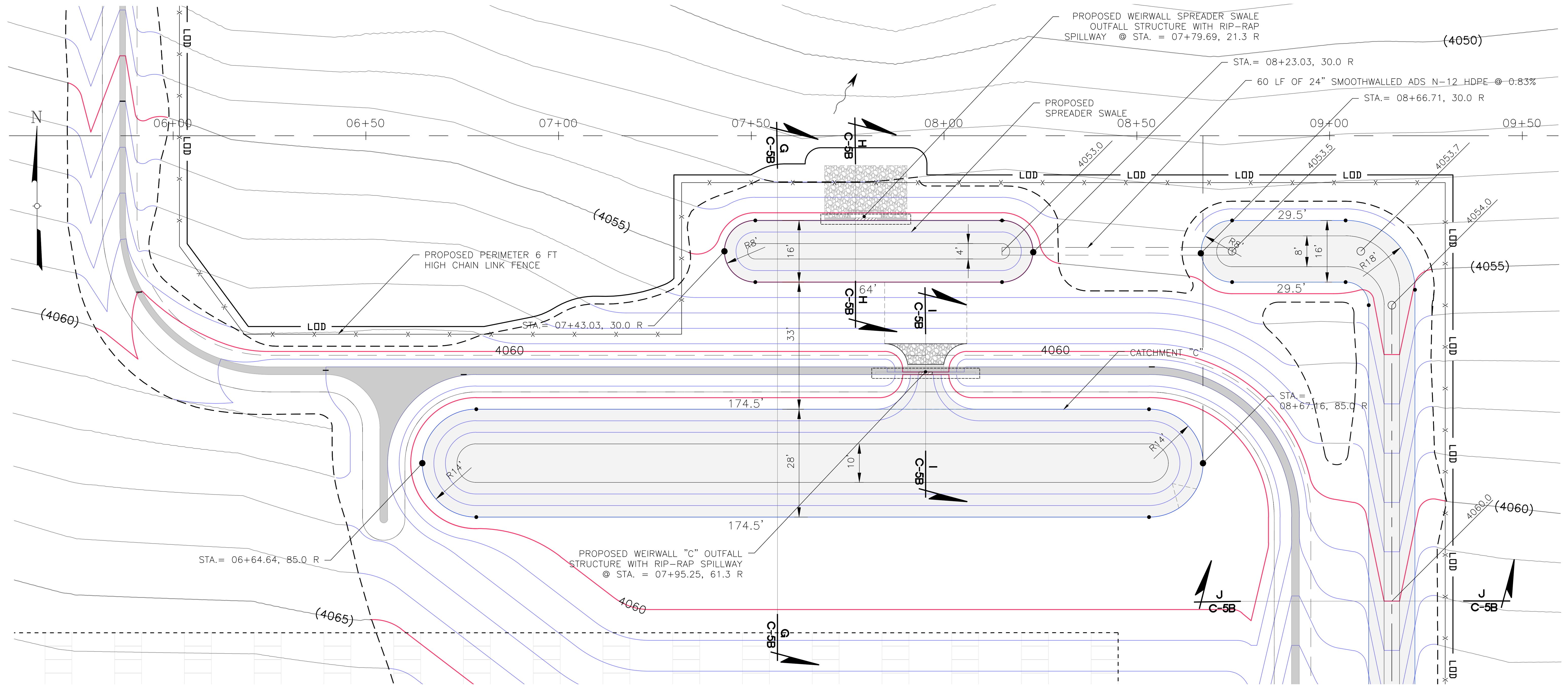
SOLAR GROUND MOUNT SYSTEM AT
OMYA
7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356

SYSTEM
DC SYSTEM SIZE: 6.49 MW
AC SYSTEM SIZE: 5.00 MW
MODULE TYPE: CSI SOLAR, CS3W-450MB-AG
MODULE QUANTITY: 14,420
ORIENTATION: 30° TILT, 180° AZIMUTH

WORK ORDER # 11550.07

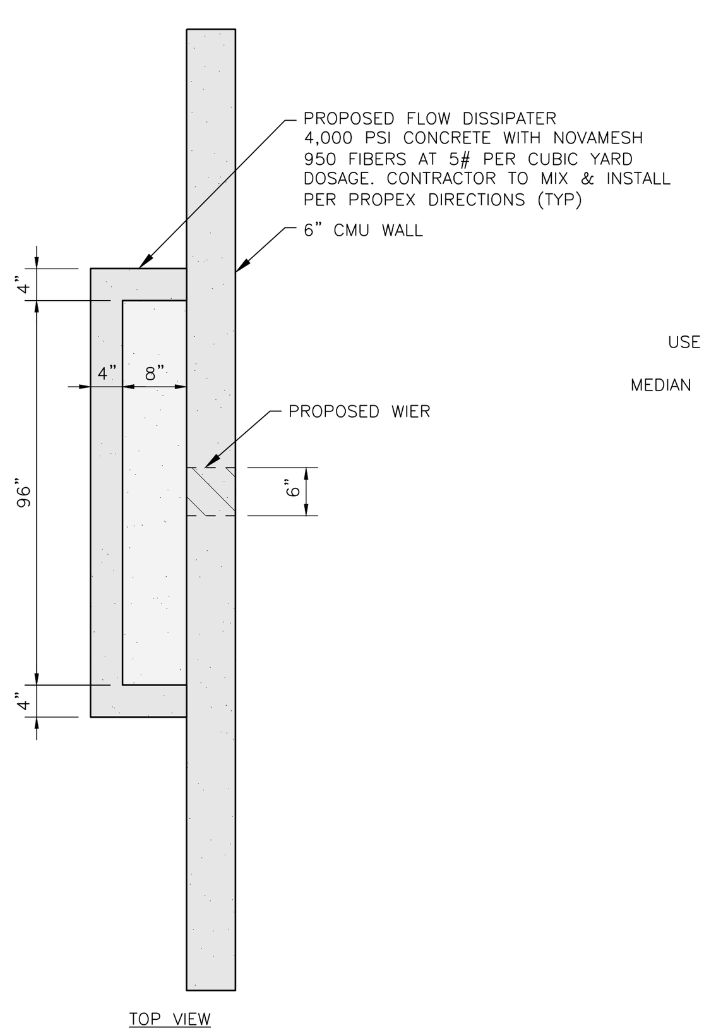
DRAWING TITLE
DRAINAGE &
GRADING PLAN

SHEET NO. C5C

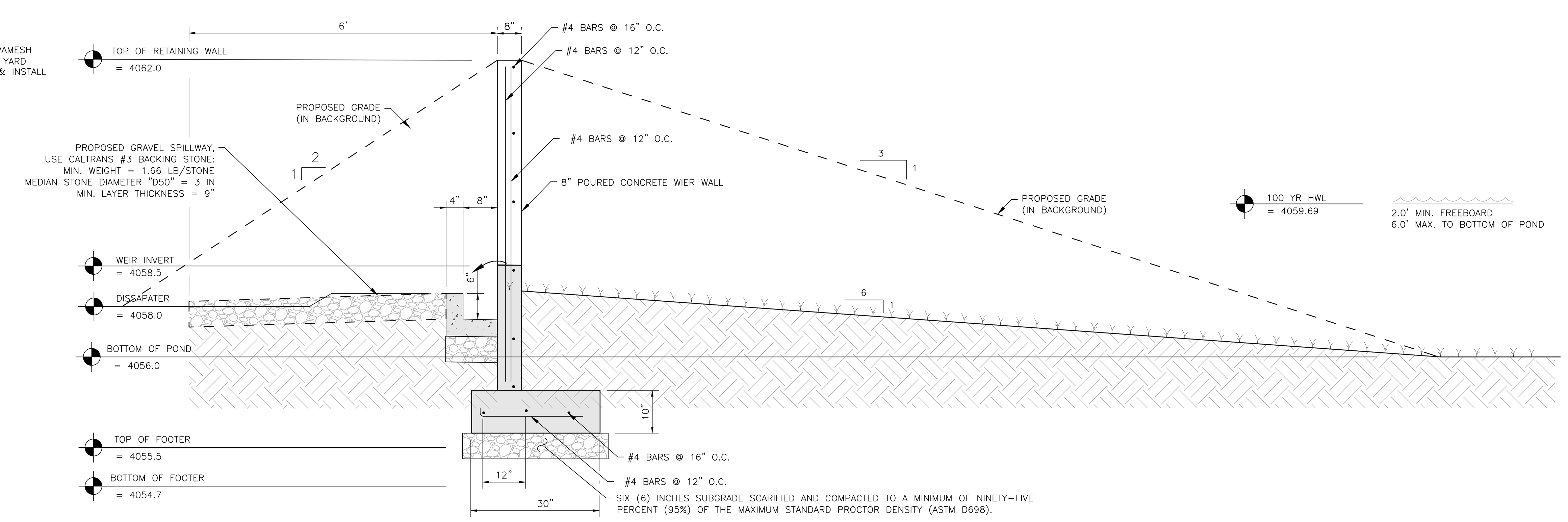


ENLARGED DRAINAGE & GRADING PLAN

SCALE: 1" = 20'

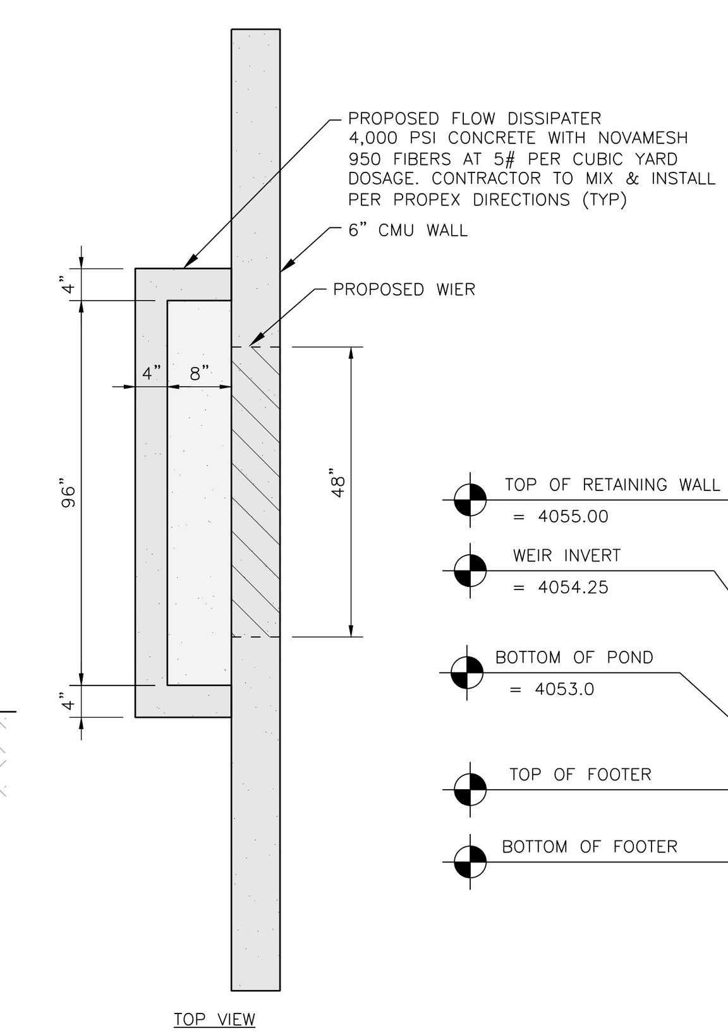


DISSIPATER DETAIL

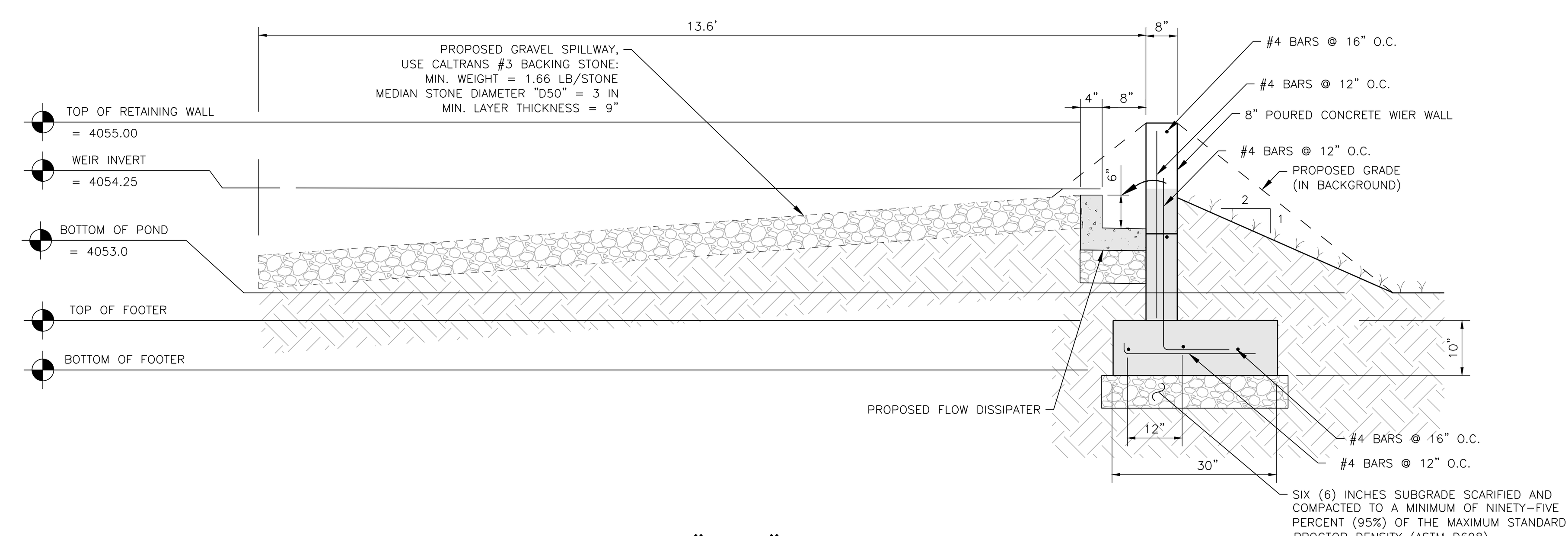


SECTION CUT "I-I"

SCALE: NTS

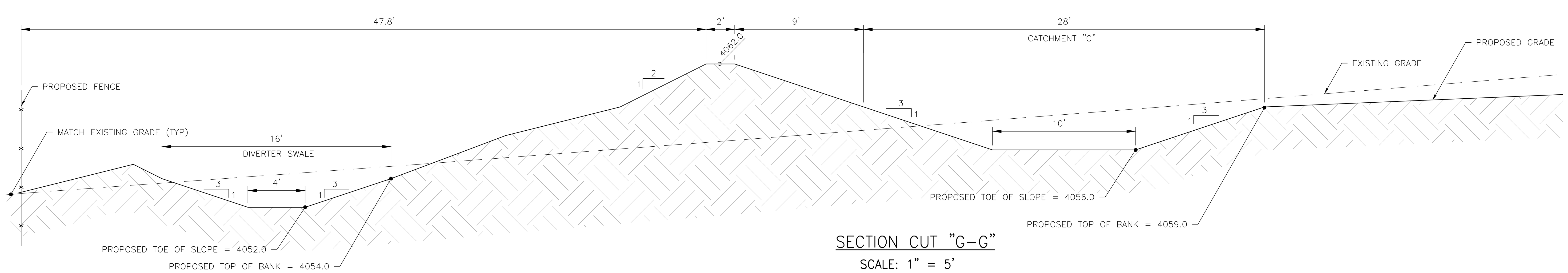


DISSIPATER DETAIL



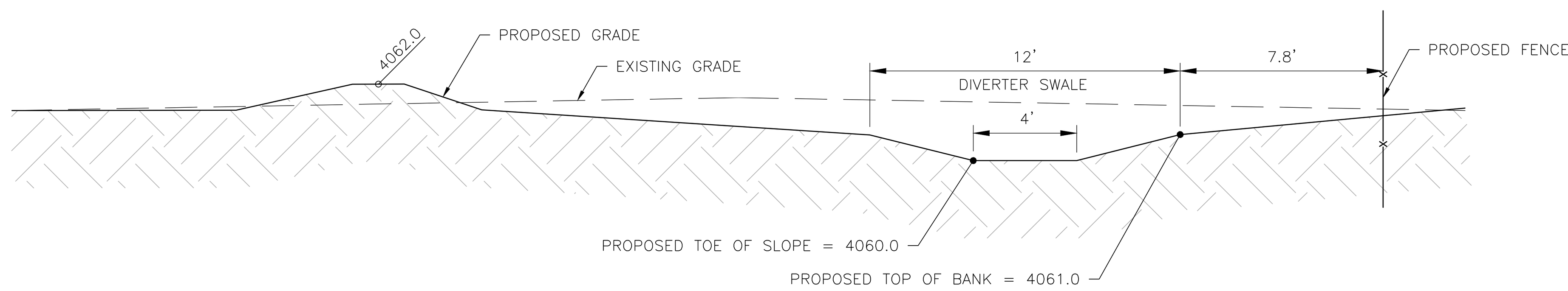
SECTION CUT "H-H"

SCALE: NTS



SECTION CUT "G-G"

SCALE: 1" = 5'



SECTION CUT "J-J"

SCALE: 1" = 5'

SHEET LEGEND:

- EXISTING PROPERTY LINE
- EXISTING ROW LINE
- EXISTING CENTER LINE
- EXISTING PAVEMENT
- FLOW ARROW
- EXISITNG BENCHMARK
- EXISTING GRAVEL
- EXISTING HYDRANT
- EXISTING CONTOURS
- EXISTING BUILDING
- EXISTING CONCRETE
- PROPOSED GRAVEL SURFACE
- PROPOSED CHAINLINK FENCE
- PROPOSED SOLAR PANELS
- PROPOSED CONTOURS

DATE	REVISION DESCRIPTION	PM	ENG	CHK
05/22/24	FOR COMMENT	-	JMP	GB
07/24/24	PER COMMENTS	-	JMP	GB

SEAL

ENGINEER:

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants
Project Contact Info
2415 Campus Drive
Suite 245
Irvine, CA 92612
Phone: (949) 502-8555
(800) 829-6531
www.tectonicengineering.com

DEVELOPER:

powerflex
EDF Renewables
805 THIRD AVENUE
NEW YORK, NEW YORK 10022
WWW.POWERFLEX.COM

PAGE SIZE: 36" x 24"

SYSTEM
DC SYSTEM SIZE: 6.49 MW
AC SYSTEM SIZE: 5.00 MW
MODULE TYPE: CS SOLAR CS3W-450MB-AG
MODULE QUANTITY: 14,420
ORIENTATION: 30° TILT, 180° AZIMUTH

PROJECT

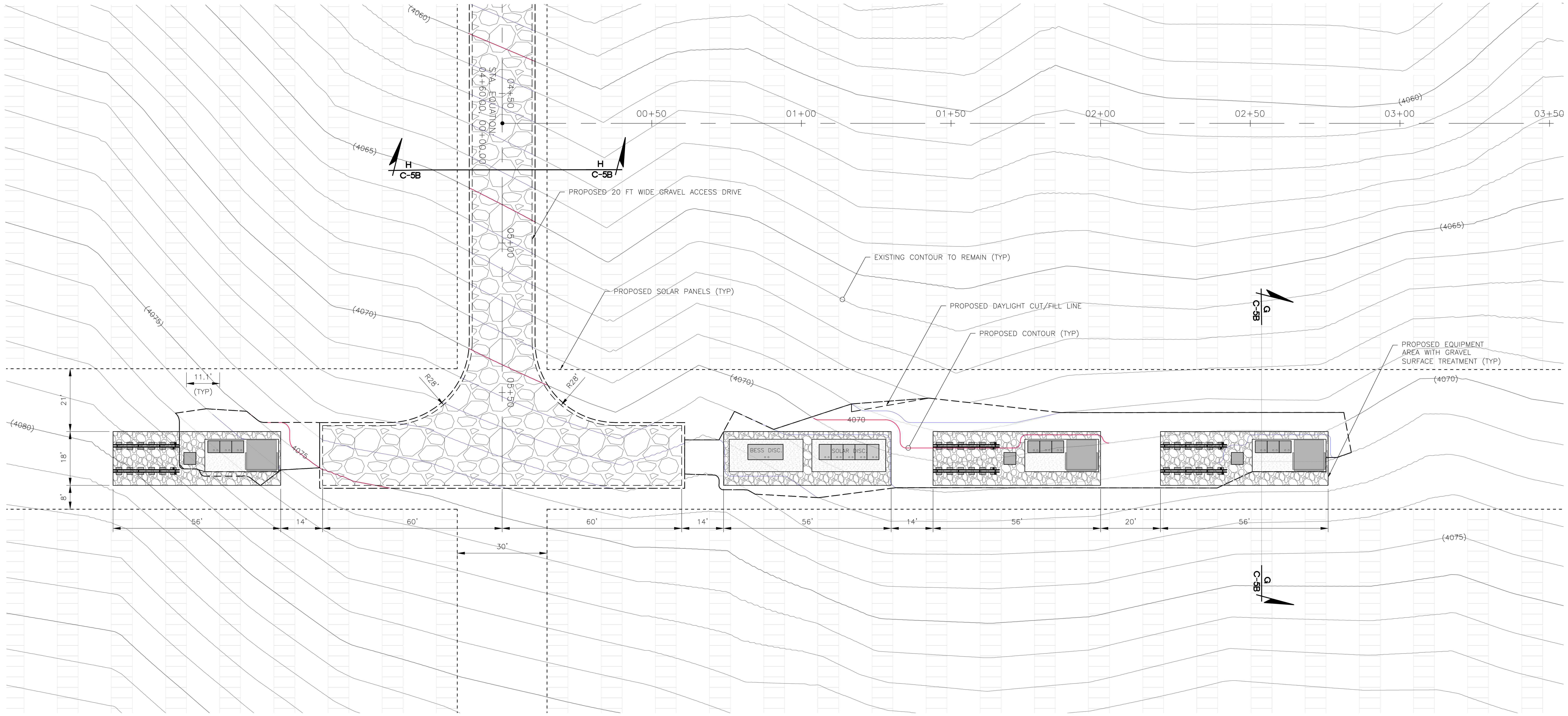
SOLAR GROUND MOUNT SYSTEM AT
OMYA
7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356

WORK ORDER # 11550.07

DRAWING TITLE
DRAINAGE & GRADING PLAN

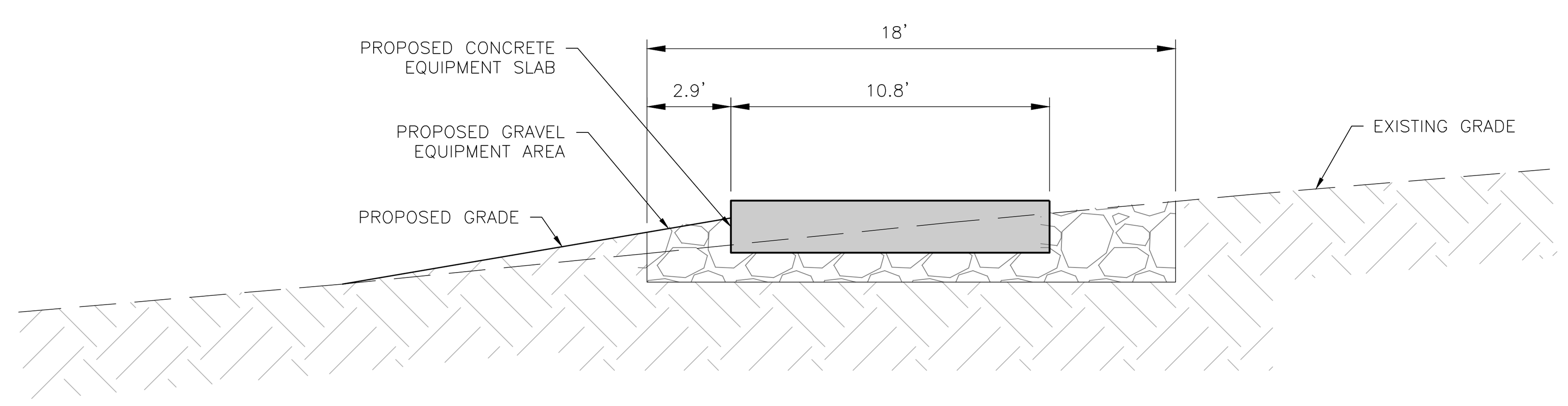
SHEET NO. C5D

PLOT DATE: 7/30/2024 3:36 PM



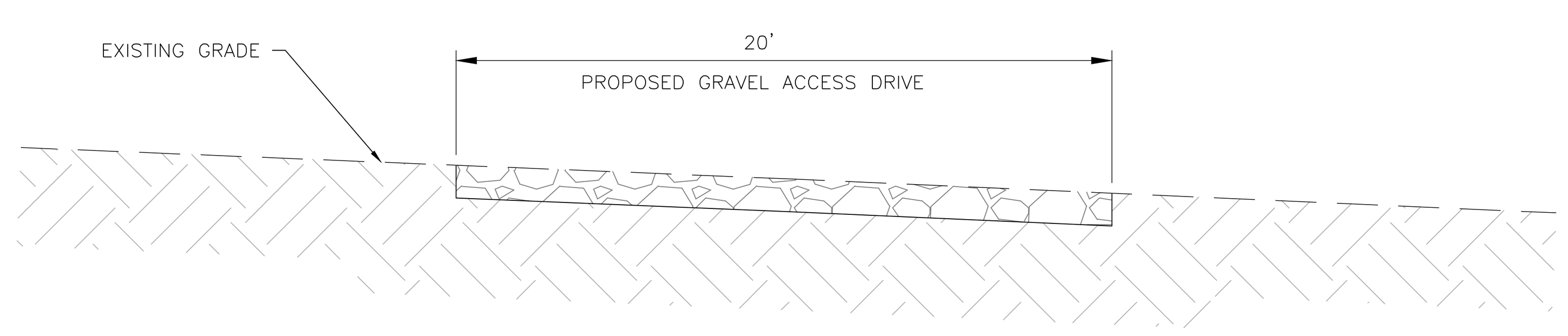
ENLARGED DRAINAGE & GRADING PLAN

SCALE: 1" = 20'



GRAVEL EQUIPMENT AREA CROSS SECTION

SCALE: 1" = 5'



TYPICAL GRAVEL ACCESS DRIVE CROSS SECTION

SCALE: 1" = 5'

SHEET LEGEND:

EXISTING PROPERTY LINE	EXISTING GRAVEL
EXISTING ROW LINE	EXISTING HYDRANT
EXISTING CENTER LINE	EXISTING CONTOURS
EXISTING PAVEMENT	EXISTING BUILDING
FLOW ARROW	EXISTING CONCRETE
EXISTING BENCHMARK	PROPOSED GRAVEL SURFACE
	PROPOSED CHAINLINK FENCE
	PROPOSED SOLAR PANELS
	PROPOSED CONTOURS

DATE	REVISION DESCRIPTION	PM	ENG	CHK
05/22/24	FOR COMMENT	-	JMP	GB
07/24/24	PER COMMENTS	-	JMP	GB

SEAL

ENGINEER

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants
2415 Campus Drive
Suite 265
Irvine, CA 92612
Phone: (949) 502-6555
www.tectonicengineering.com

DEVELOPER:

powerflex
EDF Renewables
805 THIRD AVENUE
NEW YORK, NEW YORK 10022
WWW.POWERFLEX.COM

PAGE SIZE
36" x 24"

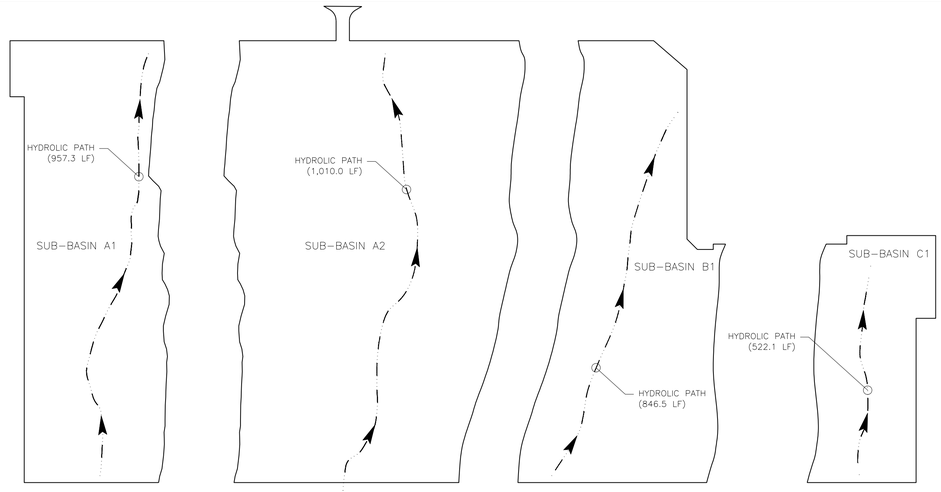
SYSTEM:
DC SYSTEM SIZE: 6.49 MW
AC SYSTEM SIZE: 5.00 MW
MODULE TYPE: CS SOLAR, CS3W-450MB-AG
MODULE QUANTITY: 14,420
ORIENTATION: 30° TILT, 180° AZIMUTH

PROJECT
SOLAR GROUND MOUNT SYSTEM AT
OMYA
7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356

WORK ORDER # 11550.07

DRAWING TITLE
DRAINAGE & GRADING PLAN

SHEET NO. C5E



SUB-BASIN A1 EXISTING CONDITIONS			
SOILS	HSG	COVER TYPE	AREA (SF)
177	A	DESERT BRUSH	269,104.77
TOTAL:			269,104.77

SUB-BASIN A-1 EXISTING CONDITIONS
HYDRAULIC PATH TOTAL LENGTH = 957.3
AVG. GRADIENT = 7.93%

SHEET FLOW LENGTH (DESERT BRUSH) = 100 FT

SHALLOW CHANNEL = 857.3 (7.58%)

TIME OF CONCENTRATION (MINUTES) : 9.87

SUB-BASIN A2 EXISTING CONDITIONS			
SOILS	HSG	COVER TYPE	AREA (SF)
177	A	DESERT BRUSH	515,051.40
TOTAL:			515,051.40

SUB-BASIN A-2 EXISTING CONDITIONS
HYDRAULIC PATH TOTAL LENGTH = 1,010.0
AVG. GRADIENT = 8.39%

SHEET FLOW LENGTH (DESERT BRUSH) = 100 FT

SHALLOW CHANNEL = 910.0 (8.48%)

TIME OF CONCENTRATION (MINUTES) : 10.96

SUB-BASIN B1 EXISTING CONDITIONS			
SOILS	HSG	COVER TYPE	AREA (SF)
177	A	DESERT BRUSH	275,294.27
TOTAL:			275,294.27

SUB-BASIN A-1 EXISTING CONDITIONS
HYDRAULIC PATH TOTAL LENGTH = 846.5
AVG. GRADIENT = 8.82%

SHEET FLOW LENGTH (DESERT BRUSH) = 100 FT

SHALLOW CHANNEL = 746.5 (8.86%)

TIME OF CONCENTRATION (MINUTES) : 9.92

SUB-BASIN C1 EXISTING CONDITIONS			
SOILS	HSG	COVER TYPE	AREA (SF)
177	A	DESERT BRUSH	114,088.66
TOTAL:			114,088.66

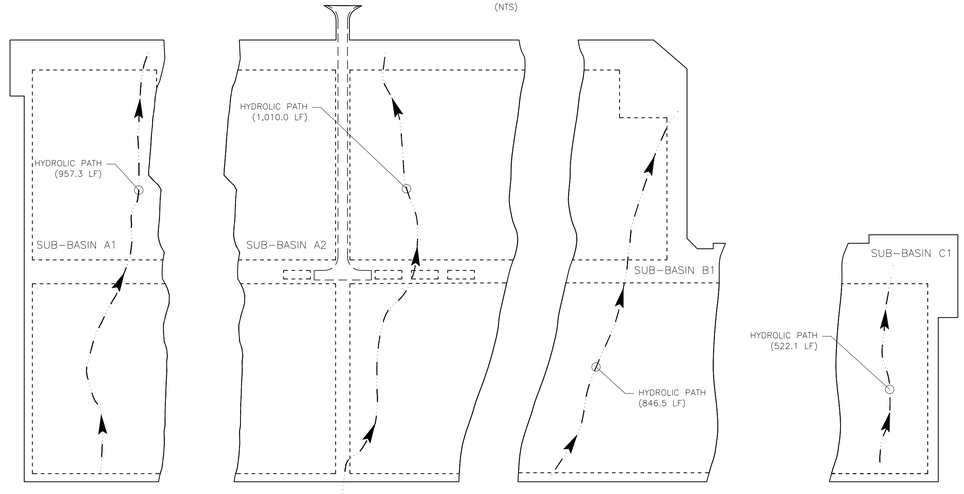
SUB-BASIN A-1 EXISTING CONDITIONS
HYDRAULIC PATH TOTAL LENGTH = 522.1
AVG. GRADIENT = 7.78%

SHEET FLOW LENGTH (DESERT BRUSH) = 100 FT

SHALLOW CHANNEL = 422.1 (7.51%)

TIME OF CONCENTRATION (MINUTES) : 8.81

PRE-DEVELOPMENT
BASIN MAP
(NTS)



SUB-BASIN A1 EXISTING CONDITIONS			
SOILS	HSG	COVER TYPE	AREA (SF)
177	A	DESERT BRUSH	198,134.16
177	A	CONCRETE	–
177	A	GRAVEL DRIVE	–
177	A	SOLAR PANEL	70,970.61
177	A	GRAVEL EQUIP.	–
177	A	STAGING AREA	–
TOTAL:			269,104.77

SUB-BASIN A-1 EXISTING CONDITIONS
HYDRAULIC PATH TOTAL LENGTH = 915.8
AVG. GRADIENT = 7.94%

SHEET FLOW LENGTH (OPEN GRASS) = 100 FT

SHALLOW CHANNEL = 815.8 (7.58%)

TIME OF CONCENTRATION (MINUTES) : 9.17

SUB-BASIN A2 EXISTING CONDITIONS			
SOILS	HSG	COVER TYPE	AREA (SF)
177	A	DESERT BRUSH	359,697.70
177	A	CONCRETE	1,384.10
177	A	GRAVEL DRIVE	14,217.58
177	A	SOLAR PANEL	137,104.13
177	A	GRAVEL EQUIP.	2,647.89
177	A	STAGING AREA	–
TOTAL:			515,051.40

SUB-BASIN A-2 EXISTING CONDITIONS
HYDRAULIC PATH TOTAL LENGTH = 972.7
AVG. GRADIENT = 8.48%

SHEET FLOW LENGTH (DESERT BRUSH) = 100 FT

SHALLOW CHANNEL = 872.7 (8.59%)

TIME OF CONCENTRATION (MINUTES) : 10.80

SUB-BASIN B1 EXISTING CONDITIONS			
SOILS	HSG	COVER TYPE	AREA (SF)
177	A	DESERT BRUSH	208,083.85
177	A	CONCRETE	–
177	A	GRAVEL DRIVE	–
177	A	SOLAR PANEL	67,210.42
177	A	GRAVEL EQUIP.	–
177	A	STAGING AREA	–
TOTAL:			275,294.27

SUB-BASIN A-1 EXISTING CONDITIONS
HYDRAULIC PATH TOTAL LENGTH = 815.0
AVG. GRADIENT = 8.83%

SHEET FLOW LENGTH (DESERT BRUSH) = 100 FT

SHALLOW CHANNEL = 715.0 (8.87%)

TIME OF CONCENTRATION (MINUTES) : 9.81

SUB-BASIN C1 EXISTING CONDITIONS			
SOILS	HSG	COVER TYPE	AREA (SF)
177	A	DESERT BRUSH	89,036.28
177	A	CONCRETE	–
177	A	GRAVEL DRIVE	–
177	A	SOLAR PANEL	25,052.38
177	A	GRAVEL EQUIP.	–
177	A	STAGING AREA	–
TOTAL:			114,088.66

SUB-BASIN A-1 EXISTING CONDITIONS
HYDRAULIC PATH TOTAL LENGTH = 444.3
AVG. GRADIENT = 7.97%

SHEET FLOW LENGTH (DESERT BRUSH) = 100 FT

SHALLOW CHANNEL = 344.3 (7.70%)

TIME OF CONCENTRATION (MINUTES) : 8.50

POST-DEVELOPMENT
BASIN MAP
(NTS)

REVISION	DESCRIPTION	DATE	PM	ENG CHK
	FOR COMMENT	05/22/24	-	JMP GB
	PER COMMENTS	07/24/24	-	JMP GB

SEAL

ENGINEER:
Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants
Corporate Center Drive
Suite 240
Irvine, CA 92612
Phone: (949) 502-8555
(800) 829-8531
www.tectonicengineering.com

DEVELOPER:
powerflex
EDF Renewables
805 THIRD AVENUE
NEW YORK, NEW YORK 10022
WWW.POWERFLEX.COM

PAGE SIZE:
36" x 24"

PROJECT:
SOLAR GROUND MOUNT SYSTEM AT
OMYA
7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356

SYSTEM SIZE: 6.49 MW
DC SYSTEM SIZE: 5.00 MW
AC SYSTEM SIZE: 3.96 MW
MODULE TYPE: (264) TSM-450MB-AG
MODULE QUANTITY: 14,420
ORIENTATION: 25° TILT, 180° AZIMUTH

WORK ORDER # 11550.07

DRAWING TITLE
BASIN MAPS

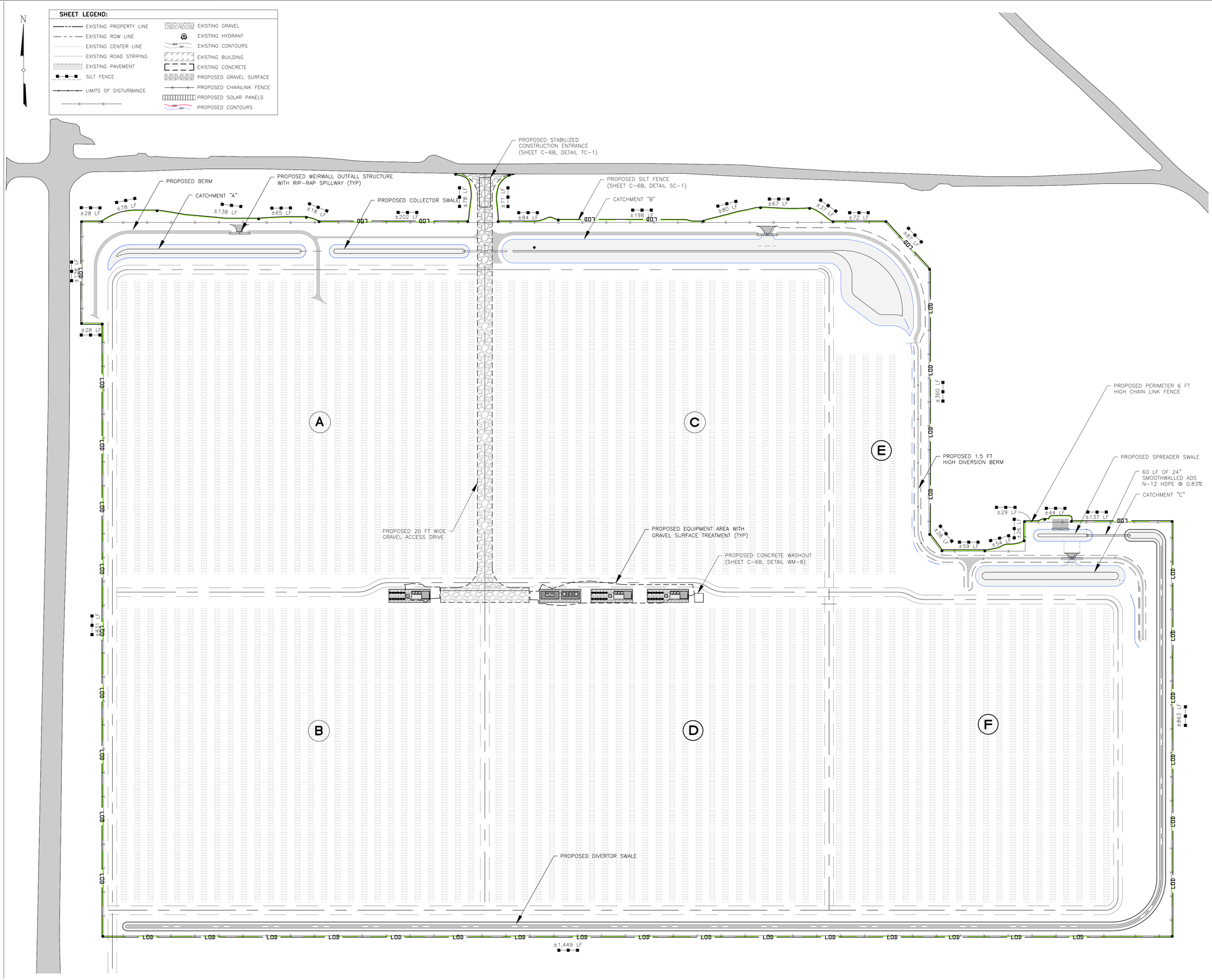
SHEET NO. C-5F

PLOT DATE: 7/25/2024 12:08 PM

N

SHEET LEGEND:

- EXISTING PROPERTY LINE
- EXISTING ROW LINE
- EXISTING CENTER LINE
- EXISTING ROAD STRIPING
- EXISTING PAVEMENT
- SILT FENCE
- LIMITS OF DISTURBANCE
- EXISTING GRAVEL
- EXISTING HYDRANT
- EXISTING CONTOURS
- EXISTING BUILDING
- EXISTING CONCRETE
- PROPOSED GRAVEL SURFACE
- PROPOSED CHAINLINK FENCE
- PROPOSED SOLAR PANELS
- PROPOSED CONTOURS



EROSION AND SEDIMENT CONTROL NOTES

1. In case of emergency, call (Responsible Person) at (24-Hour telephone).
2. Pollution and erosion prevention measures, also known as Best Management Practices (BMPs), must be installed prior to grading. These measures, including the prevention of sedimentation or flood damage, to offsite property shall be adequate whether or not an erosion control permit is required.
3. Eroded sediments and other pollutants must be retained onsite and may not be transported from the site via sheet flow, swales, area drains, natural drainage courses, or wind.
4. Erosion Control devices shall be functioning at all times. In case of failure, rapid construction of emergency devices shall be implemented.
5. Stockpiles of earth and other construction-related materials must be protected from being transported from the site by the forces of wind or water.
6. Fuels, oils, solvents, and other toxic materials must be stored in accordance with their listing and are not to contaminate the soils and surface waters. All approved storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of in a proper manner. Spills may not be washed into the drainage system.
7. Excess or waste concrete must be contained onsite. Provisions shall be made to retain concrete wastes onsite until they can be disposed of as solid waste.
8. Developers/contractors are responsible to ensure all Erosion Control Devices and BMPs are installed and functioning properly per plan. Proper precaution shall be considered when 50% or greater probability of predicted precipitation, and after actual precipitation. A construction site inspection checklist and inspection log shall be maintained at the project site at all times and available for review by the Building Official.
9. Trash and construction-related solid wastes must be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.
10. Sediments and other materials may not be tracked from the site by vehicle traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental depositions must be swept up immediately and may not be washed down by rain or other means.
11. Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to inhibit erosion by wind and water.
12. All silt and debris shall be removed from all devices within 24 hours after each rainstorm and be disposed of properly.
13. All storm water capture devices shall be protected at all times.
14. Erosion and sediment control practices should be in conformance with standard practice.
    The most common erosion control measures are:
    a. Scheduling
    b. Preservation of Existing Vegetation
    c. Stockpile Management
    d. Silt Fence
    e. Fiber Rolls
    f. Sandbag Barrier
    g. Straw Bale Barrier
    h. Storm Drain Inlet Protection
    i. Concrete Waste Management
    j. Vehicle and Equipment Fueling
    k. Vehicle and Equipment Maintenance
    l. Stabilized Construction Entrance/Exit m. Entrance/Exit Tire Wash
    n. Wind Erosion Control
15. Dust shall be controlled by watering.

EROSION & SEDIMENT CONTROL PLAN

SCALE: 1" = 60'

DATE	REVISION DESCRIPTION	PM	ENG CHK
05/22/24	FOR COMMENT	-	JMP GB
07/24/24	PER COMMENTS	-	JMP GB

SEAL

ENGINEER:

Tectonic

PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Tectonic Engineering Consultants
A Corporation
26785 Camino Seco
Suite 210
Temecula, CA 92590

Phone: (949) 502-8555
(800) 829-2531
www.tectonicengineering.com

DEVELOPER:

powerflex
EDF Renewables

805 THIRD AVENUE
NEW YORK, NY 10022
WWW.POWERFLEX.COM

PAGE SIZE: 36" x 24"

PROJECT:

SOLAR GROUND MOUNT SYSTEM AT
OMYA
7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356

SYSTEM:
DC SYSTEM SIZE: 6.49 MW
AC SYSTEM SIZE: 5.00 MW
MODULE TYPE: (504) CSSW-450MB-AG
MODULE QUANTITY: 14,420
ORIENTATION: 30° TILT, 180° AZIMUTH

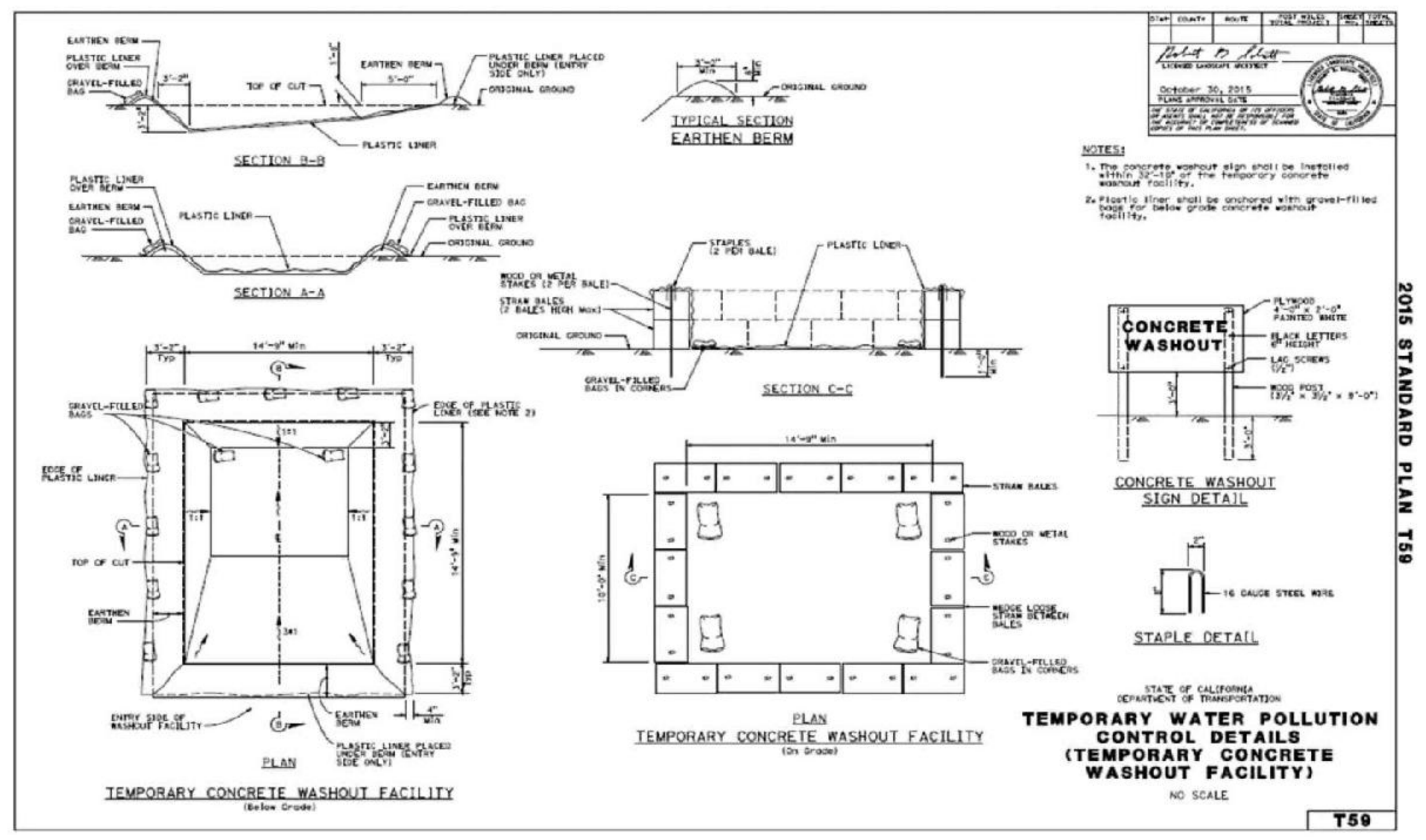
WORK ORDER # 11550.07

DRAWING TITLE:
EROSION & SEDIMENT CONTROL PLAN

SHEET NO: C6A

PLOT DATE: 7/30/2024 3:28 PM

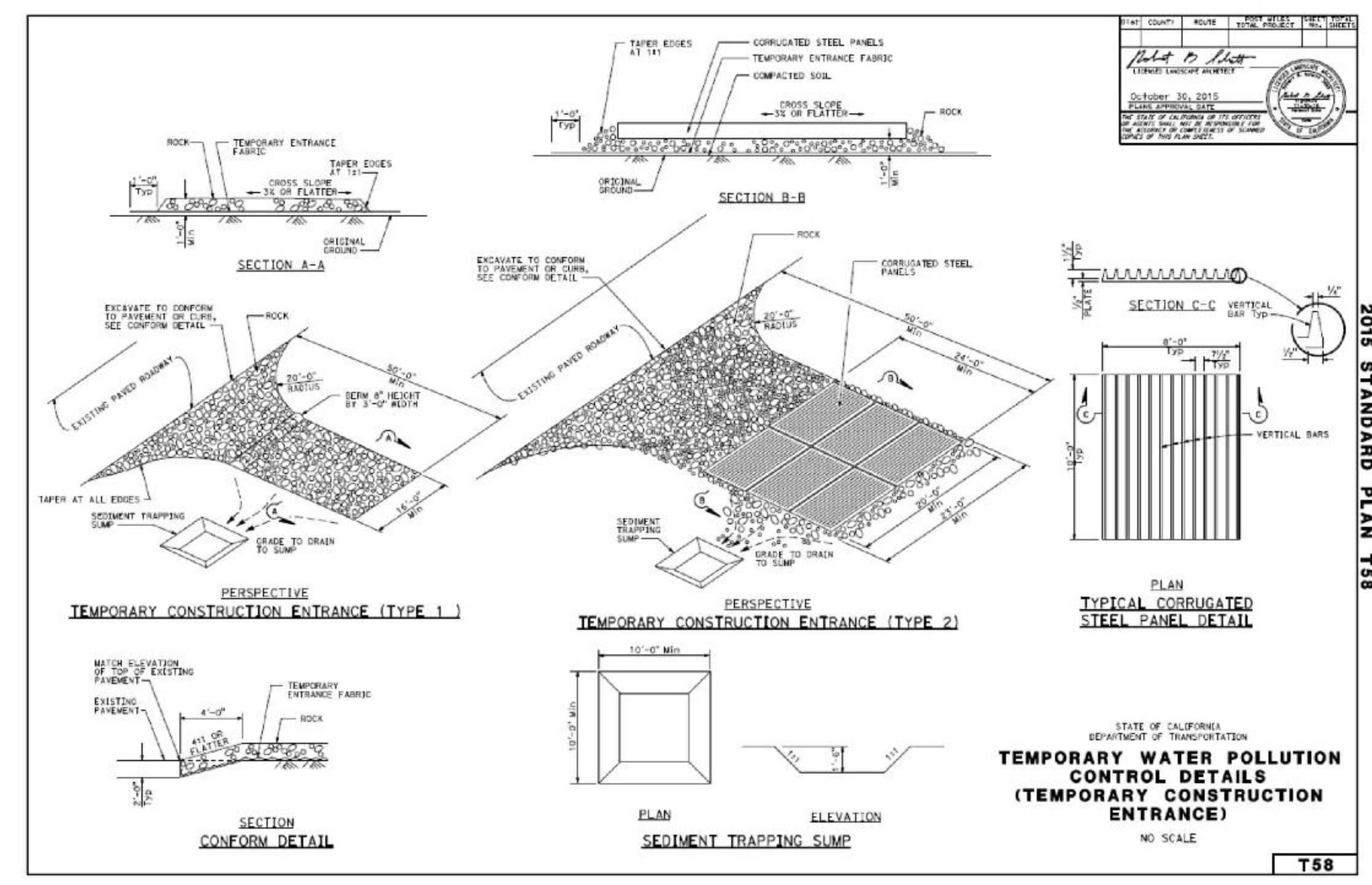
Concrete Waste Management **WM-8**



Caltrans Storm Water Quality Handbooks
Construction Site BMP Manual
May 2017

Section 8
Concrete Waste Management **WM-8**
5 of 5

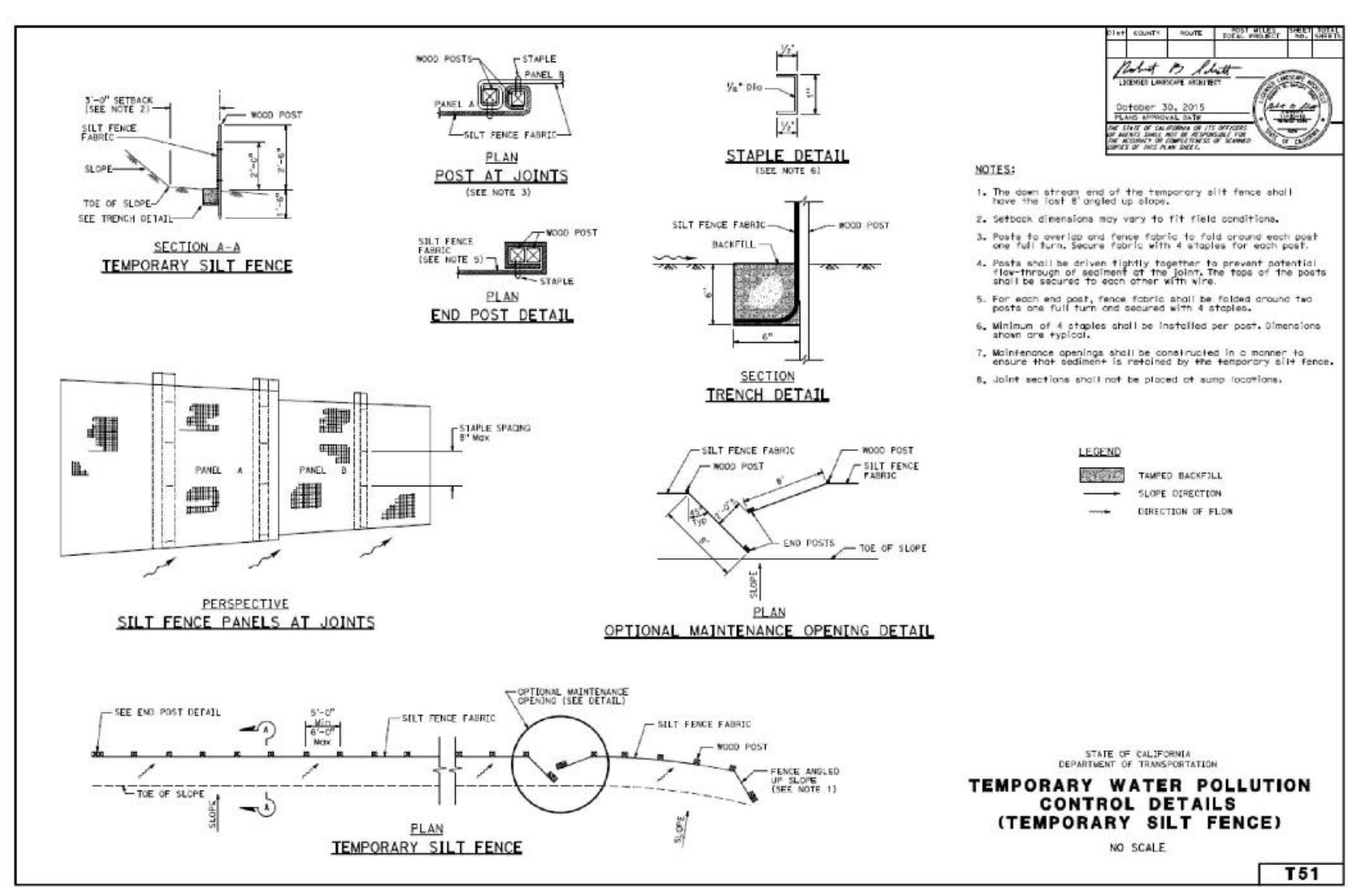
Temporary Construction Entrance/Exit **TC-1**



Caltrans Storm Water Quality Handbooks
Construction Site BMP Manual
May 2017

Section 6
Temporary Construction Entrance/Exit **TC-1**
4 of 4

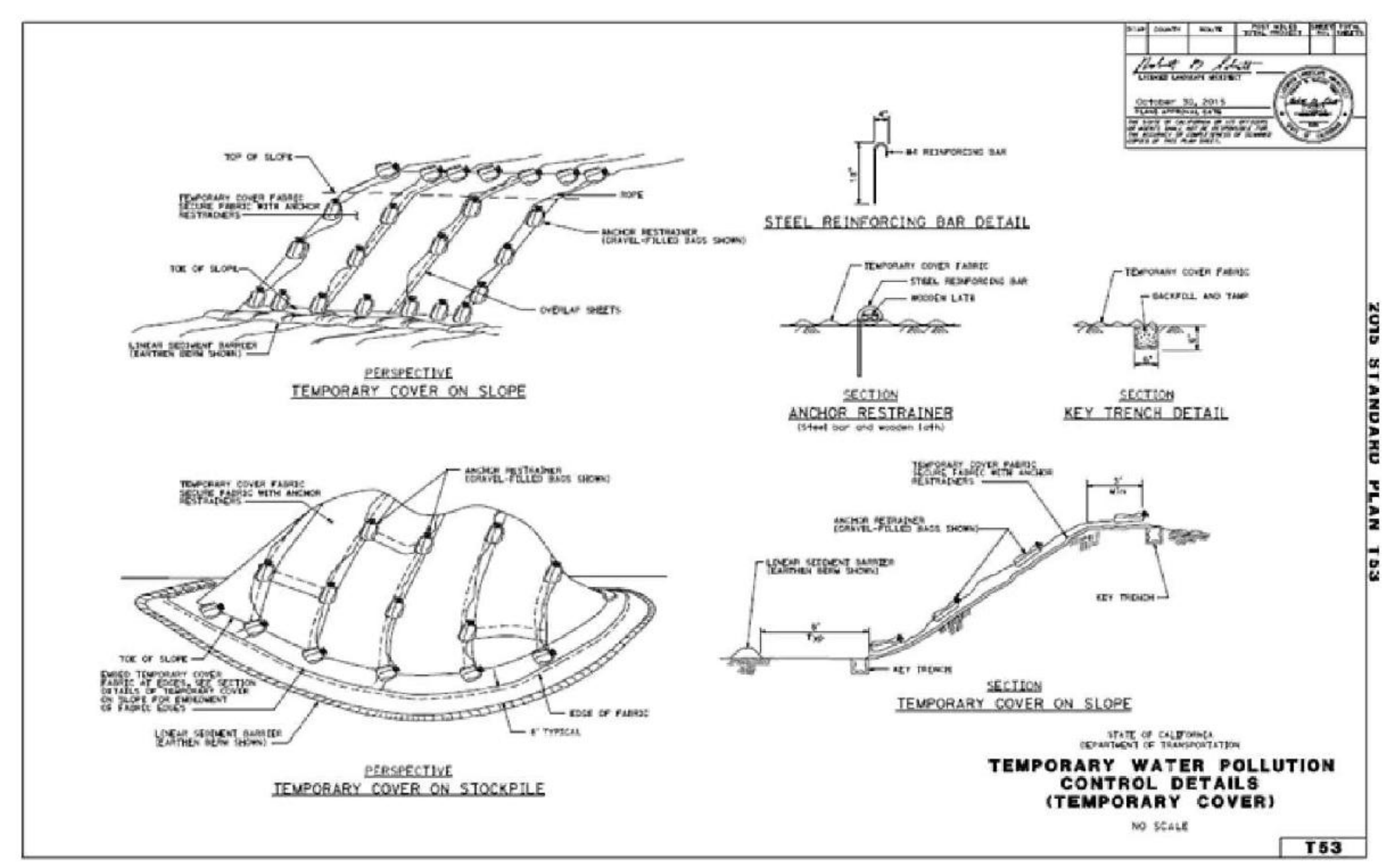
Temporary Silt Fence **SC-1**



Caltrans Storm Water Quality Handbooks
Construction Site BMP Manual
May 2017

Section 4
Temporary Silt Fence **SC-1**
5 of 6

Stockpile Management **WM-3**



Caltrans Storm Water Quality Handbooks
Construction Site BMP Manual
May 2017

Section 8
Stockpile Management **WM-3**
3 of 3

DATE	REVISION DESCRIPTION	PM	ENG	CHK
05/22/24	FOR COMMENT	–	JMP	GB
07/24/24	PER COMMENTS	–	JMP	GB

SEAL

ENGINEER
Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants
Project Contact Info
2415 Campus Drive
Suite 265
Irvine, CA 92612
Phone: (949) 502-8555
(800) 829-6531
www.tectonicengineering.com

DEVELOPER:
powerflex
EDF Renewables
805 THIRD AVENUE
NEW YORK, NEW YORK 10022
WWW.POWERFLEX.COM

PAGE SIZE
36" x 24"

PROJECT
SOLAR GROUND MOUNT SYSTEM AT
OMYA
7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356

SYSTEM
DC SYSTEM SIZE: 6.49 MW
AC SYSTEM SIZE: 5.00 MW
MODULE TYPE: CSI SOLAR, CS3W-450MB-AG
MODULE QUANTITY: 14,420
ORIENTATION: 30° TILT, 180° AZIMUTH

WORK ORDER # 11550.07

DRAWING TITLE
EROSION & SEDIMENT CONTROL DETAILS

SHEET NO. **C6B**

BOUNDARY AND ENCUMBRANCE MAP

UNINCORPORATED AREA, COUNTY OF SAN BERNARDINO, STATE OF CALIFONRIA

PROPERTY DESCRIPTION

REAL PROPERTY IN THE CITY OF LUCERNE VALLEY, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

TRACT: I (0446–033–39)

GOVERNMENT LOTS 3 AND 4 OF THE NORTHWEST 1/4 OF SECTION 1, TOWNSHIP 3 NORTH, RANGE 1 WEST, SAN BERNARDINO BASE AND MERIDIAN ACCORDING TO THE OFFICIAL PLAT THEREOF AND LYING SOUTHWEST OF THE RAILROAD.

EXCEPTING THEREFROM THAT PORTION AS CONVEYED TO THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY, A KANSAS CORPORATION, BY DEED RECORDED MAY 10, 1956 IN BOOK 3934, PAGE 484 OFFICIAL RECORDS.

TRACT: II (0446–033–08)

THE WEST 1/2 OF THE EAST 1/2 OF THE NORTH 1/2 OF GOVERNMENT LOT 5 OF THE NORTHWEST 1/4 OF SECTION 1, TOWNSHIP 3 NORTH, RANGE 1 WEST, SAN BERNARDINO BASE AND MERIDIAN, ACCORDING TO GOVERNMENT SURVEY.

EXCEPTING 3% OF ALL OIL AND MINERAL RIGHTS AS RESERVED IN DEED FROM LOUIS L. BARR, ET UX, TO PRESTON H. PORTER, ET UX, RECORDED APRIL 8, 1955, IN BOOK 3615, PAGE 271, OFFICIAL RECORDS.

TRACT: III (0446–033–09)

THE EAST 1/2 OF THE EAST 1/2 OF THE NORTH 1/2 OF LOT 5 OF THE NORTHWEST 1/4 OF SECTION 1, TOWNSHIP 3 NORTH, RANGE 1 WEST, SAN BERNARDINO BASE AND MERIDIAN, OFFICIAL RECORDS OF SAID COUNTY APPROVED BY THE SURVEYOR GENERAL JULY 20, 1896.

TRACT: IV (0446–033–17)

THE SOUTH 1/2 OF LOT 5 AND THE SOUTH 1/2 OF LOT 6 OF THE NORTHWEST 1/4 OF SECTION 1, TOWNSHIP 3 NORTH, RANGE 1 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO GOVERNMENT SURVEY. EXCEPTING THEREFROM THE EAST 1/2 OF THE SOUTH 1/2 OF LOT 6.

TRACT: V (0446–033–18)

THE NORTH ONE–HALF OF LOT 11 AND THE NORTH ONE–HALF OF LOT 12, OF THE NORTHWEST ONE–QUARTER OF SECTION 1, TOWNSHIP 3 NORTH, RANGE 1 WEST, SAN BERNARDINO BASE AND MERIDIAN, ACCORDING TO THE OFFICIAL PLAT THEREOF ON FILE IN THE OFFICE OF THE SAN BERNARDINO COUNTY RECORDER.

TRACT: VI (0446–033–19)

THE SOUTH 1/2 OF LOTS 11 AND 12, SECTION 1, TOWNSHIP 3 NORTH, RANGE 1 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND ON FILE IN THE DISTRICT LAND OFFICE.
APN: 0446–033–39 AND 0446–033–08 AND 0446–033–09 AND 0446–033–17 AND 0446–033–18 AND 0446–033–19

EXISTING EASEMENTS

THE FOLLOWING MATTERS AFFECT TRACT: I (0446–033–39):

ITEMS 1 THROUGH 8 ARE NOT SURVEY–RELATED MATTERS

(8) AN EASEMENT FOR UTILITIES AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED JUNE 14, 1956 AS BOOK 3963, PAGE 382 OF OFFICIAL RECORDS.

[SAID EASEMENT DOES NOT AFFECT TRACT I]

ITEM 9 IS NOT A SURVEY–RELATED MATTER

(10) AN EASEMENT FOR ELECTRIC SERVICE LINES AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED OCTOBER 03, 1978 AS BOOK 9530, PAGE 1613 OF OFFICIAL RECORDS.

THE FOLLOWING MATTERS AFFECT TRACT: II (0446–033–08):

(11) A RIGHT OF WAY FOR DITCHES AND CANALS AS RESERVED BY THE UNITED STATES OF AMERICA IN THE PATENT RECORDED JULY 14, 1949 IN BOOK 2432 OF PATENTS, PAGE 568.

THE LOCATION OF THE EASEMENT CANNOT BE DETERMINED FROM RECORD INFORMATION.

[SAID RIGHTS ARE BLANKET IN NATURE.]

(12) AN EASEMENT FOR ROAD AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED AS BOOK 4277, PAGE 523 OF OFFICIAL RECORDS.

13. THE LACK OF A RIGHT OF ACCESS TO AND FROM THE LAND.

THE FOLLOWING MATTERS AFFECT TRACT: III (0446–033–09):

(14) A RIGHT OF WAY FOR DITCHES AND CANALS AS RESERVED BY THE UNITED STATES OF AMERICA IN THE PATENT RECORDED IN BOOK 2432 OF PATENTS, PAGE 568.

THE LOCATION OF THE EASEMENT CANNOT BE DETERMINED FROM RECORD INFORMATION.

[SAID RIGHTS ARE BLANKET IN NATURE.]

(15) AN EASEMENT FOR ROAD AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED AS BOOK 4277, PAGE23 OF OFFICIAL RECORDS.

(16) AN EASEMENT FOR ROAD AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED AS BOOK 4277, PAGE 524 OF OFFICIAL RECORDS.

17. AN EASEMENT FOR INGRESS AND EGRESS AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED AS BOOK 7735, PAGE 779 OF OFFICIAL RECORDS.

THE LOCATION OF THE EASEMENT CANNOT BE DETERMINED FROM RECORD INFORMATION.

[SAID DOCUMENT IS A RELEASE OF LIEN AND IS NOT AN EASEMENT]

18. THE LACK OF A RIGHT OF ACCESS TO AND FROM THE LAND.

THE FOLLOWING MATTERS AFFECT TRACT: IV (0446–033–17):

(19) A RIGHT OF WAY FOR DITCHES AND CANALS AS RESERVED BY THE UNITED STATES OF AMERICA IN THE PATENT RECORDED IN BOOK 2432 OF PATENTS, PAGE 568.

THE LOCATION OF THE EASEMENT CANNOT BE DETERMINED FROM RECORD INFORMATION.

[SAID RIGHTS ARE BLANKET IN NATURE.]

(20) AN EASEMENT FOR NONE SHOWN AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED SEPTEMBER 22, 1977 AS BOOK 9268, PAGE 202 OF OFFICIAL RECORDS.

(21) AN EASEMENT FOR HIGHWAY AND ROAD AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED APRIL 16, 1981 AS INSTRUMENT NO. 81–82792 OF OFFICIAL RECORDS.

THE FOLLOWING MATTERS AFFECT TRACT: V (0446–033–18):

(22) AN EASEMENT FOR HIGHWAY AND ROAD AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED OCTOBER 15, 1990 AS INSTRUMENT NO. 90–409713 OF OFFICIAL RECORDS.

THE FOLLOWING MATTERS AFFECT TRACT: VI (0446–033–19):

(23) A RIGHT OF WAY FOR DITCHES AND CANALS AS RESERVED BY THE UNITED STATES OF AMERICA IN THE PATENT RECORDED JULY 14, 1949 IN BOOK 2432 OF PATENTS, PAGE 568.

THE LOCATION OF THE EASEMENT CANNOT BE DETERMINED FROM RECORD INFORMATION.

[SAID RIGHTS ARE BLANKET IN NATURE.]

(24) AN EASEMENT FOR POLE LINES AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED AS BOOK 5675, PAGE 632 OF OFFICIAL RECORDS.

[CENTERLINE OF EASEMENT IS PLOTTED HEREON; THE WIDTH OF SAID EASEMENT IS NOT SPECIFIED WITHIN SAID DOCUMENT]

THE FOLLOWING MATTERS AFFECT TRACT I TO VI:

25. RIGHTS OF THE PUBLIC IN AND TO THAT PORTION OF THE LAND LYING WITHIN ANY ROAD, STREET, ALLEY OR HIGHWAY.

26. WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT SHOWN BY THE PUBLIC RECORDS.

ITEM 27 IS NOT A SURVEY–RELATED MATTER.

BASIS OF BEARINGS

THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83) ZONE V, RELATIVE TO THE NORTH AMERICAN DATUM OF 1983 (2017.50 EPOCH GPS ADJUSTMENT), BASED ON STATIC GPS TIES TO TWO CONTINUOUS GPS STATIONS (CGPS) REFERRED TO AS "P598" AND "P606", BEING NORTH 28°12'47" WEST BASED ON POSITIONS PUBLISHED IN THE CALIFORNIA SPATIAL REFERENCE CENTER.

DATUM STATEMENT
ALL DISTANCES SHOWN ARE GROUND, UNLESS OTHERWISE NOTED. TO OBTAIN GRID, MULTIPLY GROUND DISTANCE BY A COMBINED FACTOR OF 0.9997404788.

BENCHMARK

NATIONAL GEODETIC SURVEY BENCHMARK POINT ID "EV0564"
DESIGNATION: BENCHMARK DISK STAMPED "T 1152 1961"
ELEVATION: 3033.52 FEET [DATUM: NAVD 88]
LOCATION: DESCRIBED BY COAST AND GEODETIC SURVEY 1961 1 MI SE FROM LUCERNE VALLEY. 1.0 MILE SOUTHEAST ALONG STATE HIGHWAY 18 FROM THE JUNCTION OF OLD WOMAN SPRINGS ROAD AT LUCERNE VALLEY, 0.05 MILE NORTHWEST OF THE JUNCTION OF EL DORADO ROAD, 43 FEET NORTHEAST OF THE CENTER LINE OF THE HIGHWAY, 30 FEET WEST–SOUTHWEST OF THE CENTER LINE OF LADERA ROAD, 4 FEET NORTHWEST OF POWER LINE POLE 89299, 2.0 FEET SOUTHEAST OF A WITNESS POST, ABOUT 2 1/2 FEET HIGHER THAN THE HIGHWAY, AND SET IN THE TOP OF A CONCRETE POST PROJECTING 0.6 FOOT ABOVE THE GROUND.

SITE ADDRESS

7225 CRYSTAL CREEK ROAD, LUCERNE VALLEY, CALIFORNIA 92356

DATE OF SURVEY

THE TOPOGRAPHIC SURVEY OF THE AREA SHOWN ON THIS PLAT WAS SURVEYED ON APRIL 09, 2024.

SURVEYOR'S NOTES

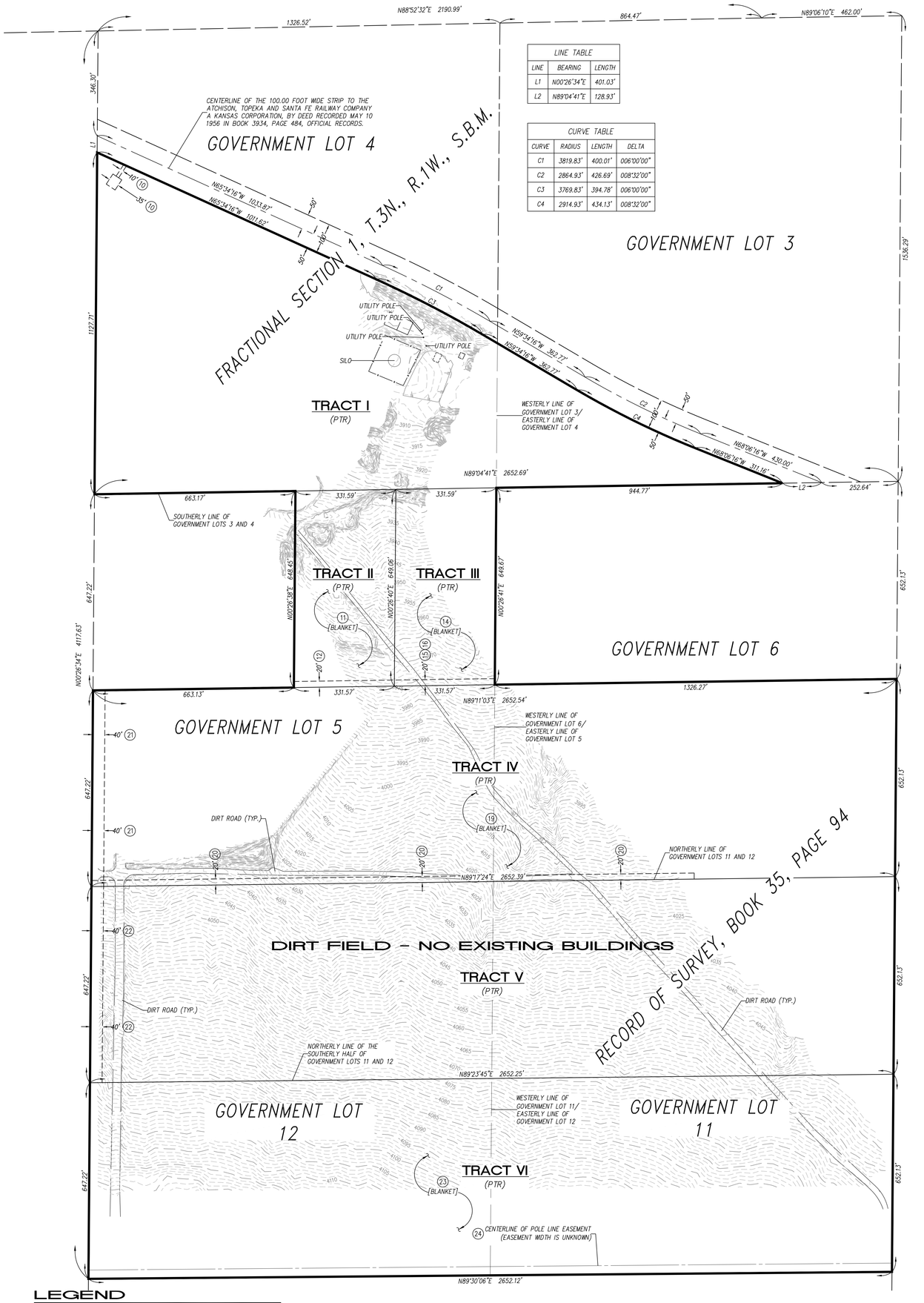
1. THE PURPOSE OF THIS SURVEY IS TO LOCATE AND PREPARE A TOPOGRAPHIC SURVEY OF THE AREA SHOWN AS SPECIFIED BY THE CLIENT.
2. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY PBLA SURVEYING, INC. OR THE SURVEYOR TO DETERMINE OWNERSHIP OF THIS PARCEL OR TO VERIFY THE DESCRIPTIONS PROVIDED. PARCEL LINES ARE SHOWN AS REFERENCE PER RECORD INFORMATION AND DOES NOT CONSTITUTE OR PURPORT TO BE A BOUNDARY SURVEY.
3. PLOTTED EASEMENTS IN THE SURVEY AREA SHOWN HEREON PER SCHEDULE B OF FIRST AMERICAN TITLE INSURANCE COMPANY, GUARANTEE NO. 7102891, DATED MARCH 19, 2024.

SURVEYOR'S STATEMENT

I HEREBY STATE THAT I AM A LICENSED LAND SURVEYOR OF THE STATE OF CALIFORNIA, THAT THIS MAP CONSISTING OF 1 SHEET REPRESENTS A TRUE AND COMPLETE SURVEY MADE BY ME OR UNDER MY DIRECTION IN APRIL, 2024

May 17 2024
PETER E. WEILBACHER, PLS 8403 — DATE:
EXPIRES 06–30–24

LICENSED LAND SURVEYOR — PETER EDWARD WEILBACHER — Exp. 06/30/24 — NO. 8403 — STATE OF CALIFORNIA

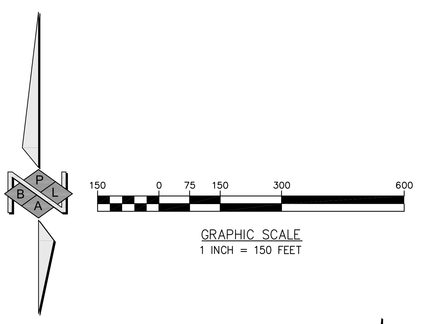


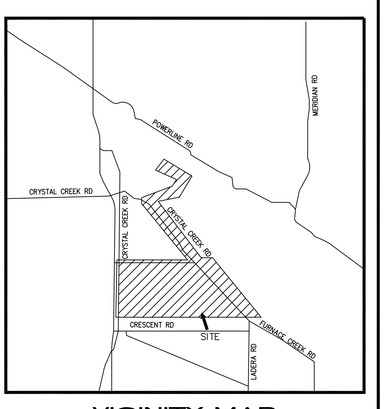
LINE TABLE		
LINE	BEARING	LENGTH
L1	N00°26'34"E	401.03'
L2	N89°04'41"E	128.93'

CURVE TABLE			
CURVE	RADIUS	LENGTH	DELTA
C1	3819.83'	400.01'	006°00'00"
C2	2864.93'	426.69'	008°32'00"
C3	3769.83'	394.78'	006°00'00"
C4	2914.93'	434.13'	008°32'00"

LEGEND

- TRACT LINE
- STREET CENTERLINE
- BOUNDARY LINE
- EASEMENT SIDELINE
- EASEMENT C/L
- LOT/PARCEL LINE
- CHAIN LINK FENCE
- (101) 1 FOOT CONTOUR INTERVAL
- (105) 5 FOOT CONTOUR INTERVAL





VICINITY MAP

NOT TO SCALE

PREPARED BY:	DATE	BY	REVISION	APP'D	JOB NO.
PBLA SURVEYING, INC.	05/03/2024	ES	FIRST RELEASE	PW	5061–1
Planning • Engineering • Surveying	05/17/2024	ES	SECOND RELEASE – BOUNDARY, EASEMENT ADDED	PW	
981 CORPORATE CENTER DR., STE. 168					
POMONA, CALIF. 91768					Sht. 1 of 1
(888) 714-9642 • (714)389-9191 FAX					

Appendix B Site Photographs

Photograph 1: From the northwest corner of the project site looking south along the western boundary.

Photograph 2: From the northwest corner of the project site looking east along the northern boundary.

Photograph 3: From the northeast corner of the project site looking south along the eastern boundary.

Photograph 4: From the northeast corner of the project site looking west along the northern boundary.

Photograph 5: From the southeast corner of the project site looking north along the eastern boundary.

Photograph 6: From the southeast corner of the project site looking west along the southern boundary.

Photograph 7: From the southwest corner of the project site looking east along the southern boundary.

Photograph 8: From the southwest corner of the project site looking north along the western boundary.

Photograph 9: From the northern boundary of the project site looking northwest along the proposed transmission line.

Photograph 10: From the middle of the proposed transmission line looking southeast along the southern portion.

Photograph 11: From the middle of the proposed transmission line looking northeast along the northern portion.

Photograph 12: Looking west towards the eastern terminus of the proposed transmission line.

Appendix C Potentially Occurring Special-Status Biological Resources

Table C-1: Potentially Occurring Special-Status Biological Resources

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Wildlife Species				
Accipiter cooperii Cooper's hawk	Fed: None CA: WL	Generally found in forested areas up to 3,000 feet in elevation, especially near edges and rivers. Prefers hardwood stands and mature forests but can be found in urban and suburban areas where there are tall trees for nesting. Common in open areas during nesting season.	No	**High** Suitable foraging habitat is present within and surrounding the project site. No nesting opportunities are present.
Aquila chrysaetos golden eagle	Fed: None CA: FP; WL	Occupies nearly all terrestrial habitats of the western states except densely forested areas. Favors secluded cliffs with overhanging ledges and large trees for nesting and cover. Hilly or mountainous country where takeoff and soaring are supported by updrafts is generally preferred to flat habitats. Deeply cut canyons rising to open mountain slopes and crags are ideal habitat.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Athene cunicularia burrowing owl	Fed: None CA: SSC	Prefers habitat with short, sparse vegetation with few shrubs and well-drained soils in grassland, shrub steppe, and desert habitats. Primarily a grassland species, but it persists and even thrives in some landscapes highly altered by human activity. Occurs in open, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. The overriding characteristics of suitable habitat appear to be burrows for roosting and nesting and relatively short vegetation with only sparse shrubs and taller vegetation.	No	**Presumed Absent** Portions of the project site are unvegetated or sparsely vegetated, providing line-of-sight observations favored by this species. Several suitable burrows (>4 inches) were observed. Routine disturbance from adjacent facilities and quarries likely preclude burrowing owl from establishing on-site.
Bombus crotchii Crotch bumble bee	Fed: None CA: CE	Colonial species that lives almost exclusively from coastal California east towards the Sierra-Cascade Crest and can be found uncommonly in western Nevada and south through Baja California. Inhabits grassland and scrub habitats in hotter and drier climates than most other bumblebee species and is only capable of tolerating a narrow range of climatic conditions. This species usually nests underground, often in abandoned rodent dens.	No	**Low** Suitable foraging habitat and refugia are present within the project site.
Bombus morrisoni Morrison bumble bee	Fed: None CA: None	Open scrub habitat. Nests above and below ground in structures and grass hummocks. Occurs throughout the west from California, east of the Sierra-Cascade Ranges, to southern British Columbia; east to New Mexico, Texas, and north to western South Dakota. Dependent on habitats with rich floral resources throughout the nesting season.	No	**Low** Suitable foraging habitat and refugia are present within the project site.
Callospermophilus lateralis bernardinus San Bernardino golden-mantled ground squirrel	Fed: None CA: None	Inhabits mountain slopes and foothills, chaparral, open areas in pine, spruce, and fir forests, rocky outcroppings and slides, margins of mountain meadows, and rocky sagebrush country; campgrounds. Often in areas with abundant stumps, rocks, or fallen logs.	No	**Presumed Absent.** There is no suitable habitat present within the project site.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Chaetodipus fallax pallidus pallid San Diego pocket mouse	Fed: None CA: None	Common resident of sandy herbaceous areas, usually in association with rocks or course gravel in southwestern California. Occurs mainly in arid coastal and desert border areas. Habitats include coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland.	No	**Low** Suitable foraging and burrowing habitat are present within the project site.
Charina umbratica southern rubber boa	Fed: None CA: **THR**	Found in a variety of montane forest habitats, particularly in the vicinity of streams or wet meadows. Requires loose, moist soil for burrowing and seeks cover in rotting logs. Restricted to the San Bernardino and San Jacinto Mountains.	No	**Presumed Absent.** There is no suitable habitat present within the project site.
Corynorhinus townsendii Townsend's big-eared bat	Fed: None CA: SSC	Found typically in montane forests; at higher elevations, the surrounding vegetation is subalpine. Roosts most commonly in caves, cliffs, and rock ledges but have been found in abandoned mines and other man-made structures.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Empidonax traillii extimus Southwestern willow flycatcher	Fed: **END** CA: **END**	Occurs in riparian woodlands in southern California. Typically requires large areas of willow thickets in broad valleys, canyon bottoms, or around ponds and lakes. These areas typically have standing or running water or are at least moist.	No	**Presumed Absent.** There is no suitable habitat present within the project site.
Ensatina eschscholtzii klauberi large-blotched salamander	Fed: None CA: WL	Inhabits moist shaded evergreen and deciduous forests and oak woodlands. Found under rocks, logs, other debris, especially bark that has peeled off and fallen beside logs and trees. Most common where there is a lot of coarse woody debris on the forest floor.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Euchloe hyantis andrewsi Andrew's marble butterfly	Fed: None CA: None	Found on the West Coast of North America from southern Oregon south through California west of the Sierra Nevada crest to northern Baja California, Mexico. Habitat consists of rocky canyons, cliffs, moraines and gravelly flats.	No	**Low** Suitable foraging habitat is present within the project site.
Eumops perotis californicus western mastiff bat	Fed: None CA: SSC	Primarily a cliff-dwelling species, roost generally under exfoliating rock slabs. Roosts are generally high above the ground, usually allowing a clear vertical drop of at least 3 meters below the entrance for flight. In California, it is most frequently encountered in broad open areas. Its foraging habitat includes dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas.	No	**Low** Suitable foraging habitat is present within the project site. Suitable roosting opportunities may be present in the cliffs to the south.
Falco mexicanus prairie falcon	Fed: None CA: WL	Commonly occur in arid and semiarid shrubland and grassland community types. Also occasionally found in open parklands within coniferous forests. During the breeding season, they are found commonly in foothills and mountains which provide cliffs and escarpments suitable for nest sites.	No	**Low** Suitable foraging habitat is present within the project site. Suitable nesting opportunities may be present in the cliffs to the south.
Glaucomys oregonensis californicus San Bernardino flying squirrel	Fed: None CA: SSC	Occurs in white fir (Abies concolor) and Jeffrey pine (Pinus jeffreyi) mixed conifer forests with black oak (Quercus kelloggii) components at higher elevations. Use cavities in large trees, snags, and logs for cover. Habitats are typically mature, dense conifer forest in close proximity to riparian areas.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Gopherus agassizii desert tortoise	Fed: **THR** CA: **END**	Occurs in desert scrub, desert wash, and Joshua tree habitats with friable, sandy, well-drained soils for nest and burrow construction. Highest densities occur in creosote bush scrub with extensive annual wildflower blooms and succulents with little to no non-native plant species.	No	**Low** Suitable foraging and burrowing habitat are present within and surrounding the project site to the west, south, and east.
Haliaeetus leucocephalus bald eagle	Fed: DL CA: **END**; FP	Occur primarily at or near seacoasts, rivers, swamps, and large lakes. Need ample foraging opportunities, typically near a large water source.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Hydroporus simplex Simple hydroporus diving beetle	Fed: None CA: None	Known Pinecrest in Tuolumne County and San Bernardino National Forest, 3 miles north of Big Bear Lake. Habitat poorly understood, has been collected from a creek and an impounded water body, could occur in lakes or ponds. Probably uses microhabitats in shallow edge areas with abundant aquatic vegetation. May occur in small lakes and ponds in other parts of the Sierra Nevada.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Lanius ludovicianus loggerhead shrike	Fed: None CA: SSC	Prefers open habitats with bare ground, scattered shrubs, and areas with low or sparse herbaceous cover including open-canopied valley foothill hardwood, riparian, pinyon-juniper, desert riparian, creosote bush scrub, and Joshua tree woodland. Requires suitable perches including trees, posts, fences, utility lines, or other perches.	No	**High** Suitable foraging and nesting habitat are present within and surrounding the project site.
Lasionycteris noctivagans silver-haired bat	Fed: None CA: None	Resides mainly in forested habitats from lower elevations to over 3,600 feet. Roosts under loose bark, in dead trees or snags, inside hollow cavities of trees, in buildings, rock crevices, wood piles, and on cliff faces.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Myotis evotis long-eared myotis	Fed: None CA: None	Found predominantly in coniferous forests, typically only at higher elevations in southern areas between 7,000 and 8,500 feet. From British Columbia to northern Arizona, they roost in tree cavities and beneath exfoliating bark in both living trees and dead snags.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Myotis thysandodes Fringed myotis	Fed: None CA: None	Inhabit a variety of plant communities including desert scrub, dry grasslands, shrub steppe, drier forest, moist coastal coniferous forest, and riparian forest, but drier woodlands (e.g., oak, pinyon-juniper, and ponderosa pine) are often preferred. Roosts in caves, buildings, underground mines, rock crevices in cliff faces and bridges	No	**Low** Suitable foraging habitat is present within the project site. Suitable roosting opportunities may be present in the cliffs to the south.
Myotis Volans long-legged myotis	Fed: None CA: None	Found primarily in coniferous forests, but the species also occurs seasonally in riparian and desert habitats. Range across western North America from southeastern Alaska, British Columbia and Alberta in Canada to Baja California and central Mexico.	No	**Low** Suitable foraging habitat is present within the project site. Suitable roosting opportunities may be present in the cliffs to the south.
Myotis yumanensis Yuma myotis	Fed: None CA: None	Found in forests and woodlands near water. Roosts in caves, buildings, mines, and crevices.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Neotamias speciosus speciosus lodgepole chipmunk	Fed: None CA: None	Occurs in open-canopy forests of mixed conifer and pine, and occasionally in chaparral.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Ovis canadensis nelsoni desert bighorn sheep	Fed: None CA: FP	Preferred habitat is near mountainous terrain above the desert floor that is visually open, as well as steep and rocky. Most Mojave Desert mountain ranges satisfy these requirements well. Surface water is another element that is considered important to population health. Found mainly in the Peninsular Ranges.	No	**Low** Suitable spring foraging habitat is present within and adjacent to the project site.
Pandion haliaetus osprey	Fed: None CA: WL	Associated strictly with large, fish-bearing waters, primarily in ponderosa pine through mixed conifer habitats. Uses large trees, snags, and dead-topped trees in open forest habitats for cover and nesting. Requires open, clear waters for foraging and uses rivers, lakes, reservoirs, bays, estuaries, and surf zones.	No	**Presumed Absent.** There is no suitable habitat present within the project site.
Rana muscosa southern mountain yellow-legged frog	Fed: **END** CA: **END**;WL	Occurs in lower elevation habitats characterized by rocky streambeds and wet meadows, while higher elevation habitats include lakes, ponds, and streams. Occupy streams in narrow, rock-walled canyons. Often found along rock walls or vegetated banks and always within a few feet of the water.	No	**Presumed Absent.** There is no suitable habitat present within the project site.
Strix occidentalis occidentalis California spotted owl	Fed: PE;PT CA: SSC	Breeds and roosts in forests and woodland with large old trees and snags, high basal areas of trees and snags, dense canopies, multiple canopy layers, and downed woody debris. Large old trees are key as they provide nest sites and cover from weather.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Thamnophis hammondii Two-striped gartersnake	Fed: None CA: SSC	Utilizes a variety of habitats including forests, mixed woodlands, grassland, chaparral, and farmlands. Often found near ponds, marshes, or streams.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Toxostoma lecontei Le Conte's thrasher	Fed: None CA: SSC	An uncommon to rare, local resident in southern California deserts from southern Mono Co. south to the Mexican border, and in western and southern San Joaquin Valley. Usually sparsely distributed in mostly flat or rolling areas such as small arroyos, open flats, or dunes, where saltbush, shadscale, cholla cactus, creosote, yucca, mesquite, and ocotillo are plants. Rainfall and flowing streams are scarce, and air temperatures are among the highest recorded on earth. Tend to avoid steep-sided canyons.	No	**Low** Suitable foraging and nesting habitat are present within and surrounding the project site to the west, north, and east.
Uma scoparia Mojave fringe-toed lizard	Fed: None CA: SSC	Sparsely vegetated arid areas with fine wind-blown sand, including dunes, flats with sandy hummocks formed around the bases of vegetation, washes, and the banks of rivers. Needs fine, loose sand for burrowing.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Xerospermophilus mohavensis Mohave ground squirrel	Fed: None CA: **THR**	Restricted to the Mojave Desert in open desert scrub, alkali desert scrub, annual grassland, and Joshua tree woodland. Prefers sandy to gravelly soils and tends to avoid rocky areas. Occurs sympatrically with the white-tailed antelope squirrel.	No	**Presumed Absent** Suitable foraging habitat is present within the project site. Suitable burrowing habitat is not present.
Plant Species				

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Abronia nana* var. *covillei Covilles dwarf abronia	Fed: None CA: None CNPS: 4.2	Carbonate, Sandy microhabitats within Great Basin scrub, Joshua tree "woodland", Pinyon and juniper woodland, Subalpine coniferous forest, Upper montane coniferous forest. Found at elevations ranging from 5000 to 10170 feet. Blooms in May-August.	No	**Presumed Absent** The project site is located outside of the geographical range of this species.
Acanthoscyphus parishii* var. *goodmaniana Cushenbury oxytheca	Fed: **END** CA: None CNPS: 1B.1	Carbonate, Sandy microhabitats within Pinyon and juniper woodland (carbonate, talus). Found at elevations ranging from 4000 to 7800 feet. Blooms in May-October.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Allium parishii Parish's onion	Fed: None CA: None CNPS: 4.3	Rocky microhabitats within Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland. Found at elevations ranging from 2955 to 5695 feet. Blooms in April-May.	No	**Presumed Absent:** No suitable habitat is present within the project site.
Astragalus albens Cushenbury milk-vetch	Fed: **END** CA: None CNPS: 1B.1	Carbonate (usually), Granitic (rarely) microhabitats within Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland. Found at elevations ranging from 3595 to 6560 feet. Blooms in March-June.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Astragalus bernardinus San Bernardino milk-vetch	Fed: None CA: None CNPS: 1B.2	Carbonate (often), Granitic (often) microhabitats within Joshua tree "woodland", Pinyon and juniper woodland. Found at elevations ranging from 2955 to 6560 feet. Blooms in April-June.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Astragalus bicristatus crested milk-vetch	Fed: None CA: None CNPS: 4.3	Carbonate (usually), Rocky (sometimes), Sandy (sometimes) microhabitats within Lower montane coniferous forest, Upper montane coniferous forest. Found at elevations ranging from 5580 to 9005 feet. Blooms in May-August.	No	**Presumed Absent** The project site is located outside of the geographical range of this species.
Astragalus lentiginosus* var. *sierrae Big Bear Valley milk-vetch	Fed: None CA: None CNPS: 1B.2	Gravelly (sometimes), Rocky (sometimes) microhabitats within Meadows and seeps, Mojavean desert scrub, Pinyon and juniper woodland, Upper montane coniferous forest. Found at elevations ranging from 5905 to 8530 feet. Blooms in April-August.	No	**Presumed Absent** The project site is located outside of the geographical range of this species.
Astragalus leucolobus Big Bear Valley woollypod	Fed: None CA: None CNPS: 1B.2	Rocky microhabitats within Lower montane coniferous forest, Pebble (Pavement) plain, Pinyon and juniper woodland, Upper montane coniferous forest. Found at elevations ranging from 3610 to 9465 feet. Blooms in May-July.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Boechera parishii Parish's rockcress	Fed: None CA: None CNPS: 1B.2	Carbonate (sometimes), Rocky microhabitats within Pebble (Pavement) plain, Pinyon and juniper woodland, Upper montane coniferous forest. Found at elevations ranging from 5805 to 9810 feet. Blooms in April-May.	No	**Presumed Absent** The project site is located outside of the geographical range of this species.
Boechera shockleyi Shockleys rockcress	Fed: None CA: None CNPS: 2B.2	Pinyon and juniper woodland (carbonate, gravelly, quartzite, rocky). Found at elevations ranging from 2870 to 7580 feet. Blooms in May-June.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Calochortus palmeri* var. *palmeri Palmer's mariposa-lily	Fed: None CA: None CNPS: 1B.2	Mesic microhabitats within Chaparral, Lower montane coniferous forest, Meadows and seeps. Found at elevations ranging from 2330 to 7840 feet. Blooms in April-July.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Calochortus striatus alkali mariposa-lily	Fed: None CA: None CNPS: 1B.2	Alkaline, Mesic microhabitats within Chaparral, Chenopod scrub, Meadows and seeps, Mojavean desert scrub. Found at elevations ranging from 230 to 5235 feet. Blooms in April-June.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Canbya candida white pygmy-poppy	Fed: None CA: None CNPS: 4.2	Granitic, Gravelly, Sandy microhabitats within Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland. Found at elevations ranging from 1970 to 4790 feet. Blooms in March-June.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Carex scirpoidea ssp. pseudoscirpoidea western single-spiked sedge	Fed: None CA: None CNPS: 2B.2	Carbonate (often), Mesic microhabitats within Alpine boulder and rock field, Meadows and seeps, Subalpine coniferous forest (rocky). Found at elevations ranging from 9810 to 12140 feet. Blooms in July-September.	No	**Presumed Absent** The project site is located outside of the geographical range of this species.
Castilleja cinerea ash-grey paintbrush	Fed: **THR** CA: None CNPS: 1B.2	Meadows and seeps, Mojavean desert scrub, Pebble (Pavement) plain, Pinyon and juniper woodland, Upper montane coniferous forest (clay, openings). Found at elevations ranging from 5905 to 9710 feet. Blooms in June-August.	No	**Presumed Absent** The project site is located outside of the geographical range of this species.
Castilleja lasiorhyncha San Bernardino Mountains owl's-clover	Fed: None CA: None CNPS: 1B.2	Mesic microhabitats within Chaparral, Meadows and seeps, Pebble (Pavement) plain, Riparian woodland, Upper montane coniferous forest. Found at elevations ranging from 4265 to 7840 feet. Blooms in May-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. Th project site is located outside of the geographical range of this species.
Castilleja montigena Heckard's paintbrush	Fed: None CA: None CNPS: 4.3	Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest. Found at elevations ranging from 6400 to 9185 feet. Blooms in May-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Castilleja plagiotoma Mojave paintbrush	Fed: None CA: None CNPS: 4.3	Great Basin scrub (alluvial), Joshua tree "woodland", Lower montane coniferous forest, Pinyon and juniper woodland. Found at elevations ranging from 985 to 8205 feet. Blooms in April-June.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Chorizanthe spinosa Mojave spineflower	Fed: None CA: None CNPS: 4.2	Alkaline (sometimes) microhabitats within Chenopod scrub, Joshua tree "woodland", Mojavean desert scrub, Playas. Found at elevations ranging from 20 to 4265 feet. Blooms in March-July.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Claytonia peirsonii ssp. bernardinus San Bernardino spring beauty	Fed: None CA: None CNPS: 1B.1	Carbonate, Openings (usually), Rocky, Talus microhabitats within Pinyon and juniper woodland, Upper montane coniferous forest. Found at elevations ranging from 7745 to 8090 feet. Blooms in March-April.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Claytonia peirsonii ssp. californacis Furnace spring beauty	Fed: None CA: None CNPS: 1B.1	Carbonate, Openings (usually), Rocky, Talus microhabitats within Pinyon and juniper woodland, Upper montane coniferous forest. Found at elevations ranging from 7545 to 7545 feet. Blooms in March-May.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Cordylanthus eremicus ssp. eremicus desert birds-beak	Fed: None CA: None CNPS: 4.3	Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland. Found at elevations ranging from 3280 to 9845 feet. Blooms in July-October.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Cymopterus multinervatus purple-nerve cymopterus	Fed: None CA: None CNPS: 2B.2	Gravelly (sometimes), Sandy (sometimes) microhabitats within Mojavean desert scrub, Pinyon and juniper woodland. Found at elevations ranging from 2590 to 5905 feet. Blooms in March-April.	Yes	**Present** Several individuals were observed in the middle of the southern portion of the project site. Suitable habitat for this species is present within and surrounding the site.
Delphinium parryi ssp. purpureum Mt. Pinos larkspur	Fed: None CA: None CNPS: 4.3	Chaparral, Mojavean desert scrub, Pinyon and juniper woodland. Found at elevations ranging from 3280 to 8530 feet. Blooms in May-June.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Diplacus johnstonii Johnstons monkeyflower	Fed: None CA: None CNPS: 4.3	Lower montane coniferous forest (disturbed areas, gravelly, roadsides, rocky, scree). Found at elevations ranging from 3200 to 9580 feet. Blooms in May-August.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Drymocallis cuneifolia var. cuneifolia wedgeleaf woodbeauty	Fed: None CA: None CNPS: 1B.1	Carbonate (sometimes) microhabitats within Riparian scrub, Upper montane coniferous forest. Elevation range is unknown; known from 5905 feet. Blooms in June-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Dryopteris filix-mas male fern	Fed: None CA: None CNPS: 2B.3	Upper montane coniferous forest (granitic, rocky). Elevation range is unknown; known from 7875 feet. Blooms in July-September.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Dudleya abramsii* ssp. *affinis San Bernardino Mountains dudleya	Fed: None CA: None CNPS: 1B.2	Carbonate (sometimes), Granitic (sometimes) microhabitats within Pebble (Pavement) plain, Pinyon and juniper woodland, Upper montane coniferous forest. Elevation range is unknown; known from 4100 feet. Blooms in April-July.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Elymus salina Salina Pass wild-rye	Fed: None CA: None CNPS: 2B.3	Pinyon and juniper woodland (rocky). Elevation range is unknown; known from 4430 feet. Blooms in May-June.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Eremogone ursina Big Bear Valley sandwort	Fed: **THR** CA: None CNPS: 1B.2	Mesic, Rocky microhabitats within Meadows and seeps, Pebble (Pavement) plain, Pinyon and juniper woodland. Elevation range is unknown; known from 5905 feet. Blooms in May-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Erigeron breweri var. jacinteus San Jacinto Mountains daisy	Fed: None CA: None CNPS: 4.3	Rocky microhabitats within Subalpine coniferous forest, Upper montane coniferous forest. Elevation range is unknown; known from 8860 feet. Blooms in June-September.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Erigeron parishii Parish's daisy	Fed: **THR** CA: None CNPS: 1B.1	Carbonate (usually), Granitic (sometimes) microhabitats within Mojavean desert scrub, Pinyon and juniper woodland. Elevation range is unknown; known from 2625 feet. Blooms in May-August.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Eriogonum evanidum vanishing wild buckwheat	Fed: None CA: None CNPS: 1B.1	Gravelly (sometimes), Sandy (sometimes) microhabitats within Chaparral, Cismontane woodland, Lower montane coniferous forest, Pinyon and juniper woodland. Elevation range is unknown; known from 3610 feet. Blooms in July-October.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Eriogonum kennedyi var. austromontanum southern mountain buckwheat	Fed: **THR** CA: None CNPS: 1B.2	Lower montane coniferous forest (gravelly), Pebble (Pavement) plain. Elevation range is unknown; known from 5805 feet. Blooms in June-September.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Eriogonum microthecum var. johnstonii Johnston's buckwheat	Fed: None CA: None CNPS: 1B.3	Rocky microhabitats within Subalpine coniferous forest, Upper montane coniferous forest. Elevation range is unknown; known from 6000 feet. Blooms in July-September.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Eriogonum ovalifolium var. vineum Cushenbury buckwheat	Fed: **END** CA: None CNPS: 1B.1	Carbonate microhabitats within Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland. Elevation range is unknown; known from 4595 feet. Blooms in May-August.	No	**Presumed Absent** The project site is located outside of the geographical range of this species.
Eriogonum umbellatum var. minus alpine sulphur-flowered buckwheat	Fed: None CA: None CNPS: 4.3	Gravelly microhabitats within Subalpine coniferous forest, Upper montane coniferous forest. Elevation range is unknown; known from 5905 feet. Blooms in June-September.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Eriophyllum lanatum* var. *obovatum southern Sierra woolly sunflower	Fed: None CA: None CNPS: 4.3	Loam, Sandy microhabitats within Lower montane coniferous forest, Upper montane coniferous forest. Elevation range is unknown; known from 3655 feet. Blooms in June-July.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Erythranthe exigua San Bernardino Mountains monkeyflower	Fed: None CA: None CNPS: 1B.2	Clay, Mesic microhabitats within Meadows and seeps, Pebble (Pavement) plain, Upper montane coniferous forest. Elevation range is unknown; known from 5905 feet. Blooms in May-July.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Erythranthe purpurea little purple monkeyflower	Fed: None CA: None CNPS: 1B.2	Meadows and seeps, Pebble (Pavement) plain, Upper montane coniferous forest. Elevation range is unknown; known from 6235 feet. Blooms in May-June.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Frasera neglecta pine green-gentian	Fed: None CA: None CNPS: 4.3	Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest. Elevation range is unknown; known from 4595 feet. Blooms in May-July.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Fritillaria pinetorum pine fritillary	Fed: None CA: None CNPS: 4.3	Granitic (sometimes), Metamorphic (sometimes) microhabitats within Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, Subalpine coniferous forest, Upper montane coniferous forest. Elevation range is unknown; known from 5695 feet. Blooms in May-July(September).	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Galium angustifolium* ssp. *gracillimum slender bedstraw	Fed: None CA: None CNPS: 4.2	Granitic, Rocky microhabitats within Joshua tree "woodland", Sonoran desert scrub. Elevation range is unknown; known from 425 feet. Blooms in April-June(July).	No	**Low** Suitable habitat is present within and adjacent to the project site.
Heuchera parishii Parish's alumroot	Fed: None CA: None CNPS: 1B.3	Carbonate (sometimes), Rocky microhabitats within Alpine boulder and rock field, Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest. Elevation range is unknown; known from 4920 feet. Blooms in June-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Hulsea vestita* ssp. *parryi Parry's hulsea	Fed: None CA: None CNPS: 4.3	Carbonate (sometimes), Granitic (sometimes), Openings, Rocky microhabitats within Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest. Elevation range is unknown; known from 4495 feet. Blooms in April-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Ivesia argyrocoma* var. *argyrocoma silver-haired ivesia	Fed: None CA: None CNPS: 1B.2	Meadows and seeps (alkaline), Pebble (Pavement) plain, Upper montane coniferous forest. Found at elevations ranging from 4,800 to 9,710 feet. Blooms in June-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Johnstonella holoptera winged cryptantha	Fed: None CA: None CNPS: 4.3	Mojavean desert scrub, Sonoran desert scrub. Found at elevations ranging from 330 feet to 5,545 feet. Blooms in March-April.	No	**Low** There is suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Lewisia brachycalyx short-sepaled lewisia	Fed: None CA: None CNPS: 2B.2	Mesic microhabitats within Lower montane coniferous forest, Meadows and seeps. Elevation range is unknown; known from 4495 feet. Blooms in (February)April-June(July).	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Lilium parryi lemon lily	Fed: None CA: None CNPS: 1B.2	Mesic microhabitats within Lower montane coniferous forest, Meadows and seeps, Riparian forest, Upper montane coniferous forest. Elevation range is unknown; known from 4005 feet. Blooms in July-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Monardella exilis Mojave monardella	Fed: None CA: None CNPS: 4.2	Sandy microhabitats within Chenopod scrub, Desert dunes, Great Basin scrub, Joshua tree "woodland", Lower montane coniferous forest, Mojavean desert scrub, Pinyon and juniper woodland. Found at elevations ranging from 1,970 to 6,725. Blooms in April-September.	No	**Low** There is suitable habitat present within or adjacent to the project site.
Myosurus minimus ssp. apus little mousetail	Fed: None CA: None CNPS: 3.1	Valley and foothill grassland, Vernal pools (alkaline). Found at elevations ranging from 66 to 2,100 feet. Blooms in March-June.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Navarretia peninsularis Baja navarretia	Fed: None CA: None CNPS: 1B.2	Mesic microhabitats within Chaparral (openings), Lower montane coniferous forest, Meadows and seeps, Pinyon and juniper woodland. Elevation range is unknown; known from 4920 feet. Blooms in (May)June-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Packera bernardina San Bernardino ragwort	Fed: None CA: None CNPS: 1B.2	Meadows and seeps (mesic, sometimes alkaline), Pebble (Pavement) plain, Upper montane coniferous forest. Elevation range is unknown; known from 5905 feet. Blooms in May-July.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Perideridia parishii* ssp. *parishii Parish's yampah	Fed: None CA: None CNPS: 2B.2	Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest. Elevation range is unknown; known from 4805 feet. Blooms in June-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Phacelia exilis Transverse Range phacelia	Fed: None CA: None CNPS: 4.3	Gravelly (sometimes), Sandy (sometimes) microhabitats within Lower montane coniferous forest, Meadows and seeps, Pebble (Pavement) plain, Upper montane coniferous forest. Elevation range is unknown; known from 3610 feet. Blooms in May-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Phacelia mohavensis Mojave phacelia	Fed: None CA: None CNPS: 4.3	Gravelly (sometimes), Sandy (sometimes) microhabitats within Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pinyon and juniper woodland. Elevation range is unknown; known from 4595 feet. Blooms in April-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Phacelia parishii Big Bear Valley phlox	Fed: None CA: None CNPS: 1B.1	Alkaline (sometimes), Clay (sometimes) microhabitats within Mojavean desert scrub, Playas. Found at elevations ranging from 1,770 to 3,935 feet. Blooms in April-May(June-July).	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Phlox dolichantha Big Bear Valley phlox	Fed: None CA: None CNPS: 1B.2	Pebble (Pavement) plain, Upper montane coniferous forest (openings). Found at elevations ranging from 6,005 to 9,745 feet. Blooms in May-July.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Physaria kingii ssp. Bernardina San Bernardino Mountains bladderpod	Fed: **END** CA: None CNPS: 1B.1	Carbonate (usually) microhabitats within Lower montane coniferous forest, Pinyon and juniper woodland, Subalpine coniferous forest. Elevation range is unknown; known from 6070 feet. Blooms in May-June.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Plagiobothrys parishii Parishs popcornflower	Fed: None CA: None CNPS: 1B.1	Alkaline, Mesic microhabitats within Great Basin scrub, Joshua tree "woodland". Elevation range is unknown; known from 2460 feet. Blooms in March-June(November).	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Poa atropurpurea San Bernardino bluegrass	Fed: **END** CA: None CNPS: 1B.2	Meadows and seeps (mesic). Elevation range is unknown; known from 4460 feet. Blooms in (April)May-July(August).	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Puccinellia parishii Parish's alkali grass	Fed: None CA: None CNPS: 1B.1	Meadows and seeps (alkaline springs, seeps). Elevation range is unknown; known from 2295 feet. Blooms in April-May.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Puccinellia simplex California alkali grass	Fed: None CA: None CNPS: 1B.2	Alkaline, Flats, Lake Margins, Vernally Mesic microhabitats within Chenopod scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools. Elevation range is unknown; known from 5 feet. Blooms in March-May.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Pyrrocoma uniflora* var. *gossypina Bear Valley pyrrocoma	Fed: None CA: None CNPS: 1B.2	Meadows and seeps, Pebble (Pavement) plain. Elevation range is unknown; known from 5250 feet. Blooms in July-September.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Rosa woodsii* var. *glabrata Cushenbury rose	Fed: None CA: None CNPS: 1B.1	Mojavean desert scrub (springs). Elevation range is unknown; known from 2985 feet. Blooms in (April)May-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Rupertia rigida Parish's rupertia	Fed: None CA: None CNPS: 4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pebble (Pavement) plain, Valley and foothill grassland. Elevation range is unknown; known from 2295 feet. Blooms in June-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Saltugilia latimeri Latimer's woodland-gilia	Fed: None CA: None CNPS: 1B.2	Granitic (often), Rocky (sometimes), Sandy (sometimes), Washes (sometimes) microhabitats within Chaparral, Mojavean desert scrub, Pinyon and juniper woodland. Elevation range is unknown; known from 1310 feet. Blooms in March-June.	No	**Low** There is suitable habitat present within or adjacent to the project site.
Sedum niveum Davidsons stonecrop	Fed: None CA: None CNPS: 4.2	Rocky microhabitats within Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest. Elevation range is unknown; known from 6810 feet. Blooms in June-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Sidalcea neomexicana Salt Spring checkerbloom	Fed: None CA: None CNPS: 2B.2	Alkaline, Mesic microhabitats within Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas. Elevation range is unknown; known from 50 feet. Blooms in March-June.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Sidalcea pedata bird-foot checkerbloom	Fed: **END** CA: **END** CNPS: 1B.1	Meadows and seeps (mesic), Pebble (Pavement) plain. Elevation range is unknown; known from 5250 feet. Blooms in May-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Sidotheca caryophylloides chickweed oxytheca	Fed: None CA: None CNPS: 4.3	Lower montane coniferous forest (sandy). Elevation range is unknown; known from 3655 feet. Blooms in July-September(October).	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Streptanthus bernardinus Laguna Mountains jewelflower	Fed: None CA: None CNPS: 4.3	Chaparral, Lower montane coniferous forest. Elevation range is unknown; known from 2200 feet. Blooms in May-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Taraxacum californicum California dandelion	Fed: **END** CA: None CNPS: 1B.1	Meadows and seeps (mesic). Elevation range is unknown; known from 5315 feet. Blooms in May-August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Thelypodium stenopetalum Slender-petaled theylypodium	Fed: **END** CA: **END** CNPS: 1B.1	Meadows and seeps (mesic, alkaline). Elevation range is unknown; known from 5250 feet. Blooms in May-September.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Trichostema micranthum small-flowered bluecurls	Fed: None CA: None CNPS: 4.3	Mesic microhabitats within Lower montane coniferous forest, Meadows and seeps. Elevation range is unknown; known from 5005 feet. Blooms in June-September.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Viola pinetorum ssp. grisea grey-leaved violet	Fed: None CA: None CNPS: 1B.2	Meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest. Elevation range is unknown; known from 4920 feet. Blooms in April-July.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Yucca brevifolia western Joshua tree	Fed: None CA: CE CNPS: N/A	Occurs in a variety of arid habitats within the Mojave Desert. Found at elevations ranging from 1,600 to 6,600 feet. Blooming period is from March to June.	Yes	**Present** This species is found throughout the project site. Suitable habitat is present within and surrounding the site.
Plant Communities				
Pebble Plains	CDFW Sensitive Habitat	Unique habitat formed by glacial retreat. Characterized by unusual soil composition primarily composed of clay and volcanic pebbles, which results in poor nutrient content and limited water retention. Deep clay pockets subject to freezing temperatures push crushed rock to the surface. Restricted to a series of small islands of habitat within the larger Pine Forests that dominate the vicinities of Baldwin Lake and Big Bear Lake. Key indicator species are Kennedy buckwheat (*Eriogonum kennedyii austromontanum*), ash-grey paintbrush (*Castilleja cinerea*), and Bear Valley sandwort (*Arenaria ursina*).	No	**Absent**

U.S. Fish and Wildlife Service (Fed) - Federal
END – Federal Endangered
THR – Federal Threatened
DL – Delisted
PE – Proposed Endangered
PT – Proposed Threatened

California Department of Fish and Wildlife (CA) - California
END – California Endangered
THR – California Threatened
CTHR – California Candidate Threatened
DL - Delisted
FP – California Fully Protected
SSC – California Species of Special Concern
WL – California Watch List

California Native Plant Society (CNPS) -
California Rare Plant Rank
1B Plants Rare, Threatened, or Endangered in California and Elsewhere
2B Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
4 Plants of Limited Distribution – A Watch List

Threat Ranks
0.2- Moderately threatened in California
0.3- Not very threatened in California

Appendix D 2024 Spring Blooming Special-Status Plant Focused Survey Report

POWERFLEX
SOLAR GROUND MOUNT SYSTEM AT OMYA - LUCERNE VALLEY

LUCERNE VALLEY SAN BERNARDINO COUNTY, CALIFORNIA

2024 Spring-Blooming Special-Status Plant Focused Survey Report

---

Prepared For:

PowerFlex
15445 Innovation Drive
San Diego, California 92128
Contact: *Michael Landler*

Prepared By:

ELMT Consulting
2201 N. Grand Avenue #10098
Santa Ana, California 2711
Contact: *Travis J. McGill*

March 2025

POWERFLEX
SOLAR GROUND MOUNT SYSTEM AT OMYA - LUCERNE VALLEY

LUCERNE VALLEY SAN BERNARDINO COUNTY, CALIFORNIA

2024 Spring-Blooming Special-Status Plant Focused Survey Report

---

The undersigned certify that the statements furnished in this report and exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented is a complete and accurate account of the findings and conclusions to the best of our knowledge and beliefs.

Travis J. McGill
Director

Thomas J. McGill, Ph.D.
Managing Director

March 2025

Table of Contents

EXHIBITS

APPENDIX

Section 1 Introduction

ELMT Consulting (ELMT) conducted a focused special-status plant survey in the spring of 2024 for the PowerFlex's Solar Ground Mount System at OMYA - Lucerne Valley (project or project site) located in Lucerne Valley, San Bernardino County, California. ELMT conducted two (2) focused plant surveys on April 11, and May 17, 2024, to coincide with the flowering periods of Cushenberry milk-vetch (*Astragalus albens*), Parish's daisy (*Erigeron parishii*), purple-nerve cymopterus (*Cymopterus multinervatus*), and other spring-blooming special-status[1] plant species known to occur within the general vicinity of the project site.

The survey was conducted in accordance with the California Department of Fish and Wildlife's (CDFWs) *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018) as well as the United States Fish and Wildlife Service (USFWS) *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (USFWS 1996). The findings of the survey will be used to establish constraints, if any, to development including measures to avoid impacts to any federally and state listed plant species and California Native Plant Society (CNPS) *California Rare Plant Rank* plant species.

Based on the results of the literature search and initial biological resources evaluation, the survey focused on the presence/absence of Cushenberry milk-vetch, which blooms from March to June, Parish's daisy, which blooms from May to August, and purple-nerve cymopterus, which blooms from March to April. Cushenberry milk-vetch is Federally listed as Endangered and is designated by the CNPS as a Rare Plant Rank 1B.1 species. Parish's daisy is Federally listed as Threatened and is designated by the CNPS as a Rare Plant Rank 1B.1 species. Purple-nerve cymopterus is neither a federally or state listed species but is designated by the CNPS as a Rare Plant Rank 2B.2 species, and was observed on-site during the surveys.

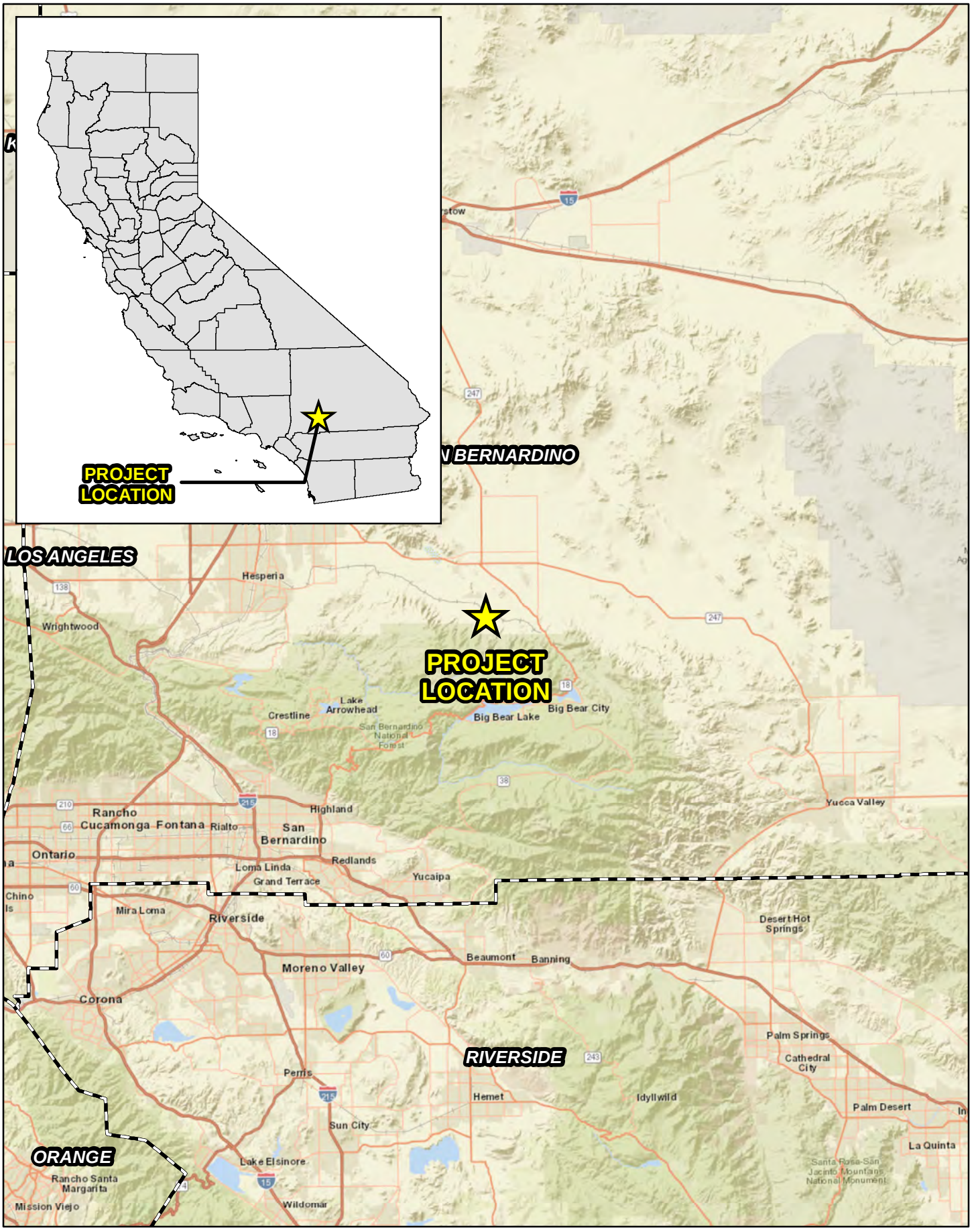
Additionally, western Joshua tree, which is state-listed candidate species was observed as occurring within the project site. The California Fish and Game Commission (Commission) designated the western Joshua tree as a candidate for listing under the California Endangered Species Act (CESA) in October 2020. This action afforded the western Joshua tree the same CESA protections as listed species, which means that removal of the desert trees was subject to fines and criminal penalties unless authorized by a "take" permit issued by the CDFW. The location, size class, and overall health of every western Joshua tree encountered within the project site was recorded to be used when determining appropriate mitigation for impacts to western Joshua tree through project implementation.

1.1 PROJECT LOCATION

The project site is generally located north of the San Bernardino Mountains, west and south of State Route 18, and east of Interstate 15 in the census-designated place Lucerne Valley, San Bernardino County, California (refer to Exhibit 1, *Regional Vicinity*). The site is depicted on both the Lucerne

[1] As used in this report, "special-status" refers to plant species that are federally or State listed, proposed, or candidates; and plant species that have been designated a California Native Plant Society (CNPS) Rare Plant Rank.

Valley and Fawnskin quadrangles of the United States Geological Survey's (USGS) 7.5-minute map series within Sections 1 and 2 of Township 3 North, Range 1 West (Exhibit 2, *Site Vicinity*). Specifically, the project site is located at the northeast corner of the intersection of Crystal Creek Road and Crescent Road within Assessor Parcel Numbers 0446-033-18, and -19, and within portions of the existing OMYA facility located at 7225 Crystal Creek Road (Exhibit 3, *Project Site*).



ELMT CONSULTING

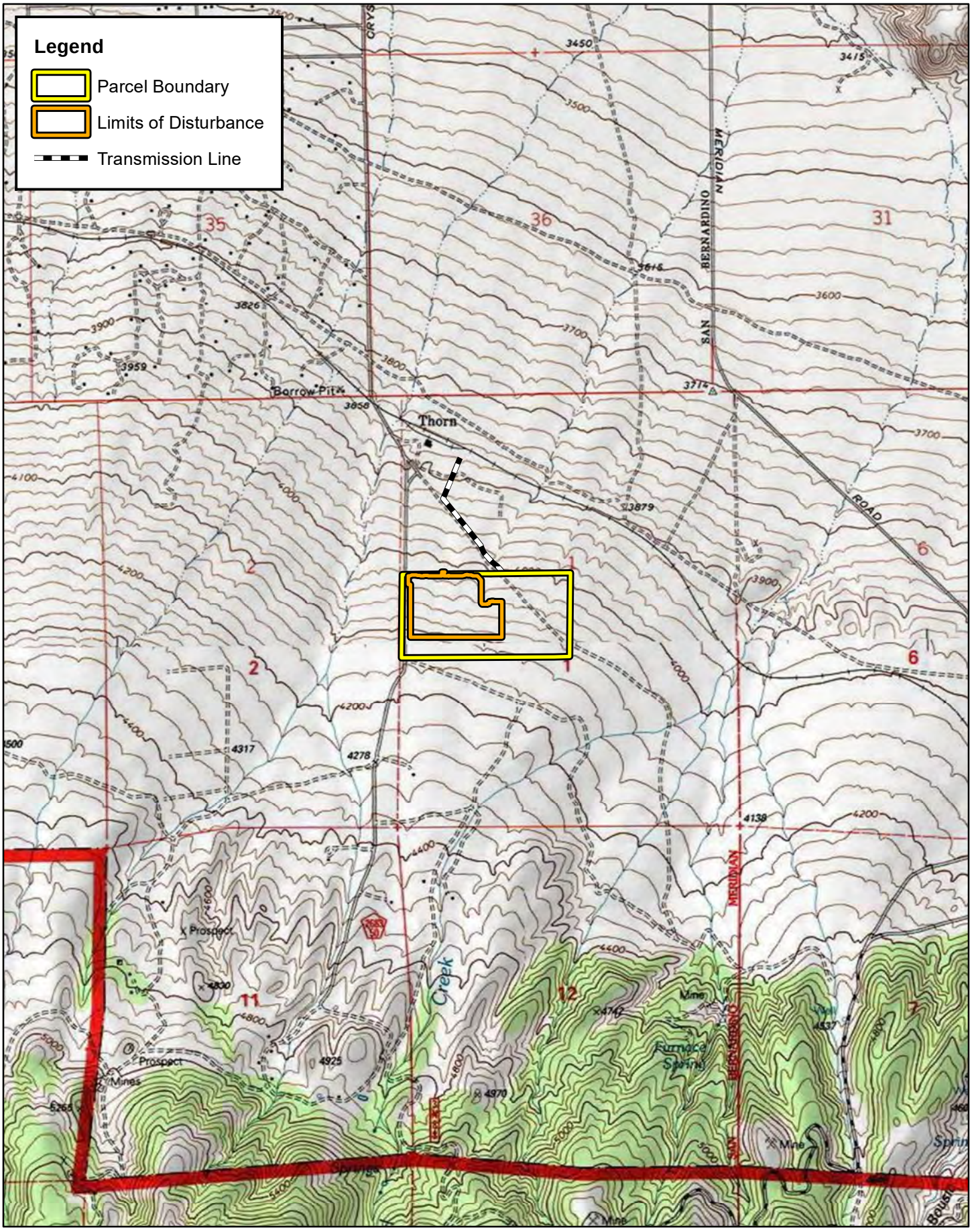
0 2.5 5 10 Miles

Source: World Street Map, San Bernardino County

POWERFLEX - SOLAR (OMYA - LUCERNE VALLEY)

Regional Vicinity

Exhibit 1



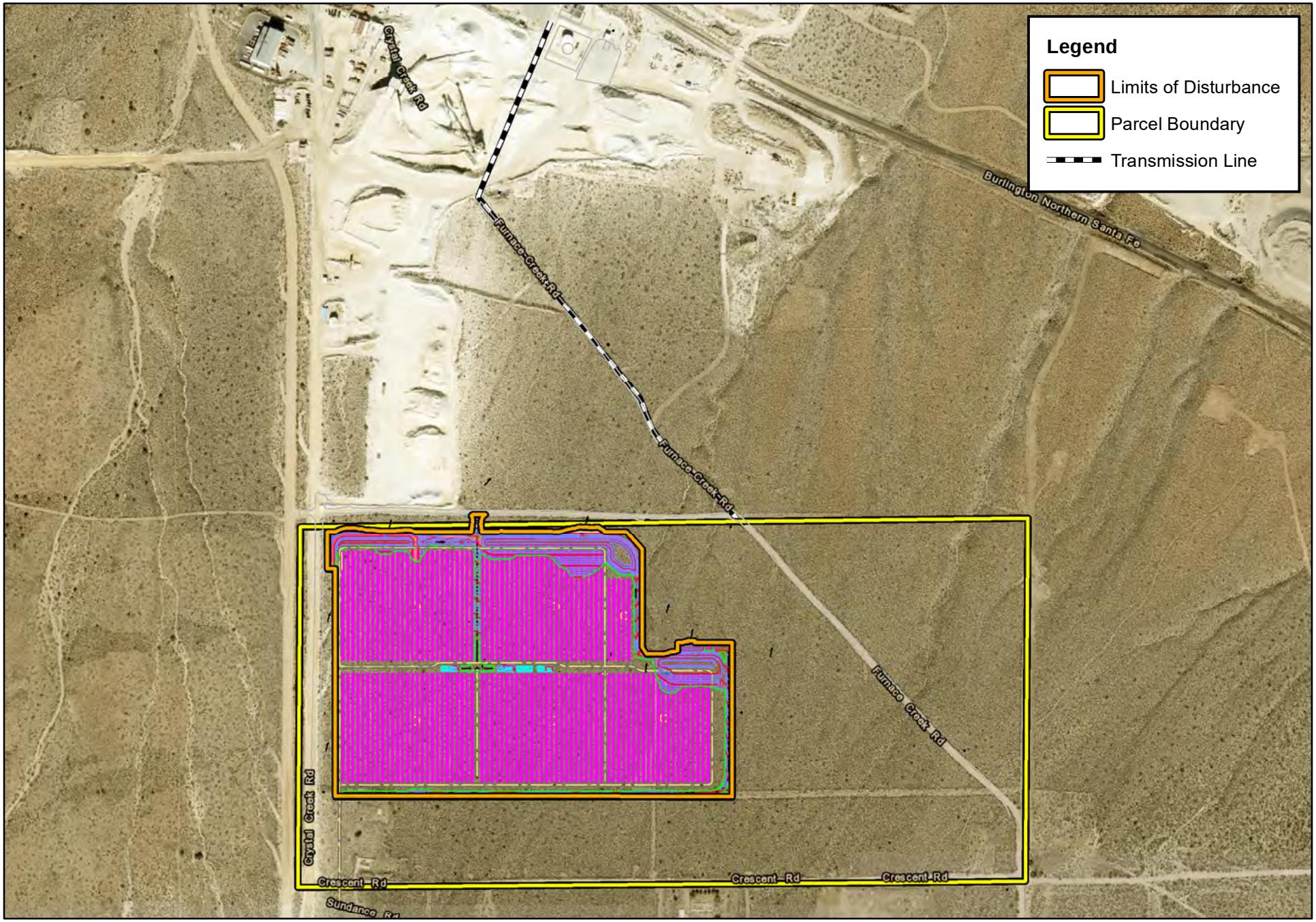
POWERFLEX - SOLAR (OMYA - LUCERNE VALLEY)

Site Vicinity

0 1,000 2,000 4,000 Feet

Source: USA Topographic Map, San Bernardino County

Exhibit 2



ELMT CONSULTING

0 250 500 1,000 Feet

Source: Google Earth Aerial Imagery, San Bernardino County

POWERFLEX - SOLAR (OMYA - LUCERNE VALLEY)

Project Site

Exhibit 3

Section 2 Methodology

ELMT conducted a thorough literature review and records search to determine which special-status plant species have the potential to occur on or within the general vicinity of the project site. In addition to the literature review, one (1) focused survey was conducted to coincide with the flowering period of spring-blooming special-status plant species known to occur within the general vicinity, focusing on the presence/absence of Cushenberry milk-vetch, Parish's daisy, and purple-nerve cymopterus.

2.1 LITERATURE REVIEW

Prior to conducting the field visit, a literature review and records search was conducted for federally and state listed plant species, and CNPS *California Rare Plant Rank* listed plant species having the potential to occur within the general vicinity of the project site. Previously recorded occurrences of special-status plant species and their proximity to the project site were determined through a query of CDFWs *California Natural Diversity Database* (CNDDB) *Rarefind 5 and CNDDB BIOS*, the CNPS's *Electronic Inventory of Rare and Endangered Vascular Plants of California*, Calflora Database, Consortium of California Herbaria (CCH), compendia of special-status species published by CDFW, and USFWS species listings, as well as the following resources:

- Google Earth Pro historic and current aerial imagery (1985 - 2023);
- *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018);
- CNPS *Botanical Survey Guidelines* (2001);
- USFWS *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (1996);
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey; and
- USFWS Critical Habitat designations for Threatened and Endangered Plant Species.

Based on the results of the database search, a list of special-status plant species having the potential to occur within the general vicinity of the project site was compiled and is provided in Appendix A.

2.2 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE PROTOCOL

Prior to the commencement of any activities that may modify natural vegetation (i.e., clearing, mowing, or ground-breaking activities) CDFW deems it necessary to conduct botanical surveys for special-status plant species based on the suitability of the habitat. CDFW recognized that it is appropriate to conduct a botanical field survey when:

- Natural (or naturalized) vegetation occurs on the site, and it is unknown if special-status plant species or natural communities occur on the site, and the project has the potential for direct or indirect effects on vegetation; or

- Special-status plants or natural communities have historically been identified on the project site; or
- Special-status plants or natural communities occur on sites with similar physical and biological properties as the project site.

The protocol states that surveys need to be conducted using systematic field techniques in all habitats of a site to ensure thorough coverage of potential impact areas. The level of effort required per given area and habitat is dependent upon the vegetation and its overall diversity and structural complexity, which determines the distance at which plants can be identified. Surveys were conducted by walking transects over the entire site to ensure thorough coverage, noting all plant taxa observed. The level of effort was sufficient to provide comprehensive reporting.

2.3 SURVEY OBJECTIVES

The field survey was conducted in a manner that maximizes the likelihood of locating special-status plant species that may be present. Every plant taxon identified on site was identified to the taxonomic level necessary to determine its rarity and listing status. The survey was conducted in the spring to maximize the likelihood of observing Cushenberry milk-vetch, Parish's daisy, purple-nerve cymopterus, and other spring-blooming species. ELMT biologists Travis J. McGill, Jacob H. Lloyd, Rachale A Lyons, and Megan Peukert conducted the focused surveys on April 11 and May 17, 2024.

The field survey was conducted in a manner that maximizes the likelihood of locating special-status plant species that may be present. Every plant taxon identified on site was identified to the taxonomic level necessary to determine its rarity and listing status. The survey was conducted at the time of year when spring-blooming species are both evident and identifiable.

2.4 FOCUSED PLANT SURVEY

All areas that may be directly and indirectly impacted by the proposed project were extensively surveyed on foot. Linear transects were walked throughout the project site and spaced at 10-meter intervals, where accessible, to ensure maximum visual coverage and increase the likelihood of detecting special-status plant species known to occur within the general vicinity of the project site. All plant species observed during the surveys were identified by visual characteristics and morphology in the field and recorded in a field notebook/iPad. Unusual and less-familiar plants were photographed on-site and identified in the laboratory using taxonomical guides. A handheld geographic positioning systems (GPS) device and standard field data sheets were used to record all populations of special-status plant species, if observed.

Based on the plant species known to occur within the general vicinity and the suitability of the on-site plant communities to support those plant species, a site visits were conducted on April 11 and May 17, 2024.

2.5 REGULATORY BACKGROUND

Federally listed species are protected under the Federal Endangered Species Act (FESA) and regulations related to the FESA are enforced by the USFWS. State-listed species are protected under the California Endangered Species Act (CESA) and these regulations are enforced by the CDFW. CDFW may also designate a species as a Species of Special Concern because of local and/or statewide population declines. California's Native Plant Protection Act (NPPA), requires all state agencies to use their authority to carry out programs to conserve endangered and rare native plants under Fish and Wildlife Code Sections 1900-1913. Provisions of the NPPA prohibit the taking of listed plants from the wild and require notification of the CDFW at least 10 days in advance of any change in land use that would adversely impact listed plants. This requirement allows CDFW to salvage listed plant species that would otherwise be destroyed. Additionally, local government agencies or watch groups may provide a list of species considered to be locally important. The CNPS maintains a list of plants considered to be sensitive which are generally considered during the environmental review process. Guidelines for the implementation of the California Environmental Quality Act (CEQA) provide that a species can be considered endangered or "rare" regardless of appearance on a formal list. Any significant impact identified during the CEQA review process requires that the impact be mitigated to less than significant.

Western Joshua tree

The Western Joshua Tree Conservation Act (WJTCA) is a California Law that was enacted in July 2023. The WJTCA prohibits the importation, export, take, possession, purchase, or sale of any western Joshua tree in California unless authorized by CDFW. The act authorizes CDFW to issue permits for the incidental take of one or more western Joshua trees if the permittee meets certain conditions. Permittees may pay specified fees in lieu of conducting mitigation activities. The act also authorizes CDFW to issue permits for the removal of dead western Joshua trees and the trimming of live western Joshua trees under certain circumstances.

The California Fish and Game Commission (Commission) designated the western Joshua tree as a candidate for listing under the California Endangered Species Act (CESA) in October 2020. This action afforded the western Joshua tree the same CESA protections as listed species, which means that removal of the desert trees was subject to fines and criminal penalties unless authorized by a "take" permit issued by the CDFW. Such permits were difficult to obtain, and when issued would authorize removal only in limited circumstances. The new law, which became effective July 1, 2023, streamlines the western Joshua tree take permit process and broadens the purposes for which a permit may be issued. A western Joshua tree may now be removed for any purpose, so long as a permit is obtained and the removal is fully mitigated, or alternatively, an in-lieu mitigation fee is paid.

Section 3 Existing Conditions

3.1 TOPOGRAPHY AND SOILS

On-site surface elevation ranges from approximately 4,006 to 4,153 feet above mean sea level and generally slopes from southwest to northeast. Topography primarily consists of low rolling hills with and arrays of shallow to deep ephemeral drainages, with maintained access roads traversing the western portion of the northern boundary, traversing northwest to southeast within the eastern portion of the site and veering to the northwest and northeast into the existing OMYA facility. In addition, remnant access roads permeate the middle of the southern portion of the site from north to south and east to west, and a graded pad is present in the southwest portion of the site that supports remnant building foundations.

Based on the USDA NRCS Soil Survey for the San Bernardino County, California, Mojave River Area, the project site is underlain by Kimberlina gravelly sandy loam (cool, 2 to 5 percent slopes) and Yermo-Kimberlina (cool, associated sloping) (Exhibit 4, *Soils*). Soils underlying the majority of the site are generally undisturbed, and soils underlying the maintained and remnant access roads have been disturbed and compacted to varying degrees from historic or routine use and maintenance.

Kimberlina gravelly sandy loam, cool, 2 to 5 percent slopes (139)

In the San Bernardino County, California, Mojave River Area, Kimberlina gravelly sandy loam soils are found at elevations of 250 to 3,500 feet. This soils type receives mean annual precipitation of 3 to 6 inches with a mean annual air temperature range of 59 to 63 degrees Fahrenheit (°F) and a frost-free period of 180 to 280 days. Kimberlina gravelly sandy loam (cool, 2 to 5 percent slopes) soils in the San Bernardino County, California, Mojave River Area are composed of 85 percent Kimberlina family and similar soils and 15 percent minor components.

Kimberlina gravelly sandy loam (cool, 2 to 5 percent slopes) soils are well-drained and developed in alluvium derived from mixed sources. In the San Bernardino County, California, Mojave River Area, they are found on footslopes and treads of fan aprons. The typical profile of this soil type in this area includes gravelly sandy loam from 0 to 7 inches and additional gravelly sandy loam from 7 to 60 inches. The depth to a restrictive feature is more than 80 inches, the depth to the water table is more than 80 inches, the available water capacity is 1.98 to 5.95 inches per hour, and the available water supply is approximately 6.5 inches.

Yermo-Kimberlina, cool, associated sloping (139)

In the San Bernardino County, California, Mojave River Area, this soils association is made up of Yermo and Kimberlina soil families, which are geographically associated soil families with similar patterns and relative proportions. Yermo-Kimberlina, cool, associated soils are found at elevations of 250 to 4,100 feet. This soil association receives mean annual precipitation of 3 to 6 inches with a mean annual air temperature range of 59 to 66 degrees °F and a frost-free period of 180 to 290 days. Yermo-Kimberlina associations in the San Bernardino County, California, Mojave River Area are composed

of approximately 60 percent Yermo and similar soils, 30 percent Kimberlina and similar soils, and 10 percent minor components.

Yermo family type soils are well-drained and developed in alluvium derived from mixed sources. In the San Bernardino County, California, Mojave River Area, they are found on backslopes and treads of alluvial fans. The typicaly profile of Yermo family soils in this area include gravelly sandy loam from 0 to 10 inches and additional gravelly sandy loam from 10 to 60 inches. The depth to a restrictive feature is more than 80 inches, the depth to the water table is more than 80 inches, the available water capacity is 1.98 to 5.95 inches per hous, and the available water supply is approximately 6.5 inches.

3.2 SURROUNDING LAND USES

The project site is located in a predominantly undeveloped area in the southern limits of Lucerne Valley, at the base of the San Bernardino Mountains foothills. Predominant development in the vicinity of the site consists of commercial aggregate mining, stockpiling, and processing facilities to the north and east of the site and sparse residential development to the south. The project site is bounded to the west by Crystal Creek Road with undeveloped, vacant land beyond; to the south by Crescent Road with scattered residential developments and undeveloped, vacant land; to the east by Ladera Road, with undeveloped, vacant land beyond; and to the north by undeveloped, vacant land and the existing OMYA quarries and materials plant. In addition, the site is transected by Furnace Creek Road which enters the northern boundary and leads southeast through the site before exiting the site at the eastern boundary.

3.3 SITE CONDITIONS

The project site consists primarily of undeveloped open space with the exception of site boundaries, actively maintained access roads along Furnace Creek Road and Crystal Creek Road in the northern portion of the site, remnant access roads in the southern portion of the site, and graded pads and remnant foundations in the southeast corner. The site supports one (1) natural plant community: Mojavean desert scrub (Exhibit 5, *Vegetation*). In addition, the site supports two (2) land cover types that would be classified as disturbed and developed. The plant community and land cover types supported on-site are described in further detail below.

3.3.1 Mojavean Desert Scrub

The majority of the project site supports a Mojavean desert scrub plant community consistent with other lowland plant communities in the vicinity. This plant community is dominated by large perennial shrub species such as black brush (*Coleogyne ramosissima*) and Mojave yucca (*Yucca schidigera*) and supports an intermittent to consistent shrub layer and sparse to robust herbaceous layer. Other plant species observed in this plant community include purple three awn (*Aristida purpurea*), hoary saltbush (*Atriplex canescens*), sticky leaved rabbitbrush (*Chrysothamnus viscidiflorus*), silver cholla (*Cylindropuntia echinocarpa*), pencil cholla (*Cylindropuntia ramosissima*), purple-nerve cymopterus (*Cymopterus multinervatus*), hedgehog cactus (*Echinocereus engelmannii*), Acton encelia (*Encelia actoni*), Nevada ephedra (*Ephedra nevadensis*), green ephedra (*Ephedra viridis*), goldenbush (*Ericameria linearifolia*), flat topped buckwheat (*Eriogonum deflexum*), California buckwheat (*Eriogonum fasciculatum*), desert trumpet (*Eriogonum inflatum*), red-stemmed filaree (*Erodium*

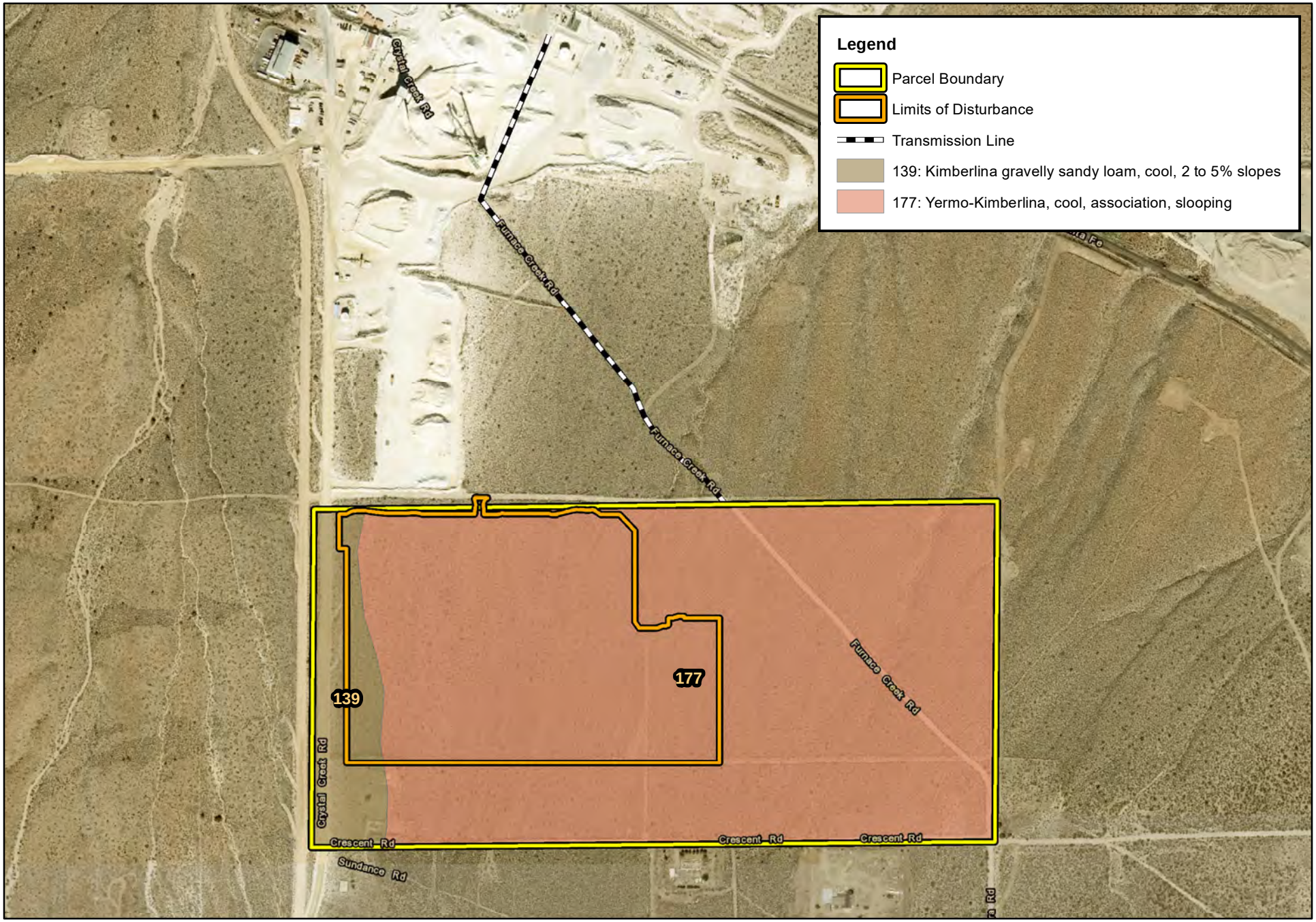
cicutarum), sticky snakeweed (*Gutierrezia microcephala*), chaparral yucca (*Hesperoyucca whipplei*), California juniper (*Juniperus californica*), winter fat (*Kraschenninnikovia lanata*), creosote (*Larrea tridentata*), desert pepperweed (*Lepidium fremontii*), Mohave lomatium (*Lomatium mohavense*), Cooper's box thorn (*Lycium cooperi*), white stemmed blazing star (*Mentzelia albicaulis*), Veatch's blazing star (*Mentzelia veatchiana*), beavertail prickly pear (*Opuntia basilaris*), desert almond (*Prunus fasciculata*), mediterranean grass (*Schismus barbatus*), apricot mallow (*Sphaeralcea ambigua*), Parish's needlegrass (*Stipa parishii*), desert needle grass (*Stipa speciosa*), desert aster (*Xylorhiza tortifolia*), and western Joshua tree (*Yucca brevifolia*).

3.3.2 Disturbed

The project site supports disturbed land within access roads that bound and permeate the site. These areas vary in vegetative density from typically barren to intermittent according to the type and degree of routine disturbance, and primarily support weedy/early successional species observed in the Mojavean desert scrub plant community.

3.3.3 Developed

Developed land generally encompasses all buildings/structures and paved or otherwise impervious surfaces. The project site supports developed land where site boundaries overlap with existing OMYA quarries and facilities, and within a remnant building foundation found in the southwest corner. These areas are generally barren due to impermeable substrates and routine disturbance, but may support especially hardy weedy/early successional species.



ELMT CONSULTING

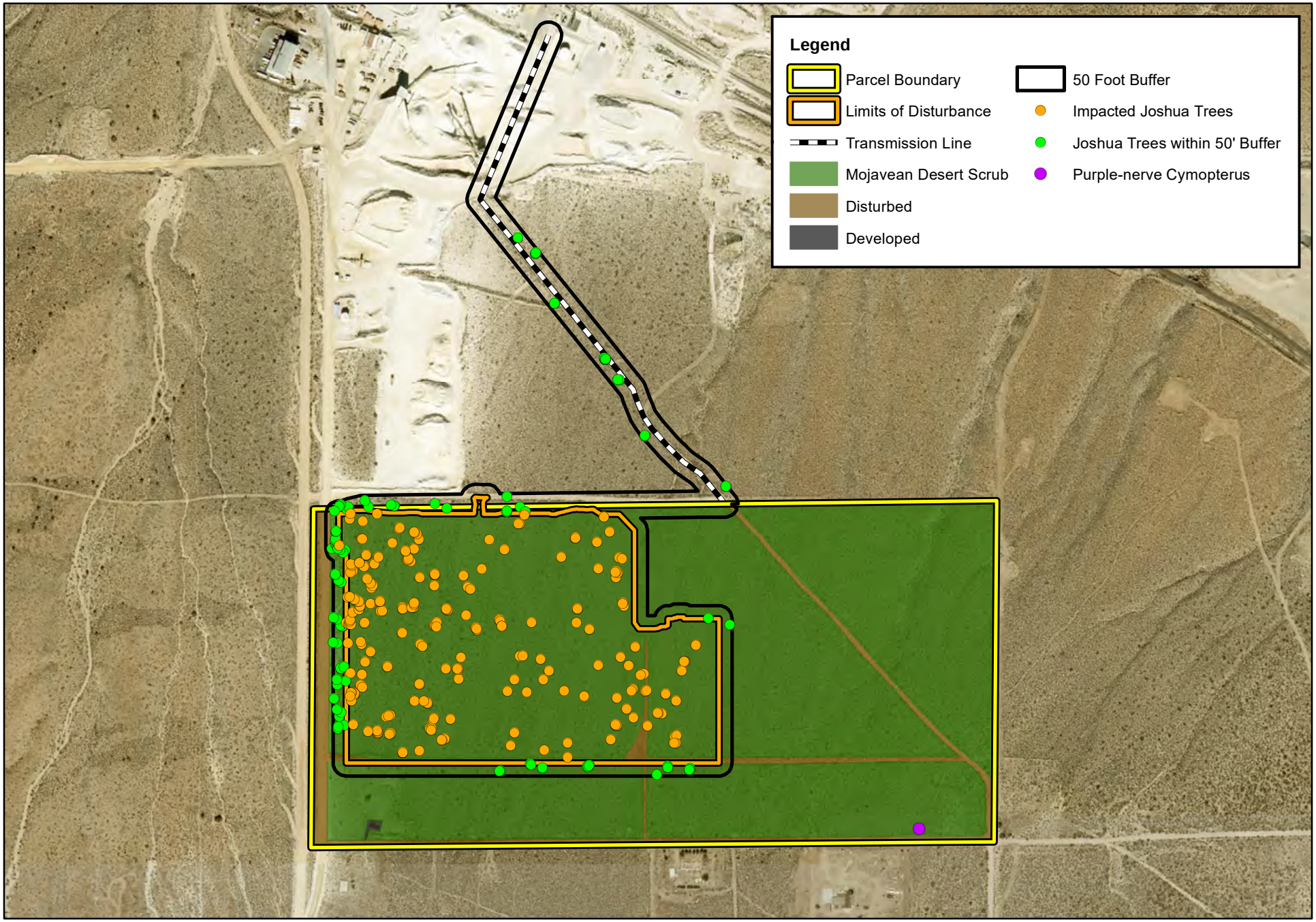
0 250 500 1,000 Feet

Source: Google Earth Aerial Imagery, Soil Survey Geographic Database, San Bernardino County

POWERFLEX - SOLAR (OMYA - LUCERNE VALLEY)

Soils

Exhibit 4



ELMT CONSULTING

0 250 500 1,000 Feet

Source: Google Earth Aerial Imagery, San Bernardino County

POWERFLEX - SOLAR (OMYA - LUCERNE VALLEY)

Vegetation

Exhibit 5

Section 4 Results

4.1 SPECIAL-STATUS PLANT SPECIES

The CNDDB Rarefind 5, the Quickview Tool in BIOS, the CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California, and CCH was queried for reported locations of special-status plant species in the Lucerne Valley and Fawnskin USGS 7.5-minute quadrangles. These two quadrangles were used due to the proximity of the project site to quadrangle boundaries and regional topography. The literature search identified seventy-seven (77) special-status plant species as having the potential to occur within these quadrangles. Special-status plant species identified during the literature review are presented in *Table A-1: Potentially Occurring Special-Status Plant Species*, provided in Appendix A. The following section provides a detailed assessment of the plant species that were determined to have the potential to occur on the project site, and the results of the focused survey. In addition, refer to Exhibit 6, *CNDDB Special-Status Plant Observations*, for a depiction of the special-status plant locations within the general vicinity of the project site.

Cushenberry Milk-vetch

Cushenberry milk-vetch is a perennial herb that blooms from March and June. It is federally listed as endangered and is designated by the CNPS as a Rare Plant Rank 1B.1 species, indicating that it is rare, threatened, or endangered in California and elsewhere, and is seriously threatened in California with over 80% of known occurrences threatened. It is endemic to San Bernardino County, California and is only known from the northeast slopes of the San Bernardino Mountains and foothills, primarily between Big Bear Lake and Lucerne Valley, from 3,595 to 6,560 feet. It is usually found on carbonate soils, and occasionally granitic soils, within Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland habitats.

This species was not observed during the focused special-status plant species survey. According to the CNDDB, the nearest occurrences of Cushenberry milk-vetch to the site are located approximately 1.67 miles to the east and south, observed in 2021 and 2008, respectively. This species is presumed to be absent from the project site.

Parish's Daisy

Parish's daisy is a perennial herb that blooms from May to August. It is federally listed as threatened and is designated by the CNPS as a Rare Plant Rank 1B.1 species, indicating that it is rare, threatened, or endangered throughout its range with over 80% of known occurrences threatened. This species is endemic to California and is known to occur along the northern slopes of the San Bernardino and Little San Bernardino Mountain Ranges from 2,625 to 6,560 feet above mean sea level. It is usually found on carbonate soils, sometimes granitic soils, and is associated with Mojavean desert scrub and pinyon and juniper woodland plant communities. It is commonly found growing on limestone substrates, or on granite with a limestone layer, and is very tolerant of alkaline soils.

This species was not observed during the focused special-status plant species survey. According to the CNDDB, the nearest mapped occurrences of Parish's daisy to the project site occur approximately 1.72

miles southeast and 1.68 miles to the south, observed in 2021 and 1991, respectively. This species is presumed to be absent from the project site.

Purple-nerve Cymopterus

Puple-nerve cymopterus is a perennial herb that blooms from March to April. It is neither federally nor state listed but is designated by the CNPS as a Rare Plant Rank 2B.2 species, indicating that it rare, threatened, or endangered in California but more common elsewhere with 20 to 80 percent of known occurrences threatened. This species is native to the desert regions of the southwestern United States and is known to occur from 2,590 to 5,905 feet above mean sea level. It is sometimes found on gravelly and sandy soils and is associated with Mojavean desert scrub and pinyon and juniper woodland plant communities.

A group comprising four (4) individuals of this species were observed within the southwest corner of the parcel boundary, outside the project footprint. No other individuals were observed during the 2024 focused surveys.

Western Joshua Tre

The Western Joshua Tree (*Yucca brevifolia*) is a distinctive tree-like species native to the Mojave Desert, thriving in arid climates with hot summers and cool winters at altitudes of 1,300 to 5,900 feet. Recognizable by its spiky leaves, bell-shaped flowers, and mutualistic relationship with the yucca moth for pollination, it provides habitat and food for various desert wildlife.

A western Joshua tree may now be removed per the Western Joshua Tree Conservation Act for any purpose, so long as a permit is obtained and the removal is fully mitigated, or alternatively, an in-lieu mitigation fee is paid. The table below summarizes the new rules for the area in which the project site is located.

Location	Requirements
Project is not located within the reduced fee area.	Full mitigation, or in-lieu fee as follows: • $2,544.75 per tree > 5 meters tall • $509 per tree 1 to 5 meters tall • $346 per tree < 1 meter tall

A total of six hundred twenty-three (623) western Joshua trees were observed within the proposed limits of disturbance during the field investigation, including four hundred four (404) individuals measuring less than one meter in height and two hundred nineteen (219) individuals measuring between one and five meters in height.

The table below provides a summary of the Joshua trees documented onsite and their associated mitigation fee.

Size Classification	Count	Fee per Tree	Fees
A (<1 meter)	404	$346.00	$139,784.00
B (1 to 5 meters)	219	$509.00	$111,471.00
C (> 5 meters)	0	$2,544.75	$0.00
TOTALS	**623**		**$ 251,255.00**

Additionally, a total of ninety-four (94) western Joshua trees were observed within 50 feet of the project site (outside of the proposed project footprint) during the field investigation, including forty-two (42) individuals measuring less than one meter in height, and fifty-two (52) individuals measuring between one and five meters in height. These 94 western Joshua trees will not be impacted by project implementation. Refer to Exhibit 5, for a map depicting the location of Joshau tree onsite.

Section 5 Conclusion and Recommendations

A total of 4 purple-nerve cymopterus were observed within the parcel boundary during the focused 2024 focused plant surveys, outside of the proposed limits of disturbance. Therefore, this species is presumed to be absent from the proposed limits of disturbance, and will not be impacted from project implementation. Refer to Exhibit 5, for a map depicting the location of purple-nerve cymopterus onsite.

A total of six hundred twenty-three (623) western Joshua trees were observed within the proposed limits of disturbance during the field investigation, including four hundred four (404) individuals measuring less than one meter in height and two hundred nineteen (219) individuals measuring between one and five meters in height. Impacts to the on-site Joshua trees will require a total mitigation fee of $246,860 to be paid into the Western Joshua Tree Mitigation Tree fund, and a Western Joshua Tree Incidental Take Permit to be prepared and processed with CDFW.

The timing of the surveys coincided with the blooming period for Cushenberry milk-vetch, Parish's daisy, and other spring blooming special-status plant species known to occur in the general vicinity of the project site. Despite a systematic inventory of all areas that may be directly and indirectly impacted by the proposed project, no Cushenberry milk-vetch, Parish's daisy, or any of the other spring-blooming special-status plant species were observed during the survey. Therefore, Cushenberry milk-vetch, Parish's daisy, and the remaining spring-blooming special-status plant species known to occur in the vicinity of the project site are presumed absent. Implementation of the proposed project is not expected to result in impacts to spring-blooming special-status plant species.

Section 6 References

Bruce G. Baldwin, et. all 2012. *Vascular Plants of California.* University of California Press, Berkley and Los Angeles, California,

California Department of Fish and Wildlife, 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. State of California, California Natural Resources Agency. http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp

California Department of Fish and Wildlife. 2024. RareFind 5, California Natural Diversity Data Base, California. Data Base report on threatened, endangered, rare or otherwise sensitive species and communities for the Lucerne Valley and Fawnskin 7.5-minute USGS quadrangles.

California Invasive Plant Council (Cal-IPC). 2006. California Invasive Plant Inventory. Cal-IPC Publication 2006-02. California Invasive Plant Council, Berkeley. Available at: www.cal-ipc.org

California Native Plant Society, 2009. Inventory of Rare and Endangered Plants (online edition, v6-05c). California Native Plant Society. Sacramento, CA. Accessed June, 2014. http://www.cnps.org/cnps/inventory/index.html

California Native Plant Society, 2020. Inventory of Rare and Endangered Plants of California. Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society. Sacramento, California. Available at: http://www.cnps.org/inventory.

Holland, R. F., 1986. Preliminary descriptions of the Terrestrial Natural Communities of California. Calif. Dept. of Fish and Game, Sacramento, CA.

Jepson Online Interchange. 2013. Consortium of California Herbaria on-line database. Accessed at: http://ucjeps.berkeley.edu/interchange.html

Munz, P.A., 1974. *A Flora of Southern California*. University of California Press, Berkeley, California.

Skinner, M.W. and B.M. Pavlik, 1994. *Inventory of Rare and Endangered Vascular Plants of California*. California Native Plant Society, Spec. Pub. No. 1 (5th edition), Berkeley, California.

University of California Press, 2012. The Jepson Manual: Vascular Plants of California

U.S. Fish and Wildlife Service, 1996. *Review of plant and animal taxa for listing as endangered or threatened species; notice of review.* Federal Register Vol. 61, No. 40.

U.S. Fish and Wildlife Service. 1996. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants. Available: http://www.fws.gov/sacramento/es/documents/Listed_plant_survey_guidelines.PDF

U.S. Fish and Wildlife Service. 1996c. Endangered and Threatened Wildlife and Plants; Review of Plant and Animal Taxa that are Candidates for Listing as Endangered or Threatened Species; Notice of Review; Proposed Rule. Federal Register 61(40): 7596-7613.

U.S. Fish and Wildlife Service. 2006. List of federal candidates for listing, available at: http://ecos.fws.gov/endangered/candidates/index.html

Appendix A Potentially Occurring Special-Status Plant Species

Table A-1: Potentially Occurring Special-Status Biological Resources

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Plant Species				
Abronia nana* var. *covillei Covilles dwarf abronia	Fed: None CA: None CNPS: 4.2	Carbonate, Sandy; Great Basin scrub, Joshua tree "woodland", Pinyon and juniper woodland, Subalpine coniferous forest, Upper montane coniferous forest; Elevation range: 5000 to 10170 feet; Blooming period: May-Aug.	No	**Presumed Absent** The project site is located outside of the geographical range of this species.
Acanthoscyphus parishii* var. *goodmaniana Cushenbury oxytheca	Fed: **END** CA: None CNPS: 1B.1	Carbonate, Sandy; Pinyon and juniper woodland (carbonate, talus); Elevation range: 4000 to 7800 feet; Blooming period: May-Oct.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Allium parishii Parish's onion	Fed: None CA: None CNPS: 4.3	Rocky; Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland; Elevation range: 2955 to 5695 feet; Blooming period: Apr-May.	No	**Presumed Absent:** No suitable habitat is present within the project site.
Astragalus albens Cushenbury milk-vetch	Fed: **END** CA: None CNPS: 1B.1	Carbonate (usually), Granitic (rarely); Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland; Elevation range: 3595 to 6560 feet; Blooming period: Mar-Jun.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Astragalus bernardinus San Bernardino milk-vetch	Fed: None CA: None CNPS: 1B.2	Carbonate (often), Granitic (often); Joshua tree "woodland", Pinyon and juniper woodland; Elevation range: 2955 to 6560 feet; Blooming period: Apr-Jun.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Astragalus bicristatus crested milk-vetch	Fed: None CA: None CNPS: 4.3	Carbonate (usually), Rocky (sometimes), Sandy (sometimes); Lower montane coniferous forest, Upper montane coniferous forest; Elevation range: 5580 to 9005 feet; Blooming period: May-Aug.	No	**Presumed Absent** The project site is located outside of the geographical range of this species.
Astragalus lentiginosus* var. *sierrae Big Bear Valley milk-vetch	Fed: None CA: None CNPS: 1B.2	Gravelly (sometimes), Rocky (sometimes); Meadows and seeps, Mojavean desert scrub, Pinyon and juniper woodland, Upper montane coniferous forest; Elevation range: 5905 to 8530 feet; Blooming period: Apr-Aug.	No	**Presumed Absent** The project site is located outside of the geographical range of this species.
Astragalus leucolobus Big Bear Valley woollypod	Fed: None CA: None CNPS: 1B.2	Rocky; Lower montane coniferous forest, Pebble (Pavement) plain, Pinyon and juniper woodland, Upper montane coniferous forest; Elevation range: 3610 to 9465 feet; Blooming period: May-Jul.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Boechera parishii Parish's rockcress	Fed: None CA: None CNPS: 1B.2	Carbonate (sometimes), Rocky; Pebble (Pavement) plain, Pinyon and juniper woodland, Upper montane coniferous forest; Elevation range: 5805 to 9810 feet; Blooming period: Apr-May.	No	**Presumed Absent** The project site is located outside of the geographical range of this species.
Boechera shockleyi Shockleys rockcress	Fed: None CA: None CNPS: 2B.2	Pinyon and juniper woodland (carbonate, gravelly, quartzite, rocky); Elevation range: 2870 to 7580 feet; Blooming period: May-Jun.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Calochortus palmeri* var. *palmeri Palmer's mariposa-lily	Fed: None CA: None CNPS: 1B.2	Mesic; Chaparral, Lower montane coniferous forest, Meadows and seeps; Elevation range: 2330 to 7840 feet; Blooming period: Apr-Jul.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Calochortus striatus alkali mariposa-lily	Fed: None CA: None CNPS: 1B.2	Alkaline, Mesic; Chaparral, Chenopod scrub, Meadows and seeps, Mojavean desert scrub; Elevation range: 230 to 5235 feet; Blooming period: Apr-Jun.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Canbya candida white pygmy-poppy	Fed: None CA: None CNPS: 4.2	Granitic, Gravelly, Sandy; Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland; Elevation range: 1970 to 4790 feet; Blooming period: Mar-Jun.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Carex scirpoidea ssp. pseudoscirpoidea western single-spiked sedge	Fed: None CA: None CNPS: 2B.2	Carbonate (often), Mesic; Alpine boulder and rock field, Meadows and seeps, Subalpine coniferous forest (rocky); Elevation range: 9810 to 12140 feet; Blooming period: Jul-Sep.	No	**Presumed Absent** The project site is located outside of the geographical range of this species.
Castilleja cinerea ash-grey paintbrush	Fed: **THR** CA: None CNPS: 1B.2	Meadows and seeps, Mojavean desert scrub, Pebble (Pavement) plain, Pinyon and juniper woodland, Upper montane coniferous forest (clay, openings); Elevation range: 5905 to 9710 feet; Blooming period: Jun-Aug.	No	**Presumed Absent** The project site is located outside of the geographical range of this species.
Castilleja lasiorhyncha San Bernardino Mountains owl's-clover	Fed: None CA: None CNPS: 1B.2	Mesic; Chaparral, Meadows and seeps, Pebble (Pavement) plain, Riparian woodland, Upper montane coniferous forest; Elevation range: 4265 to 7840 feet; Blooming period: May-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. Th project site is located outside of the geographical range of this species.
Castilleja montigena Heckard's paintbrush	Fed: None CA: None CNPS: 4.3	Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest; Elevation range: 6400 to 9185 feet; Blooming period: May-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Castilleja plagiotoma Mojave paintbrush	Fed: None CA: None CNPS: 4.3	Great Basin scrub (alluvial), Joshua tree "woodland", Lower montane coniferous forest, Pinyon and juniper woodland; Elevation range: 985 to 8205 feet; Blooming period: Apr-Jun.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Chorizanthe spinosa Mojave spineflower	Fed: None CA: None CNPS: 4.2	Alkaline (sometimes); Chenopod scrub, Joshua tree "woodland", Mojavean desert scrub, Playas; Elevation range: 20 to 4265 feet; Blooming period: Mar-Jul.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Claytonia peirsonii ssp. bernardinus San Bernardino spring beauty	Fed: None CA: None CNPS: 1B.1	Carbonate, Openings (usually), Rocky, Talus; Pinyon and juniper woodland, Upper montane coniferous forest; Elevation range: 7745 to 8090 feet; Blooming period: Mar-Apr.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Claytonia peirsonii ssp. californacis Furnace spring beauty	Fed: None CA: None CNPS: 1B.1	Carbonate, Openings (usually), Rocky, Talus; Pinyon and juniper woodland, Upper montane coniferous forest; Elevation range: 7545 to 7545 feet; Blooming period: Mar-May.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Cordylanthus eremicus ssp. eremicus desert birds-beak	Fed: None CA: None CNPS: 4.3	Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland; Elevation range: 3280 to 9845 feet; Blooming period: Jul-Oct.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Cymopterus multinervatus purple-nerve cymopterus	Fed: None CA: None CNPS: 2B.2	Gravelly (sometimes), Sandy (sometimes); Mojavean desert scrub, Pinyon and juniper woodland; Elevation range: 2590 to 5905 feet; Blooming period: Mar-Apr.	Yes	**Present** Several individuals were observed in the middle of the southern portion of the project site. Suitable habitat for this species is present within and surrounding the site.
Delphinium parryi ssp. purpureum Mt. Pinos larkspur	Fed: None CA: None CNPS: 4.3	Chaparral, Mojavean desert scrub, Pinyon and juniper woodland; Elevation range: 3280 to 8530 feet; Blooming period: May-Jun.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Diplacus johnstonii Johnstons monkeyflower	Fed: None CA: None CNPS: 4.3	Lower montane coniferous forest (disturbed areas, gravelly, roadsides, rocky, scree); Elevation range: 3200 to 9580 feet; Blooming period: May-Aug.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Drymocallis cuneifolia var. cuneifolia wedgeleaf woodbeauty	Fed: None CA: None CNPS: 1B.1	Carbonate (sometimes); Riparian scrub, Upper montane coniferous forest; Elevation range: 5905 to 7925 feet; Blooming period: Jun-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Dryopteris filix-mas male fern	Fed: None CA: None CNPS: 2B.3	Upper montane coniferous forest (granitic, rocky); Elevation range: 7875 to 10170 feet; Blooming period: Jul-Sep.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Dudleya abramsii* ssp. *affinis San Bernardino Mountains dudleya	Fed: None CA: None CNPS: 1B.2	Carbonate (sometimes), Granitic (sometimes); Pebble (Pavement) plain, Pinyon and juniper woodland, Upper montane coniferous forest; Elevation range: 4100 to 8530 feet; Blooming period: Apr-Jul.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Elymus salina Salina Pass wild-rye	Fed: None CA: None CNPS: 2B.3	Pinyon and juniper woodland (rocky); Elevation range: 4430 to 7005 feet; Blooming period: May-Jun.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Eremogone ursina Big Bear Valley sandwort	Fed: **THR** CA: None CNPS: 1B.2	Mesic, Rocky; Meadows and seeps, Pebble (Pavement) plain, Pinyon and juniper woodland; Elevation range: 5905 to 9515 feet; Blooming period: May-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Erigeron breweri var. jacinteus San Jacinto Mountains daisy	Fed: None CA: None CNPS: 4.3	Rocky; Subalpine coniferous forest, Upper montane coniferous forest; Elevation range: 8860 to 9515 feet; Blooming period: Jun-Sep.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Erigeron parishii Parish's daisy	Fed: **THR** CA: None CNPS: 1B.1	Carbonate (usually), Granitic (sometimes); Mojavean desert scrub, Pinyon and juniper woodland; Elevation range: 2625 to 6560 feet; Blooming period: May-Aug.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Eriogonum evanidum vanishing wild buckwheat	Fed: None CA: None CNPS: 1B.1	Gravelly (sometimes), Sandy (sometimes); Chaparral, Cismontane woodland, Lower montane coniferous forest, Pinyon and juniper woodland; Elevation range: 3610 to 7300 feet; Blooming period: Jul-Oct.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Eriogonum kennedyi var. austromontanum southern mountain buckwheat	Fed: **THR** CA: None CNPS: 1B.2	Lower montane coniferous forest (gravelly), Pebble (Pavement) plain; Elevation range: 5805 to 9480 feet; Blooming period: Jun-Sep.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Eriogonum microthecum var. johnstonii Johnston's buckwheat	Fed: None CA: None CNPS: 1B.3	Rocky; Subalpine coniferous forest, Upper montane coniferous forest; Elevation range: 6000 to 9600 feet; Blooming period: Jul-Sep.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Eriogonum ovalifolium var. vineum Cushenbury buckwheat	Fed: **END** CA: None CNPS: 1B.1	Carbonate; Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland; Elevation range: 4595 to 8005 feet; Blooming period: May-Aug.	No	**Presumed Absent** The project site is located outside of the geographical range of this species.
Eriogonum umbellatum var. minus alpine sulphur-flowered buckwheat	Fed: None CA: None CNPS: 4.3	Gravelly; Subalpine coniferous forest, Upper montane coniferous forest; Elevation range: 5905 to 10065 feet; Blooming period: Jun-Sep.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Eriophyllum lanatum* var. *obovatum southern Sierra woolly sunflower	Fed: None CA: None CNPS: 4.3	Loam, Sandy; Lower montane coniferous forest, Upper montane coniferous forest; Elevation range: 3655 to 8205 feet; Blooming period: Jun-Jul.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Erythranthe exigua San Bernardino Mountains monkeyflower	Fed: None CA: None CNPS: 1B.2	Clay, Mesic; Meadows and seeps, Pebble (Pavement) plain, Upper montane coniferous forest; Elevation range: 5905 to 7595 feet; Blooming period: May-Jul.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Erythranthe purpurea little purple monkeyflower	Fed: None CA: None CNPS: 1B.2	Meadows and seeps, Pebble (Pavement) plain, Upper montane coniferous forest; Elevation range: 6235 to 7545 feet; Blooming period: May-Jun.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Frasera neglecta pine green-gentian	Fed: None CA: None CNPS: 4.3	Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest; Elevation range: 4595 to 8205 feet; Blooming period: May-Jul.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Fritillaria pinetorum pine fritillary	Fed: None CA: None CNPS: 4.3	Granitic (sometimes), Metamorphic (sometimes); Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, Subalpine coniferous forest, Upper montane coniferous forest; Elevation range: 5695 to 10825 feet; Blooming period: May-Jul(Sep).	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Galium angustifolium* ssp. *gracillimum slender bedstraw	Fed: None CA: None CNPS: 4.2	Granitic, Rocky; Joshua tree "woodland", Sonoran desert scrub; Elevation range: 425 to 5085 feet; Blooming period: Apr-Jun(Jul).	No	**Low** Suitable habitat is present within and adjacent to the project site.
Heuchera parishii Parish's alumroot	Fed: None CA: None CNPS: 1B.3	Carbonate (sometimes), Rocky; Alpine boulder and rock field, Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest; Elevation range: 4920 to 12470 feet; Blooming period: Jun-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Hulsea vestita* ssp. *parryi Parry's hulsea	Fed: None CA: None CNPS: 4.3	Carbonate (sometimes), Granitic (sometimes), Openings, Rocky; Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest; Elevation range: 4495 to 9500 feet; Blooming period: Apr-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Ivesia argyrocoma* var. *argyrocoma silver-haired ivesia	Fed: None CA: None CNPS: 1B.2	Meadows and seeps (alkaline), Pebble (Pavement) plain, Upper montane coniferous forest; Elevation range: 4800 to 9710 feet; Blooming period: Jun-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Johnstonella holoptera winged cryptantha	Fed: None CA: None CNPS: 4.3	Mojavean desert scrub, Sonoran desert scrub; Elevation range: 330 to 5545 feet; Blooming period: Mar-Apr.	No	**Low** Suitable habitat is present within and adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Lewisia brachycalyx short-sepaled lewisia	Fed: None CA: None CNPS: 2B.2	Mesic; Lower montane coniferous forest, Meadows and seeps; Elevation range: 4495 to 7545 feet; Blooming period: (Feb)Apr-Jun(Jul).	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Lilium parryi lemon lily	Fed: None CA: None CNPS: 1B.2	Mesic; Lower montane coniferous forest, Meadows and seeps, Riparian forest, Upper montane coniferous forest; Elevation range: 4005 to 9005 feet; Blooming period: Jul-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Monardella exilis Mojave monardella	Fed: None CA: None CNPS: 4.2	Sandy; Chenopod scrub, Desert dunes, Great Basin scrub, Joshua tree "woodland", Lower montane coniferous forest, Mojavean desert scrub, Pinyon and juniper woodland; Elevation range: 1970 to 6725 feet; Blooming period: Apr-Sep.	No	**Low** Suitable habitat is present within and adjacent to the project site.
Myosurus minimus ssp. apus little mousetail	Fed: None CA: None CNPS: 3.1	Valley and foothill grassland, Vernal pools (alkaline); Elevation range: 65 to 2100 feet; Blooming period: Mar-Jun.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Navarretia peninsularis Baja navarretia	Fed: None CA: None CNPS: 1B.2	Mesic; Chaparral (openings), Lower montane coniferous forest, Meadows and seeps, Pinyon and juniper woodland; Elevation range: 4920 to 7545 feet; Blooming period: (May)Jun-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Packera bernardina San Bernardino ragwort	Fed: None CA: None CNPS: 1B.2	Meadows and seeps (mesic, sometimes alkaline), Pebble (Pavement) plain, Upper montane coniferous forest; Elevation range: 5905 to 7545 feet; Blooming period: May-Jul.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Perideridia parishii* ssp. *parishii Parish's yampah	Fed: None CA: None CNPS: 2B.2	Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest; Elevation range: 4805 to 9845 feet; Blooming period: Jun-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Phacelia exilis Transverse Range phacelia	Fed: None CA: None CNPS: 4.3	Gravelly (sometimes), Sandy (sometimes); Lower montane coniferous forest, Meadows and seeps, Pebble (Pavement) plain, Upper montane coniferous forest; Elevation range: 3610 to 8860 feet; Blooming period: May-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Phacelia mohavensis Mojave phacelia	Fed: None CA: None CNPS: 4.3	Gravelly (sometimes), Sandy (sometimes); Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pinyon and juniper woodland; Elevation range: 4595 to 8205 feet; Blooming period: Apr-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Phacelia parishii Big Bear Valley phlox	Fed: None CA: None CNPS: 1B.1	Alkaline (sometimes), Clay (sometimes); Mojavean desert scrub, Playas; Elevation range: 1770 to 3935 feet; Blooming period: Apr-May(Jun-Jul).	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Phlox dolichantha Big Bear Valley phlox	Fed: None CA: None CNPS: 1B.2	Pebble (Pavement) plain, Upper montane coniferous forest (openings); Elevation range: 6005 to 9745 feet; Blooming period: May-Jul.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Physaria kingii ssp. Bernardina San Bernardino Mountains bladderpod	Fed: **END** CA: None CNPS: 1B.1	Carbonate (usually); Lower montane coniferous forest, Pinyon and juniper woodland, Subalpine coniferous forest; Elevation range: 6070 to 8860 feet; Blooming period: May-Jun.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Plagiobothrys parishii Parishs popcornflower	Fed: None CA: None CNPS: 1B.1	Alkaline, Mesic; Great Basin scrub, Joshua tree "woodland"; Elevation range: 2460 to 4595 feet; Blooming period: Mar-Jun(Nov).	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Poa atropurpurea San Bernardino bluegrass	Fed: **END** CA: None CNPS: 1B.2	Meadows and seeps (mesic); Elevation range: 4460 to 8055 feet; Blooming period: (Apr)May-Jul(Aug).	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Puccinellia parishii Parish's alkali grass	Fed: None CA: None CNPS: 1B.1	Meadows and seeps (alkaline springs, seeps); Elevation range: 2295 to 3280 feet; Blooming period: Apr-May.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Puccinellia simplex California alkali grass	Fed: None CA: None CNPS: 1B.2	Alkaline, Flats, Lake Margins, Vernally Mesic; Chenopod scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools; Elevation range: 5 to 3050 feet; Blooming period: Mar-May.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Pyrrocoma uniflora* var. *gossypina Bear Valley pyrrocoma	Fed: None CA: None CNPS: 1B.2	Meadows and seeps, Pebble (Pavement) plain; Elevation range: 5250 to 7545 feet; Blooming period: Jul-Sep.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Rosa woodsii* var. *glabrata Cushenbury rose	Fed: None CA: None CNPS: 1B.1	Mojavean desert scrub (springs); Elevation range: 2985 to 4710 feet; Blooming period: (Apr)May-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Rupertia rigida Parish's rupertia	Fed: None CA: None CNPS: 4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pebble (Pavement) plain, Valley and foothill grassland; Elevation range: 2295 to 8205 feet; Blooming period: Jun-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Saltugilia latimeri Latimer's woodland-gilia	Fed: None CA: None CNPS: 1B.2	Granitic (often), Rocky (sometimes), Sandy (sometimes), Washes (sometimes); Chaparral, Mojavean desert scrub, Pinyon and juniper woodland; Elevation range: 1310 to 6235 feet; Blooming period: Mar-Jun.	No	**Low** Suitable habitat is present within and adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Sedum niveum Davidsons stonecrop	Fed: None CA: None CNPS: 4.2	Rocky; Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest; Elevation range: 6810 to 9845 feet; Blooming period: Jun-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Sidalcea neomexicana Salt Spring checkerbloom	Fed: None CA: None CNPS: 2B.2	Alkaline, Mesic; Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas; Elevation range: 50 to 5020 feet; Blooming period: Mar-Jun.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Sidalcea pedata bird-foot checkerbloom	Fed: **END** CA: **END** CNPS: 1B.1	Meadows and seeps (mesic), Pebble (Pavement) plain; Elevation range: 5250 to 8205 feet; Blooming period: May-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Sidotheca caryophylloides chickweed oxytheca	Fed: None CA: None CNPS: 4.3	Lower montane coniferous forest (sandy); Elevation range: 3655 to 8530 feet; Blooming period: Jul-Sep(Oct).	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Streptanthus bernardinus Laguna Mountains jewelflower	Fed: None CA: None CNPS: 4.3	Chaparral, Lower montane coniferous forest; Elevation range: 2200 to 8205 feet; Blooming period: May-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Taraxacum californicum California dandelion	Fed: **END** CA: None CNPS: 1B.1	Meadows and seeps (mesic); Elevation range: 5315 to 9185 feet; Blooming period: May-Aug.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Thelypodium stenopetalum Slender-petaled theylypodium	Fed: **END** CA: **END** CNPS: 1B.1	Meadows and seeps (mesic, alkaline); Elevation range: 5250 to 8205 feet; Blooming period: May-Sep.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Trichostema micranthum small-flowered bluecurls	Fed: None CA: None CNPS: 4.3	Mesic; Lower montane coniferous forest, Meadows and seeps; Elevation range: 5005 to 7545 feet; Blooming period: Jun-Sep.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.
Viola pinetorum ssp. grisea grey-leaved violet	Fed: None CA: None CNPS: 1B.2	Meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest; Elevation range: 4920 to 11155 feet; Blooming period: Apr-Jul.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site is located outside of the geographical range of this species.

Scientific Name Common Name	**Status**	**Habitat Description**	**Observed On-site**	**Potential to Occur**
Yucca brevifolia western Joshua tree	Fed: None CA: CE CNPS: N/A	Occurs in a variety of arid habitats within the Mojave Desert. Found at elevations ranging from 1,600 to 6,600 feet. Blooming period is from March to June.	Yes	**Present** This species is found throughout the project site. Suitable habitat is present within and surrounding the site.
Plant Communities				
Pebble Plains	CDFW Sensitive Habitat	Unique habitat formed by glacial retreat. Characterized by unusual soil composition primarily composed of clay and volcanic pebbles, which results in poor nutrient content and limited water retention. Deep clay pockets subject to freezing temperatures push crushed rock to the surface. Restricted to a series of small islands of habitat within the larger Pine Forests that dominate the vicinities of Baldwin Lake and Big Bear Lake. Key indicator species are Kennedy buckwheat (*Eriogonum kennedyii austromontanum*), ash-grey paintbrush (*Castilleja cinerea*), and Bear Valley sandwort (*Arenaria ursina*).	No	**Absent**

U.S. Fish and Wildlife Service (Fed) - Federal
END – Federal Endangered
THR – Federal Threatened
DL – Delisted
PE – Proposed Endangered
PT – Proposed Threatened

California Department of Fish and Wildlife (CA) - California
END – California Endangered
THR – California Threatened
CTHR – California Candidate Threatened
DL - Delisted
FP – California Fully Protected
SSC – California Species of Special Concern
WL – California Watch List

California Native Plant Society (CNPS) -
California Rare Plant Rank
1B Plants Rare, Threatened, or Endangered in California and Elsewhere
2B Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
4 Plants of Limited Distribution – A Watch List

Threat Ranks
0.2- Moderately threatened in California
0.3- Not very threatened in California

Appendix B Site Photographs

Photograph 1: From the northwest corner of the project site looking south along the western boundary.

Photograph 2: From the northwest corner of the project site looking east along the northern boundary.

Photograph 3: From the northeast corner of the project site looking south along the eastern boundary.

Photograph 4: From the northeast corner of the project site looking west along the northern boundary.

Photograph 5: From the southeast corner of the project site looking north along the eastern boundary.

Photograph 6: From the southeast corner of the project site looking west along the southern boundary.

Photograph 7: From the southwest corner of the project site looking east along the southern boundary.

Photograph 8: From the southwest corner of the project site looking north along the western boundary.

Photograph 9: From the northern boundary of the project site looking northwest along the proposed transmission line.

Photograph 10: From the middle of the proposed transmission line looking southeast along the southern portion.

Photograph 11: From the middle of the proposed transmission line looking northeast along the northern portion.

Photograph 12: Looking west towards the eastern terminus of the proposed transmission line.

Photograph 13: Purple nerve cymopterus found onsite.

Photograph 14: Close up on the flower of the purple nerve cymopterus found onsite.

Appendix E Regulations

Special status species are native species that have been afforded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

Federal Regulations

Endangered Species Act of 1973

Federally listed threatened and endangered species and their habitats are protected under provisions of the Federal Endangered Species Act (ESA). Section 9 of the ESA prohibits "take" of threatened or endangered species. "Take" under the ESA is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct." The presence of any federally threatened or endangered species that are in a project area generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. Under the regulations of the ESA, the United States Fish and Wildlife Service (USFWS) may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act.

Critical Habitat is designated for the survival and recovery of species listed as threatened or endangered under the ESA. Critical Habitat includes those areas occupied by the species, in which are found physical and biological features that are essential to the conservation of an ESA listed species and which may require special management considerations or protection. Critical Habitat may also include unoccupied habitat if it is determined that the unoccupied habitat is essential for the conservation of the species.

Whenever federal agencies authorize, fund, or carry out actions that may adversely modify or destroy Critical Habitat, they must consult with USFWS under Section 7 of the ESA. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highway Administration or a permit from the U.S. Army Corps of Engineers (Corps)).

If USFWS determines that Critical Habitat will be adversely modified or destroyed from a proposed action, the USFWS will develop reasonable and prudent alternatives in cooperation with the federal institution to ensure the purpose of the proposed action can be achieved without loss of Critical Habitat. If the action is not likely to adversely modify or destroy Critical Habitat, USFWS will include a statement in its biological opinion concerning any incidental take that may be authorized and specify terms and conditions to ensure the agency is in compliance with the opinion.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S. Government Code [USC] 703) makes it unlawful to pursue, capture, kill, possess, or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union, and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703; 50 CFR 10, 21).

The MBTA covers the taking of any nests or eggs of migratory birds, except as allowed by permit pursuant to 50 CFR, Part 21. Disturbances causing nest abandonment and/or loss of reproductive effort (i.e., killing or abandonment of eggs or young) may also be considered "take." This regulation seeks to protect migratory birds and active nests.

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six families of raptors occurring in North America were included in the amendment: Accipitridae (kites, hawks, and eagles); Cathartidae (New World vultures); Falconidae (falcons and caracaras); Pandionidae (ospreys); Strigidae (typical owls); and Tytonidae (barn owls). The provisions of the 1972 amendment to the MBTA protects all species and subspecies of the families listed above. The MBTA protects over 800 species including geese, ducks, shorebirds, raptors, songbirds and many relatively common species.

State Regulations

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) provides for the protection of the environment within the State of California by establishing State policy to prevent significant, avoidable damage to the environment through the use of alternatives or mitigation measures for projects. It applies to actions directly undertaken, financed, or permitted by State lead agencies. If a project is determined to be subject to CEQA, the lead agency will be required to conduct an Initial Study (IS); if the IS determines that the project may have significant impacts on the environment, the lead agency will subsequently be required to write an Environmental Impact Report (EIR). A finding of non-significant effects will require either a Negative Declaration or a Mitigated Negative Declaration instead of an EIR. Section 15380 of the CEQA Guidelines independently defines "endangered" and "rare" species separately from the definitions of the California Endangered Species Act (CESA). Under CEQA, "endangered" species of plants or animals are defined as those whose survival and reproduction in the wild are in immediate jeopardy, while "rare" species are defined as those who are in such low numbers that they could become endangered if their environment worsens.

California Endangered Species Act (CESA)

In addition to federal laws, the state of California implements the CESA which is enforced by CDFW. The CESA program maintains a separate listing of species beyond the FESA, although the provisions of each act are similar.

State-listed threatened and endangered species are protected under provisions of the CESA. Activities that may result in "take" of individuals (defined in CESA as; "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") are regulated by CDFW. Habitat degradation or modification is not included in the definition of "take" under CESA. Nonetheless, CDFW has interpreted "take" to include the destruction of nesting, denning, or foraging habitat necessary to maintain a viable breeding population of protected species.

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the

absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

The CDFW has also produced a species of special concern list to serve as a species watch list. Species on this list are either of limited distribution or their habitats have been reduced substantially, such that a threat to their populations may be imminent. Species of special concern may receive special attention during environmental review, but they do not have formal statutory protection. At the federal level, USFWS also uses the label species of concern, as an informal term that refers to species which might be in need of concentrated conservation actions. As the Species of Concern designated by USFWS do not receive formal legal protection, the use of the term does not necessarily ensure that the species will be proposed for listing as a threatened or endangered species.

Fish and Game Code

Fish and Game Code Sections 3503, 3503.5, 3511, and 3513 are applicable to natural resource management. For example, Section 3503 of the Code makes it unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (Birds of Prey, such as hawks, eagles, and owls) are protected under Section 3503.5 of the Fish and Game Code which makes it unlawful to take, possess, or destroy their nest or eggs. A consultation with CDFW may be required prior to the removal of any bird of prey nest that may occur on a project site. Section 3511 of the Fish and Game Code lists fully protected bird species, where the CDFW is unable to authorize the issuance of permits or licenses to take these species. Pertinent species that are State fully protected by the State include golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*). Section 3513 of the Fish and Game Code makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Native Plant Protection Act

Sections 1900–1913 of the Fish and Game Code were developed to preserve, protect, and enhance Rare and Endangered plants in the state of California. The act requires all state agencies to use their authority to carry out programs to conserve Endangered and Rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of the CDFW at least ten days in advance of any change in land use which would adversely impact listed plants. This allows the CDFW to salvage listed plant species that would otherwise be destroyed.

California Native Plant Society Rare and Endangered Plant Species

Vascular plants listed as rare or endangered by the CNPS, but which have no designated status under FESA or CESA are defined as follows:

California Rare Plant Rank

1A- Plants Presumed Extirpated in California and either Rare or Extinct Elsewhere

1B- Plants Rare, Threatened, or Endangered in California and Elsewhere

2A- Plants Presumed Extirpated in California, But More Common Elsewhere

2B- Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

3- Plants about Which More Information is Needed - A Review List

4- Plants of Limited Distribution - A Watch List

Threat Ranks

.1- Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2- Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

.3- Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known).

Local Policies

San Bernardino County Development Code

Section 88.01.060 of the County of San Bernardino Development Code provides regulations for the removal or harvesting of specified desert native plants in order to preserve and protect the plants and to provide for the conservation and wise use of desert resources. The provisions are intended to coincide with the Desert Native Plants Act (Food and Agricultural Code Section 8001 et seq.) and the State Department of Food and Agriculture to implement and enforce the Act.

Pursuant to Section 88.01.060 of the Development Code, the following desert native plants or any part of them, except the fruit, shall not be removed except under a Tree or Plant Removal Permit:

1) The following desert native plants with stems two inches or greater in diameter or six feet or greater in height:

   (A) *Dalea spinosa* (smoke tree)
   (B) All species of the genus *Prosopis* (mesquites)

2) All species of the family *Agavaceae* (century plants, nolinas, yuccas)

3) Creosote Rings, 10 feet or greater in diameter

4) All Joshua trees

5) Any part of any of the following species, whether living or dead:

   (A) *Olneya tesota* (desert ironwood)
   (B) All species of the genus *Prosopis* (mesquites)

(C) All species of the genus *Cercidium* (palos verdes)

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFG regulates activities under the Fish and Game Code Section 1600-1616, and the Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

Federal Regulations

Section 404 of the Clean Water Act

In accordance with the Revised Definition of "Waters of the United States"; Conforming (September 8, 2023), "waters of the United Sates" are defined as follows:

(a) ***Waters of the United States*** means:

(1) Waters which are:
(i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
(ii) The territorial seas; or
(iii) Interstate waters;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:
(i) Waters identified in paragraph (a)(1) of this section; or
(ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section

(b) The following are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted

cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;
(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (*e.g.*, gullies, small washes) characterized by low volume, infrequent, or short duration flow.

(c) In this section, the following definitions apply:

(1) ***Wetlands*** means 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.

(2) ***Adjacent*** means having a continuous surface connection

(3) ***High tide line*** means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

(4) ***Ordinary high water mark*** means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

(5) ***Tidal waters*** means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

Section 401 of the Clean Water Act

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits, and helps insure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Water Quality Control Boards (Regional Board) that issue or deny certification for discharges to waters of the United States and waters of the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board assumed this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

State Regulations

Fish and Game Code

Fish and Game Code Sections 1600 et. seq. establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided.

Fish and Game Code Section 1602 requires any person, state, or local governmental agency or public utility to notify the CDFW before beginning any activity that will do one or more of the following:

(1) substantially obstruct or divert the natural flow of a river, stream, or lake;
(2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or
(3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. CDFW's regulatory authority extends to include riparian habitat (including wetlands) supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, the CDFW takes jurisdiction to the top of bank of the stream or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation. A Section 1602 Streambed Alteration Agreement would be required if impacts to identified CDFW jurisdictional areas occur.

Porter Cologne Act

The California *Porter-Cologne Water Quality Control Act* gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Act has become an important tool in the post SWANCC and Rapanos regulatory environment, with respect to the state's authority over isolated and insignificant waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although "waste" is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include fill discharged into water bodies.