DETERMINATION OF BIOLOGICALLY EQUIVALENT OR SUPERIOR PRESERVATION (DBESP) ANALYSIS

FOR IMPACTS TO MSHCP RIPARIAN/RIVERINE AREAS

MORENO VALLEY TRADE CENTER PROJECT LOCATED IN THE COUNTY OF RIVERSIDE, CALIFORNIA

APNs:
488-340-002 THROUGH 488-340-012

Permittee:

City of Moreno Valley
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July 8, 2020

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EXHIBITS

1.0 EXECUTIVE SUMMARY

This document provides an analysis in support of a Determination of Biologically Equivalent or Superior Preservation (DBESP) for the Moreno Valley Trade Center Project (the Project) located in the City of Moreno Valley, Riverside County, California, in regard to the Multiple Species Habitat Conservation Plan (MSHCP) requirements for *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (MSHCP Volume I, Section 6.1.2)*.

This document has been prepared following the 2019 MSHCP DBESP Report Template and is consistent with the guidelines identified in *Volume I, Section 6.1.2* of the MSHCP document (Dudek 2003), to demonstrate that with the appropriate mitigation, the Project will represent a "biologically equivalent or superior alternative". This document analyzes onsite sensitive biological resources, including a summary of findings of general and focused biological surveys, and vegetation mapping. A more detailed reporting of biological resources, including results of species-specific focused surveys, are contained within the Project's Biological Technical Report [Glenn Lukos Associates Inc. (GLA), 2020].

This document describes compensatory mitigation for impacts to unvegetated riverine areas, which are expected to be considered equivalent or superior mitigation for the Project, as compared to avoidance of such resources on site.

This document also describes compensatory mitigation for impacts to the burrowing owl (*Athene cunicularia*), which is expected to be considered equivalent or superior mitigation for the Project, as compared to avoidance of such resources on site.

2.0 INTRODUCTION

2.1 Project Area

The Project Site comprises approximately 84.68 acres in the City of Moreno Valley, Riverside County, California [Exhibit 1 – Regional Map] and is located within Section 2 of Township 3 South, Range 3 West, of the U.S. Geological Survey (USGS) 7.5" quadrangle map Sunnymead (dated 1967 and photorevised in 1980)[Exhibit 2 – Vicinity Map]. The Project Site is bordered by Eucalyptus Avenue to the north, Redlands Boulevard to the east, Encelia Avenue to the south, and disturbed undeveloped lands and the Quincy Channel to the west [Exhibit 3 – Aerial Map and Exhibit _ 4, Site Plan Map].

City staff may access the Project site from eastbound State Route (SR) 60. Exit at Redlands Boulevard and turn right. Continue on Redlands Boulevard past Eucalyptus Avenue and the site is on the right.

For this report, the term *Project Site* is defined as the area of onsite, permanent impacts equaling 69.66 acres [Exhibit 4 – Site Plan Map]. The term *Offsite Impact Area* includes the areas not on-site that are to be directly and permanently impacted by the Project, totaling 12.22 acres. This report analyzes the combined impact area totaling 81.88 acres. The Project Site is composed of

Assessor's Parcel Numbers (APNs): 488-340-002 through 488-340-012. For this document, we have assumed that all direct impacts would be permanent. The term *Study Area* includes both the Project Site, the Offsite Impact Area, and those areas within the project proponent's property limit that will not be directly impacted, for a total area of 84.68 acres.

2.2 Project Description

The Project consists of a development plan for a light industrial building with 1,332,380 square feet of building floor area, inclusive of warehouse/storage space and supporting office space. The proposed building would operate as a cross-dock warehouse with 104 loading docks on the north side of the building and 120 loading docks on the south side of the building. Truck trailer parking spaces (278 total) also would be provided within the truck courts/loading areas on the north and south sides of the building. The truck courts/loading areas would be enclosed and screened from public viewing areas by solid screen walls. Automobile parking areas would be provided on the western and eastern sides of the building; a total of 637 automobile parking spaces would be provided on-site. Access to the Project Site would be provided by up to eight (8) driveways: two (2) driveways from Eucalyptus Avenue, two (2) driveways from Redlands Avenue, and at least two (2) or no more than four (4) driveways from Encelia Avenue. The proposed driveways to Encelia Avenue would be restricted to automobile traffic only; no heavy trucks would be permitted to enter/exit the site from the proposed Encelia Avenue driveways.

Additional off-site improvements would include various connections and infrastructure improvements within Redlands Boulevard and Eucalyptus Avenue, totaling approximately 12.22 acres.

All impacts associated with the Project would be permanent, including both the onsite and offsite areas. The Project would not have any temporary impacts.

2.3 Existing Conditions

The Study Area primarily consists of annually maintained agricultural fields that support predominantly ruderal vegetation, with the southeastern portion containing an active plant nursery. The Study Area and the surrounding landscape has been historically disked since 1966[1]. Currently the surrounding land uses include commercial industry to the north, residential development to the south, and agricultural uses to the east and west. The Project slopes gently to the southeast, with elevations on site ranging from approximately 1,710 feet above mean sea level (amsl) in the southeast to 1,751 feet amsl in the northwest. The Quincy Channel enters the northwestern portion of the Study Area through a culvert under Eucalyptus Avenue and flows in a southerly direction for 1,487 linear feet before continuing off-site to the south [Exhibit 7 – Site Photographs]. Two ephemeral drainage ditches, which were constructed in, and drain wholly within upland areas, occur along the northern and eastern boundaries of the Project Site parallel to Eucalyptus Avenue and Redlands Boulevard, respectively.

Soils on site consist of loam, fine sand, and fine sandy loam from the Metz and San Emigdio series [Exhibit 5 – Soils Map].

[1] *Historic Aerials*, www.historicaerials.com/.

The Study Area supports the following vegetation/land use types: Disturbed/Developed, Disturbed/Ruderal, Ornamental, and Ruderal. Table 2-1 provides a summary of the vegetation types and their corresponding acreage. Descriptions of each vegetation type follow the table. A Vegetation Map is attached as Exhibit 6. Photographs depicting the site are shown in Exhibit 7.

Table 2-1. Summary of Vegetation/Land Use Types for the Study Area

VEGETATION/LAND USE TYPE	ONSITE AREAS (acres)	OFFSITE IMPACT AREA (acres)	TOTAL (acres)
Disturbed/Developed	14.77	12.22	**26.99**
Disturbed/Ruderal	53.39	0	**53.39**
Ornamental	0.80	0	**0.80**
Ruderal	3.49	0	**3.49**
Total	**72.46**	**12.22**	**84.68**

2.3.1 Disturbed/Developed

The Study Area supports 26.99 acres of disturbed/developed areas, including 14.77 acres onsite and 12.22 acres offsite. These onsite areas consist of vehicular access roads located along the western and southern portions of the site and an active plant nursery located in the southeastern corner of the site. The offsite areas consist of existing paved roadways.

2.3.2 Disturbed/Ruderal

The Study Area supports 53.39 acres of disturbed/ruderal lands, all of which are associated with the onsite portions of the Project. These lands cover the majority of the Study Area and were historically used for farming. These areas are routinely disked for weed abatement. Dominant plant species observed included London rocket (*Sisymbrium irio*), cheeseweed (*Malva parviflora*), common fiddleneck (*Amsinckia intermedia*), red brome (*Bromus madritensis* ssp. *rubens*), and Russian thistle (*Salsola australis*), with some areas having dense patches of non-native grasses. Other species detected included wild radish (*Raphanus sativus*), black mustard (*Brassica nigra*), common barley (*Hordum vulgare*), common Mediterranean grass (*Schismus barbatus*), field mustard (*Brassica rapa*), flax-leaved horseweed (*Erigeron bonariensis*), lambs quarters (*Chenopodium album*), prickly lettuce (*Lactuca serriola*), red brome (*Bromus madritensis* ssp. *rubens*), silver wattle (*Acacia dealbata*), white horehound (*Marrubium vulgare*), annual bursage (*Ambrosia acanthicarpa*), salt heliotrope (*Heliotropium curassavicum*), and western sunflower (*Helianthus annuus*).

Additionally, the disturbed/ruderal lands support sparse occurrences of ornamentally planted southern California black walnut (*Juglans californica*) and Peruvian pepper tree (*Schinus molle*).

2.3.3 Ornamental

The Study Area contains 0.80 acre of lands supporting trees that were planted at the site or that established from other ornamental plantings, all of which are associated with the onsite portion of the Project. These areas primarily consist of non-native or planted tree species occurring in the

central and southeastern portions of the Study Area. Dominant plant species observed included Fremont cottonwood (*Populus fremontii*) and red gum (*Eucalyptus camaldulensis*).

2.3.4 Ruderal

The Study Area supports 3.49 acres of ruderal lands, all of which are associated with the onsite portion of the Project. These areas primarily consist of non-native ruderal vegetation that have not been historically maintained. Ruderal areas on site are primarily associated with Quincy Channel along the western boundary of the Study Area and with fence-lines in the eastern portions of the site. In the Quincy Creek section of ruderal lands, the dominant plant species within these areas included common fiddleneck, London rocket, and Russian thistle. Additional plant species observed included giant reed (*Arundo donax*), castor bean (*Ricinis communis*), Mexican fan palm (*Washingtonia robusta*), red-stemmed filaree (*Erodium cicutarium*), tamarisk (*Tamarix* sp.), tree of heaven (*Ailanthus altissima*), and tree tobacco (*Nicotiana glauca*). In the eastern portion of ruderal lands on site, dominant plants include common Mediterranean grass, common barley, cheeseweed, fiddleneck, and London rocket.

3.0 RIPARIAN/RIVERINE MITIGATION (SECTION 6.1.2)

3.1 Methods

The MSHCP defines riparian areas as *lands which contain Habitat dominated by trees, shrubs, persistent emergent mosses and lichens, which occur close to or which depend upon soils moisture from a nearby fresh water source*. In the absence of riparian habitat, the MSHCP defines riverine areas as *areas with fresh water flow during all or a portion of the year.*

The MSHCP defines vernal pools as *seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indictors of hydrology and/or vegetation during the drier portion of the growing season.*

With the exception of wetlands created for the purpose of providing wetlands habitat or resulting from human actions to create open waters, or from the alteration of natural stream courses, areas demonstrating characteristics as described above and which are artificially created are not included in these definitions.

The MSHCP requires habitat assessments/focused surveys for certain species identified under Section 6.1.2, including riparian birds and fairy shrimp. Bird species requiring assessments include least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*). Fairy srhimp speces requiring assessments include listed species such as Riverside fairy shrimp (*Streptocephalus woottoni*), Santa Rosa Plataeu fairy shrimp (*Linderiella santarosae*), and vernal pool fairy shrimp (*Branchinecta lynchi*). Although not directly referenced by Section 6.1.2, assessments also should consider the San Diego fairy shrimp (*Branchinecta sandiegonensis*) where appropriate. For fairy shrimp, habitat assessments should consider all non-vernal pool

features that could sufficiently hold water including stock ponds, ephemeral pools, road ruts, and other human-made depressions.

GLA biologists reviewed the Study Area to document MSHCP riparian/riverine resources on December 6, 2019 and March 31, 2020. Prior to beginning the field assessment, a color aerial photograph, a topographic base map of the property, and the previously cited USGS topographic map were examined to determine the locations of potential riparian/riverine areas. Suspected resources were field-checked for the presence of definable channels and/or riparian vegetation. While in the field, the limits of riparian/riverine resources were recorded onto a color aerial photograph using visible landmarks and/or sub-meter accuracy global positioning system (GPS) devices.

To assess the Study Area for vernal/seasonal pools (including fairy shrimp habitat), GLA biologists evaluated the topography of the site, including whether the site contained depressional features/topography with the potential to become inundated; whether the site contained soils associated with vernal/seasonal pools; and whether the site supported plants that suggested areas of localized ponding. The site was evaluated by GLA biologists on December 6, 2019.

3.2 Burrowing Owl

The majority of the Project Site is located within the MSHCP survey area for the burrowing owl (*Athene cunicularia*). GLA biologists April Nakagawa and David Smith conducted focused surveys for the burrowing owl for all suitable habitat areas within the Project Site. Surveys were conducted in accordance with survey guidelines described in the 2006 MSHCP Burrowing Owl Survey Instructions. The guidelines stipulate that four focused survey visits be conducted on separate dates between March 1 and August 31. Within areas of suitable habitat, the MSHCP first requires a focused burrow survey to map all potentially suitable burrows. The focused burrow survey was conducted on March 6, 2020. Focused burrowing owl surveys were conducted on March 6, March 30, April 3, and April 17, 2020. The burrowing owl survey visits were generally conducted within a survey window from one hour prior to sunrise to two hours after sunrise.

The surveys were conducted during weather that was conducive to observing owls outside their burrows and detecting burrowing owl sign and not during rain, high winds (> 20 mph), dense fog, or temperatures over 90 °F. Additionally, all work was performed more than 5 days after a rain event.

Surveys were conducted by walking meandering transects throughout areas of suitable habitat. Exhibit 10 identifies the burrowing owl survey areas at the Project Site. Transects were spaced between 22 feet and 65 feet apart, adjusting for vegetation height and density, in order to provide adequate visual coverage of the survey areas. At the start of each transect, and at least every 320 feet along transects, the survey area was scanned for burrowing owls using binoculars. All suitable burrows were inspected for diagnostic owl sign (e.g., pellets, prey remains, whitewash, feathers, bones, and/or decoration) in order to identify potentially occupied burrows. Transect locations are provided on Exhibit 10, along with the 500-foot buffer area. Table 3-1 summarizes the burrowing owl survey visits.

Table 3-1. Summary of Burrowing Owl Surveys

Survey Date	Biologist(s)	Start/End Time	Start/End Temperature (°F)	Start/End Wind Speed (mph)	Cloud Cover (%)
03/06/2020	AN	0615/0915	57/64	0-3	20%
03/30/2020	DS	0600/0900	43/54	0-2	10%
04/03/2020	DS	0555/0855	51/57	0-1	60%
04/17/2020	DS	0610/0910	45/55	0-1	0%

AN = April Nakagawa, DS = David Smith

3.3 Results/Impacts

3.3.1 Results

The Study Area contains the Quincy Channel and two ephemeral drainage ditches artificially constructed to collect road and agricultural runoff. These drainage features qualify as MSHCP Riparian/Riverine areas. As such, a total of 2.73 acres of MSHCP Riparian/Riverine areas occur within the Study Area, of which 2.71 acres is riverine and 0.02-acre is riparian [Exhibit 8 – MSHCP Riparian/Riverine Areas Map]. The riverine areas are dominated by ruderal, weedy vegetation, which is not suitable habitat for Riparian/Riverine associated sensitive species such as least Bell's vireo, southwestern willow flycatcher, or western yellow-billed cuckoo. Riparian areas on site are too small to support Riparian/Riverine associated sensitive species and are not viable habitat.

No vernal or seasonal pools are present within the Study Area. As discussed above, no ponding was observed at the site during biological surveys, including those that occurred following periods of substantial rainfall. The site lacks the suitable topography (including localized depressions) to support prolonged inundation necessary to support fairy shrimp. In addition, the site is mapped as containing fine sand, loam, and sandy loam soils, which are generally not associated with vernal pools. Observations of the soils at the site showed a lack of clay soil components. Lastly, no plants were observed at the site that are associated with vernal pools and similar habitats that experience prolonged inundation.

The Project site supports approximately 71.65 acres of potential habitat (disturbed/developed, disturbed/ruderal, and ruderal) for the burrowing owl. The Offsite Impacts area supports approximately 12.22 acres of potential habitat (disturbed/developed). A total of 83.87 acres of potential habitat is present.

GLA biologists did not observe burrowing owls, or evidence of burrowing owls (e.g., cast pellets, preened feathers, or whitewash clustered at a burrow) during the general biological surveys conducted in December 2019, and did not detect the burrowing owl during focused burrowing owl surveys conducted in March and April 2020. Exhibit 10 – Burrowing Owl Survey Area/Burrow Map, depicts the location of the burrowing owl survey areas and of burrows detected during the focused burrow survey. This species was confirmed absent from the Study Area.

3.3.2 Impacts

Pursuant to Volume I, Section 6.1.2 of the MSHCP, projects must consider alternatives providing for 100 percent avoidance of riparian/riverine areas. If avoidance is infeasible, then the unavoidable impacts must be mitigated and a DBESP is required.

The Study Area contains the Quincy Channel and two ephemeral drainage ditches artificially constructed to collect road and agricultural runoff. These drainage features qualify as MSHCP Riparian/Riverine areas. As such, a total of 2.73 acres of MSHCP Riparian/Riverine areas occur within the Study Area, of which 2.71 acres is riverine and 0.02-acre is riparian [Exhibit 9 – MSHCP Riparian/Riverine Areas Map]. The riverine areas are dominated by ruderal, weedy vegetation, which is not suitable habitat for Riparian/Riverine associated sensitive species such as least Bell's vireo or western yellow-billed cuckoo. Riparian areas on site are too small to support Riparian/Riverine associated sensitive species and are not viable habitat.

The proposed Project would permanently impact approximately 0.57 acre of MSHCP riverine areas [Exhibit 12]. No temporary impacts would occur.

No vernal or seasonal pools are present within the Study Area. The Study Area is a maintained agricultural field that lacked ponding features upon multiple visits within a week of rainfall. This lack of vernal pool habitat precludes the occurrence of any listed fairy shrimp species.

The Project will not impact the burrowing owl as no burrowing owl were detected or identified on site during 2020 focused surveys.

3.4 Mitigation/Equivalency

Riparian/Riverine Mitigation

The following is proposed to mitigate unavoidable impacts to 0.57 acre of MSHCP riverine areas, none of which support riparian habitat:

1. The purchase of 0.57 acre of re-establishment credits (a 1:1 mitigation-to-impact ratio) from the Riverpark Mitigation Bank; *and*

2. The purchase of 0.57 acre of rehabilitation credits (a 1:1 mitigation-to-impact ratio) from the Riverpark Mitigation Bank;

In the event that compensatory mitigation credits are not available from the Riverpark Mitigation Bank at the time of proposed work commencement, the Applicant will enter into an agreement to purchase rehabilitation credits from the Santa Ana River Watershed In-Lieu Fee Program (SARW-ILFP) at a 2:1 mitigation-to-impact ratio. The compensatory mitigation would consist of the rehabilitation of riparian habitat within the Santa Ana River Watershed. It is understood that this mitigation proposal through the SARW-ILFP would constitute permittee-responsible mitigation at would require an amendment to the DBESP.

Burrowing Owl Mitigation

As a mitigation measure for burrowing owl, the developer will conduct a burrowing owl pre-construction survey 30 days or less from the commencement of initial ground disturbance.

3.4.1 Direct Effects/Infeasibility of Avoidance

Direct effects are those effects that can be expected from direct removal of and disturbances to the land and resources. For this report, the term *permanent impact* is defined as that portion of the resource that will be permanently developed/removed. All impacts proposed by the Project will be permanent. The Project will not result in any temporary impacts.

Direct effects will occur to 0.57 acre of MSHCP riverine areas (none of which support MSHCP riparian habitat) within the Study Area. A total of 3,570 linear feet of roadside ditch will be permanently impacted. No impact to Quincy Channel will occur.

As part of the Project, both Eucalyptus Avenue and Redlands Boulevard will be widened within the site. As these ditches are roadside ditches adjacent to both Eucalyptus Avenue and Redlands Boulevard, these impacts will eliminate both roadside ditches within the Study Area and place them in a pipe. These impacts are unavoidable due to the location of each ditch and proposed road improvements. Flows will still be discharged to the same place, but in a pipe instead of the roadside ditches.

It should also be noted that the Study Area has been disturbed and utilized for dry farming (agricultural production) for over 50 years. As a result, the above-referenced MSHCP riparian/riverine resources on site exhibit low function and value as compared to the provision of compensatory mitigation at a local mitigation bank or in-lieu fee program as described below.

The purchase of compensatory re-establishment and rehabilitation mitigation credits from the Riverpark Mitigation Bank at a 1:1 mitigation to impact ratio for both re-establishment and rehabilitation (totaling 2:1 mitigation) will be considered superior mitigation as compared to the preservation of 0.57 acre of roadside ditches which have been in agricultural production for over 50 years. As noted above, the riverine features to be impacted consist of two roadside ditches. No riparian habitat or riverine habitat within Quincy Channel will be impacted. The proposed re-establishment and rehabilitation credits will consist of riparian habitat areas that will represent habitat functions that would be superior to the existing conditions at the Project site.

The Project team's mitigation proposal consists of the following:

1) The purchase of 0.57 acre of re-establishment credits (a 1:1 mitigation-to-impact ratio) from the Riverpark Mitigation Bank; *and*

2) The purchase of 0.57 acre of rehabilitation credits (a 1:1 mitigation-to-impact ratio) from the Riverpark Mitigation Bank;

In the event that compensatory mitigation credits are not available from the Riverpark Mitigation Bank at the time of proposed work commencement, the Applicant will enter into an agreement to purchase rehabilitation credits from the SARW-ILFP at a 2:1 mitigation-to-impact ratio. The compensatory mitigation would consist of the rehabilitation of riparian habitat within the Santa Ana River Watershed. It is understood that this mitigation proposal through the SARW-ILFP would constitute permittee-responsible mitigation at would require an amendment to the DBESP. No mitigation for burrowing owl is necessary as no owls are on site.

3.4.2 Indirect Effects

Indirect effects are those effects that give rise to delayed, secondary effects. Examples of indirect effects include fragmentation, increased levels of environmental toxins, plant and wildlife dispersal interruption, increased risk of fire, construction noise, and invasion of non-native animals and plants, which stresses or alters competition among natives. Indirect effects are those that can be assumed to increase mortality, reduce productivity, and/or reduce the functions and values of natural open space for native species.

The Project Site and its surroundings have been under agricultural operation for more than 50 years and it is not a wildlife movement corridor; rather, the area is already fragmented by construction of other warehouse/commercial buildings, the SR 60 Freeway, and rural residential housing. The development of a warehouse building and its associated improvements will not result in further fragmentation than what already exists, and it will not result in a lower function and value of natural open space for native species or other effects associated with such natural open space.

Finally, the Project is not located adjacent to the MSHCP Conservation Area; therefore, it is not subject to the Urban/Wildland Interface Guidelines. The Project will not result in adverse indirect effects to special-status resources.

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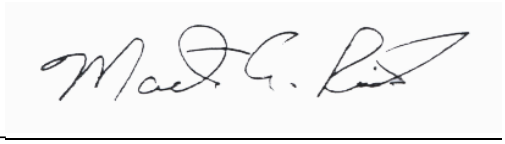
5.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Signed:  Date: July 8, 2020

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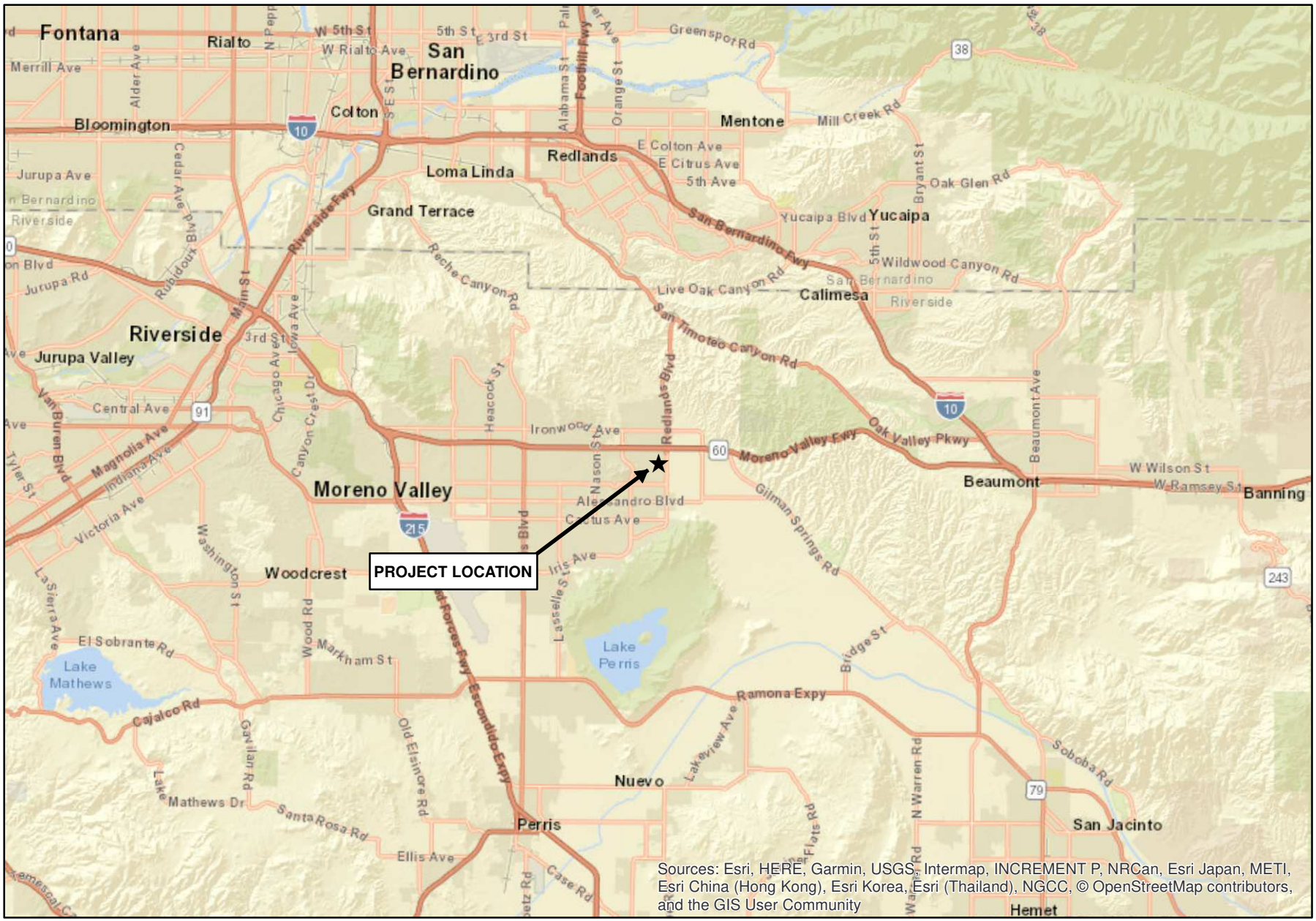

Source: ESRI World Street Map

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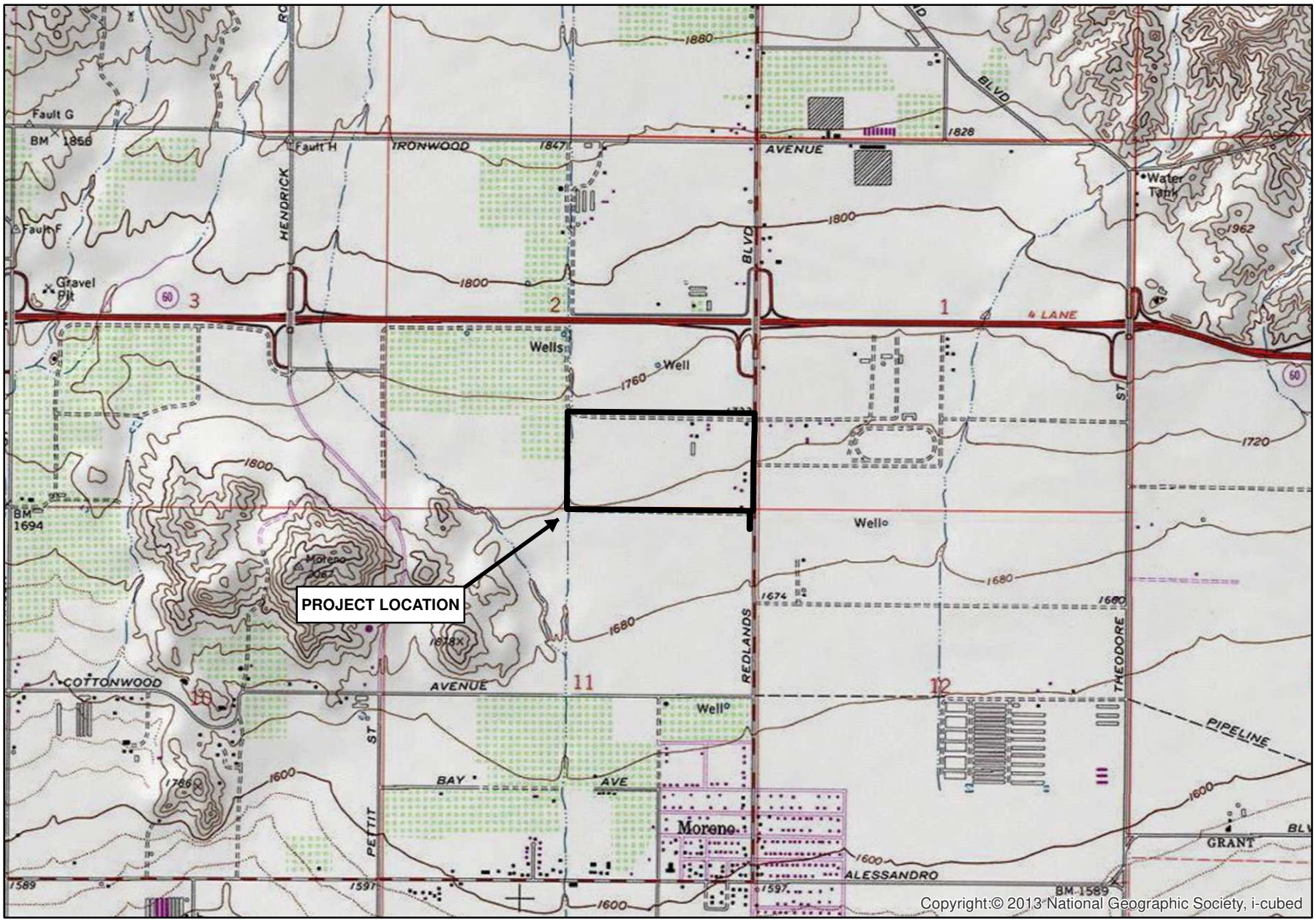
MORENO VALLEY TRADE CENTER

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1

Adapted from USGS Sunnymead, CA quadrangle



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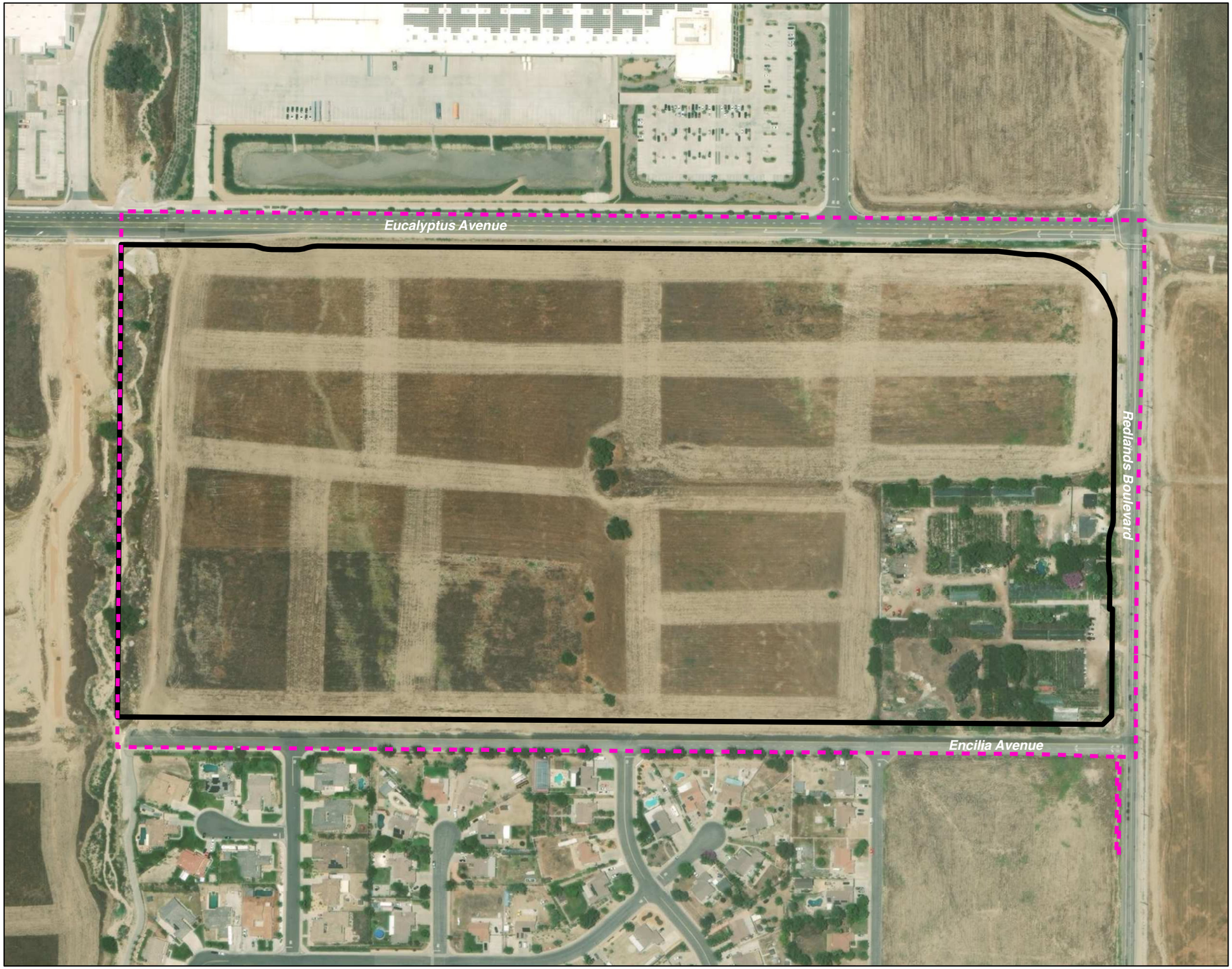
0 1,000 2,000 4,000 Feet

MORENO VALLEY TRADE CENTER

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2



Project Boundary

Study Area

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 7, 2020

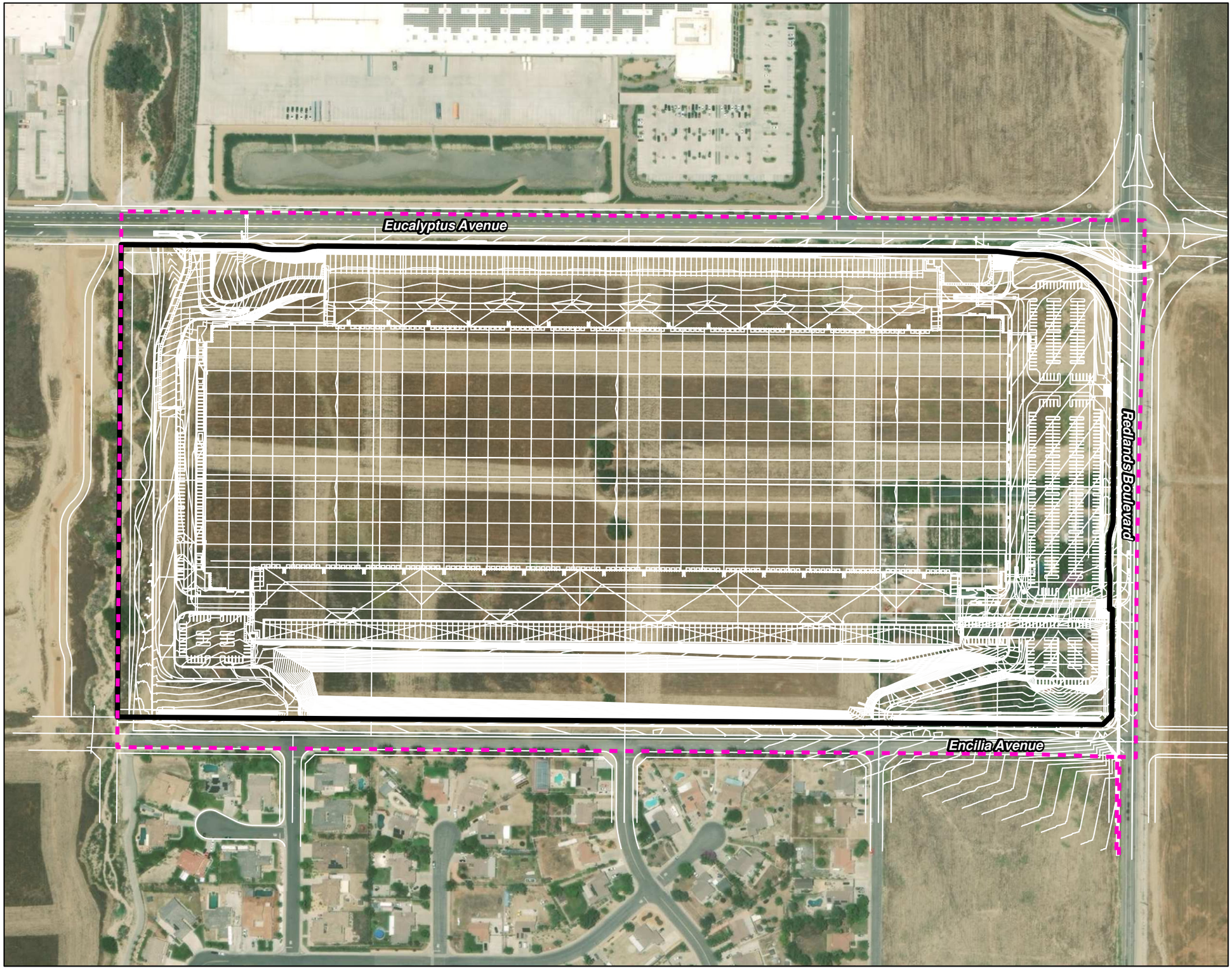
MORENO VALLEY TRADE CENTER

Aerial Map

GLENN LUKOS ASSOCIATES

Exhibit 3

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\1459-1_Aerial.mxd



Project Boundary

Study Area

Project Site Plan

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 7, 2020

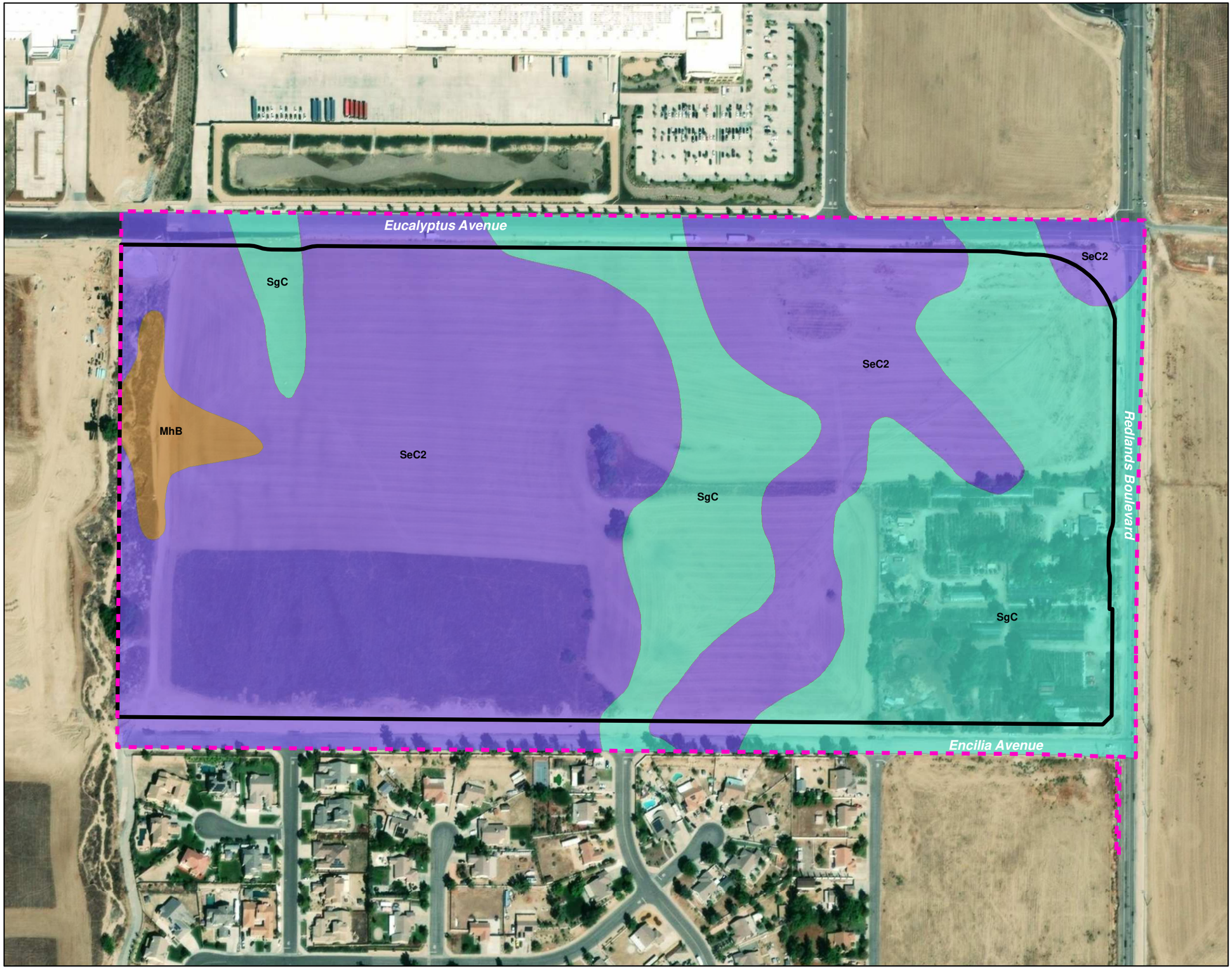
MORENO VALLEY TRADE CENTER

Site Plan Map

GLENN LUKOS ASSOCIATES

Exhibit 4

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\1459-1_SitePlan.mxd



Project Boundary

Study Area

MhB - Metz loamy fine sand, sandy loam substratum, 0 to 5 per cent slopes

SeC2 - San Emigdio fine sandy loam, 2 to 8 percent slopes, eroded

SgC - San Emigdio loam, 2 to 8 percent slopes

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

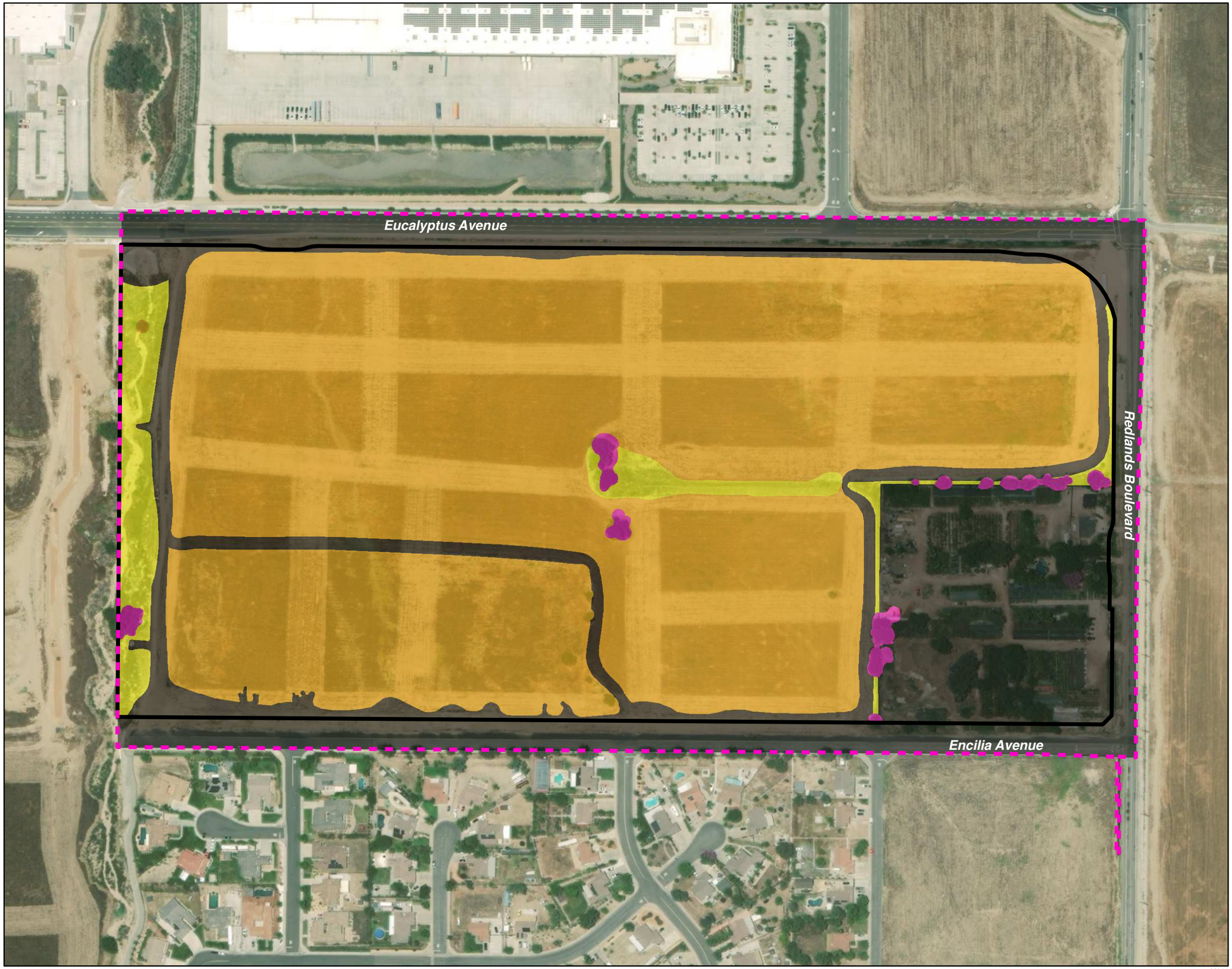
MORENO VALLEY TRADE CENTER

Soils Map

GLENN LUKOS ASSOCIATES

Exhibit 5

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\SoilsGIS\1459-1_Soils.mxd



Project Boundary

Study Area

Ornamental

Ruderal

Disturbed/Ruderal

Disturbed/Developed

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 7, 2020

MORENO VALLEY TRADE CENTER

Vegetation Map

GLENN LUKOS ASSOCIATES

Exhibit 6

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\VegetationGIS\1459-1_Vegetation.mxd

Photograph 1: Photo depicting the disturbed nature of the site where areas had been recently disked per annual maintenance.

Photograph 2: Photo depicts the disturbed/ruderal vegetation with ornamental trees in the background.

Photograph 3: Photo of Quincy Channel from the southwestern portion of the site.

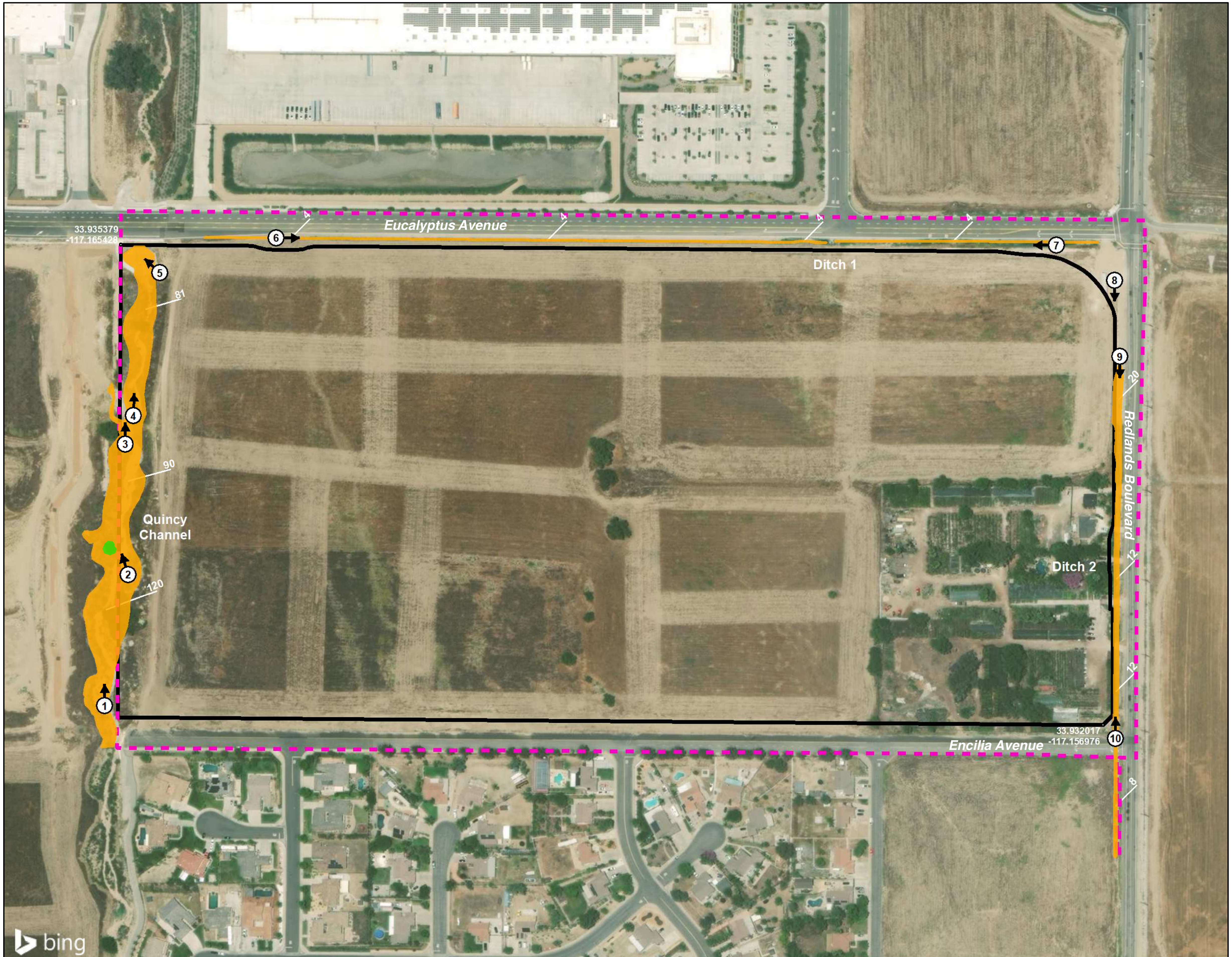
Photograph 4: Photo of Drainage Ditch 2 running parallel to Redlands Boulevard. Note the lack of vegetation.

GLENN LUKOS ASSOCIATES

Exhibit 7

MORENO VALLEY TRADE CENTER

Site Photographs



Project Boundary

Study Area / Impact Footprint

MSHCP Riparian

MSHCP Riverine

Width of Feature in Feet

Photo Location

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 7, 2020

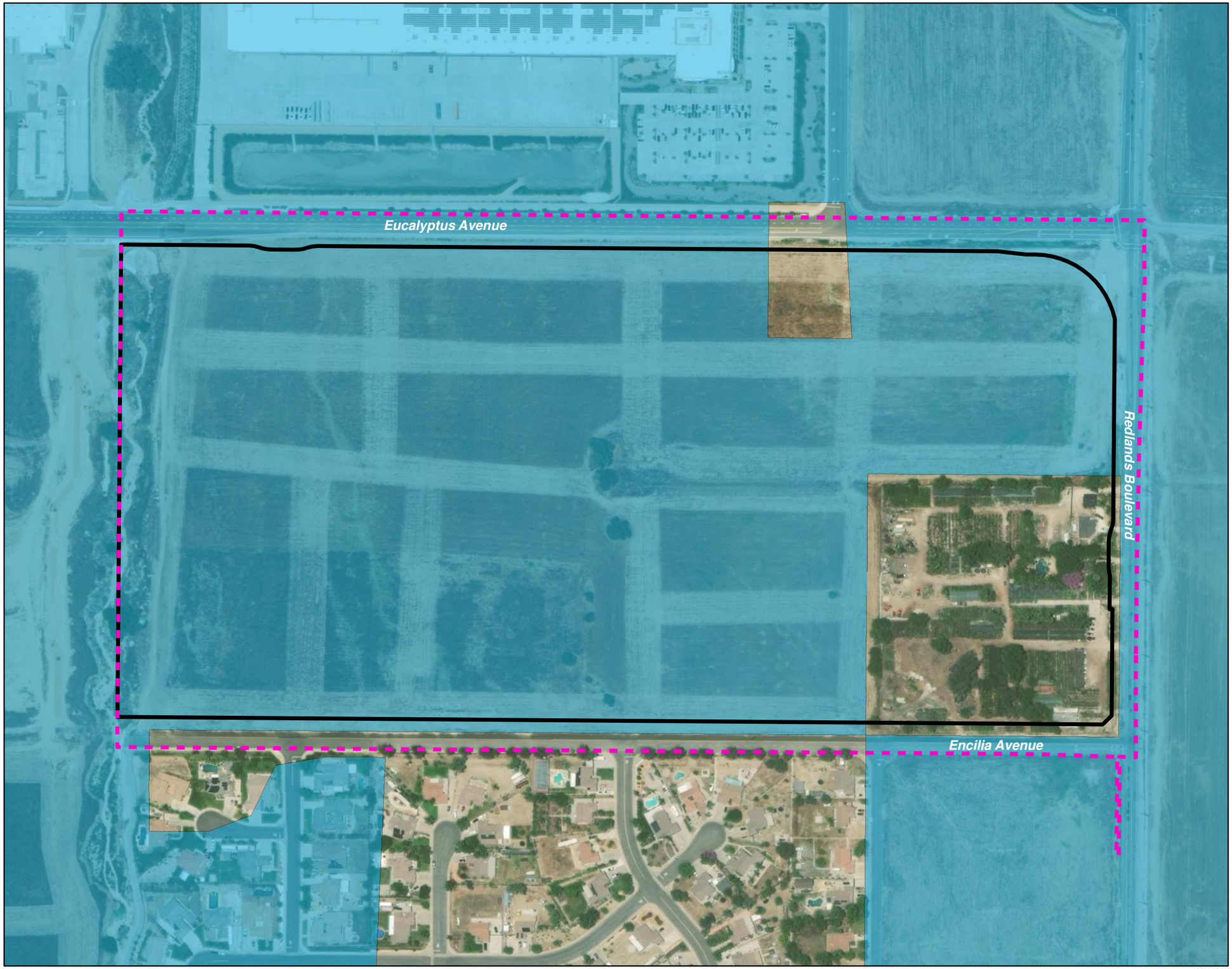
MORENO VALLEY TRADE CENTER

MSHCP Riparian/Riverine Map

GLENN LUKOS ASSOCIATES

Exhibit 8

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\DelineationGIS\REV1\1459-1_JD_REV1_MSHCP.mxd



Project Boundary

Study Area

Burrowing Owl Survey Area

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 7, 2020

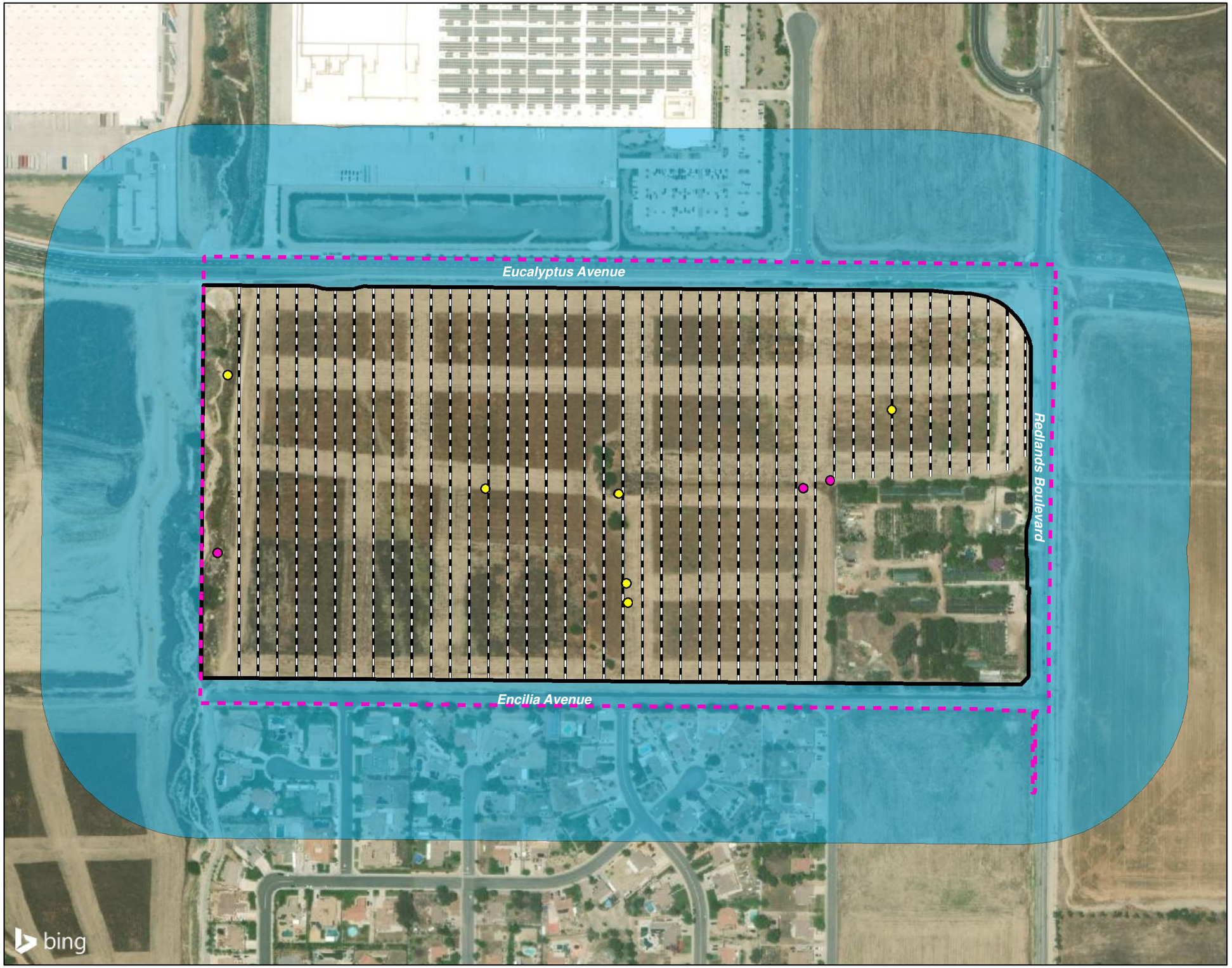
MORENO VALLEY TRADE CENTER

MSHCP Overlay Map

GLENN LUKOS ASSOCIATES

Exhibit 9

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\MSHCP_GIS\1459-1_MSHCPOverlay.mxd



Project Boundary

Study Area

500' Buffer Area

Transects

Burrow

Burrow Complex

N

0 150 300 600

Feet

1 inch = 300 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 7, 2020

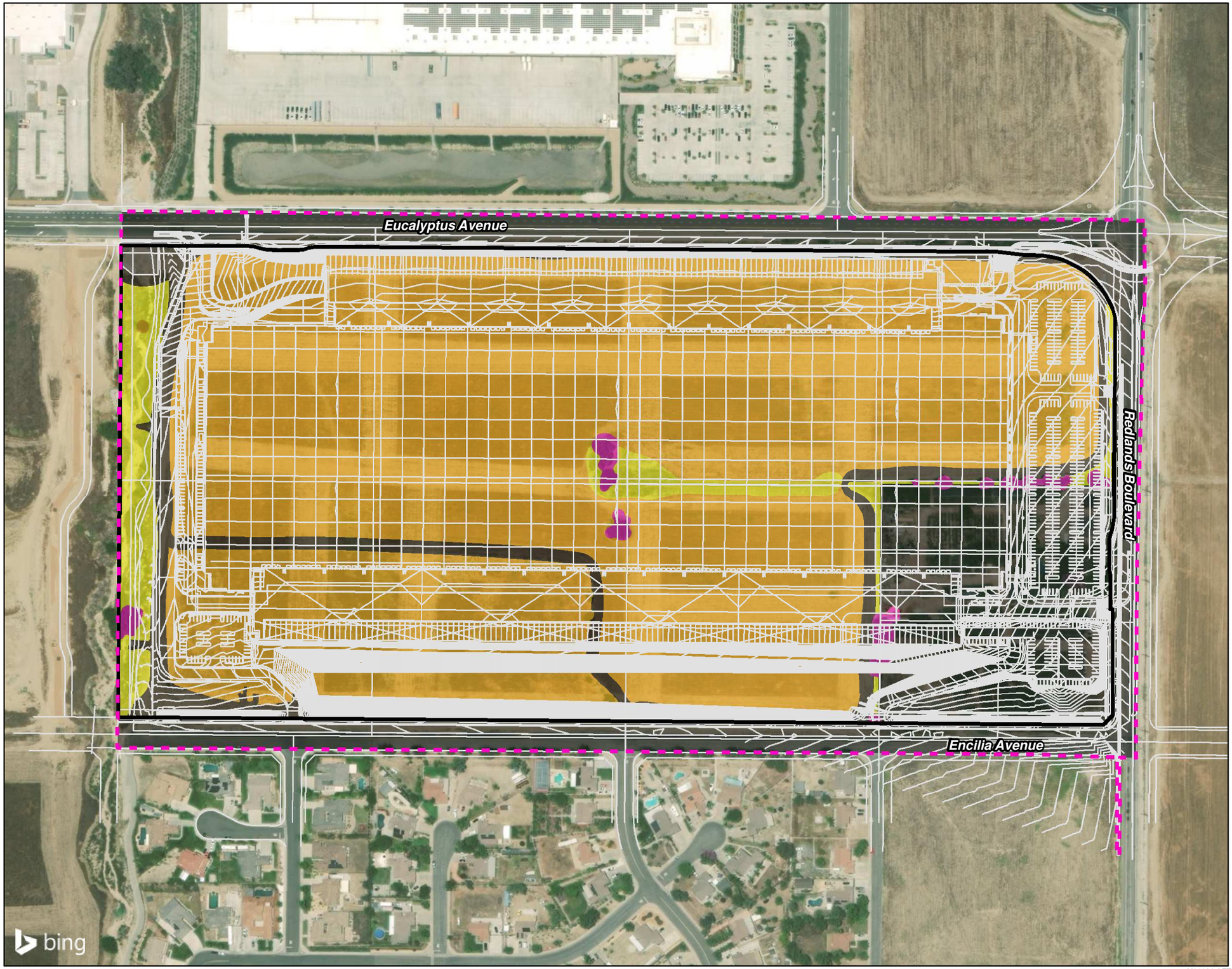
MORENO VALLEY TRADE CENTER

Burrowing Owl Map

GLENN LUKOS ASSOCIATES

Exhibit 10

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\BUOW_GIS\1459-1_BUOW.mxd



Project Boundary

Study Area

Project Site Plan

Ornamental

Ruderal

Disturbed/Ruderal

Disturbed/Developed

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 7, 2020

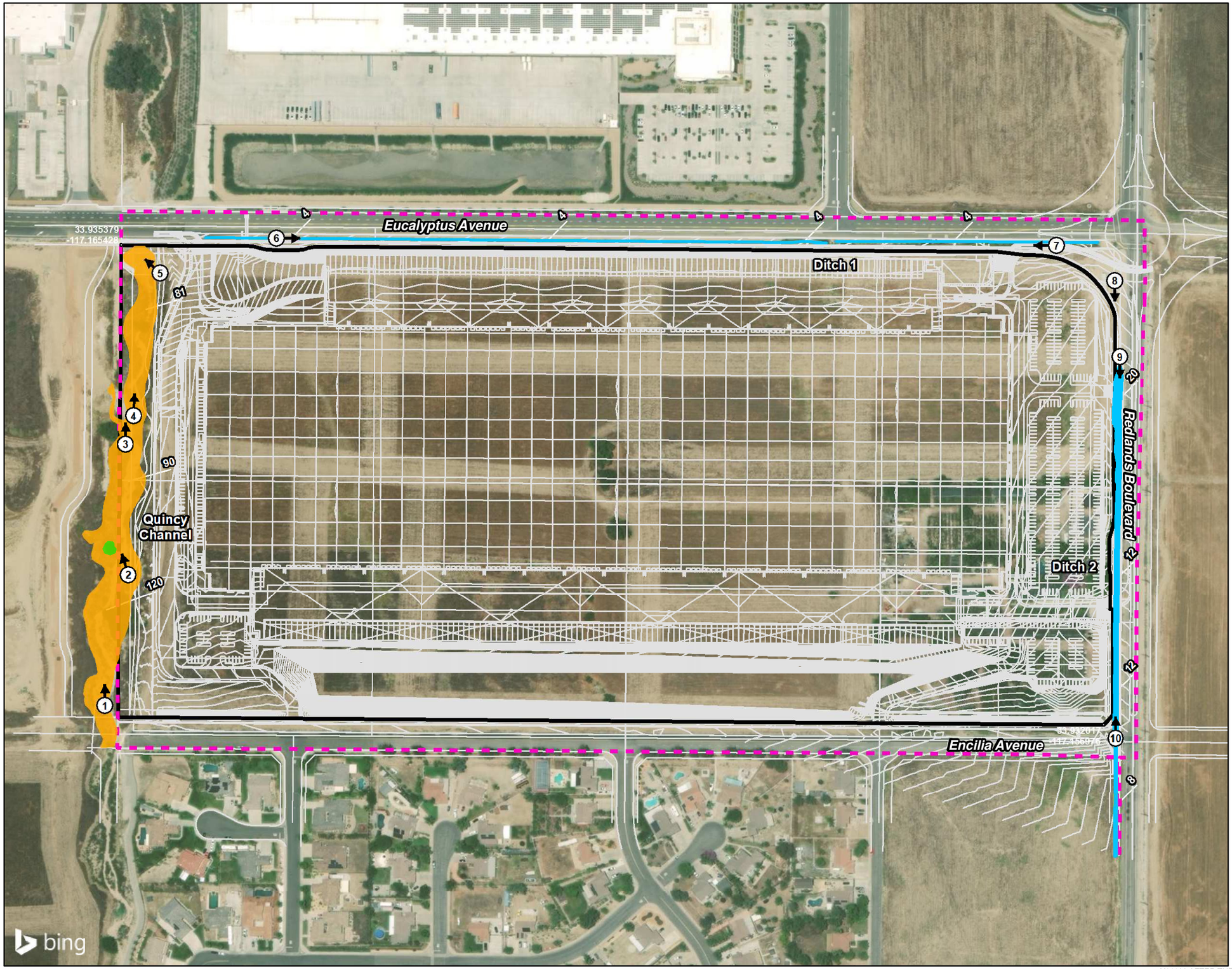
MORENO VALLEY TRADE CENTER

Vegetation Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 11

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\ImpactsGIS\1459-1_Impacts_Vegetation.mxd



Project Boundary

Study Area

Project Site Plan

Avoided MSHCP Riparian

Avoided MSHCP Riverine

Impacted MSHCP Riverine

4 Width of Feature in Feet

① Photo Location

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 7, 2020

MORENO VALLEY TRADE CENTER

MSHCP Riparian/Riverine Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 12

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\ImpactsGIS\1459-1_Impacts_JD_REV1_MSHCP.mxd