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September 28, 2016

Mr. Glenn Elliott
Environmental Engineer, Program/Project Manager
U.S. Department of Veterans Affairs
Office of Construction & Facilities Management
425 I Street, NW, Room 6W417a
Washington, DC 20001

Re: Task 4.3.1– Resource Avoidance Report
Site Specific Environmental Assessment
Riverside National Cemetery, Riverside, California
Project # 901-002

Dear Mr. Elliott:

The enclosed Draft Resource Avoidance Report prepared by Balance Environmental for the Riverside National Cemetery in Riverside, California, has been prepared for your review. Balance Environmental is submitting this information on behalf of LRS Federal LLC. Balance Environmental will be representing LRS Federal LLC throughout this process.

If you have any questions concerning this information, please contact me by phone at (435) 757-3815 or by electronic mail at norman.nate@gmail.com.

Thank you for reviewing this report.

Nate Norman, PWS
Project Manager/Owner

cc: Randall Farren (Marstel-Day, LLC)
William O. Gray (LRS Federal)

Attachments: Draft Resource Avoidance Report (pdf, MSWord)

Resource Avoidance Report (DRAFT)

Riverside National Cemetery
Riverside, California

Prepared for:

LRS Federal, LLC
A Service Disabled Veteran-Owned Company
8221 Ritchie Highway, Suite 300
Pasadena, MD 21122

On Behalf of:

U.S. Department of Veterans Affairs
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Prepared by:

BALANCE ENVIRONMENTAL

September 28, 2016

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Contents

	Page
Introduction	1
Noxious Weeds	1
Waters of the U.S., Including Wetlands	1
Floodplains	3
Threatened and Endangered Species	3
Migratory Birds/Bald and Golden Eagles	6
Utilities and Right of Ways	6
Cultural and Historical Resources	6
Farmland	8
Earthwork Considerations	10
Slopes	10
Geology	10
Hazardous Waste	10
Earthquake Hazard	12
Summary of Resources	13
References	14

List of Figures

1.	Location Map	2
2.	Wetland Delineation Map	4
3.	Stephens' Kangaroo Rat Map	5
4.	Utilities Map	7
5.	Soils Map	9
6.	Slopes Map.	11
7.	Landfill Map	12
8.	Composite Resources Map	14

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Resource Avoidance Report: Riverside National Cemetery

INTRODUCTION

The purpose of this report is to identify potential impacts to environmental resources that may need to be avoided during the design phase of the approximately 55-acre expansion of the Riverside National Cemetery. Located at 22495 Van Buren Boulevard in the city of Riverside, Riverside County, California, the Cemetery is operated by the U.S. Department of Veterans Affairs (VA), National Cemetery Administration. The planned expansion of the Cemetery would be located to the south of the existing cemetery on a 179-acre site, in a configuration that is yet to be determined (Figure 1, Site Location Map).

Both manmade issues like utilities, right of ways, and cultural resources, and natural areas such as waterways, wetlands, threatened and endangered species need to be avoided wherever feasible. Resources considered in this report include: noxious weeds; waters of the US, including wetlands; floodplains; threatened and endangered species; migratory birds and bald and golden eagles; utilities and right of ways; cultural and historical resources; soils; slopes; geology; hazardous waste; earthquake hazards; and the Stephens' kangaroo rat (SKR; *Dipodomys stephensi*) easement.

NOXIOUS WEEDS

Noxious weeds are known to have adverse environmental effects. As a result, Federal, state, and local governments have issued various orders and regulations regarding noxious weeds. Executive Order (EO) 11987 prohibits agencies from introducing plants or animals that do not naturally occur, presently or historically, in ecosystems in the U.S.

According to the CalWeedMapper (http://calweedmapper.cal-ipc.org), 18 species of weeds classified as "to be eradicated" are known to occur near the project's location. A larger amount of invasive and non-native plants is present at the project site; non-native grasses, such as great brome (Bromus diandrus) can cause suitable SKR habitat to be unsuitable (USFWS 1997). Prior to construction, noxious weeds should be inventoried in the project area to determine which species (if any) should be eradicated to prevent infestation. Also, to avoid the potential additional introduction of non-native or invasive species, the design plan should incorporate native flora for gravesite buffers and landscaping, and to the extent practicable, native species should be used to revegetate land disturbed during construction.

WATERS OF THE U.S., INCLUDING WETLANDS

Jurisdictional waters of the U.S., including streams and wetlands, are defined by 33 CFR Part 328.3 and are protected by Section 404 of the Clean Water Act (CWA; 33 USC 1344), and Executive Order (EO) 11990, Protection of Wetlands. Section 404 of the CWA, which is

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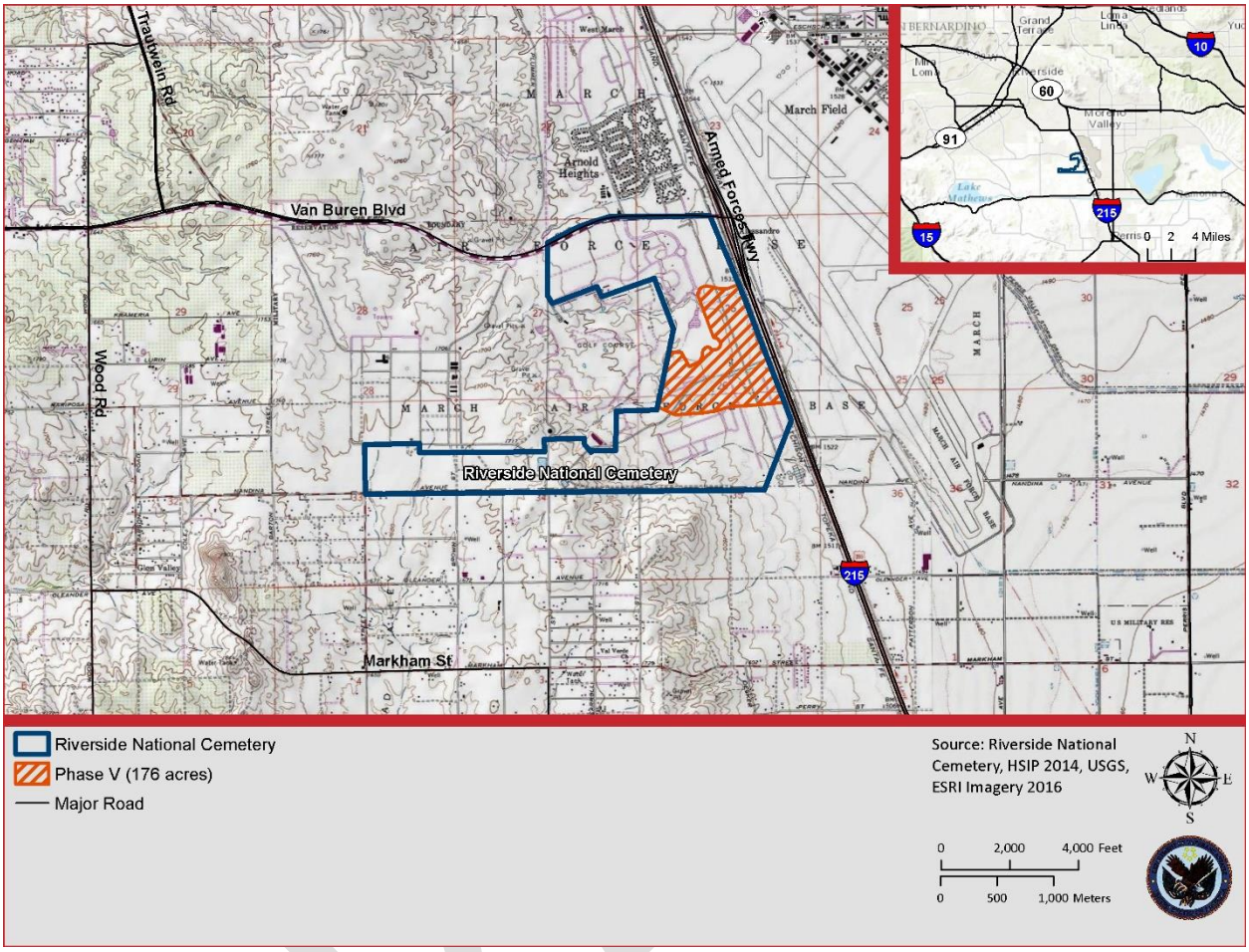

Figure 1. Location Map.

administered and enforced by the U.S. Army Corps of Engineers (USACE), requires that any direct impacts to wetlands and/or other waters of the U.S. should be avoided and/or minimized to the greatest extent possible.

In April 2016, a Wetland and Waters of the U.S. delineation study was conducted on the Phase V expansion area. The wetland delineation was completed in accordance with the U.S. Army Corps of Engineers' 1987 Wetland Delineation Manual (USACOE, 1987) and the Arid West Supplement (USACOE, 2008). Waterways were reviewed in accordance with the 2008 "A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States." The investigation revealed uplands, streams, open water, and wetlands within the project area. A total of four aquatic resources were found totaling 3.16 acres. Two ditches that convey irrigation water lead to one open water area and one wetland that have been excavated. The wetland was classified as palustrine scrub/shrub wetlands (PSS). The excavated ponded areas do not appear to have outlets; however, there was a historic blue line drainage on the USGS Topo map that crossed the project area near the location of the northern ditch (VA, 2016a).

These waterways are included in the 2016 delineation report that is currently being reviewed by

the USACE. The waterways and wetland meet the USACE definition criteria but are not directly adjacent to tributaries to Navigable Waters of the U.S., and may not be considered jurisdictional. If the areas are found to be jurisdictional, Section 404 of the Clean Water Act requires that any direct impacts to wetlands and/or other waters of the U.S. should be avoided and/or minimized to the greatest extent possible. Unavoidable impacts to jurisdictional areas greater than 0.1 acre but less than 0.5 acre may be permitted by the USACE under a Permit; however, mitigation may be required for unavoidable impacts and as with impacts to jurisdictional waterways, require applicable local, state, or federal permits to be obtained prior to cemetery development (Figure 2, Wetland Delineation Map).

FLOODPLAINS

Floodplains are those areas that have been delineated by the Federal Emergency Management Agency (FEMA) and identified on the Flood Insurance Rate Maps (FIRM) as occurring in either the 100-year and/or 500-year floodplain. Under Executive Orders 13690 (https://www.fema.gov/federal-flood-risk-management-standard-forms) and 11988 (https://www.fema.gov/executive-order-11988-floodplain-management), federal agencies are required to "avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect floodplain development wherever there is a practicable alternative."

A search of the FEMA Flood Map Service Center for flood map surrounding the project area (floodplain map number 06065C0745G, 08/28/2008) showed that no mapped floodways or 100-year or 500-year floodplain in the vicinity of the project. The proposed expansion site is not located in either the 100-year or the 500-year flood zone as mapped by the Federal Emergency Management Agency (FEMA) (VA 2010). Therefore, there are no floodplains to avoid in the project site.

THREATENED AND ENDANGERED SPECIES

Section 7 of the Endangered Species Act requires Federal agencies to ensure that any action authorized, funded or carried out by them is not likely to jeopardize the continued existence of listed species or modify their critical habitat (USFWS, 2016).

There are a total of 34 species of concern known to occur within Riverside County, CA. On the Riverside National Cemetery property, there is no critical habitat and other than the SKR. No other protected vegetation or wildlife have been identified onsite. (Potomac-Hudson Engineering, Inc. 2010).

In 2016, Natural Resources Assessment, Inc. (NRAI) conducted SKR surveys for the project to identify the density of Stephens' Kangaroo Rat (SKR). NRAI found a total of 139 active burrows. Using the modified O'Farrell method, each animal has 2.5 burrows, for an estimated total of approximately 184 animals on the Phase V which equals 0.79 animals per acre which is considered "trace" density (NRAI, 2016).

Coordination between the VA and US Fish and Wildlife Service (USFWS) is still ongoing, and the exact SKR management process is yet-to-be-determined. It is likely the VA will work with the

Western Riverside County SKR Habitat Conservation Plan to relocate the SKR from the project area (VA, 2016b). If necessary, the VA will secure an incidental take permit from the Riverside County HCA. The engineering and construction contractors will need to insure that any SKR not removed from the site during the relocation process are avoided according to the incidental take permit.

The VA has been and continues to work with the USFWS to remove the SKR preservation area, so the SKR management areas and wildlife corridors are not issues for the cemetery development. (VA, 2016b). However, at this time the agreement has not been finalized and therefore the SKR management areas and corridors are still resources that should be avoided (See figure 3).

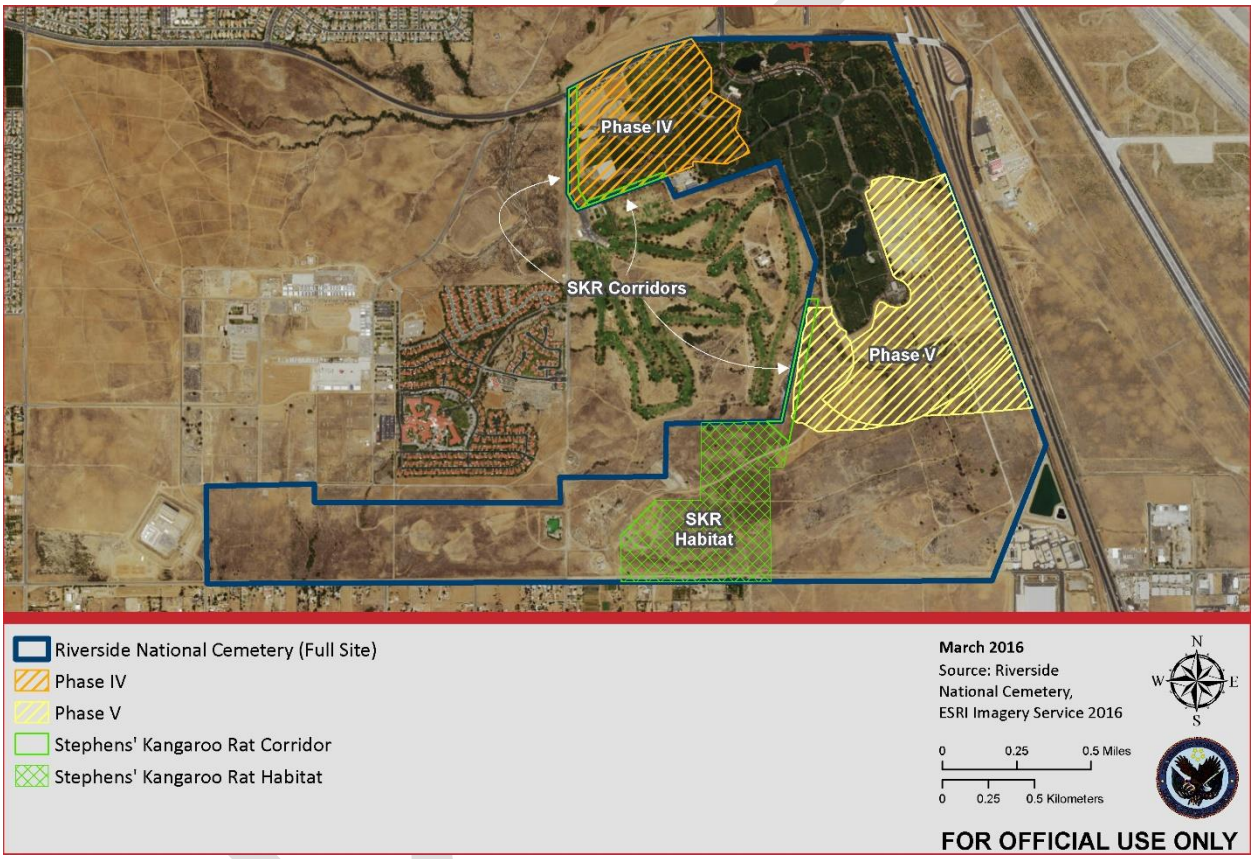

Figure 3. Stephens' Kangaroo Rat Map.

MIGRATORY BIRDS/BALD AND GOLDEN EAGLES

Bald Eagles (Haliaeetus leucocephalus) and Golden Eagles (Aquila chrysaetos) receive additional protection under The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), as amended, which prohibits anyone, without a permit, from "taking" bald eagles, including their parts, nests, or eggs (https://www.fws.gov/midwest/eagle/protect/laws.html). There is one documented nesting territory in Riverside County and there were potential nesting areas observed within the project area, including various size trees within the riparian areas and meadows; thus, potential foraging, roosting, and nesting habitat exists within the project area for Bald and Golden Eagles. However,

it is extremely unlikely that an eagle would be utilizing this area as most of their territory is in the northern portion of the state.

The Migratory Bird Treaty Act (MBTA) prohibits destruction or disturbance of nesting activities or nests that result in loss of eggs or young. All wild birds are protected under the MBTA, except non-native, human-introduced species, and a few families not mentioned in the underlying treaties. Typically, nesting birds do not require avoidance of an area; rather, measures such as limited construction times to avoid the nesting period are often implemented. To comply with MBTA and Bald and Golden Eagle Protection Act, nest surveys will need to be conducted prior to construction and consultation with the USFWS will need to occur if any nests are identified to ensure that regulated birds are not impacted by the construction activities.

UTILITIES AND RIGHT OF WAYS

Preliminary data from the topographic survey report (VA. 2016c) shows that powerlines are found along the eastern edge of the project and on the east side of the unnamed gravel roadway parallel to the eastern property edge. There are also two substations in the southeast corner of the site and short laterals coming off of the utility lines (Figure 4). It is assumed that these lines and right-of ways belong to Southern California Edison. These areas should be avoided if possible during the design and construction phases but should they need to be removed or relocated, coordination with Southern California Edison will be necessary. The only other utility currently know on the project area is a small pipeline of unknown origin found running between two of the maintenance buildings. More information is needed to determine whether this pipeline will need to be avoided.

CULTURAL AND HISTORICAL RESOURCES

For all federally proposed actions, federal agencies are required to consult with federally recognized Native American Tribes in accordance with NEPA, the NHPA, the Native American Graves Protection and Repatriation Act (NAGPRA), EO 13007, and EO 13175. The project is also required to protect any archeological, historical, and cultural resources on site (Section 106 of the National Historic Preservation Act).

During the development of the Site-Specific Environmental Assessment (SEA), as part of the public outreach effort, the VA will consult with federally recognized Native American tribes having possible interest in the project area. Currently, no Traditional Cultural Properties or Native American sacred places are known to exist within the project area.

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Figure 4. Utilities Map.

In October 1975, after review of the National Register of Historic Places, consulting with Department of Defense, and having the site inspected for traces of Native American writings on rock formations, the development of the original 750 acres of property (including the Phase V expansion area) was determined to have no adverse effect on any present or potential non-federally owned National Registry property, and the Advisory Council on Historic Preservation acknowledged the determination of no effect.

In July 1994, Jean A. Keller, Consulting, conducted a Phase 1 cultural resources survey for the area around the Cemetery. This study found several prehistoric sites south of the cemetery, but none within the existing or proposed Phase V portion of the site. Another review by CRM TECH in 2008 found several of the sites found in the 1994 survey were incorrectly mapped. These sites were readjusted slightly to the west, but still do not occur within the Phase V portion of the site.

As part of the environmental assessment of the photovoltaic (solar) systems in 2010, a confidential records search was conducted at the California Historical Resources Information System, Eastern Information System. There were no listed National Register properties on or within one-quarter mile of the cemetery at that time (Potomac-Hudson Engineering, Inc. 2010).

In March 2016, a California Historical Resources Information System, Eastern Information system cultural resources record search indicated that within or adjacent to the Riverside National Cemetery boundary, there are 27 cultural records; however, the records search confirmed that no identified NRHP-eligible or NRHP-listed historic or archaeological properties exist in the Phase 5 expansion area. No impacts to cultural resources are expected to occur as a result of the cemetery expansion development; however, the existing Riverside National Cemetery is eligible for the National Register of Historic Places as a historic district. Because the existing buildings are contributing to the district, renovations and/or demolishing of existing buildings will require a Memorandum of Agreement with the SHPO. Coordination on these buildings and the Memorandum of Agreement are ongoing (Baynard, 2016).

FARMLAND

Prime farmland is protected under the Farmland Protection Policy Act of 1981 in order to minimize the extent that federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses (7 CFR 658 Federal Register: June, 1994). Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. Prime farmland contains soils of the highest quality and can economically produce sustained high yields of crops when treated and managed according to acceptable farming methods (NRCS, 2006). Farmland of Statewide Importance is land other than Prime Farmland that contains a good combination of chemical and physical properties for the production of crops that during the two update cycles prior to the mapping date, has been used for the production of irrigated crops (http://www.conservation.ca.gov/dlrp/fmmp/Documents/soil_criteria.pdf). Farmland of Statewide Importance is protected under the Farmland Protection Policy Act of 1981 to minimize the extent that federal programs contribute to the unnecessary and irreversible conversion of farmland to non-agricultural uses.

USDA ERSI Imagery Service 2016, NRCS soils survey data shows that Monserate Sandy Loam covers nearly all of the project with most areas being 0-5% slopes with a few small areas of 5-8%

slope or 8-15% slopes. Other soils include Vista course sandy loam (2-8% slopes) and Fallbrook fine sandy loam (8-15% slopes) (Figure 5). Although these soils are not listed as Prime Farmland soils, they are considered Soils of Statewide Importance (California Department of Conservation, 2009). As this project has the potential to convert Soils of Statewide Importance to nonfarm use, the VA should seek a Farmland Conversion Impact Rating through NRCS prior to development.

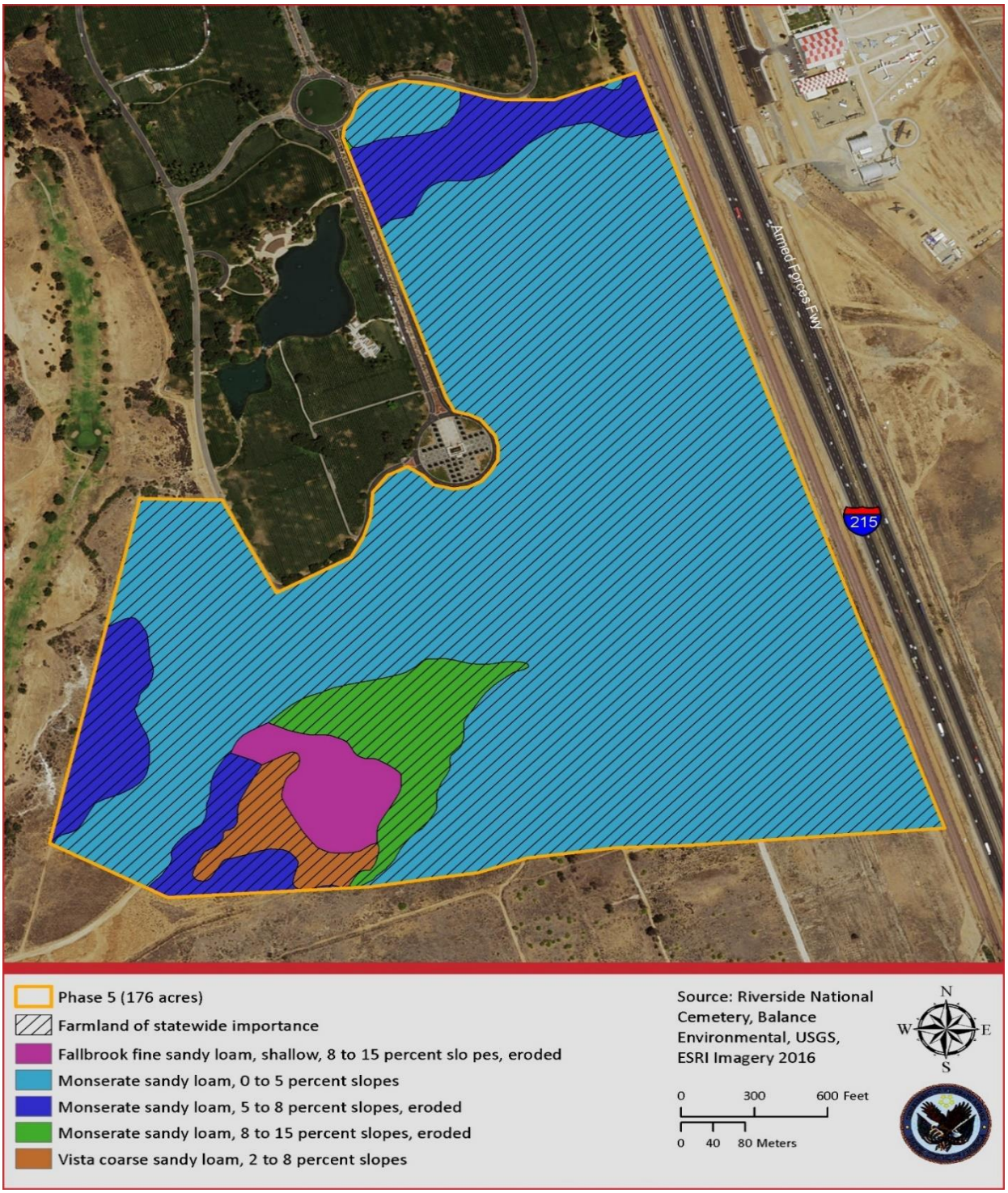

Figure 5. Soils Map.

EARTHWORK CONSIDERATIONS

According to the Terracon's geotechnical report (VA, 2016c), no areas of unbuildable soils or bedrock exist on the site, and conventional earthmoving equipment will be able to handle most excavations. However, several rocky outcrops and dense materials are found in the southern and western portions of the site. The use of specialized heavy-duty equipment may be required in these areas. Also, due to the clay content in most of the soils, if possible construction should occur during extended periods of dry weather. Work completed during wet portions of the season may require precautionary measures to protect the sub soils. These minor issues do not constitute any areas that would need to be avoided, but may take special consideration during the design and construction process.

SLOPES

According to the National Cemetery Administration (NCA) Design Guidelines (http://www.cfm.va.gov/til/nca/NCADesignGuide.pdf; March, 2010), Section 10.6 (Grading Guidelines), mowed slopes should not be greater than 25% and interment areas should be located on slopes of 15% or less.

Slopes across the project area are all relatively flat with the exception of some of the excavated slopes along the waterways and the stockpiles of soils. The topographic survey conducted in 2016 (VA. 2016c) used highly sensitive surveying techniques that were able to pick up on the slopes of the fill piles that had been dumped thorough the site, and which appear as several small steep slopes clustered together (Figure 6). These fill piles appear to be of clean fill material that could likely be used for construction purposes and should not be an issue to be avoided.

The topo map shown in Figure 6 was created from the 2016 topo survey and shows specific slope information with gradients to help ensure compliance with NCA Design Guidelines.

GEOLOGY

According to the Terracon geotechnical report (VA. 2016c), the site's eastern portion is made up of alluvium deposits, and the southwestern portion consists of granitic rocks. No karst or pseudo-karst features were reported on or near the project site.

HAZARDOUS WASTE

40 CFR Part 312 requires inquiry into the previous ownership, uses, and environmental conditions of a property, conducted by or under the responsible charge of an environmental professional as defined in 40 CFR §312.10.

The undeveloped site is not currently generating any solid or hazardous waste, and after its development is not expected to generate hazardous waste. The landfill boundaries that were surveyed by AMF Affiliates, Inc. (AMF, 1996) are outside of the project area and are not expected to be impacted by the development (Figure 7).

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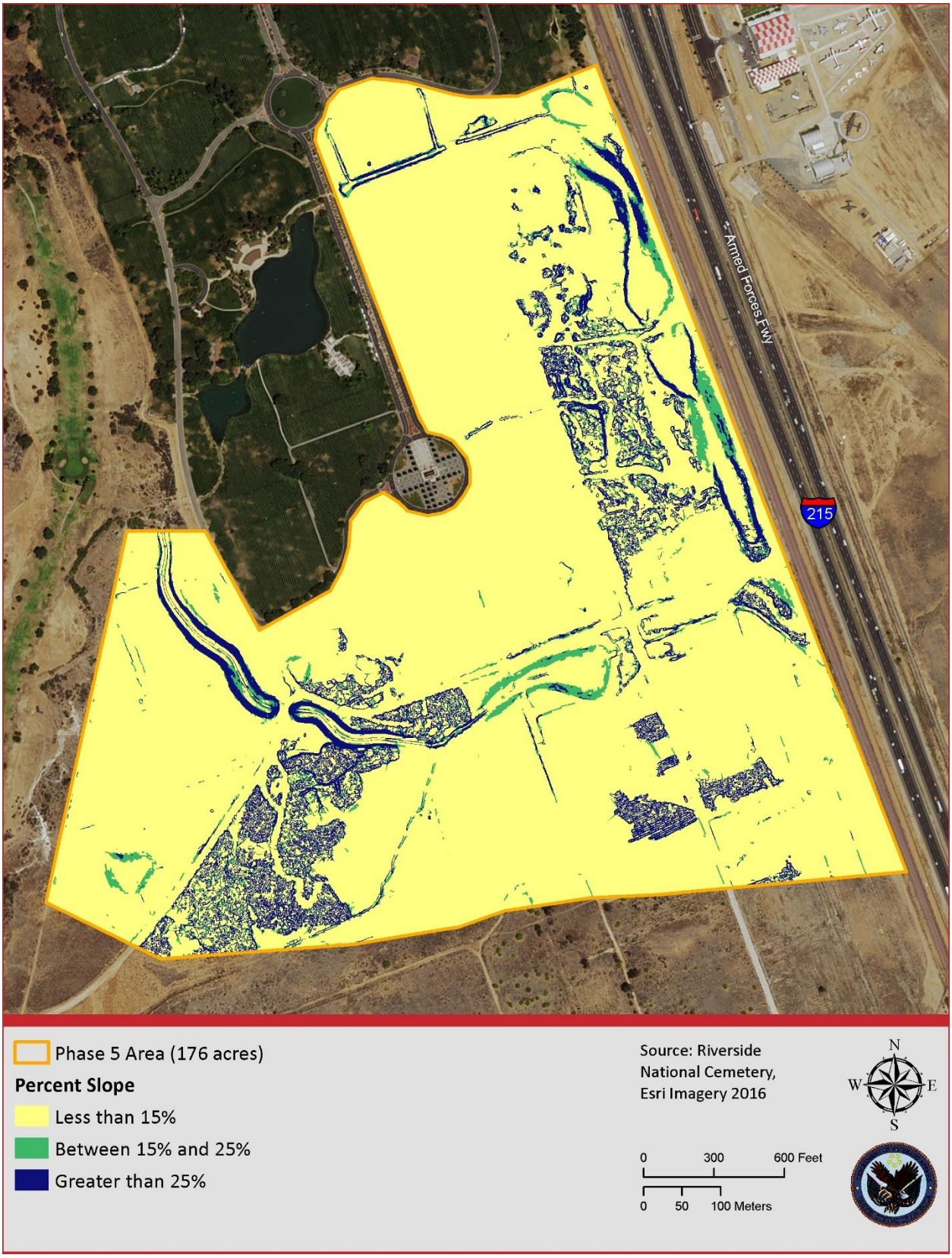

Figure 6. Slopes Map

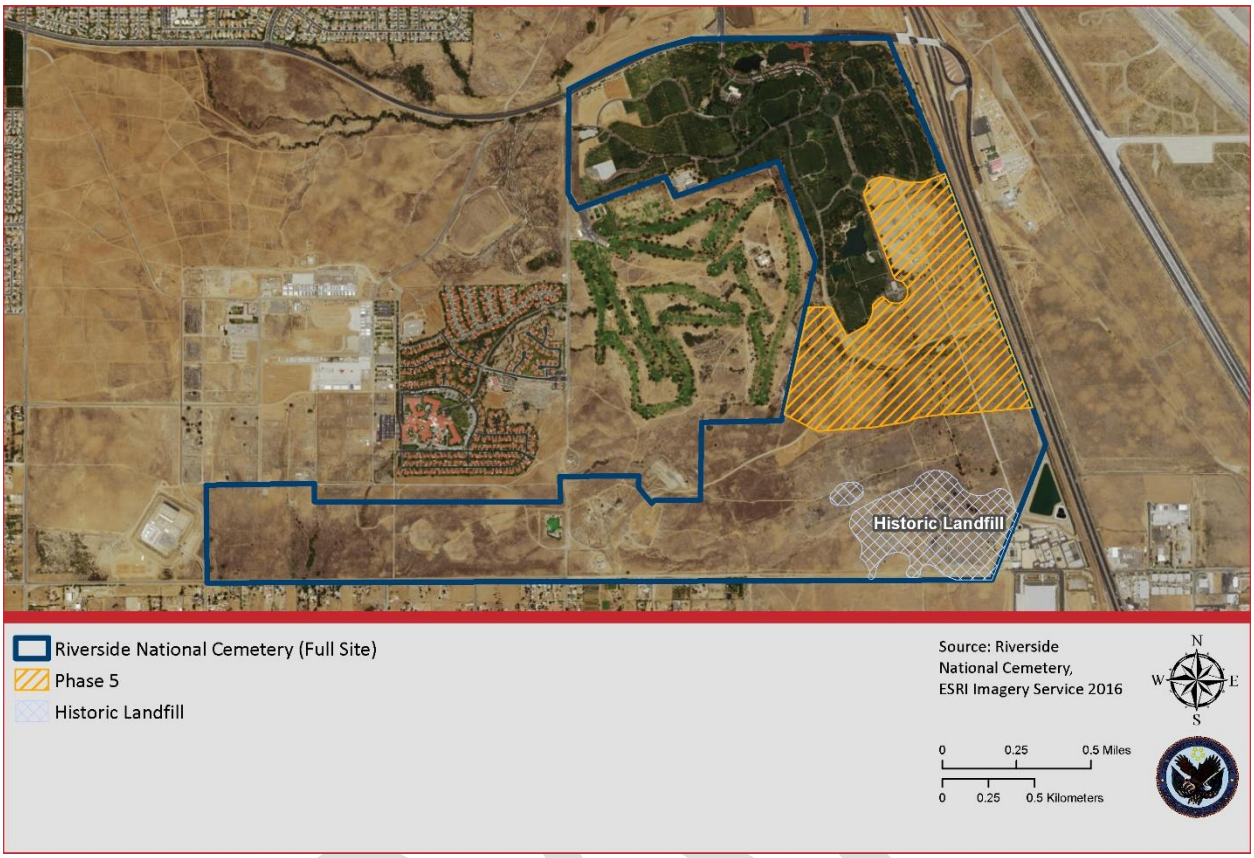

Figure 7. Landfill Map.

According to the Environmental Radius Report (Marstel-Day, LLC, 2016), there are several known contamination areas near the project site. The majority are in connection with the March Air Reserve Base, but three are associated with Riverside National Cemetery (including the landfill area). However, none are located within the project area. At this point, there does not appear that a Level 1 or Phase 1 Environmental Site Assessment Report has been done for the property. As discussed in the slope section of this report, the project area does have several locations where dirt, concrete and other fill material has been dumped. These areas appeared to be clean fill, but they were not specifically inspected for hazardous materials during any of the on-site assessments. Prior to design and construction, the VA should consider conducting a Level 1 or Phase 1 Environmental Site Assessment to ensure that no potentially contaminated sites exist on or near the property.

EARTHQUAKE HAZARD

Southern California is a seismically active area; however, based on the State Fault Hazard Maps, the project is not located within the Alquist-Priolo Earthquake Fault Zone. However, the San Jacinto fault, located approximately 14 kilometers from the site, could have a seismic impact on the project area. Additionally, based on review of the County of Riverside GIS system, the project site is located within a high potential for liquefaction designated area (VA. 2016c). Because the project area is not within a fault zone and the entire area is susceptible to liquefaction, there are

not specific areas to be avoided due to earthquake hazards; however, due to the high potential for liquefaction and proximity to the San Jacinto fault, during the design, buildings or other structures that pose a higher risk to human life will require additional investigations and/or engineering to reduce the earthquake hazards.

SUMMARY OF RESOURCES

Our review found that there are no floodplains or geological areas within the project area that need to be avoided. Slopes across the project area are all relatively flat and the fill piles should not be an issue to be avoided. There are no known hazardous or solid wastes on the site but the area may need to undergo additional environmental investigation. During the design process, rocky outcrops and dense materials may take special consideration, and because of the potential for liquefaction, structures should be designed to resist effects of an earthquake. Prior to construction, the site should be surveyed for noxious weeds to control their spread and measures should be taken to prevent their introduction. In addition, nest surveys will need to be conducted. The VA should coordinate a Farmland Impact Rating with NRCS to quantify potential effects on regional prime farmland soils. Cultural resources are not expected to be an issue; however, because the existing Cemetery is eligible for the National Register of Historic Places, renovations and/or demolishing of existing buildings may require a programmatic agreement or Memorandum of Agreement with the SHPO. The SKR will need to be removed and/or mitigated with the resource agencies, and the SKR corridor's requirements will need to be complied with until the easement is removed or modified.

If the wetlands and streams are considered to be jurisdictional, they should be avoided if possible, and any unavoidable impacts will need to be permitted and possibly mitigated. If the utilities currently found at the site cannot be avoided, coordination with Southern California Edison will be necessary. All potential resources to be avoided are presented in Figure 8.

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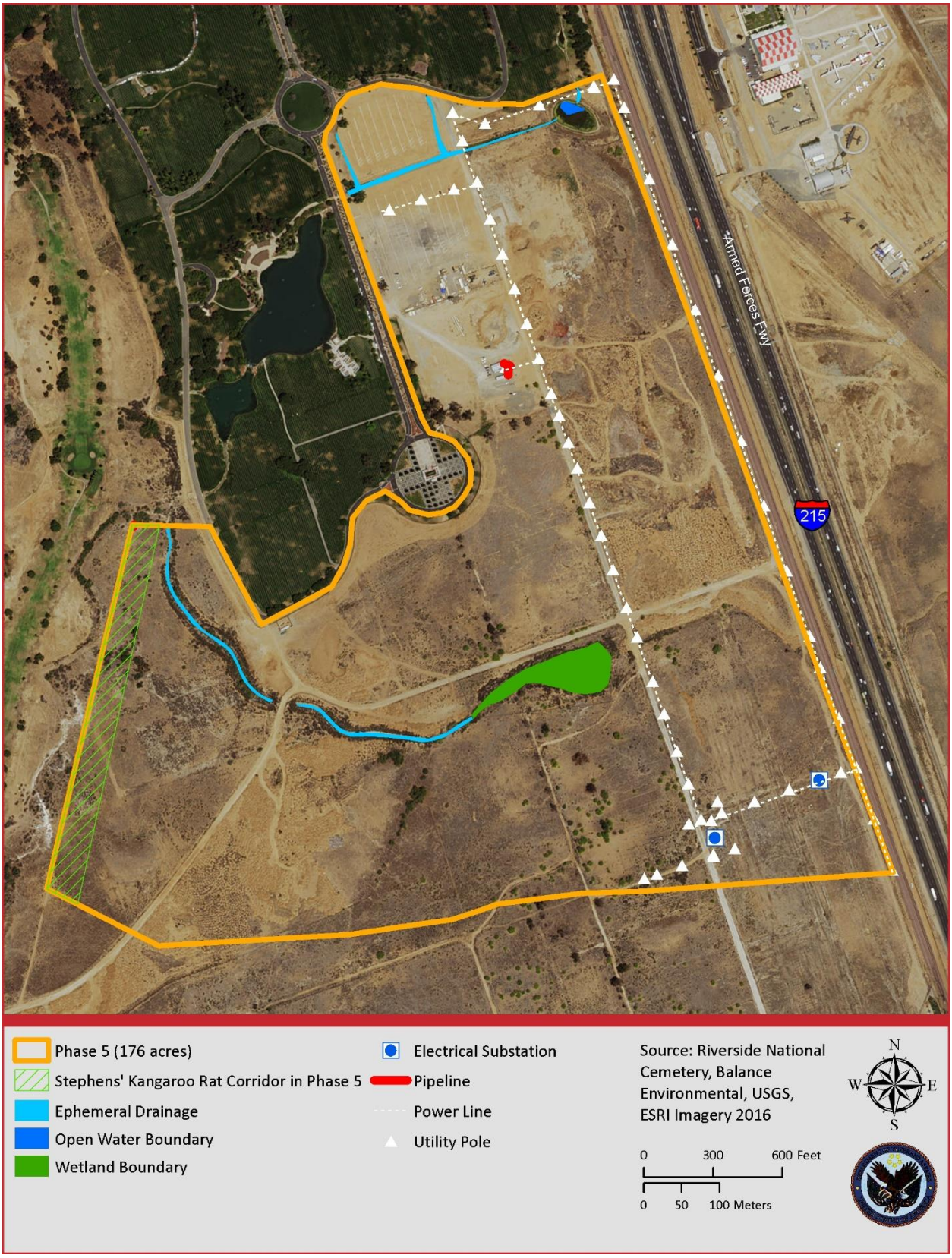

Figure 8. Composite Resources Map

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