



# PUBLIC NOTICE

**U.S. ARMY CORPS OF ENGINEERS  
LOS ANGELES DISTRICT**

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## **APPLICATION FOR PERMIT**

**Bonnie Clare Road and Scotty's Castle Emergency Reconstruction – CA ERFO DEVA 11(1)**

**Public Notice/Application No.:** SPL-2017-00051-GLH

**Project:** Bonnie Clare Road and Scotty's Castle Emergency Reconstruction – CA ERFO DEVA 11(1)

**Comment Period:** January 18, 2018 through February 17, 2018

**Project Manager:** Jerry Hidalgo; (805) 585-2145; [Gerardo.L.Hidalgo@usace.army.mil](mailto:Gerardo.L.Hidalgo@usace.army.mil)

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### **Applicant**

Brent Nagen  
Federal Highway Administration  
12300 W. Dakota Ave., Suite 280  
Lakewood, Colorado 80228

### **Contact**

Greg Bergquist  
Federal Highway Administration  
12300 W. Dakota Ave., Suite 280  
Lakewood, Colorado 80228

### **Location**

The proposed project is located in Grapevine Canyon, within Death Valley National Park, Inyo County, California (37.059808, -117.286050).

### **Activity**

On October 18th, 2015 a storm event released 3" of rain in five hours within the vicinity of Scotty's Castle. This storm event culminated with a flash flood that was equal to the maximum probable event which is 30 times the magnitude of a 100-year flood event. Approximately 95 percent of the facilities within the Death Valley Scotty's Historic District were damaged or destroyed. Bonnie Clare Road was severely damaged in this event along with many other facilities, including historic and reproduction fence posts significant to the cultural landscape. The National Park Service with funding from the Federal Highway Administration is proposing to re-establish access and protective structures within the flood damaged areas in Grapevine Canyon and Scotty's Castle Campus. For more information see the Additional Information section below.

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Interested parties are hereby notified an application has been received for a Department of the Army permit for the activity described herein and shown on the attached drawing(s). We invite you to review today's public notice and provide views on the proposed work. By providing substantive, site-specific comments to the Corps Regulatory Division, you provide information that supports the Corps' decision-making process. All comments received during the comment period become part of the record and will be considered in the decision. This permit will be issued, issued with special conditions, or denied under Section 404 of the Clean Water Act. Comments should be mailed to:



DEPARTMENT OF THE ARMY  
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS  
REGULATORY DIVISION  
ATTN: Jerry Hidalgo  
2151 Alessandro Drive, Suite 110  
Ventura, California 93001-3766

Alternatively, comments can be sent electronically to: [Gerardo.L.Hidalgo@usace.army.mil](mailto:Gerardo.L.Hidalgo@usace.army.mil)

The mission of the U.S. Army Corps of Engineers Regulatory Program is to protect the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands. The Regulatory Program in the Los Angeles District is executed to protect aquatic resources by developing and implementing short- and long-term initiatives to improve regulatory products, processes, program transparency, and customer feedback considering current staffing levels and historical funding trends.

Corps permits are necessary for any work, including construction and dredging, in the Nation's navigable water and their tributary waters. The Corps balances the reasonably foreseeable benefits and detriments of proposed projects, and makes permit decisions that recognize the essential values of the Nation's aquatic ecosystems to the general public, as well as the property rights of private citizens who want to use their land. The Corps strives to make its permit decisions in a timely manner that minimizes impacts to the regulated public.

During the permit process, the Corps considers the views of other Federal, state and local agencies, interest groups, and the general public. The results of this careful public interest review are fair and equitable decisions that allow reasonable use of private property, infrastructure development, and growth of the economy, while offsetting the authorized impacts to the waters of the United States. The permit review process serves to first avoid and then minimize adverse effects of projects on aquatic resources to the maximum practicable extent. Any remaining unavoidable adverse impacts to the aquatic environment are offset by compensatory mitigation requirements, which may include restoration, enhancement, establishment, and/or preservation of aquatic ecosystem system functions and services.

### **Evaluation Factors**

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof. Factors that will be considered include conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people. In addition, if the proposal would discharge dredged or fill material, the evaluation of the activity will include application of the EPA Guidelines (40 CFR Part 230) as required by Section 404 (b)(1) of the Clean Water Act.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts



of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

### **Preliminary Review of Selected Factors**

**EIS Determination**- A preliminary determination has been made an environmental impact statement is not required for the proposed work.

**Water Quality**- The applicant is required to obtain water quality certification, under Section 401 of the Clean Water Act, from the California Regional Water Quality Control Board. Section 401 requires any applicant for an individual Section 404 permit provide proof of water quality certification to the Corps of Engineers prior to permit issuance.

**Coastal Zone Management**- This project is located outside the coastal zone and preliminary review indicates it would not affect coastal zone resources. After a review of the comments received on this public notice and in consultation with the California Coastal Commission, the Corps will make a final determination of whether this project affects coastal zone resources after review of the comments received on this Public Notice.

**Essential Fish Habitat**- No Essential Fish Habitat (EFH), as defined by the Magnuson-Stevens Fishery Conservation and Management Act, occurs within the project area and no EFH is affected by the proposed project.

**Cultural Resources**- The project is located in the Death Valley Scotty Historic District (Scotty's Castle). The National Park Service (NPS) is the lead federal agency for NEPA and has been designated the lead Federal agency for fulfilling collective responsibilities for compliance with Section 106 of the National Historic Preservation Act. Completion of the 106 consultation would be required prior to issuance of a Corps permit for the proposed project.

**Endangered Species**- The NPS is the lead federal agency for NEPA and has been designated the lead federal agency for fulfilling collective responsibilities for compliance with Section 7 of the Endangered Species Act. Completion of the Section 7 responsibilities would be required prior to issuance of a Corps permit for the proposed project. Should the U.S. Fish and Wildlife Service (USFWS) issue a Biological Opinion special conditions would be included in the Corps' authorization requiring compliance with all the required avoidance and minimization measures required by USFWS.

**Public Hearing**- Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearing shall state with particularity the reasons for holding a public hearing.

### **Proposed Activity for Which a Permit is Required**

**Basic Project Purpose**- The basic project purpose comprises the fundamental, essential, or irreducible purpose of the proposed project, and is used by the Corps to determine whether the applicant's project is water dependent (i.e., requires access or proximity to or siting within the special aquatic site to fulfill its basic purpose). Establishment of the basic project purpose is necessary only



when the proposed activity would discharge dredged or fill material into a special aquatic site (e.g., wetlands, pool and riffle complex, mudflats, coral reefs). The October 2015 storm destroyed an earthen berm which protected Scotty's Castle from flows from normal rain events. Since the October 2015 storm the area where the berm was located has developed into a wetland. To protect Scotty's Castle and its historic artifacts the applicant is proposing to re-establish the earthen berm in its original location. Because fills are proposed within a special aquatic site, identification of the basic project purpose is required. The basic project purpose is to re-establish access and flood protection structures within Grapevine Canyon and Scotty's Castle Campus. The project is water dependent.

**Overall Project Purpose-** The overall project purpose serves as the basis for the Corps' 404(b)(1) alternatives analysis and is determined by further defining the basic project purpose in a manner that more specifically describes the applicant's goals for the project, and which allows a reasonable range of alternatives to be analyzed. The overall project purpose for the proposed project is to re-establish a Functional Class I, Principal Park Road, which provides access to the Scotty's Castle Campus and historic district from Beatty, NV and the Furnace Creek visitor area and re-establish flood protection structures to protect historic artifacts from future flow events.

### **Additional Project Information**

**Baseline information-** The project is located within the Grapevine Canyon (180902030208 HUC-12) watershed in the Death Valley – Lower Amargosa (18090203 HUC-8) watershed. Grapevine Canyon originates in headwater canyons in Nevada, before flowing across the Nevada/California border and entering Grapevine Canyon. Grapevine Canyon is an ephemeral alluvial wash which remains dry for the majority of the year, and only flows during large rain events. Several groundwater springs exist in the canyon. These springs emerge and create isolated areas of surface water that flow for a short distance before percolating into the highly permeable alluvial soils. At the mouth of the canyon, Grapevine Canyon dissipates to an alluvial fan and contributes to Death Valley Wash.

Use of the Grapevine Canyon has a long and rich history as a transportation corridor, representing a continuity of use extending from the prehistoric period to the present. Archeological evidence suggests that the canyon corridor was part of an extensive trail system used by early inhabitants of the area for thousands of years. In the mid-1800s and early-1900s, the canyon was used by explorers, miners and homesteaders and in the 1920s, became the main access road for Scotty's Castle. In the 1930s, with the establishment of the Death Valley National Monument, the road became a park access road and was upgraded during the Mission 66 era of park development. Today, the Bonnie Clare Road corridor continues to serve as an important circulation route, providing access to Death Valley National Park and Scotty's Castle, while maintaining the rural character of the road as it was designed during the period of significance.

On the evening of October 18th, a storm event released 3" of rain in five hours within the vicinity of Scotty's Castle, resulting in employees and visitors being stranded for 18 hours, requiring evacuation. This storm event culminated with a flash flood that was equal to the maximum probable event which is 30 times the magnitude of a 100-year flood event. Approximately 95% of the facilities within the historic district were damaged or destroyed. Bonnie Clare Road was severely damaged in this event along with many other facilities, including historic and reproduction fence posts significant to the cultural landscape.

Currently, Bonnie Clare Road remains closed to public access. Bonnie Clare Road provides access to the Scotty's Castle campus and historic district from Beatty, NV and the Furnace Creek visitor area. Scotty's Castle receives approximately 120,000 visitors each year, which equates to approximately 10 percent of park visitors. Tonopah and Goldfield, Nevada economies and Scotty's



Castle businesses depend on the Bonnie Clare Road section as an important connection in the park and southern California tour route. Bonnie Clare Road is also a main access road to the park for visitors and tour buses. Replacement of the roadway is also required for fire crews to access northern sections of the park and to provide maintenance access for an existing powerline and waterlines that run through the canyon. Additionally, the roadway provides members of the Timbisha Shoshone access to sacred sites in their ancestral lands within Death Valley National Park.

Historic buildings, utility systems, and museum collections were severely damaged or destroyed throughout the Scotty's Castle campus and are at risk for further degradation. Additional protection measures are needed to protect historic buildings and artifacts from future storm events, as well as ensuring a safe evacuation route for employees in Park housing during flow events. The reconstruction of a pre-existing stormwater control berm is required to protect several buildings in Scotty's Castle Campus that are the most vulnerable to stormwater events. One of these buildings regularly houses historic artifacts. Additionally, this berm is needed to contain the spring flows to keep them from flowing over the parking lot and bypassing a wetland/riparian area. The wetland and riparian areas are dependent on these spring flows as their source of hydrology, so without containment of the spring flows, the wetland areas would likely rapidly convert to upland habitats.

The emergency repairs to Scotty's Castle Bridge are needed to repair damage from the 2015 flood event. Bridge abutments were heavily damaged and undercut during the 2015 flood event, thereby compromising the structural integrity of the historic structure. Channel grade control structures are needed to prevent headcutting from migrating upstream and to prevent downstream headcuts from further undercutting the bridge abutments.

A permanent replacement waterline is needed to re-establish a reliable and sustainable water source at Scotty's Castle Campus. This water source is used for irrigation, visitor and staff facilities, and it also provides the critical fire suppression for the historic structure within the campus.

Project description- The project would include the reconstruction of approximately 7.61 miles of Bonnie Clare Road (Route 011) from the northeastern park boundary (California/Nevada boarder) at Mile Post (MP) 0.0 to approximately 100 feet south of the Grapevine Ranger Station at MP 7.7., including minor roadway realignment in heavy damaged roadway areas, and scour control and flow management structures along the roadway and within the vicinity of Scotty's Castle. The roadway reconstruction would involve repairing roadway embankment, subgrade and pavement surface. The roadway realignment would involve the obliteration of the existing damaged roadway, removal of associated embankment fills and floodplain restoration.

Revetment mattresses and jersey barrier cut-off walls would be placed under the roadway and within the roadway embankment to prevent under-cutting. Gabion baskets would be placed within the floodplain to manage head-cuts created during the flood event. Bendway weirs would be placed within Grapevine Canyon Wash to direct main channel flows away from the confluence with Drainage Feature 28 to promote perpendicular flows across the roadway and to prevent flows from reaching the Scotty's Castle Ranger Station and NPS employee housing. Additionally, a permanent waterline would be installed approximately 3 feet under the finished road grade within the roadway prism to connect the spring intake building to the waterline control valve at Scotty's Castle. The waterline would be directionally bored from the intake building to the roadway and from the roadway to the valve box and would not result in direct fill into waters of the U.S.

An earthen stormwater control berm in the vicinity of the Scotty's Castle Parking lot would be reconstructed to protect buildings housing historic artifacts from larger flow events, and to prevent the spring flows from flowing across the parking lot and bypassing wetlands. A second earthen berm



would be constructed within the active floodplain upstream of the Scotty's Castle Campus to protect a recently reconstructed water-line valve that provides water to the campus for visitor use and fire-prevention.

Emergency abutment repairs, erosion and scour protection and grade control structures would be reconstructed at Scotty's Castle Bridge. Undercut abutments would be repaired and reinforced using concrete. Scour protection would be installed around the abutments to prevent further degradation around the bridge abutments. Articulated concrete blocks will be installed approximately 50 feet upstream of the bridge, continues through the bridge and then 40 feet downstream and will tie into the existing banks. The vertical drop associated with the existing headcut in the bridge will be redistributed over two sloped-drops: one 10 feet downstream of the bridge with a 2-foot vertical drop over 8 feet horizontal, and one 40 feet downstream of the bridge with a 1.5-foot vertical drop over 3 feet horizontal. To mitigate future degradation at this sloped drop, the ACBs will be embedded 6 feet below the channel bed at 1 (horizontal) to 2 (vertical) slope.

A permanent 14 inch outer diameter smooth-wall high density polyethylene would be installed to connect the spring intake building to a newly replace waterline control valve. This waterline would replace and steel pipe waterline that was washed out during the October 2015 flood event. For the majority of its alignment, the waterline would be co-located within the roadway prism of the proposed Bonnie Clare Road. The waterline would be buried approximately 3-feet below the finished road grade. Directional Boring and open trenching would be used to install the waterline between the roadway and the two termini.

Table 1 outlines the anticipated impacts to waters of the U.S. as a result of the proposed project.

Table 1: Impact Site Description

Waterbody Type	Permanent – New Construction		Temporary – Reconstruction of Previously Serviceable Structures		Temporary – Access/ Restored to Pre-Con Elevations	
	Acres	Linear feet	Acres	Linear feet	Acres	Linear feet
Non-forested wetland (Emergent)	-	-	0.052	-	-	-
Non-forested wetland (Scrub-Shrub)	-	-	-	-	-	-
Forested wetland	-	-	-	-	-	-
Perennial stream	-	-	-	-	-	-
Intermittent stream	0.040	862	-	-	-	-
Ephemeral stream	3.371	~0.58 miles	26.593	~4.23 miles	18.984	-
Impoundment	-	-	-	-	-	-
Other:	-	-	-	-	-	-
<b>Total:</b>	<b>3.411</b>	<b>~0.74 miles</b>	<b>26.645</b>	<b>~4.23 miles</b>	<b>18.984</b>	<b>-</b>



Permanent Impacts are determined to be in areas where new roadway construction would take place within waters of the U.S., and would result in new permanent impacts. The reconstruction of the roadway and other previously serviceable structures are considered temporary impacts, as there is no net permanent loss of waters from before the flood event. Additional temporary impacts are determined to be areas of construction access and roadway obliteration. These impacts would not result in a permanent loss of waters of the U.S., but may require heavy equipment access, or staging of flood deposited debris, rock, or embankment.

Proposed Mitigation– The proposed mitigation may change as a result of comments received in response to this public notice, the applicant's response to those comments, and/or the need for the project to comply with the 404(b)(1) Guidelines. In consideration of the above, the proposed mitigation sequence (avoidance/minimization/compensation), as applied to the proposed project is summarized below:

**Avoidance:** Where determined feasible the roadway was realigned out of the ordinary high-water mark of Grapevine Canyon Wash to the greatest extent possible. Directional boring instead of trenching the proposed permanent waterline when crossing wetlands was implement to avoid adverse impacts from trenching and backfilling the buried waterline.

**Minimization:** In sections where it was unavoidable to place the roadway out of the ordinary high-water mark due to steep canyon slopes the proposed roadway was realigned to one side of the floodplain to allow the floodplain to re-establish connectivity.

**Compensation:** The applicant has provided a conceptual plan to compensate for permanent impacts to 3.411 acres of waters of the U.S. through re-establishment of 7.863 acres of wetland and riparian habitat at four locations immediately adjacent to the proposed project. Table 2 outlines the proposed mitigations sites. Location maps of the proposed mitigation sites are attached. Final Mitigation credits will be determined by the U.S. Army Corps of Engineers.

Table 2: Mitigation Site Description

Site	Habitat Type	Mitigation Type	Activity	Potential Credit	Lat, Long. (NAD83)
Area 1: Spring Flow Channel	Open Water, Riparian, PEM/PSS	Re-Establishment	Re-establish meandering spring flow channel to create spring flow, wetland and riparian corridor.	483 LF (0.022 Ac.) Riverine, 0.135 Ac. PEM, 0.245 Ac. PSS	37.032297, -117.325092
Area 2: Spring Flow Channel	Open Water, Riparian, PEM/PSS	Re-Establishment	Re-establish meandering spring flow channel to create spring flow, wetland and riparian corridor. Redirect spring flows into relic wetland and riparian area.	355 LF (0.016 Ac.) Riverine, 0.142 Ac. PEM, 0.196 Ac. PSS	37.032155, -117.330319
Area 3: Spring Flow Channel	PEM/PSS	Re-Establishment	Capture spring flows and redirect to relic wetland and riparian area.	62 LF (0.003 Ac.) Riverine, 0.048 Ac. PEM, 0.014 Ac. PSS	37.031504, -117.339462
Area 4: Road Oblit. – Floodplain Restoration	Riverine - Ephemeral	Re-Establishment	Obliterate and removed old roadway from active floodplain. Add floodplain complexity by partially burying boulder and installing vertical mulching to promote revegetation.	7.083 Ac. Riverine	37.04928, -117.296878

LF – Linear Feet, Ac. – Acres, PEM – Palustrine Emergent, PSS – Palustrine Scrub-Shrub.



Preliminary Alternatives Analysis – As part of the Corps' permit evaluation process, alternatives to the proposed project would be considered pursuant to the 404(b)(1) guidelines. The guidelines require the Corps to authorize the "least environmentally damaging practicable alternative" that meets the overall project purpose. The applicant has provided the following preliminary alternatives and discussion as part of their application. This does not represent a complete list of alternatives that may be considered by the Corps, or a determination of their adequacy. They are provided here for informational purposes and to solicit comments. Figures showing the preliminary alternatives is attached.

Bonnie Clare Road Reconstruction: Five alternatives were identified and analyzed for the purposes of reconstructing Bonnie Clare Road. From construction station 215+00 to the western extent of the project, construction station 406+47.31, all four roadway alternatives have the same horizontal and vertical alignment. This section of the roadway sustained very little damage during the flood event because it nearly entirely outside of the OHWM and floodplain of Grapevine Canyon Wash. The dimensions of the roadway prism are the same in all four alternatives and the actions required to re-open the roadway in this section would generally be exempt from permit requirement as described in Section 404(f)(1) of the Clean Water Act. Therefore the roadway repairs in this roadway section were excluded from further alternatives analysis; however, any proposed alignment shifts, scour protection, or additional structures were included for analysis.

*Alternative 1-A: No Action Alternative* – Alternative 1-A was identified as the alternative that would have no impacts to aquatic features and would not require 404 authorization. Due to the geomorphic location of the existing travel corridor, this alternative would abandon a large portion of the roadway from Construction Station 190+00 east to the California/Nevada border. This alternative would only involve the emergency roadway repairs that would be exempt from permit requirement as described in Section 404(f)(1) of the Clean Water Act.

*Alternative 1-B: Preferred Alternative* – Alternative 1-B was identified as the alternative that would most closely resemble the previous roadway alignment, with some vertical and horizontal alignment shifts to move the roadway out of the active floodplain of Grapevine Canyon Wash and to increase the resiliency of the roadway.

*Alternative 1-C:* Alternative 1-C was identified as the alternative that would involve relocating Bonnie Clare Road adjacent to the new active floodplain of Grapevine Canyon Wash and elevate the roadway approximately five feet above the anticipated flow line and install low-water crossings to accommodate side drainages.

*Alternative 1-D:* Alternative 1-D was identified as an alternative that would realign Bonnie Clare entirely out of the flood zone for Grapevine Canyon for most of its alignment and would involve additional structures such as bridges, box culverts and grade control structures to accommodate side drainages.

*Alternative 1-E:* Alternative 1-E was identified as an alternative that would not have impacts to aquatic features and would not require 404/ 401 Clean Water Act Permits. This alternative would closely resemble the alignment of Alternative 1-D, but would utilize bridges, or large culverts to span across the ordinary high water mark and would not result in fill within a water of the U.S.

Stormwater Control Structures: Three alternatives were identified and analyzed for the purposes of this alternatives analysis for the installation of stormwater control structures and a permanent waterline to protect buildings within Scotty's Castle Campus and provide a water source.



*Alternative 2-A: No Action Alternative* – Alternative 2-A was identified as the alternative that would have no impacts to aquatic features and would not require 404/ 401 Clean Water Act Permits. Due to the location of the existing structures within the Scotty's Castle Campus and the flow patterns of Grapevine Canyon, it is not possible to protect these structures without a discharge into waters of the U.S., therefore no protective structures are proposed in this alternative.

*Alternative 2-B: Preferred Alternative* – Alternative 2-B was identified as the alternative that would protect the threatened structures within Scotty's Castle Campus by reconstructing one earthen berm that was destroyed during the flood event and constructing a second earthen berm out of channel bed material deposited during the flood event.

*Alternative 2-C: Alternative 2-B* was identified as the alternative that would protect the threatened structures within Scotty's Castle Campus constructing a berm to protect the long-shed and would avoid impacts to special aquatics sites adjacent to the long-shed.

*Scotty's Castle Bridge Repair:* Two alternatives were identified and analyzed for the purposes of this alternatives analysis for the emergency repairs to Scotty's Castle Bridge.

*Alternative 3-A: No Action Alternative* – Alternative 3-A was identified as the alternative that would have no impacts to aquatic features and would not require 404/ 401 Clean Water Act Permits. Due to the location of the existing bridge and the flow patterns of Grapevine Canyon, it is not possible to repair these structures without a discharge into waters of the U.S. This alternative would involve the installation of flood relief culverts outside of the ordinary high water mark (OHWM) of Grapevine Canyon Wash.

*Alternative 3-B: Preferred Alternative* – Alternative 3-B was identified as the alternative that would repair and protect the exiting Scotty's Castle Bridge while not significantly modifying the historic bridge structure. This alternative would involve repairs to the existing bridge abutments, installation of scour protection around the abutments and the installation of grade control structures to prevent the channel from further undercutting the abutments.

*Scotty's Castle Waterline:* Three alternatives were identified and analyzed for the purposes of this alternatives analysis for reconstructing the permanent waterline from the spring intake building to the waterline control valve.

*Alternative 4-A: No Action Alternative* – Alternative 4-A was identified as the alternative that would have no impacts to aquatic features and would not require 404/401 Clean Water Act Permits. Due to the location of the existing spring intake building, it is not possible to reconstruct the permanent buried waterline without a discharge of fill into waters of the U.S.

*Alternative 4-B:* Alternative 4-B was identified as the alternative that would replace the water close to its pre-flood event location within the broad wash of Grapevine Canyon. This alternative would involve burying the waterline within a trench that is located within the OHWM of Grapevine Canyon Wash.

*Alternative 4-C: Preferred Alternative* – This alternative would co-locate the waterline within the newly reconstructed roadway prism of Bonnie Clare Road with the waterline deviating from the roadway to connect to the water intake building and to the waterline control valve.



## **Proposed Special Conditions**

Special conditions addressing avoidance, minimization and compensation of impacts to waters of the U.S. would likely be included in the final permit, if issued. No special conditions are proposed at this time.

For additional information please call Jerry Hidalgo of my staff at (805) 585-2145 or via e-mail at Gerardo.L.Hidalgo@usace.army.mil. This public notice is issued by the Chief, Regulatory Division.



### *Regulatory Program Goals:*

- To provide strong protection of the nation's aquatic environment, including wetlands.
- To ensure the Corps provides the regulated public with fair and reasonable decisions.
- To enhance the efficiency of the Corps' administration of its regulatory program.

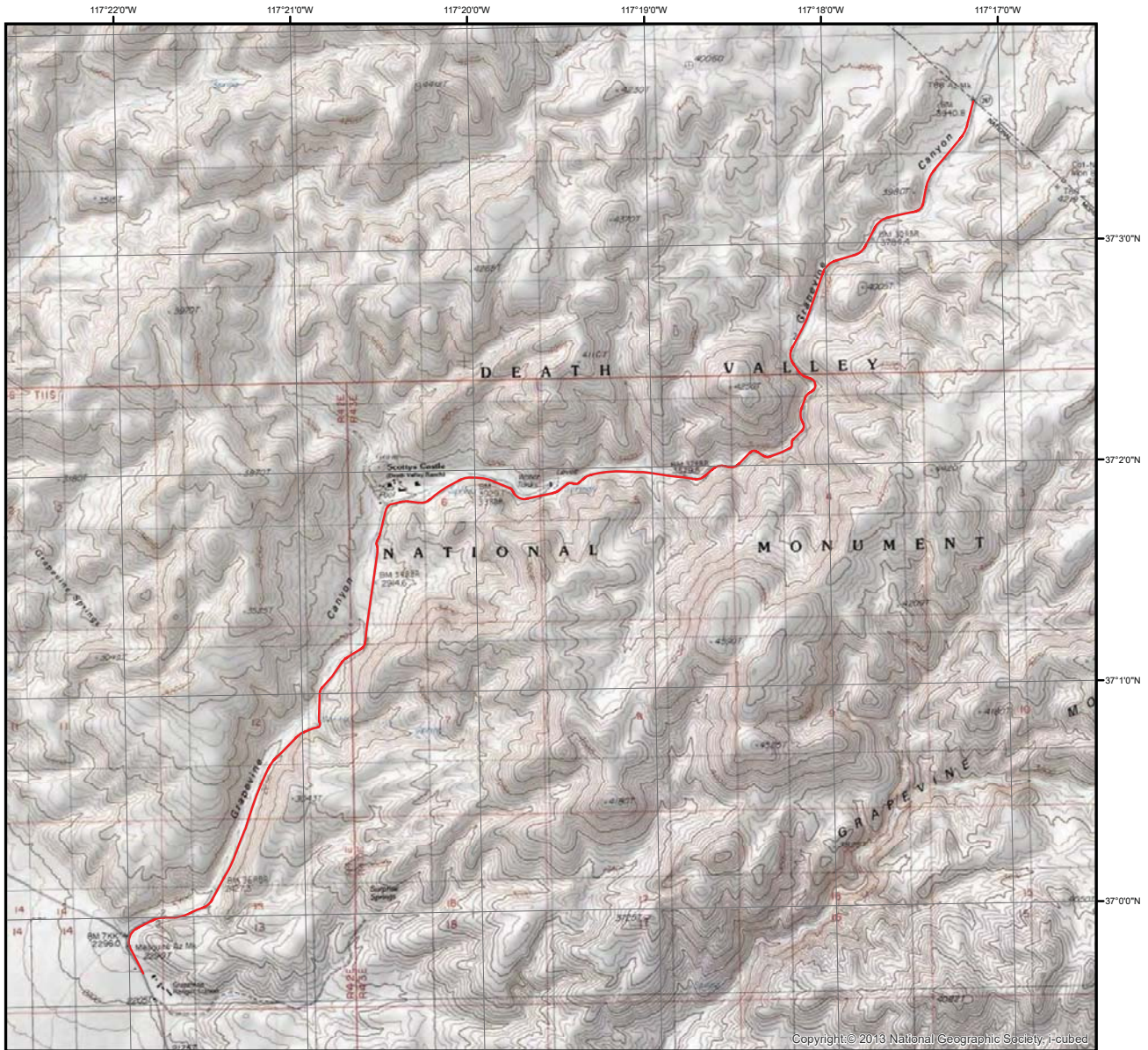
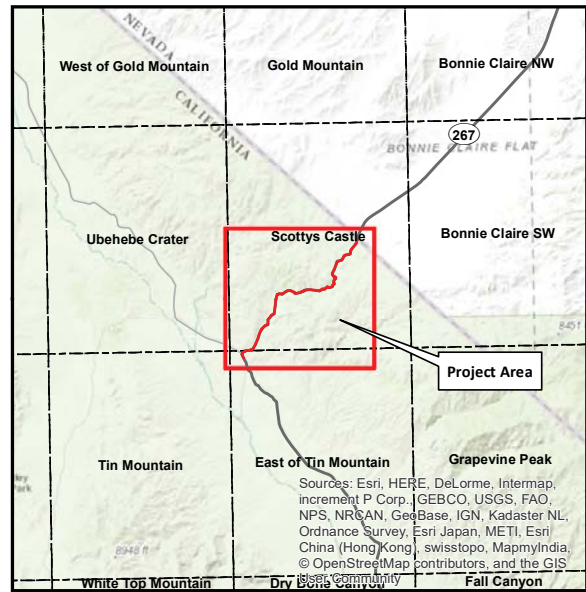
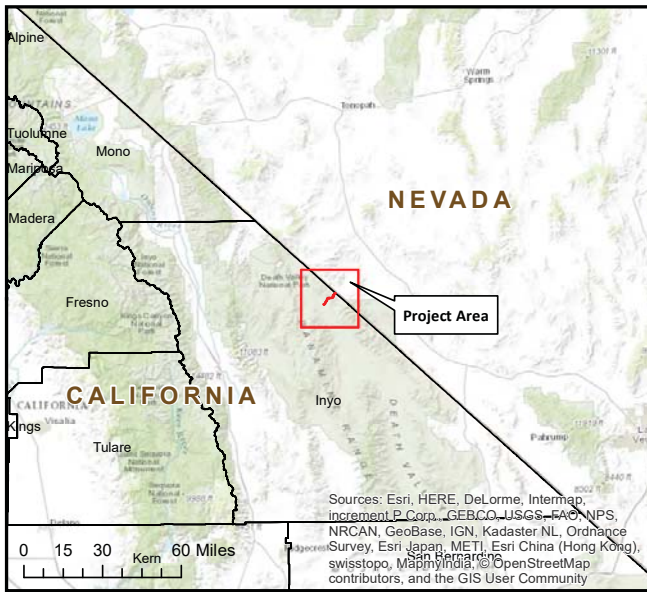
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**DEPARTMENT OF THE ARMY**  
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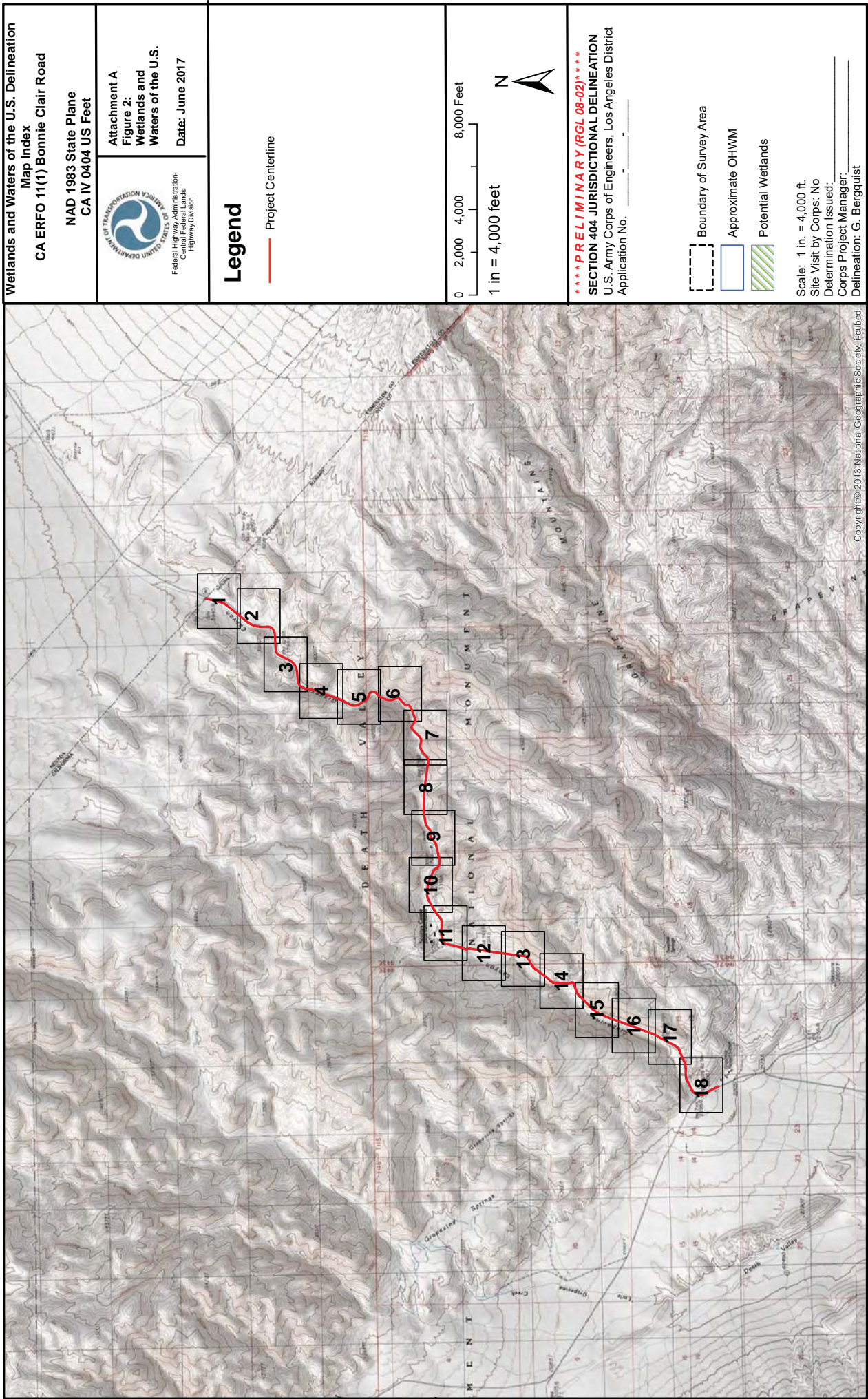
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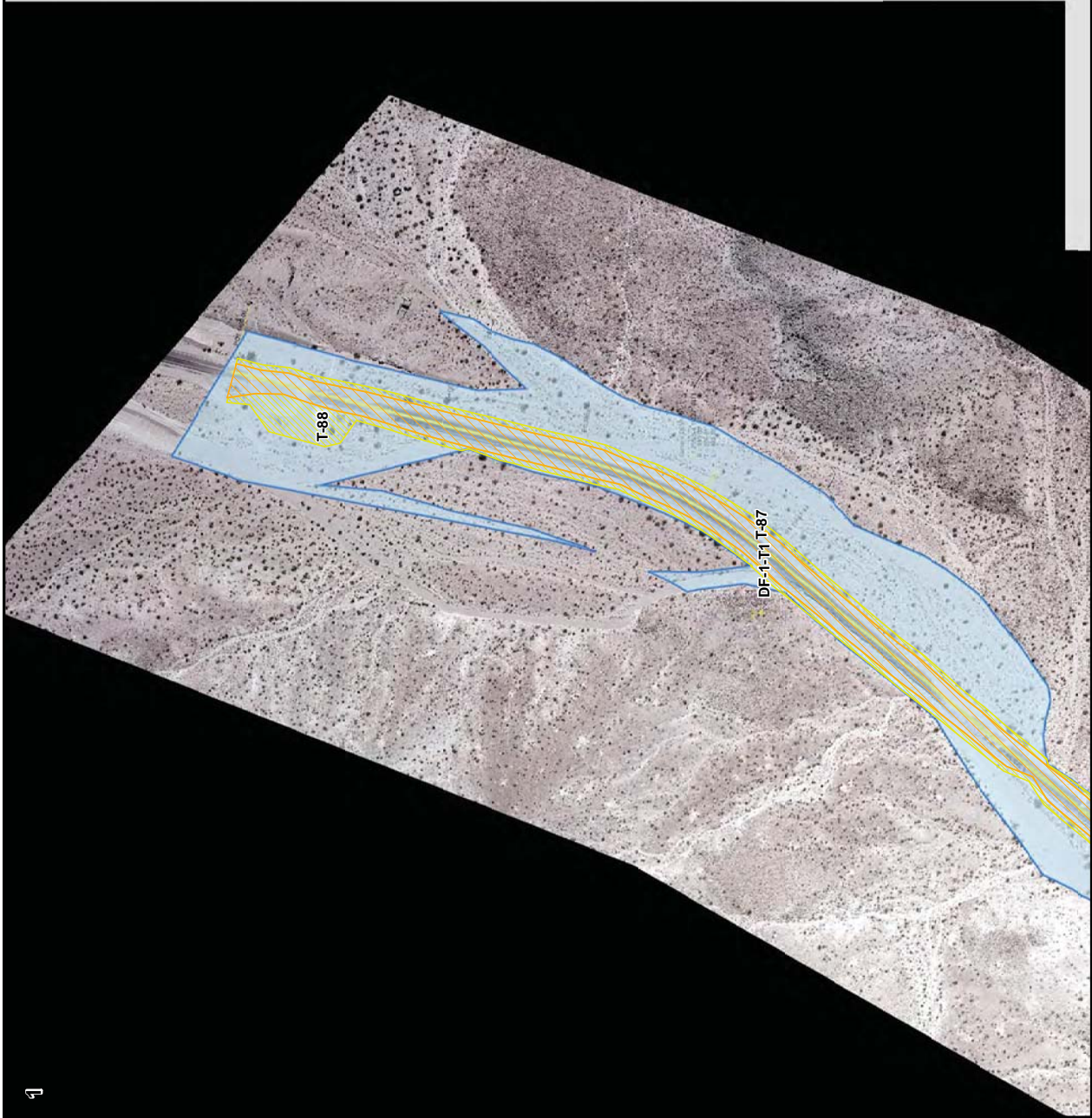


 <p>Federal Highway Administration Central Federal Lands Highway Division</p>	<p><b>CA ERFO DEVA 11(1)</b> <b>Bonnie Claire Road</b></p> <p>— Project Location</p>	<p>1 inch = 3,000 feet</p> <p>0 1,500 3,000 Feet</p> <p>0 0.25 0.5 1 Miles</p> <p>Background Imagery: USGS 7.5 minute quadrangle topographic maps Copyright © 2011 National Geographic Society, i-cubed</p>	<p><b>Appendix - Figure 1:</b> <b>Project Location Map</b></p> <p><b>Date: November 2016</b></p> <p><b>Tulare County, CA</b> <b>USGS 7.5</b> <b>Minute Quadrangles:</b> <b>Scotty's Castle</b> <b>East of Tin Mountain</b></p>
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CA ERFO 11(1) Bonnie Clair Road  
Section 404(b)(1) - 404 Impact Map

NAD 1983 State Plane  
CA IV 0404 US Feet



Attachment 1:  
404 Impact Map  
June 2017

### Legend

-  Approximate OHWM
-  Spring Flow
-  Potential Wetlands
-  Perm Impacts - New Const.
-  Temp Impacts - Reconstr.
-  Temp - Const. Access
-  Spring Flow Impacts
-  Buried Waterline

0 100 200 400 Feet

1 in = 200 feet

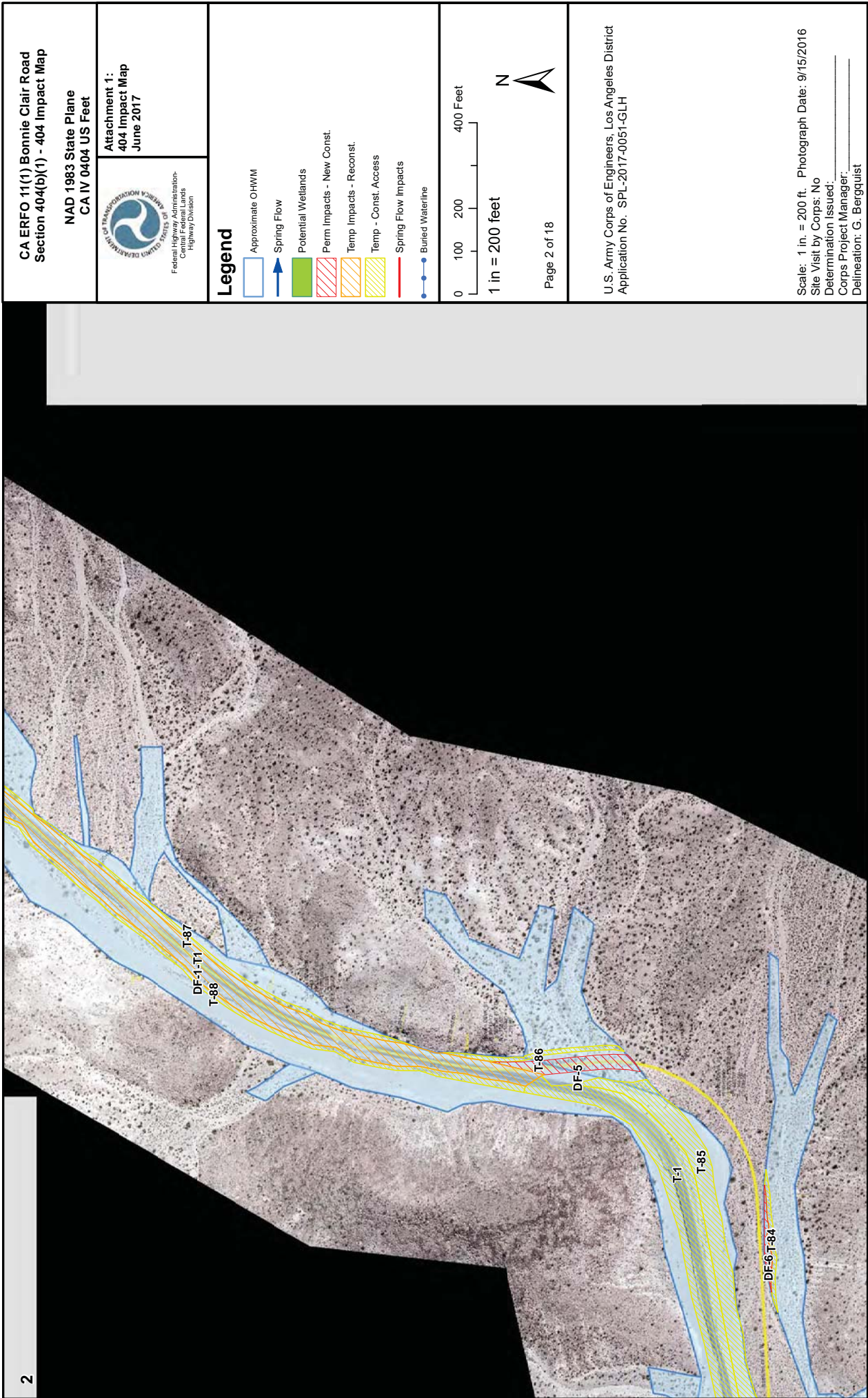


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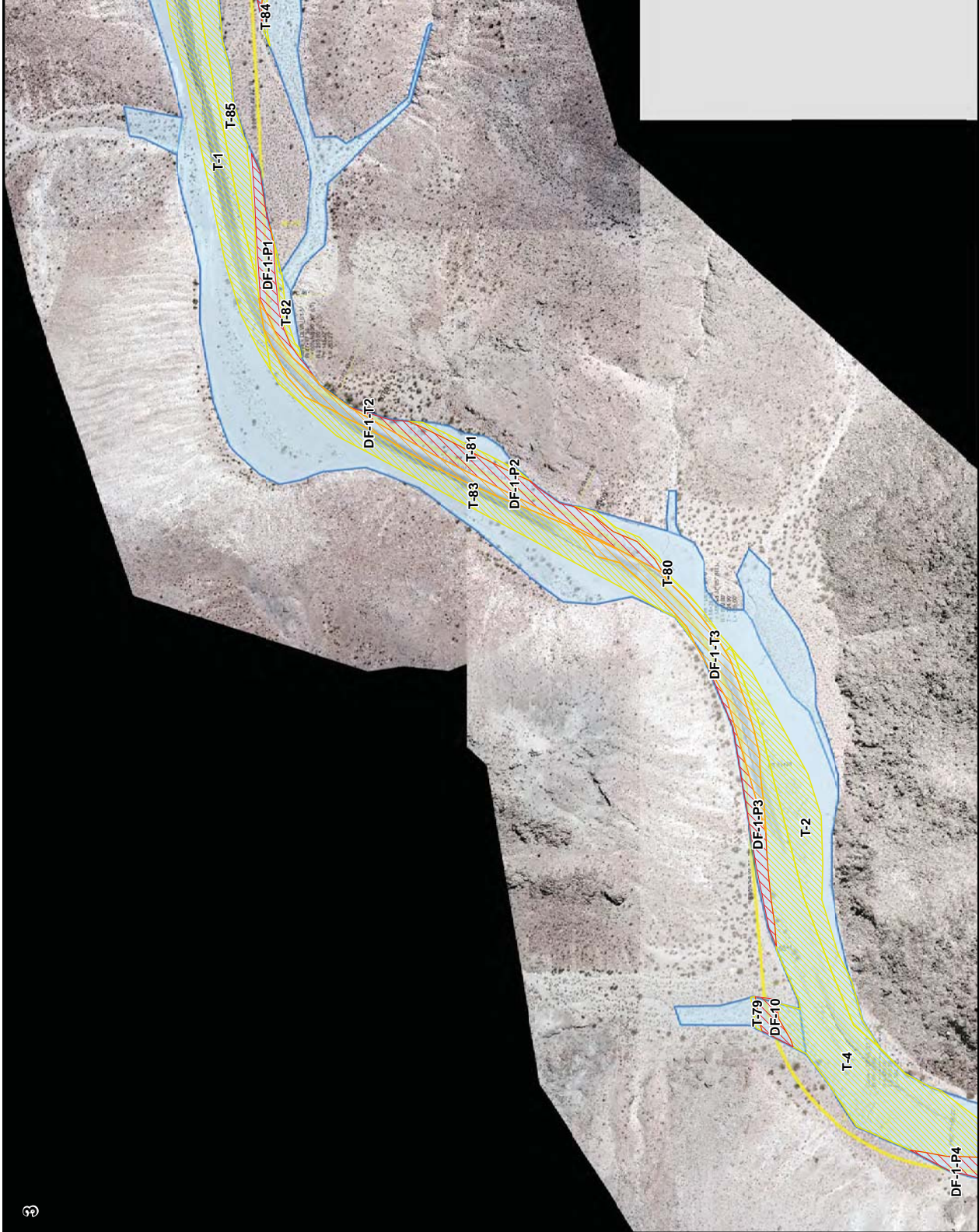
U.S. Army Corps of Engineers, Los Angeles District  
Application No. SPL-2017-0051-GLH

Scale: 1 in. = 200 ft. Photograph Date: 9/15/2016  
Site Visit by Corps: No  
Determination Issued: \_\_\_\_\_  
Corps Project Manager: \_\_\_\_\_  
Delineation: G. Bergquist










CA ERFO 11(1) Bonnie Clair Road  
Section 404(b)(1) - 404 Impact Map

NAD 1983 State Plane  
CA IV 0404 US Feet



FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS  
HIGHWAY DIVISION

Attachment 1:  
404 Impact Map  
June 2017

**Legend**

- Approximate OHWM
- Spring Flow
- Potential Wetlands
- Perm Impacts - New Const.
- Temp Impacts - Reconst.
- Temp - Const. Access
- Spring Flow Impacts
- Buried Waterline

0 100 200 400 Feet

1 in = 200 feet

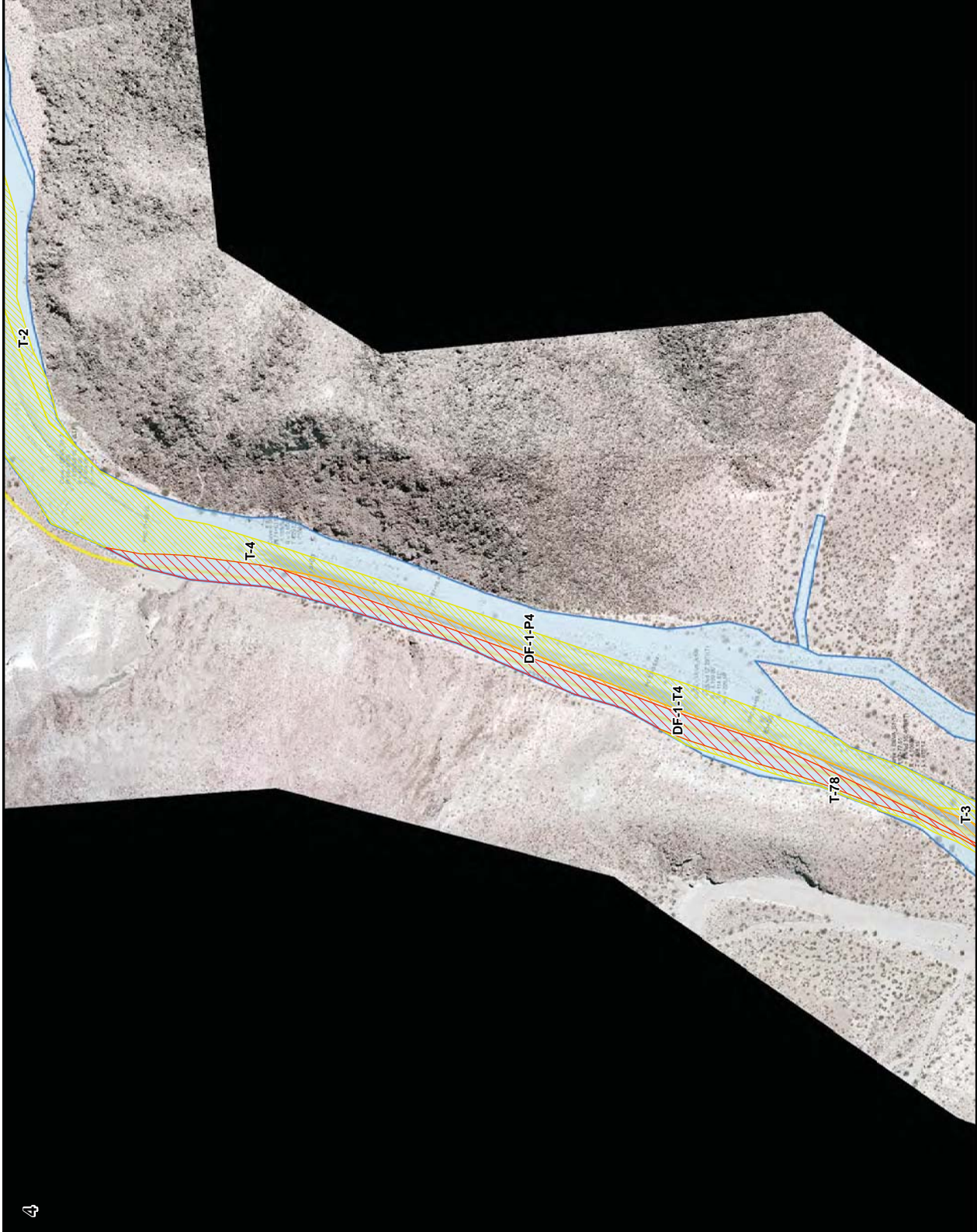
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U.S. Army Corps of Engineers, Los Angeles District  
Application No. SPL-2017-00051-GLH

Scale: 1 in. = 200 ft. Photograph Date: 9/15/2016  
Site Visit by Corps: No  
Determination Issued: \_\_\_\_\_  
Corps Project Manager: \_\_\_\_\_  
Delineation: G. Bergquist





CA ERO 11(1) Bonnie Clair Road  
Section 404(b)(1) - 404 Impact Map

NAD 1983 State Plane  
CA IV 0404 US Feet



Attachment 1:  
404 Impact Map  
June 2017

Legend

- Approximate OHWM
- Spring Flow
- Potential Wetlands
- Perm Impacts - New Const.
- Temp Impacts - Reconstr.
- Temp - Const. Access
- Spring Flow Impacts
- Buried Waterline

0 100 200 400 Feet

1 in = 200 feet



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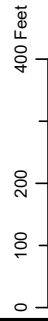
U.S. Army Corps of Engineers, Los Angeles District  
Application No. SPL-2017-0051-GLH

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Site Visit by Corps: No  
Determination Issued:  
Corps Project Manager:  
Delineation: G. Bergquist

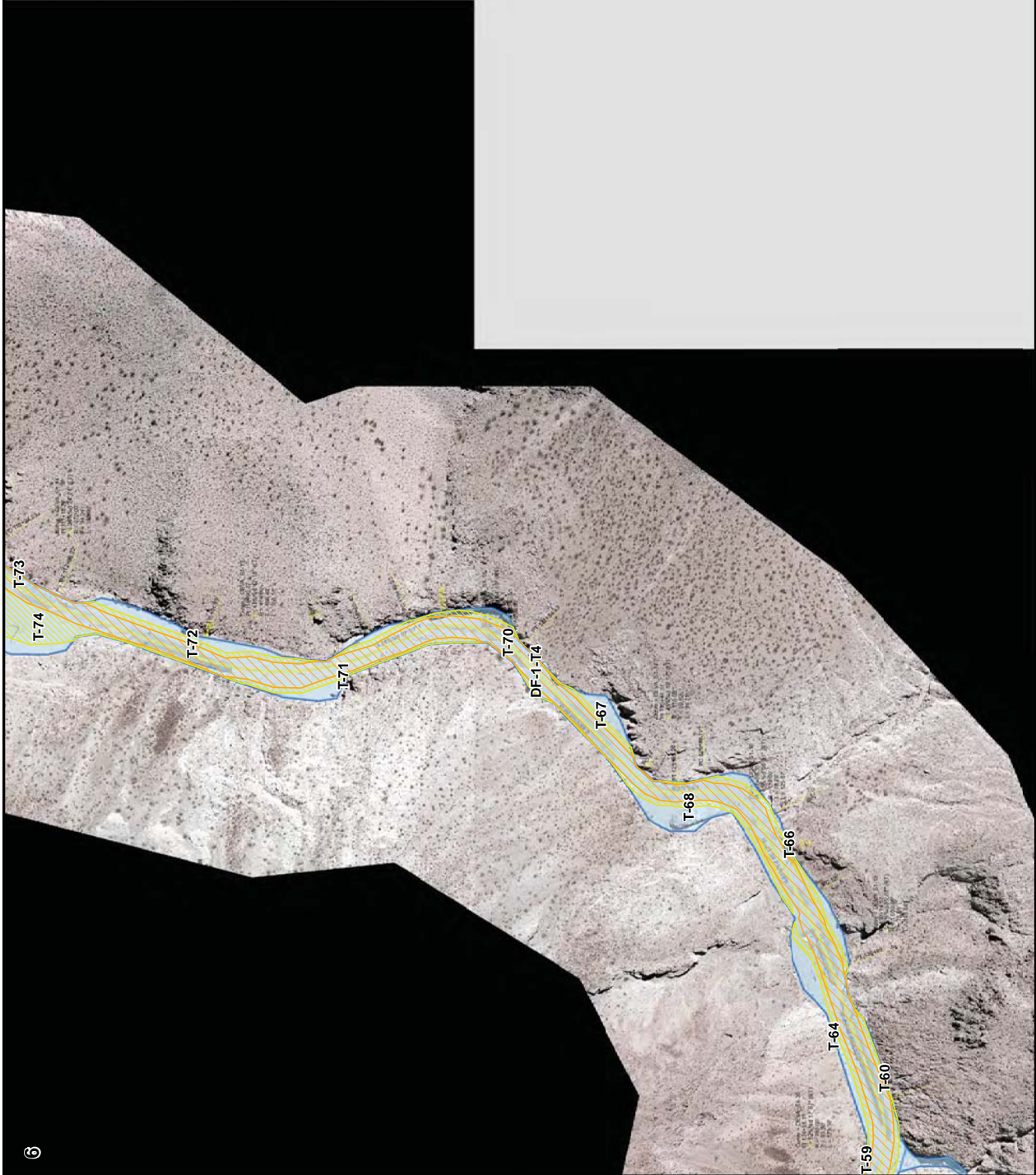


### Legend

- 
- Approximate OHWM
- Spring Flow
- Potential Wetlands
- Perm Impacts - New Const.
- Temp Impacts - Reconst.
- Temp - Const. Access
- Spring Flow Impacts
- Buried Waterline







CA ERFO 11(1) Bonnie Clair Road  
Section 404(b)(1) - 404 Impact Map

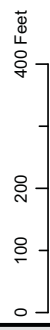
NAD 1983 State Plane  
CA IV 0404 US Feet



Attachment 1:  
404 Impact Map  
June 2017

**Legend**

- Approximate OHWM
- Spring Flow
- Potential Wetlands
- Perm Impacts - New Const.
- Temp Impacts - Reconstr.
- Temp - Const. Access
- Spring Flow Impacts
- Buried Waterline



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U.S. Army Corps of Engineers, Los Angeles District  
Application No. SPL-2017-0051-GLH

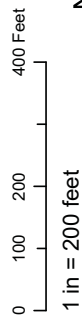
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Determination Issued:  
Corps Project Manager:  
Delineation: G. Bergquist





## Legend

- 
- Approximate OHWM  
Spring Flow  
Potential Wetlands  
Perm Impacts - New Const.  
Temp Impacts - Reconst.  
Temp - Const. Access  
Spring Flow Impacts  
Buried Waterline

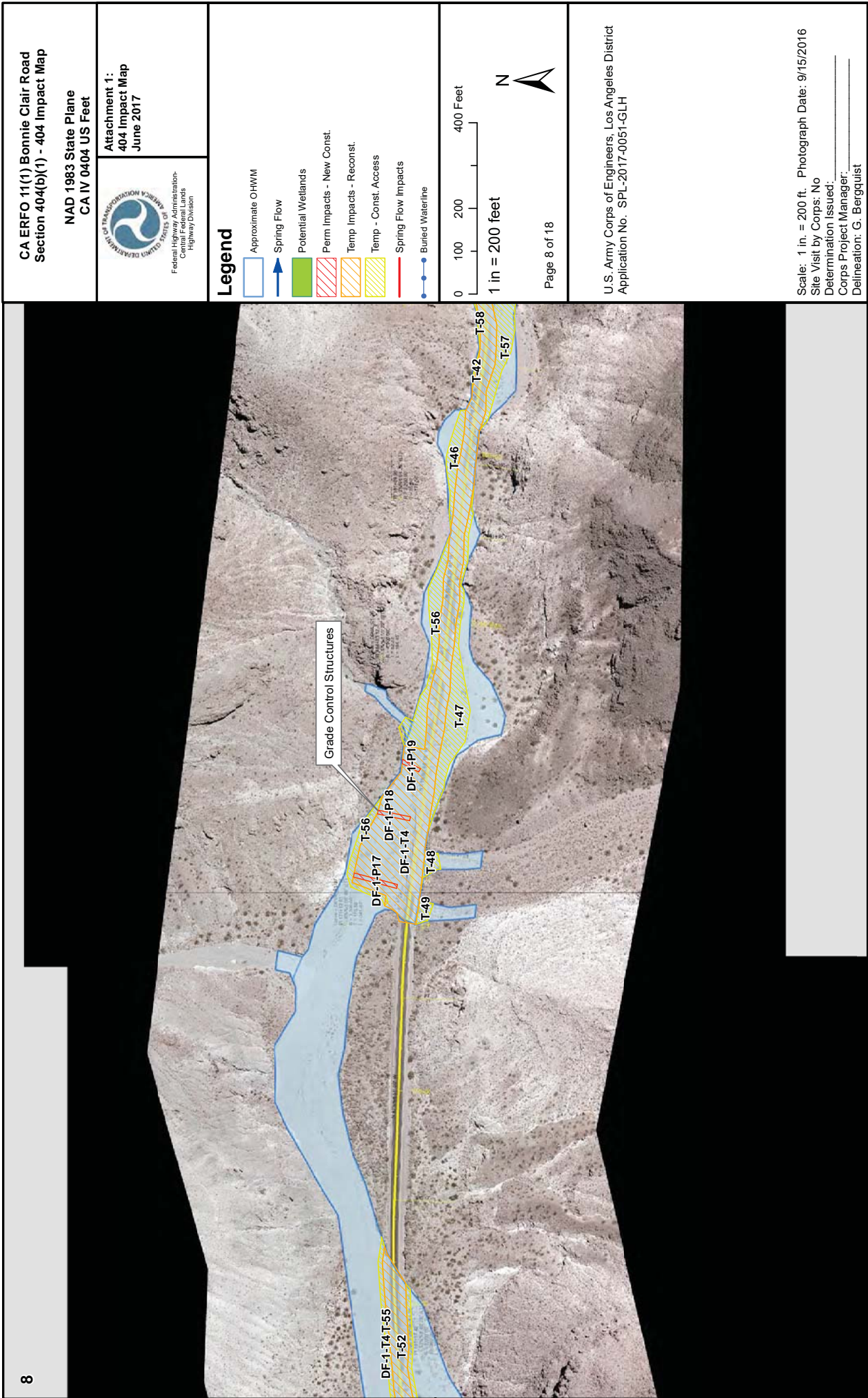


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U.S. Army Corps of Engineers, Los Angeles District  
Application No. SPL-2017-0051-GLH

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 Determination Issued: \_\_\_\_\_  
 Corps Project Manager: \_\_\_\_\_  
 Delineation: G. Bergquist





CA ERFO 11(1) Bonnie Clair Road  
Section 404(b)(1) - 404 Impact Map

NAD 1983 State Plane  
CA IV 0404 US Feet



Attachment 1:  
404 Impact Map  
June 2017

### Legend

- Approximate OHWM
- Spring Flow
- Potential Wetlands
- Perm Impacts - New Const.
- Temp Impacts - Reconst.
- Temp - Const. Access
- Spring Flow Impacts
- Buried Waterline

0 100 200 400 Feet  
1 in = 200 feet



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U.S. Army Corps of Engineers, Los Angeles District  
Application No. SPL-2017-0051-GLH

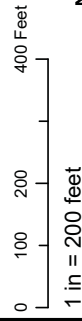
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Determination Issued: \_\_\_\_\_  
Corps Project Manager: \_\_\_\_\_  
Delineation: G. Bergquist



NAD 1983 State Plane  
CA IV 0404 US Feet



Federal Highway Administration-  
Central Federal Lands  
Highway Division



U.S. Army Corps of Engineers, Los Angeles District  
Application No. SPL-2017-0051-GLH

Scale: 1 in. = 200 ft. Photograph Date: 9/15/2016  
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Determination Issued: \_\_\_\_\_  
Corps Project Manager: \_\_\_\_\_  
Delineation: G. Bergquist



CA ERFO 11(1) Bonnie Clair Road  
Section 404(b)(1) - 404 Impact Map

NAD 1983 State Plane  
CA IV 0404 US Feet

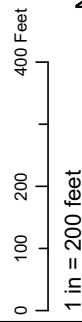


Attachment 1:  
404 Impact Map  
June 2017

Federal Highway Administration  
Central Federal Lands  
Highway Division

Legend

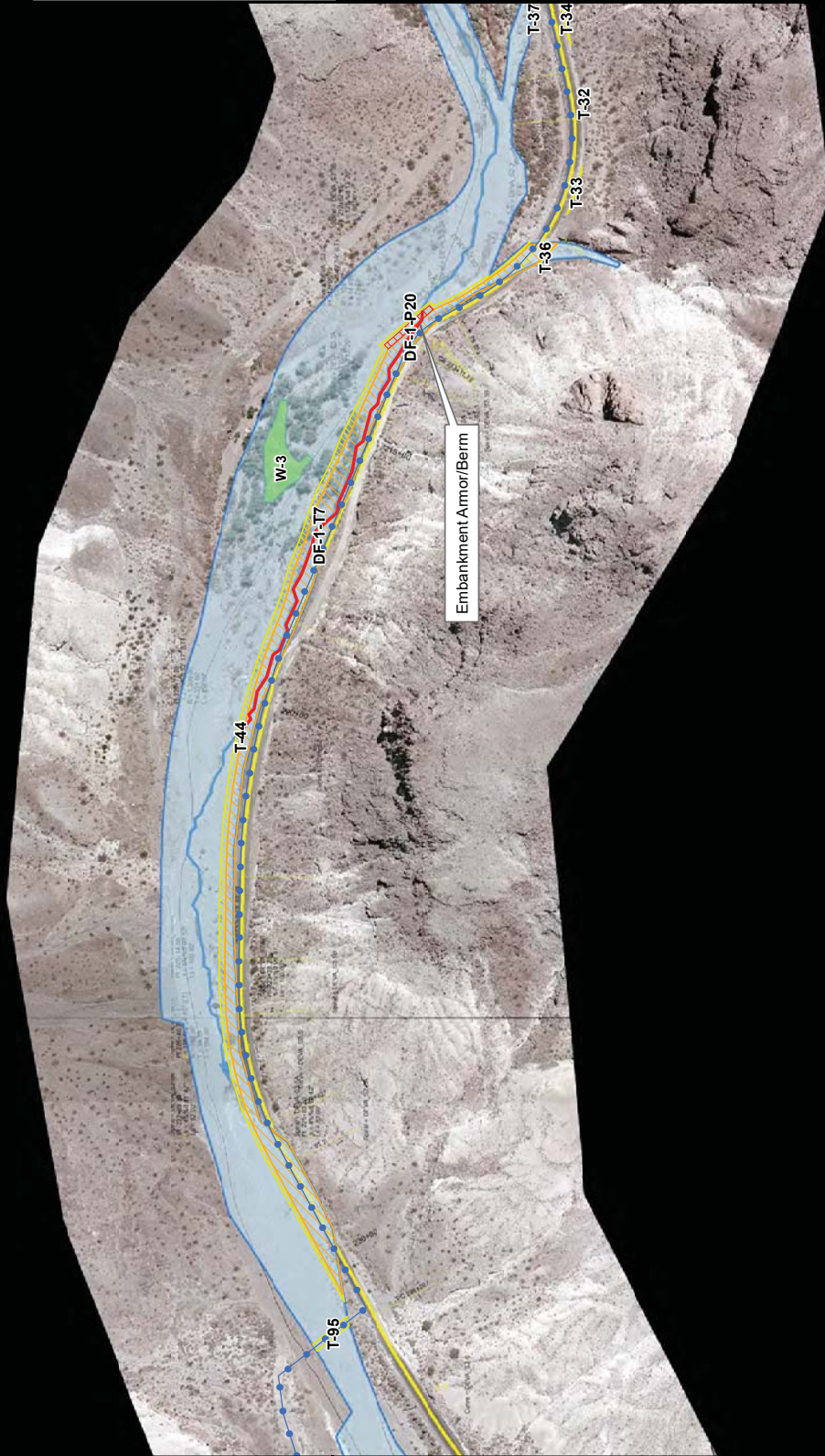
- Approximate OHWM
- Spring Flow
- Potential Wetlands
- Perm Impacts - New Const.
- Temp Impacts - Reconst.
- Temp - Const. Access
- Spring Flow Impacts
- Buried Waterline



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U.S. Army Corps of Engineers, Los Angeles District  
Application No. SPL-2017-0051-GLH

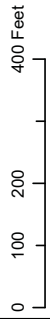
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Determination Issued: \_\_\_\_\_  
Corps Project Manager: \_\_\_\_\_  
Delineation: G. Bergquist





### Legend

- 



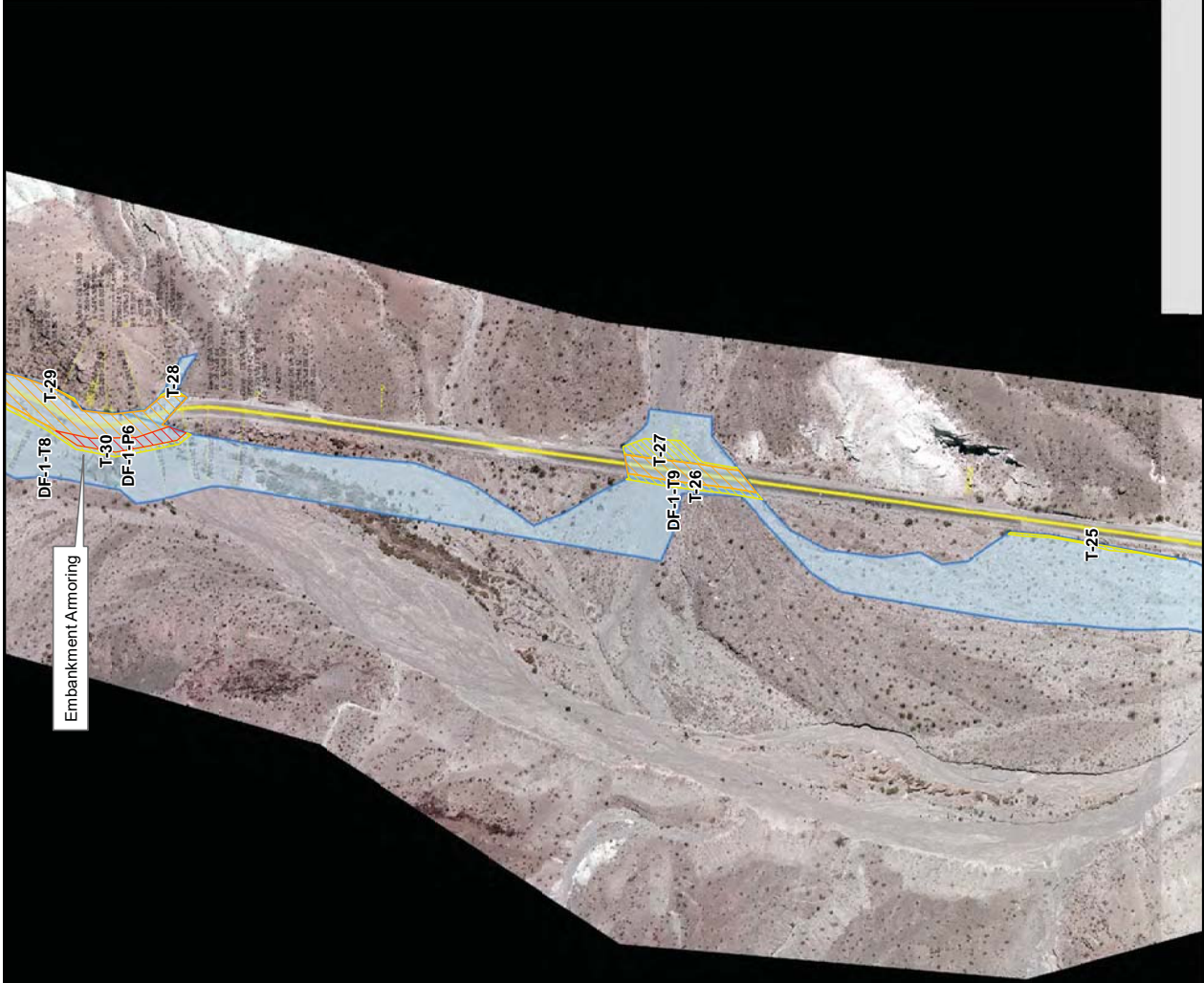
1 in = 200 feet

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U.S. Army Corps of Engineers, Los Angeles District  
Application No. SPL-2017-0051-GLH

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 Site Visit by Corps: No  
 Determination Issued: \_\_\_\_\_  
 Corps Project Manager: \_\_\_\_\_  
 Delineation: G. Bergquist





CA ERF0 11(1) Bonnie Clair Road  
Section 404(b)(1) - 404 Impact Map

NAD 1983 State Plane  
CA IV 0404 US Feet



Attachment 1:  
404 Impact Map  
June 2017

### Legend

- Approximate OHWM
- Spring Flow
- Potential Wetlands
- Perm Impacts - New Const.
- Temp Impacts - Reconstr.
- Temp - Const. Access
- Spring Flow Impacts
- Buried Waterline

0 100 200 400 Feet

1 in = 200 feet



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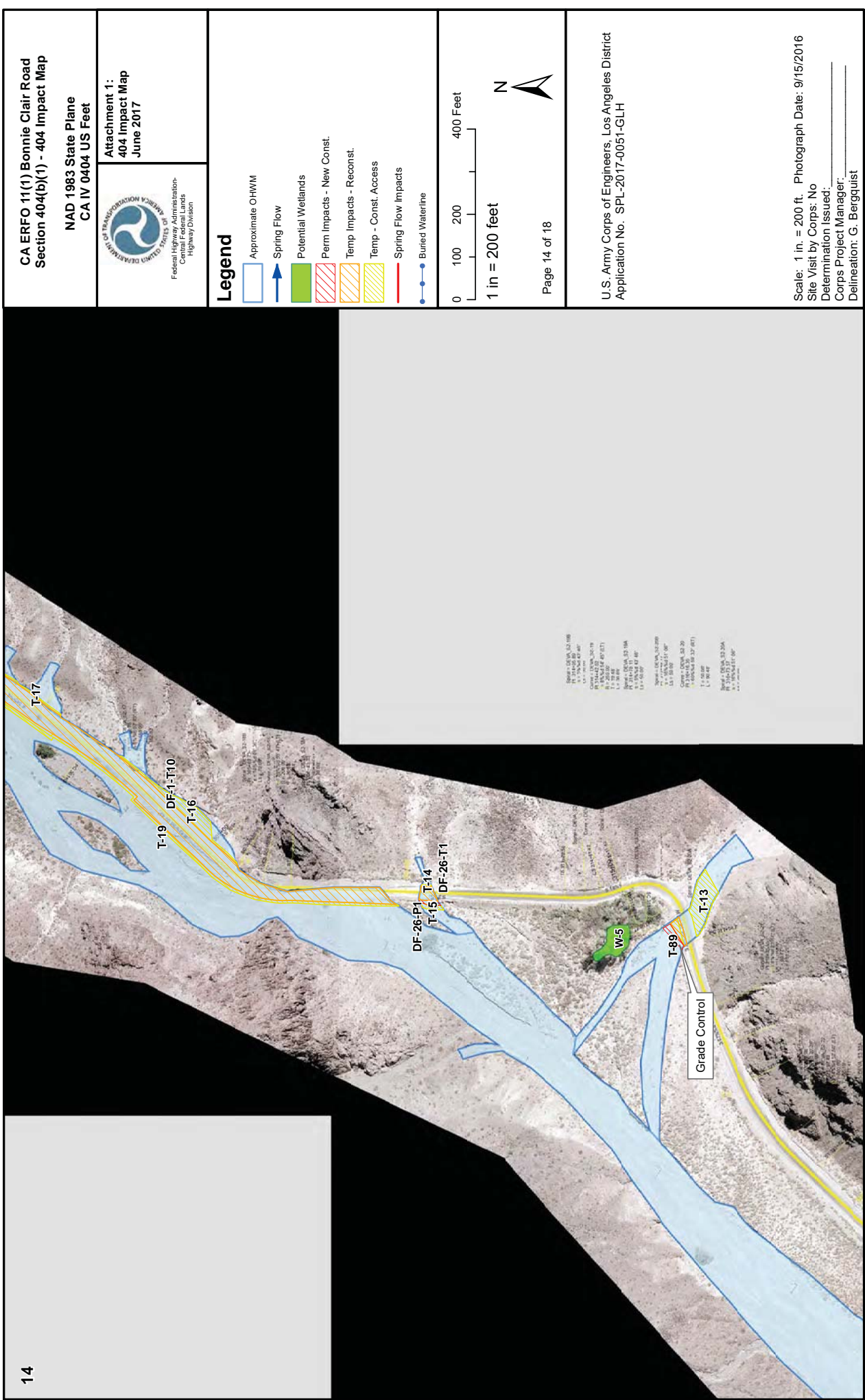
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Application No. SPL-2017-0051-GLH

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Corps Project Manager: \_\_\_\_\_  
Delineation: G. Bergquist

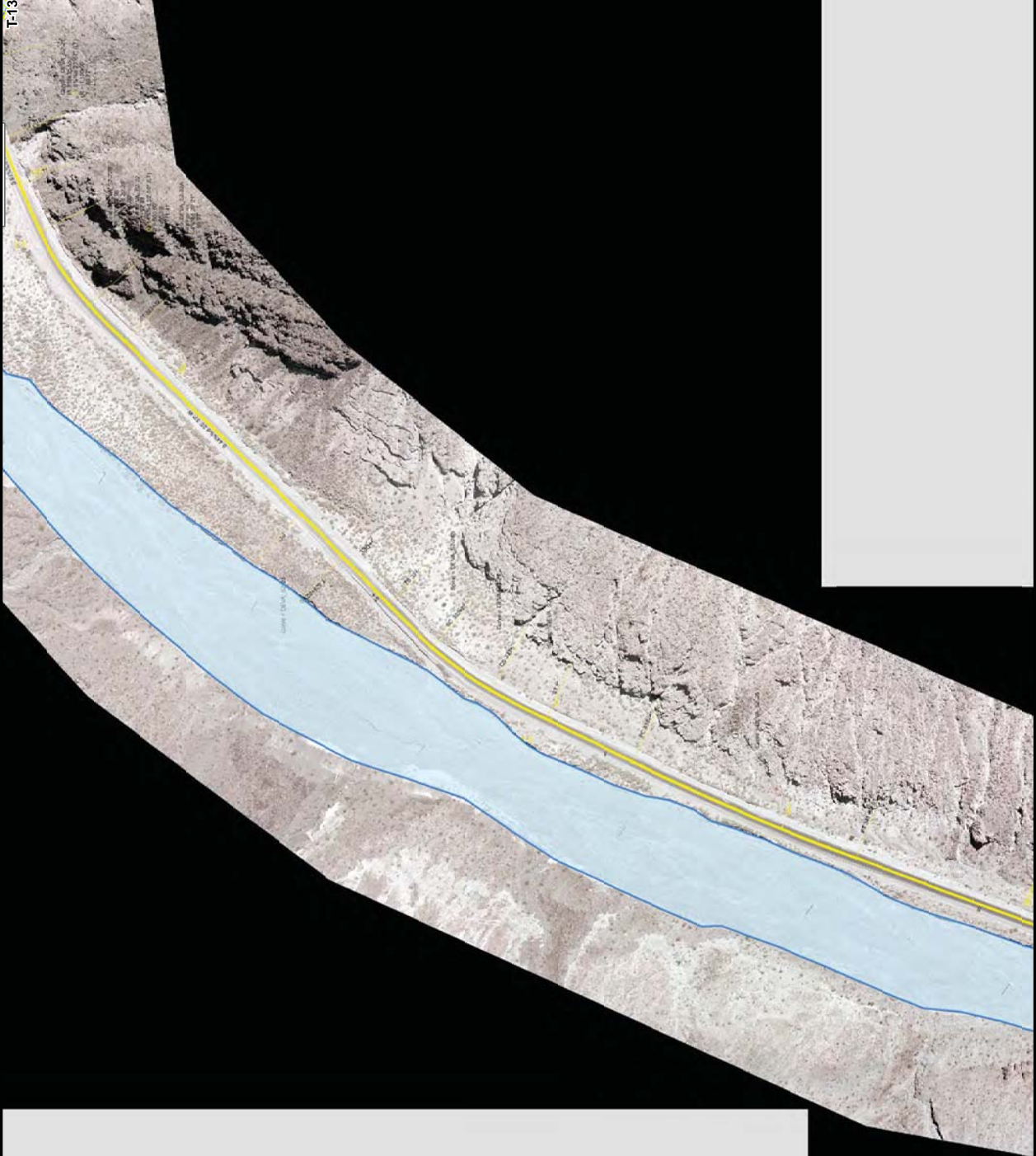







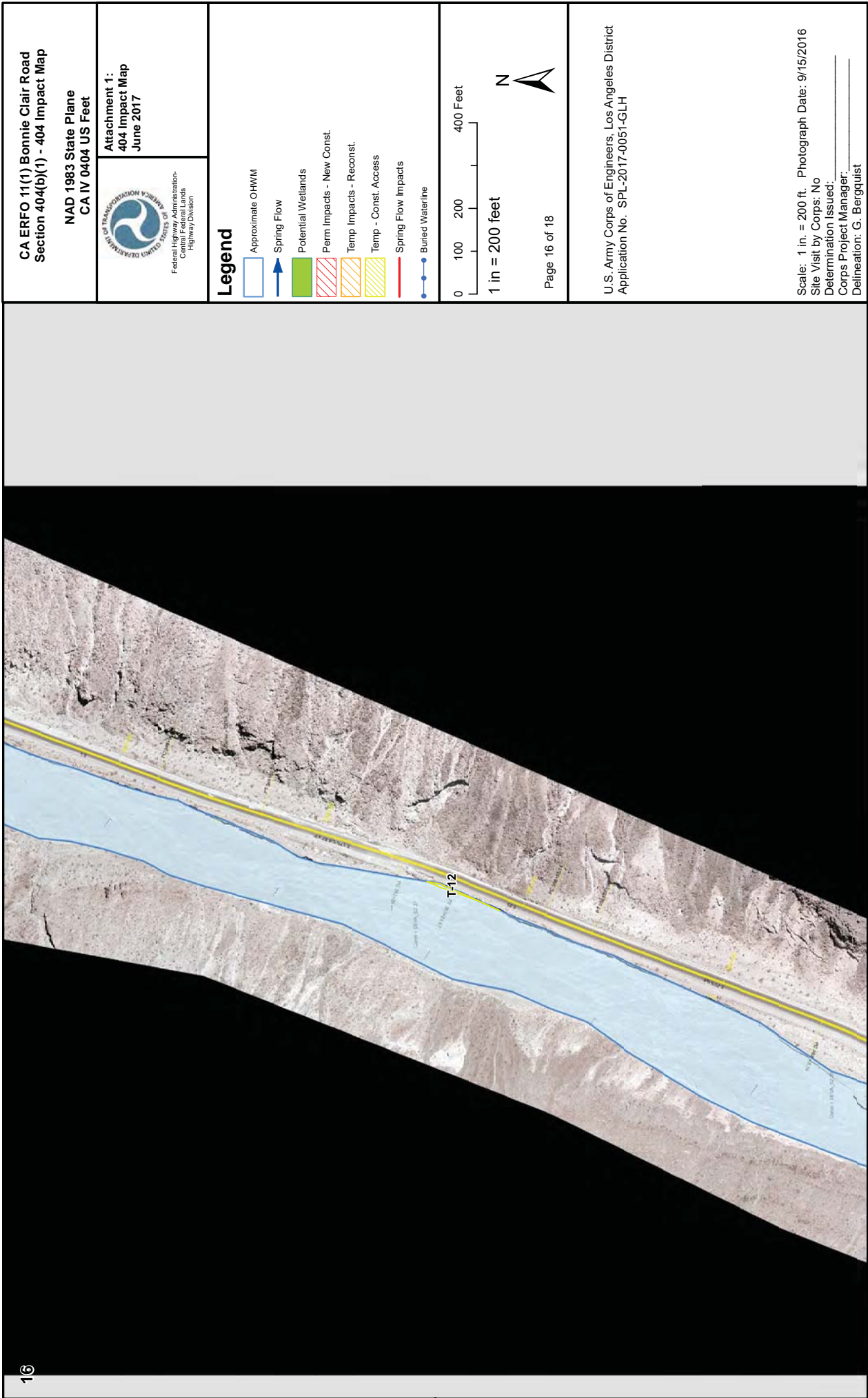




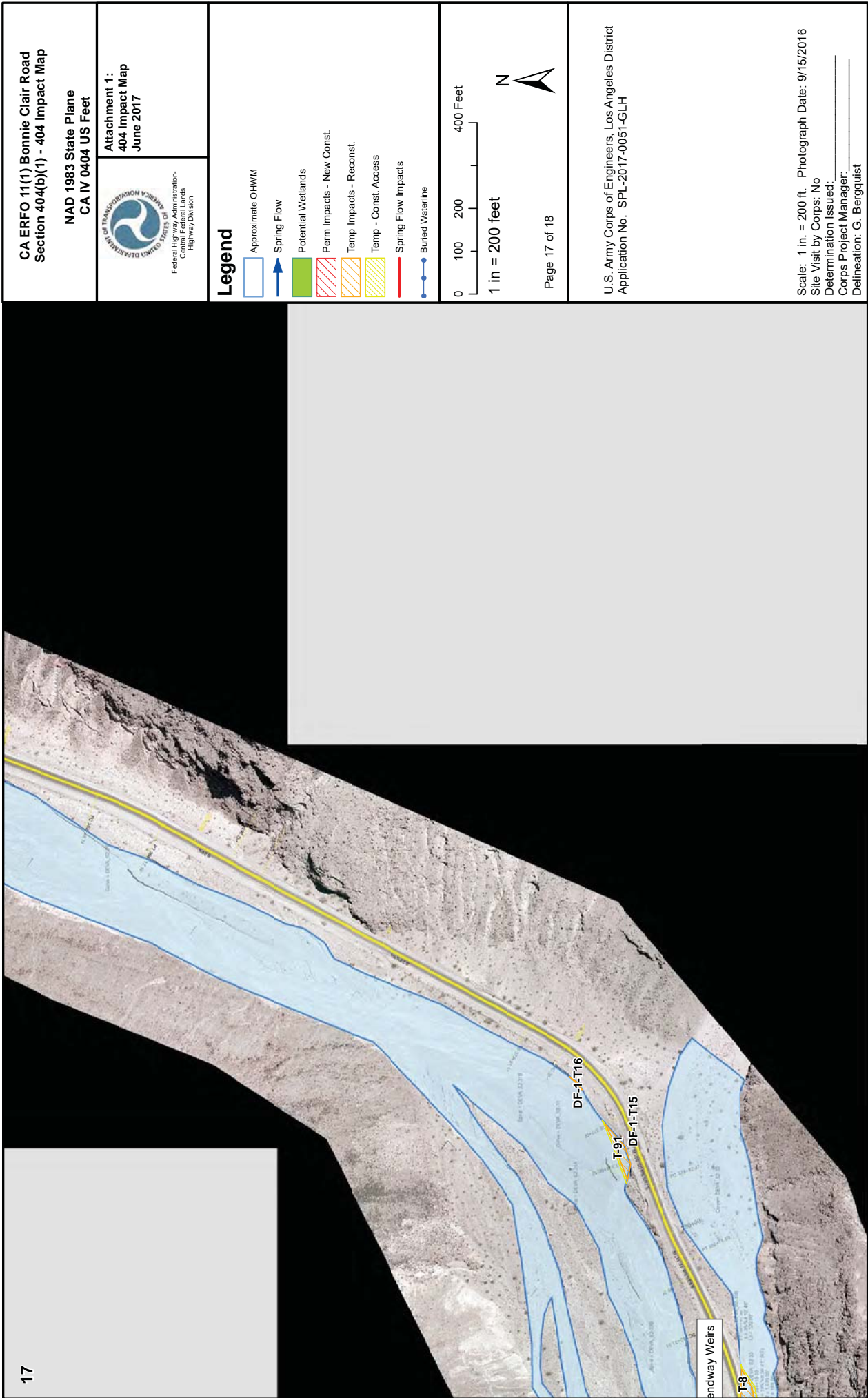


<b>CA ERO 11(1) Bonnie Clair Road Section 404(b)(1) - 404 Impact Map</b>	
<b>NAD 1983 State Plane CA IV 0404 US Feet</b>	
 FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	<b>Attachment 1: 404 Impact Map June 2017</b>
<b>Legend</b> <ul style="list-style-type: none"><li>Approximate OHWM</li><li>Spring Flow</li><li>Potential Wetlands</li><li>Perm Impacts - New Const.</li><li>Temp Impacts - Reconstr.</li><li>Temp - Const. Access</li><li>Spring Flow Impacts</li><li>Buried Waterline</li></ul>	
0 100 200 400 Feet 1 in = 200 feet N	
Page 15 of 18	
U.S. Army Corps of Engineers, Los Angeles District Application No. SPL-2017-0051-GLH	
Scale: 1 in. = 200 ft. Photograph Date: 9/15/2016 Site Visit by Corps: No Determination Issued: _____ Corps Project Manager: _____ Delineation: G. Bergquist	

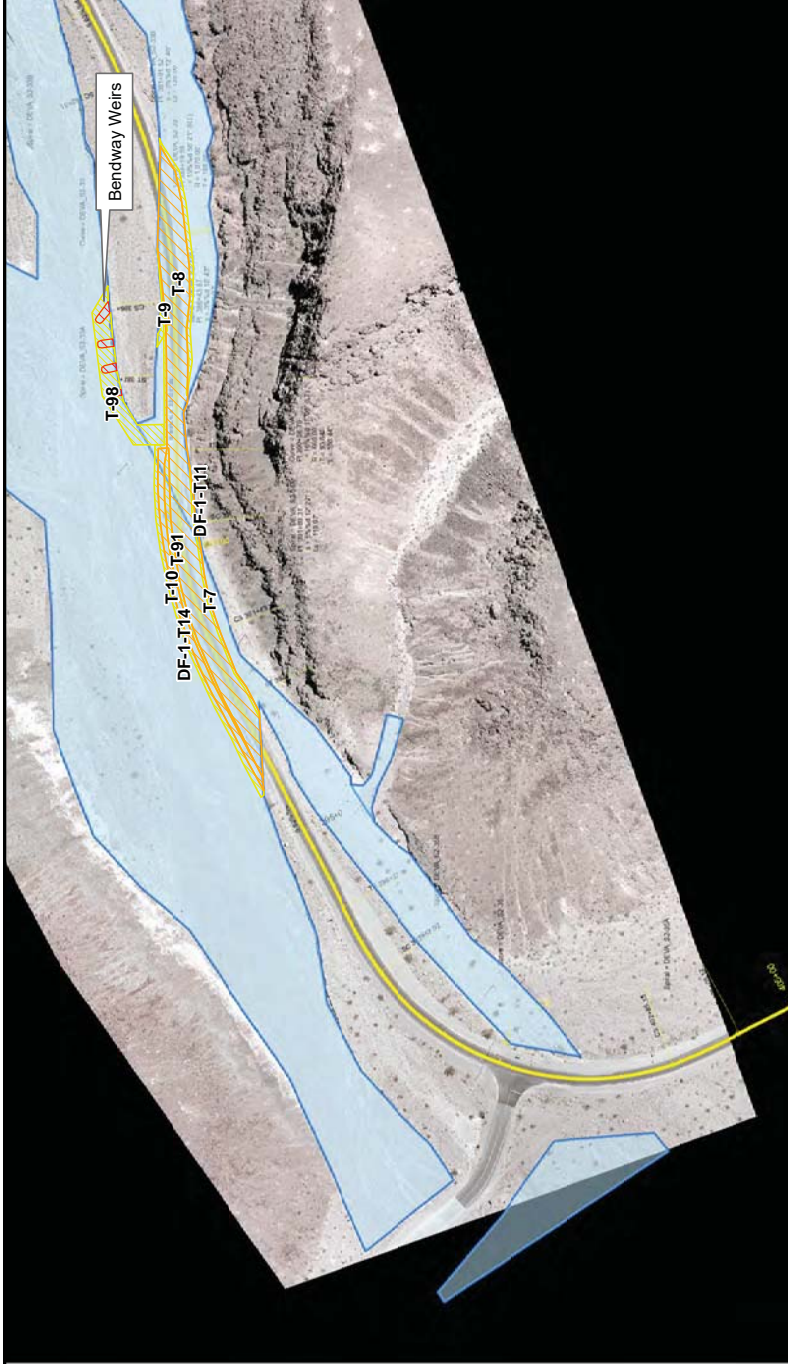











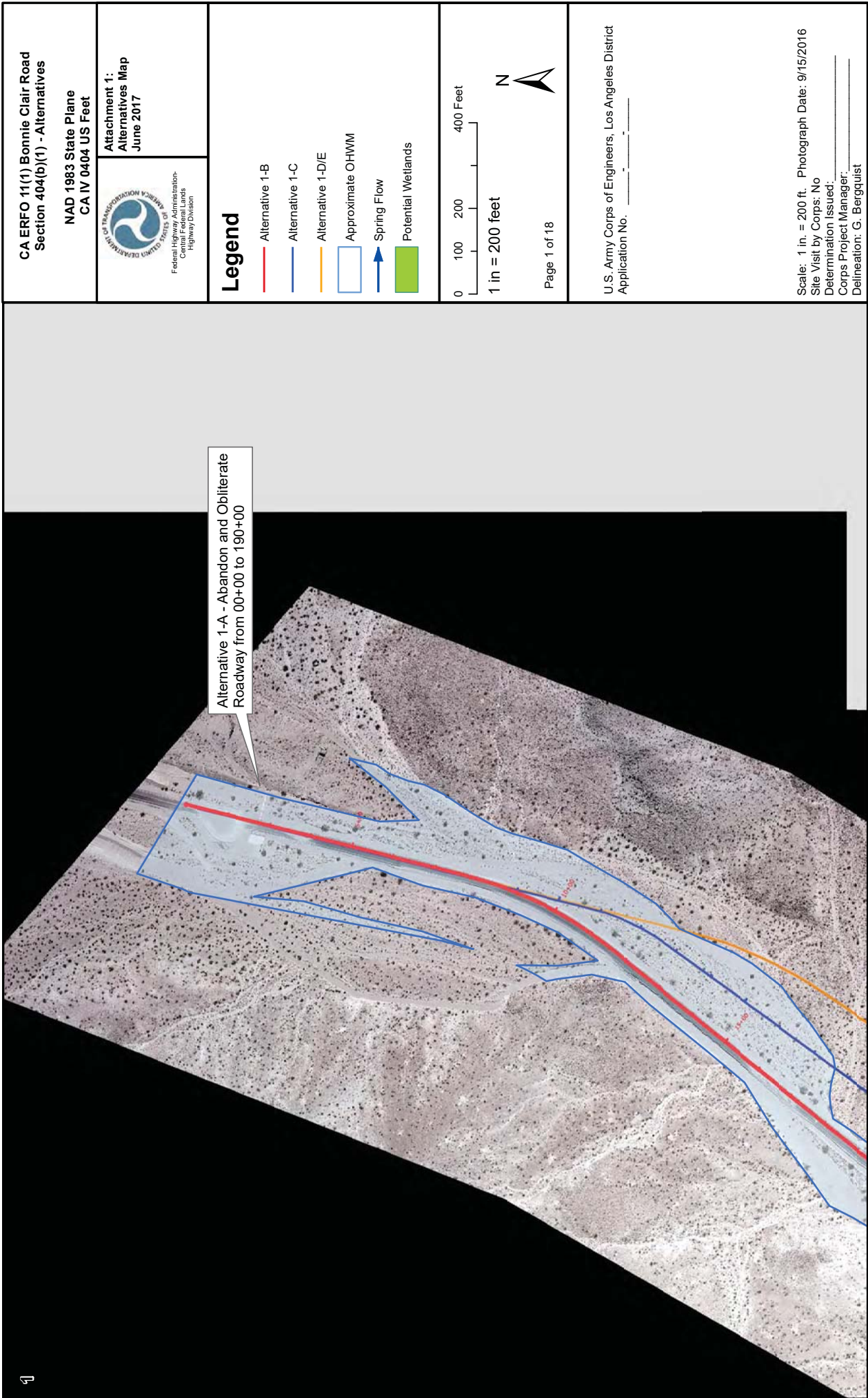


<p><b>CA ERFO 11(1) Bonnie Clair Road</b>  <b>Section 404(b)(1) - 404 Impact Map</b></p> <p><b>NAD 1983 State Plane</b>  <b>CA IV 0404 US Feet</b></p>		<p><b>Attachment 1:</b>  <b>404 Impact Map</b>  <b>June 2017</b></p>	
 <p>Federal Highway Administration          Central Federal Lands          Highway Division</p>		<p><b>Legend</b></p> <ul style="list-style-type: none"> <li>Approximate OHWM</li> <li>Spring Flow</li> <li>Potential Wetlands</li> <li>Perm Impacts - New Const.</li> <li>Temp Impacts - Reconst.</li> <li>Temp - Const. Access</li> <li>Spring Flow Impacts</li> <li>Buried Waterline</li> </ul>	
<p>0 100 200 400 Feet</p> <p>1 in = 200 feet</p> <p>N</p>		<p>Page 18 of 18</p>	
<p>U.S. Army Corps of Engineers, Los Angeles District          Application No. SPL-2017-0051-GLH</p>		<p>Scale: 1 in. = 200 ft. Photograph Date: 9/15/2016          Site Visit by Corps: No          Determination Issued: _____          Corps Project Manager: _____          Delineation: G. Bergquist</p>	

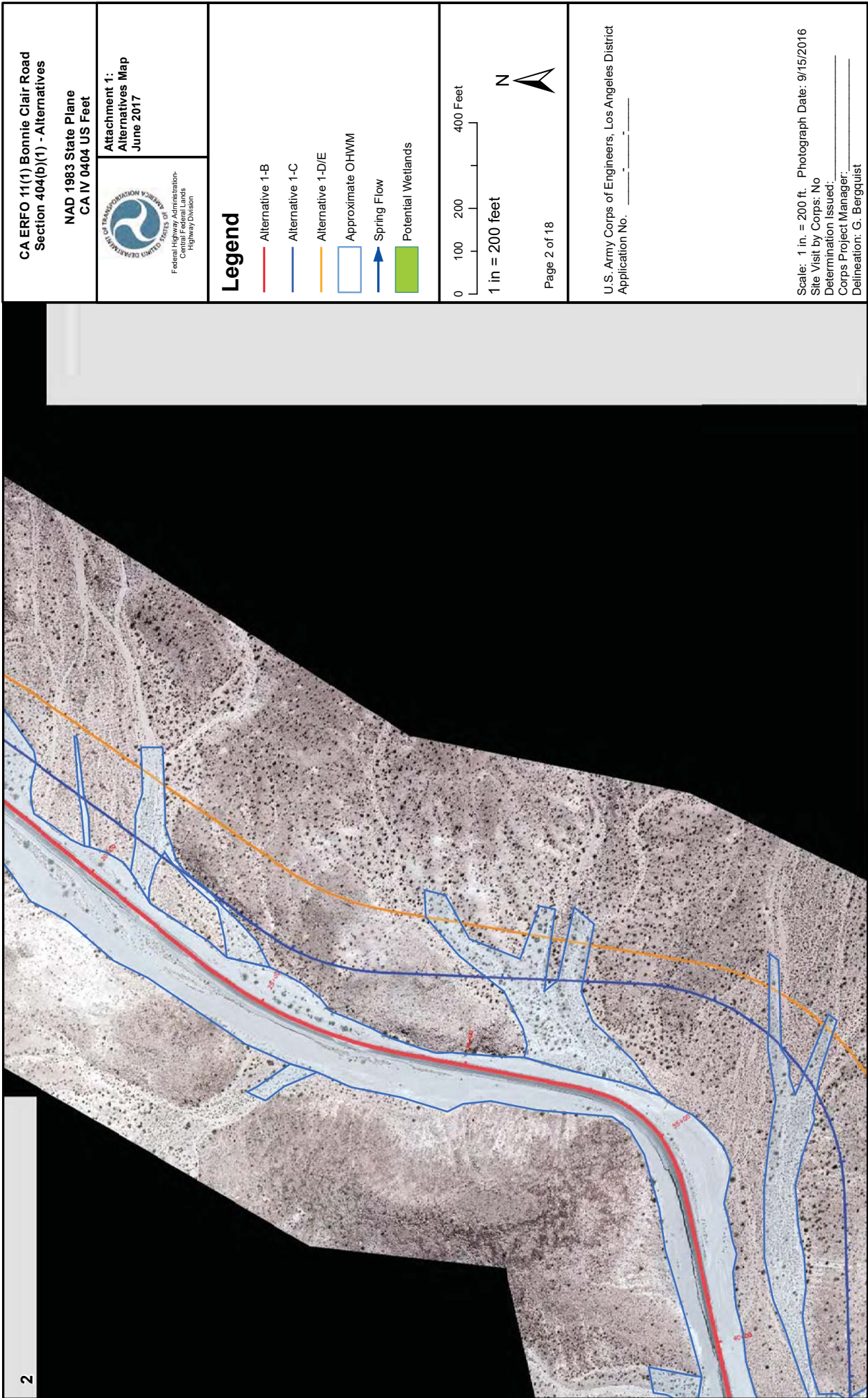


## Proposed Alternatives:





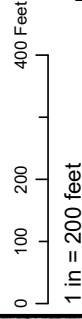




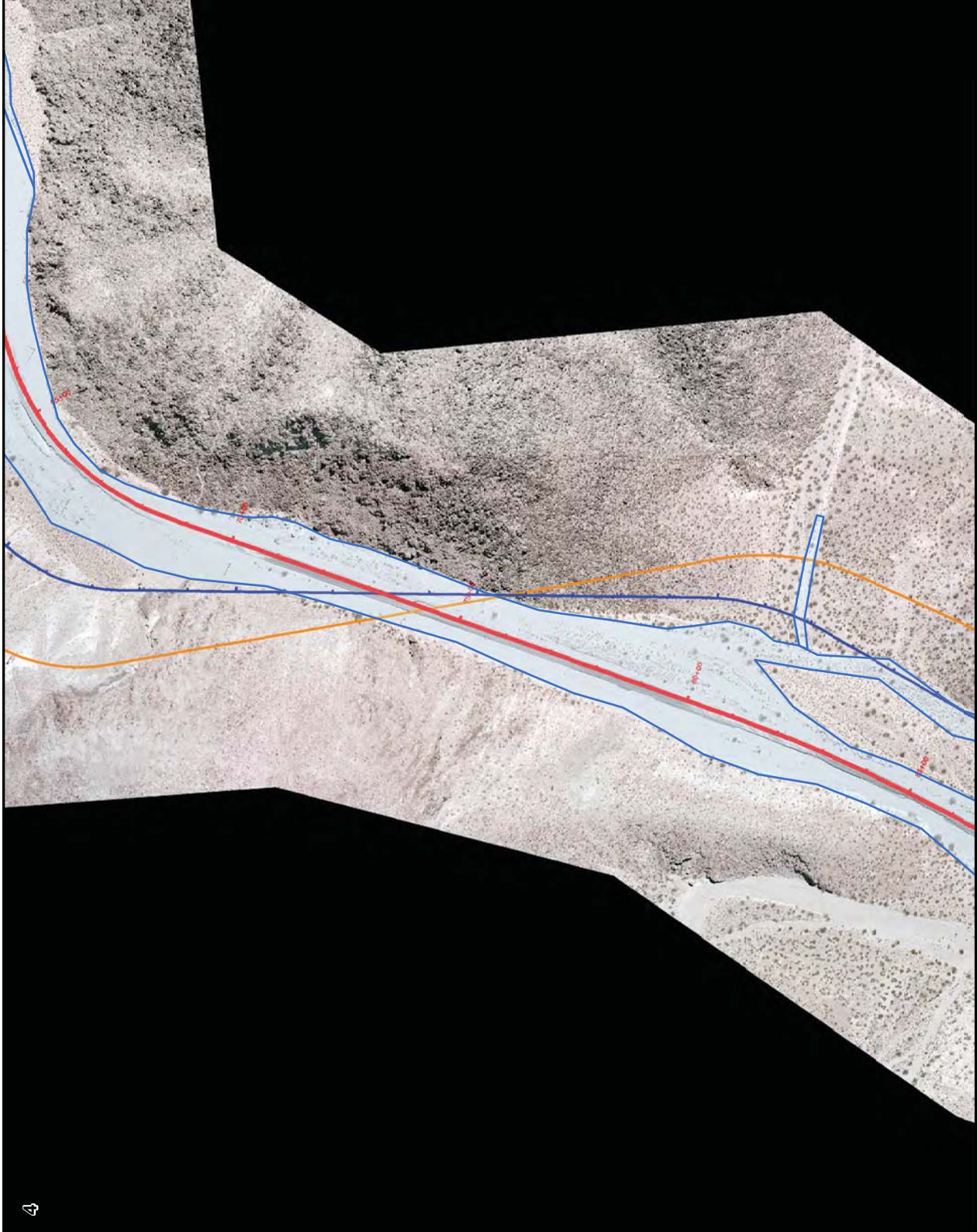


## Legend

- Alternative 1-B  
Alternative 1-C  
Alternative 1-D/E  
Approximate OHWM  
Spring Flow  
Potential Wetlands







CA ERF 11(1) Bonnie Clair Road  
Section 404(b)(1) - Alternatives  
NAD 1983 State Plane  
CA IV 0404 US Feet



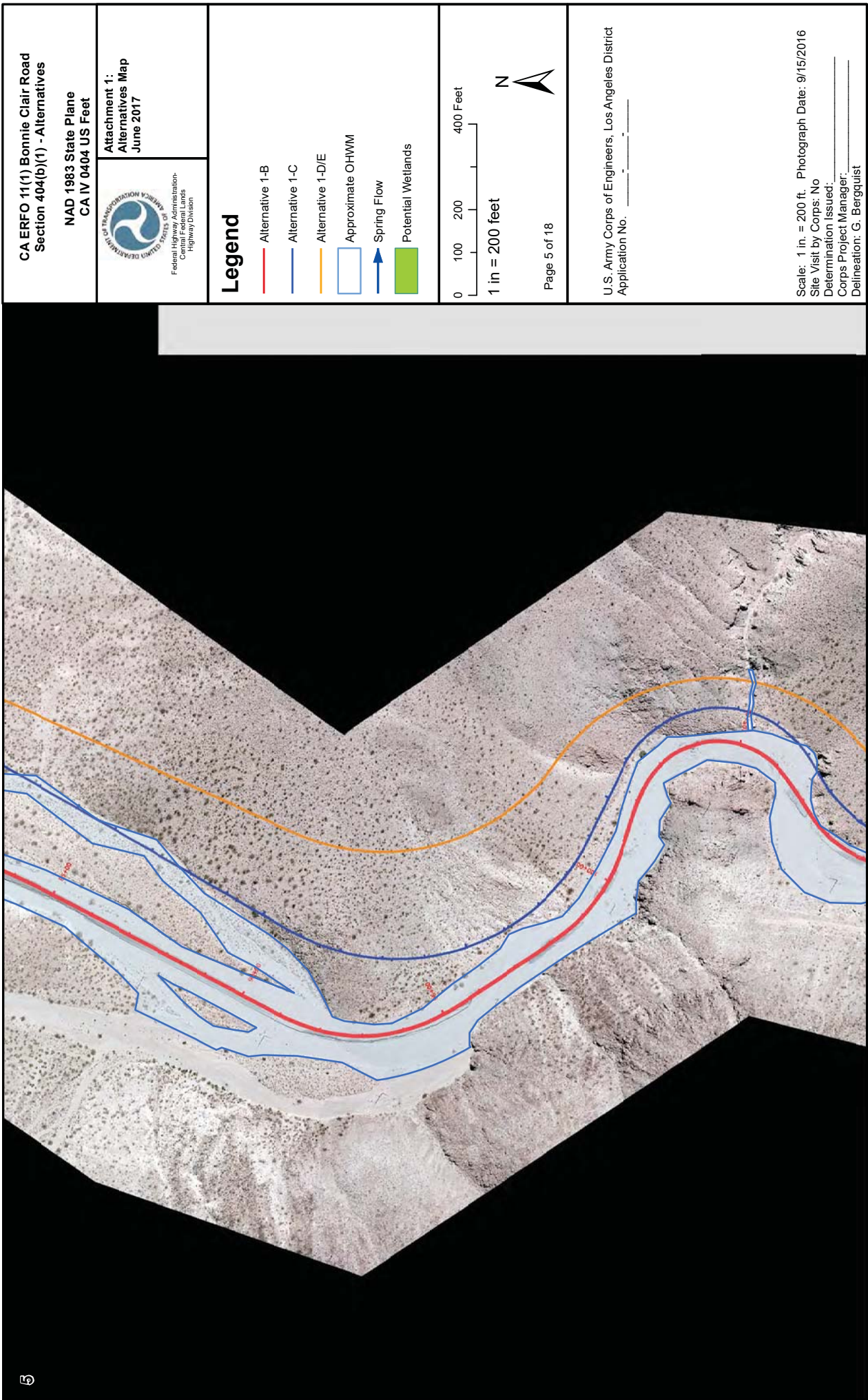
**Legend**

- Alternative 1-B
- Alternative 1-C
- Alternative 1-D/E
- Approximate OHWM
- Spring Flow
- Potential Wetlands

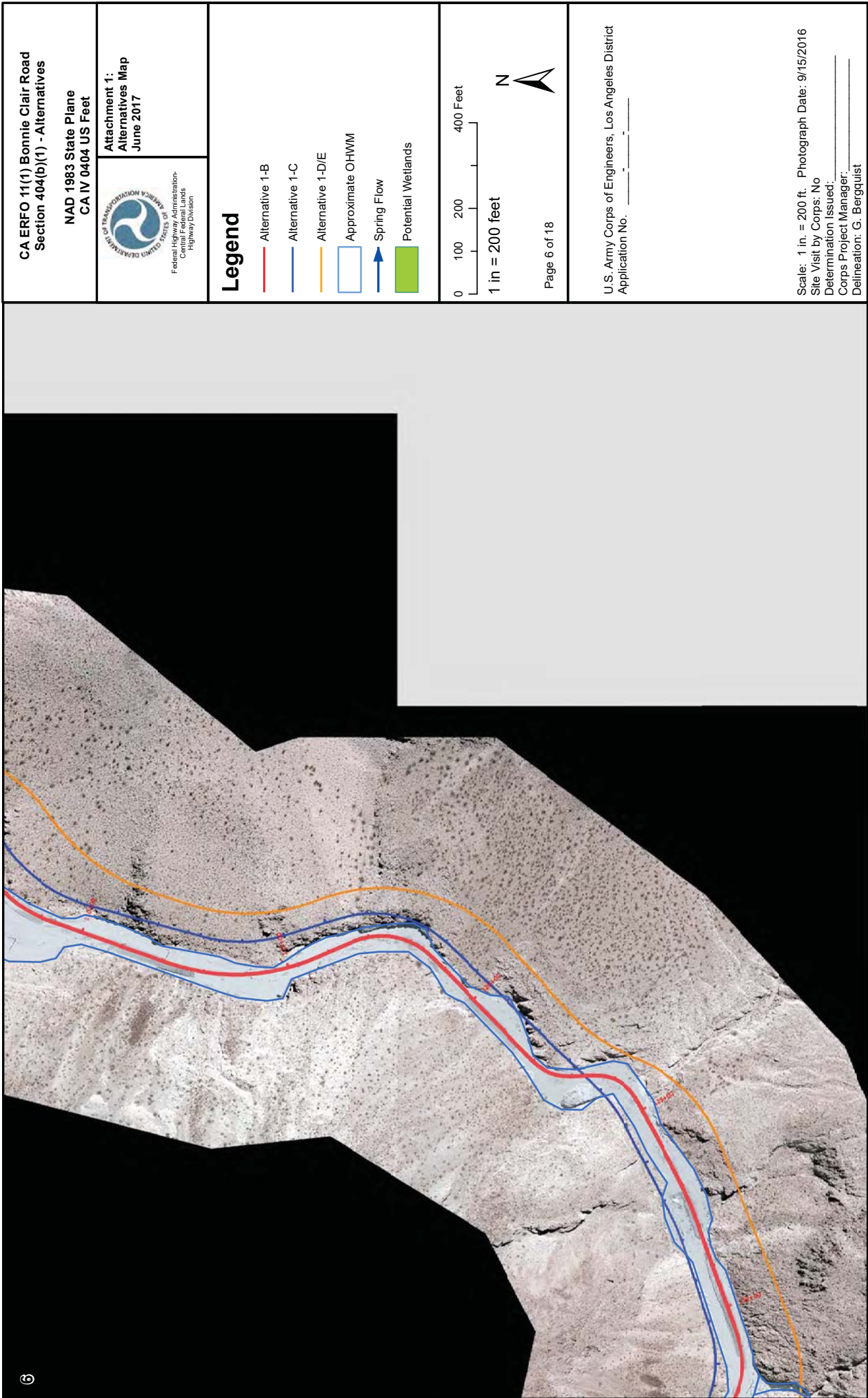
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1 in = 200 feet  
N  
Page 4 of 18

U.S. Army Corps of Engineers, Los Angeles District  
Application No. \_\_\_\_\_  
Scale: 1 in. = 200 ft. Photograph Date: 9/15/2016  
Site Visit by Corps: No  
Determination Issued: \_\_\_\_\_  
Corps Project Manager: \_\_\_\_\_  
Delineation: G. Bergquist

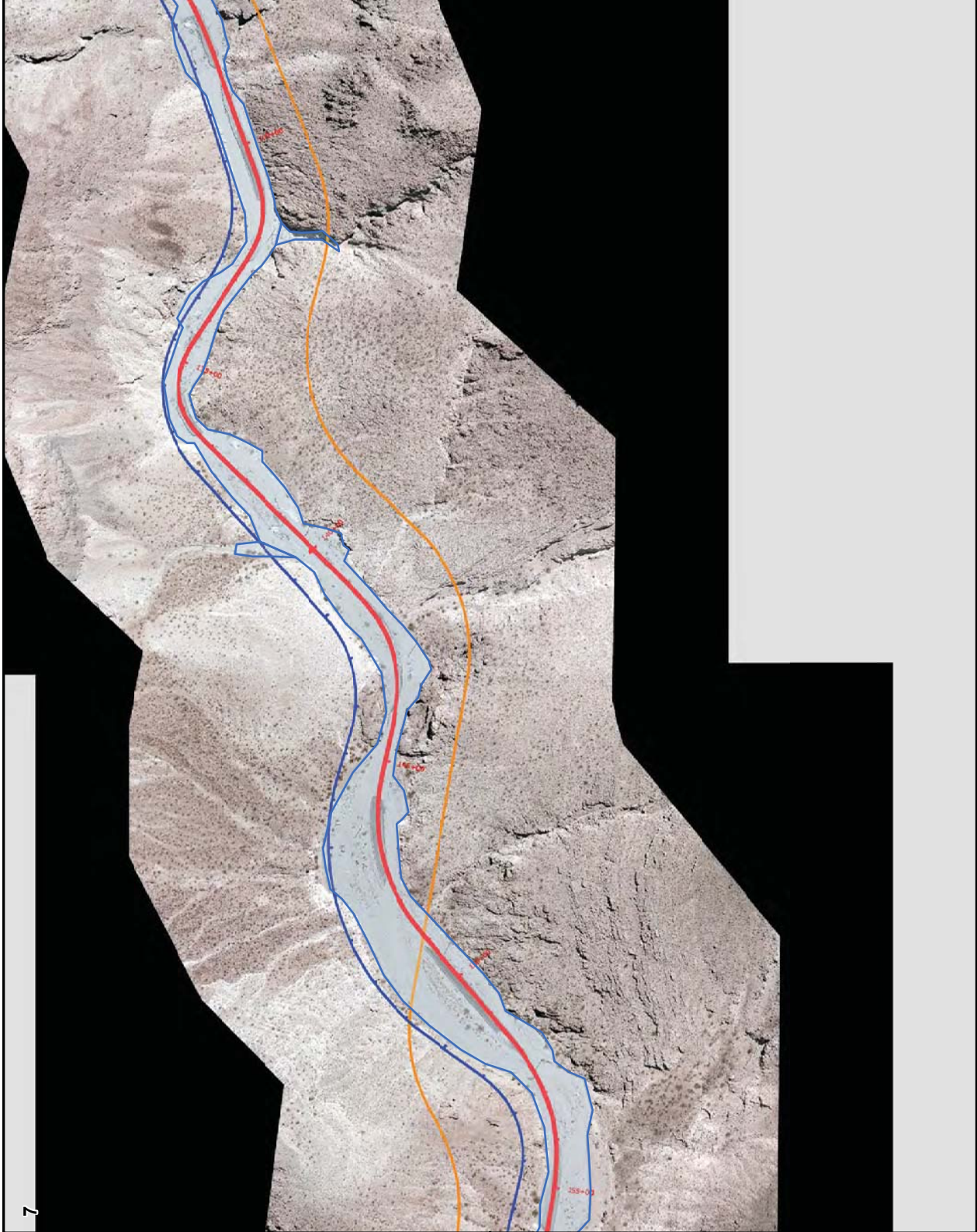












CA ERF0 11(1) Bonnie Clair Road  
Section 404(b)(1) - Alternatives

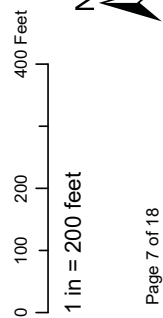
NAD 1983 State Plane  
CA IV 0404 US Feet



Attachment 1:  
Alternatives Map  
June 2017

### Legend

- Alternative 1-B
- Alternative 1-C
- Alternative 1-D/E
- Approximate OHWM
- Spring Flow
- Potential Wetlands

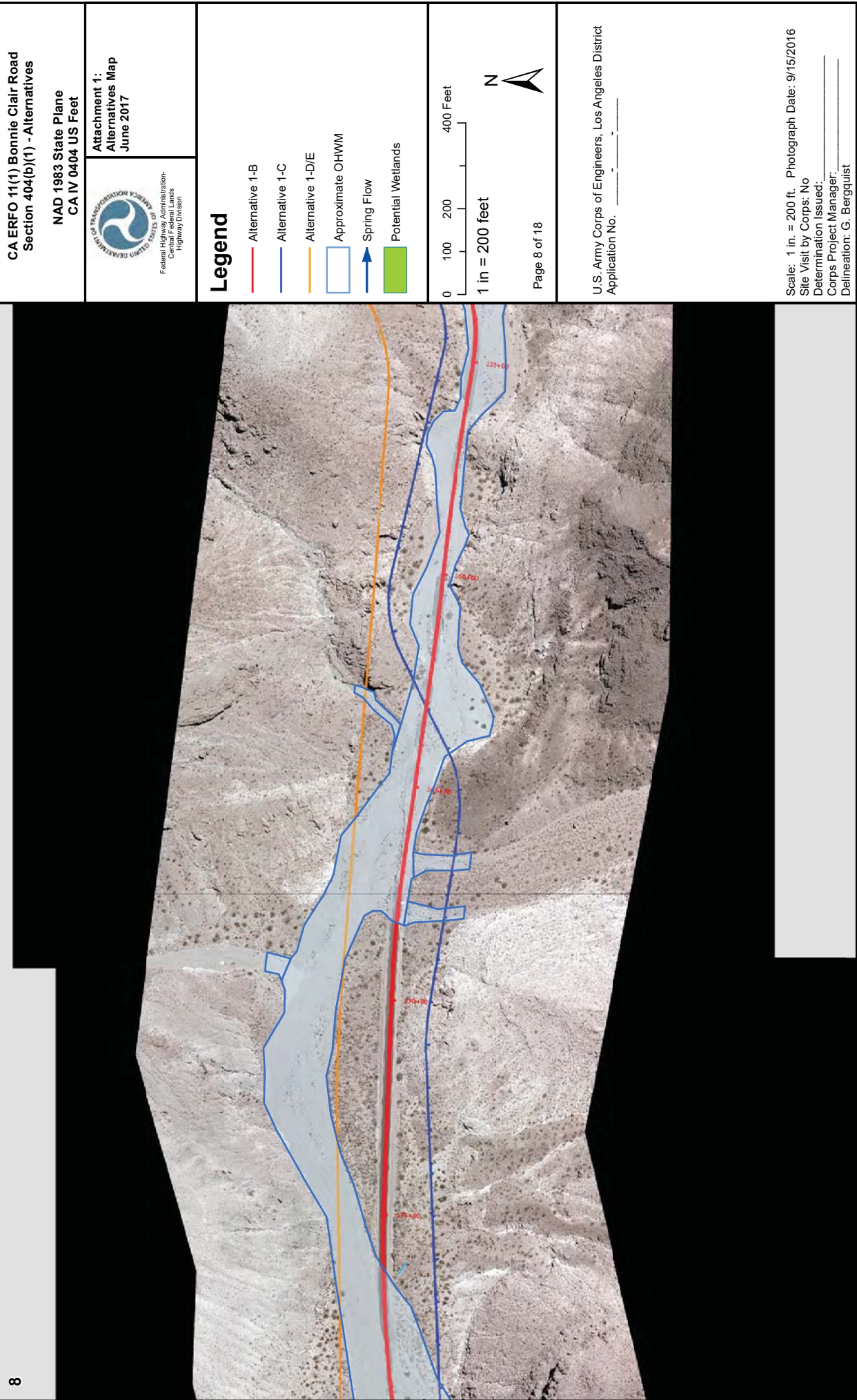



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U.S. Army Corps of Engineers, Los Angeles District  
Application No. \_\_\_\_\_

Scale: 1 in. = 200 ft. Photograph Date: 9/15/2016  
Site Visit by Corps: No  
Determination Issued: \_\_\_\_\_  
Corps Project Manager: \_\_\_\_\_  
Delineation: G. Bergquist





<b>CA ERF0 11(1) Bonnie Clair Road Section 404(b)(1) - Alternatives</b>	
<b>NAD 1983 State Plane CA IV 0404 US Feet</b>	
 U.S. Army Corps of Engineers Central Federal Lands Highway Division	<b>Attachment 1: Alternatives Map June 2017</b>
<b>Legend</b> — Alternative 1-B — Alternative 1-C — Alternative 1-D/E □ Approximate OHWM → Spring Flow ■ Potential Wetlands	
0 100 200 400 Feet 1 in = 200 feet N Page 8 of 18	
U.S. Army Corps of Engineers, Los Angeles District Application No. _____	
Scale: 1 in. = 200 ft. Photograph Date: 9/15/2016 Site Visit by Corps: No Determination Issued: _____ Corps Project Manager: _____ Delineation: G. Bergquist	



Alternative 1-B  
Alternative 1-C  
Alternative 1-D/E  
Approximate OHWM  
Spring Flow  
Potential Wetlands



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U.S. Army Corps of Engineers, Los Angeles District  
Application No. \_\_\_\_\_ - \_\_\_\_\_

Scale: 1 in. = 200 ft. Photograph Date: 9/15/2016  
Site Visit by Corps: No  
Determination Issued: \_\_\_\_\_  
Corps Project Manager: \_\_\_\_\_  
Delineation: G. Bergquist



CA ERFO 11(1) Bonnie Clair Road  
Section 404(b)(1) - Alternatives

NAD 1983 State Plane  
CA IV 0404 US Feet



Attachment 1:  
Alternatives Map  
June 2017

**Legend**

- Alternative 1-B
- Alternative 1-C
- Alternative 1-D/E
- Approximate OHWM
- Spring Flow
- Potential Wetlands

0 100 200 400 Feet

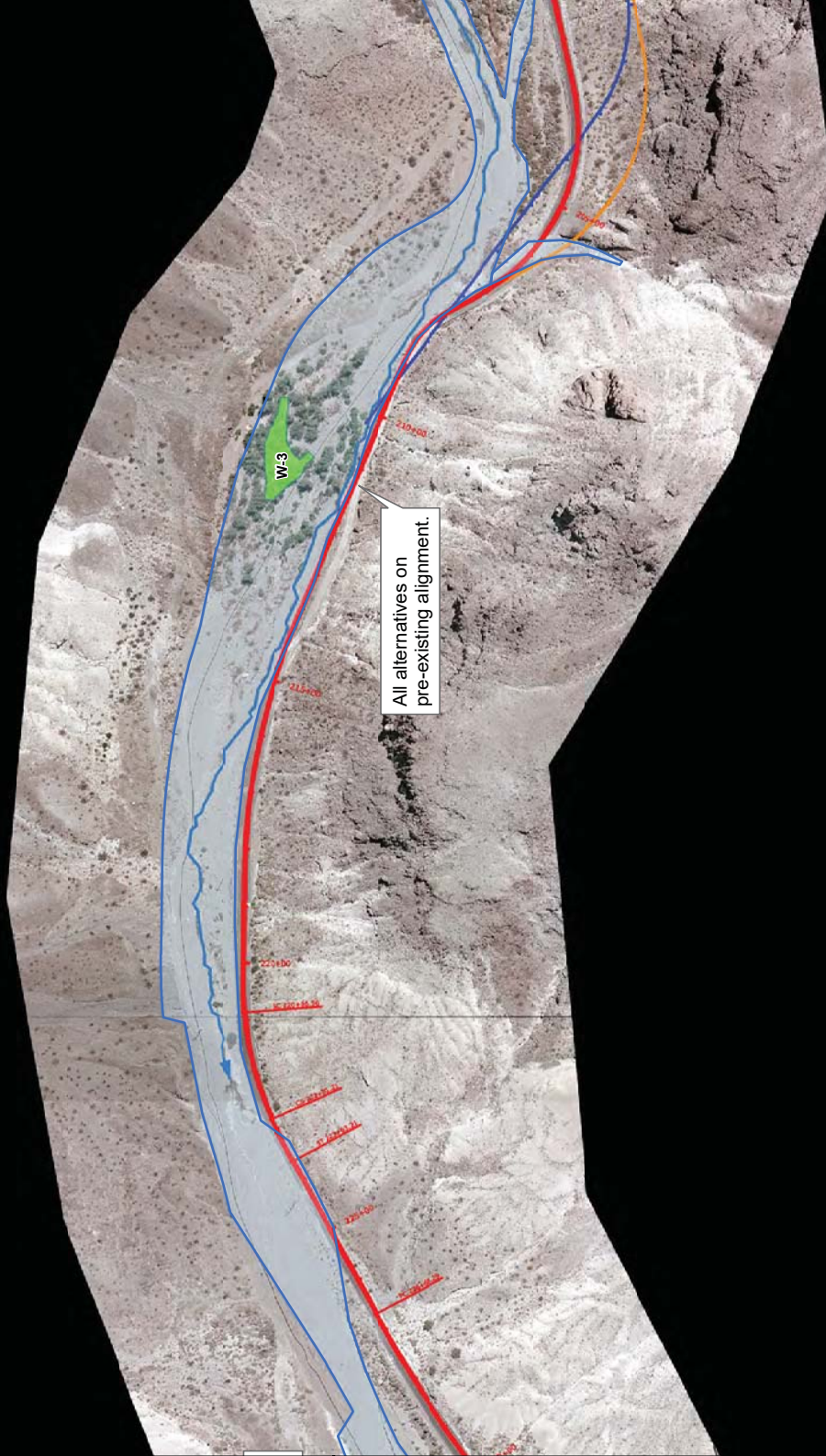
1 in = 200 feet



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U.S. Army Corps of Engineers, Los Angeles District  
Application No. \_\_\_\_\_

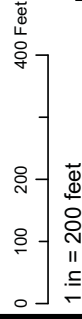
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Corps Project Manager: \_\_\_\_\_  
Delineation: G. Bergquist





## Legend

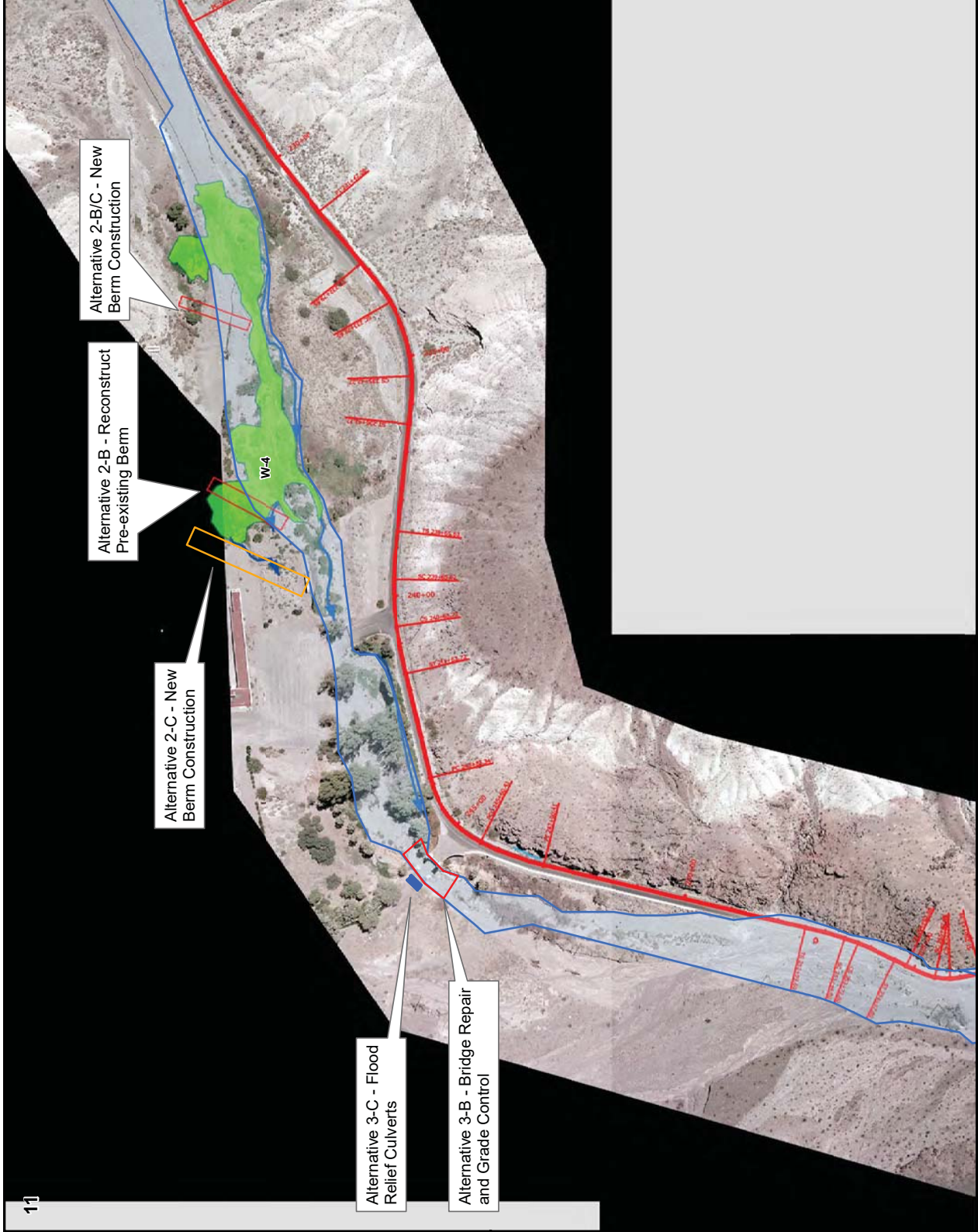
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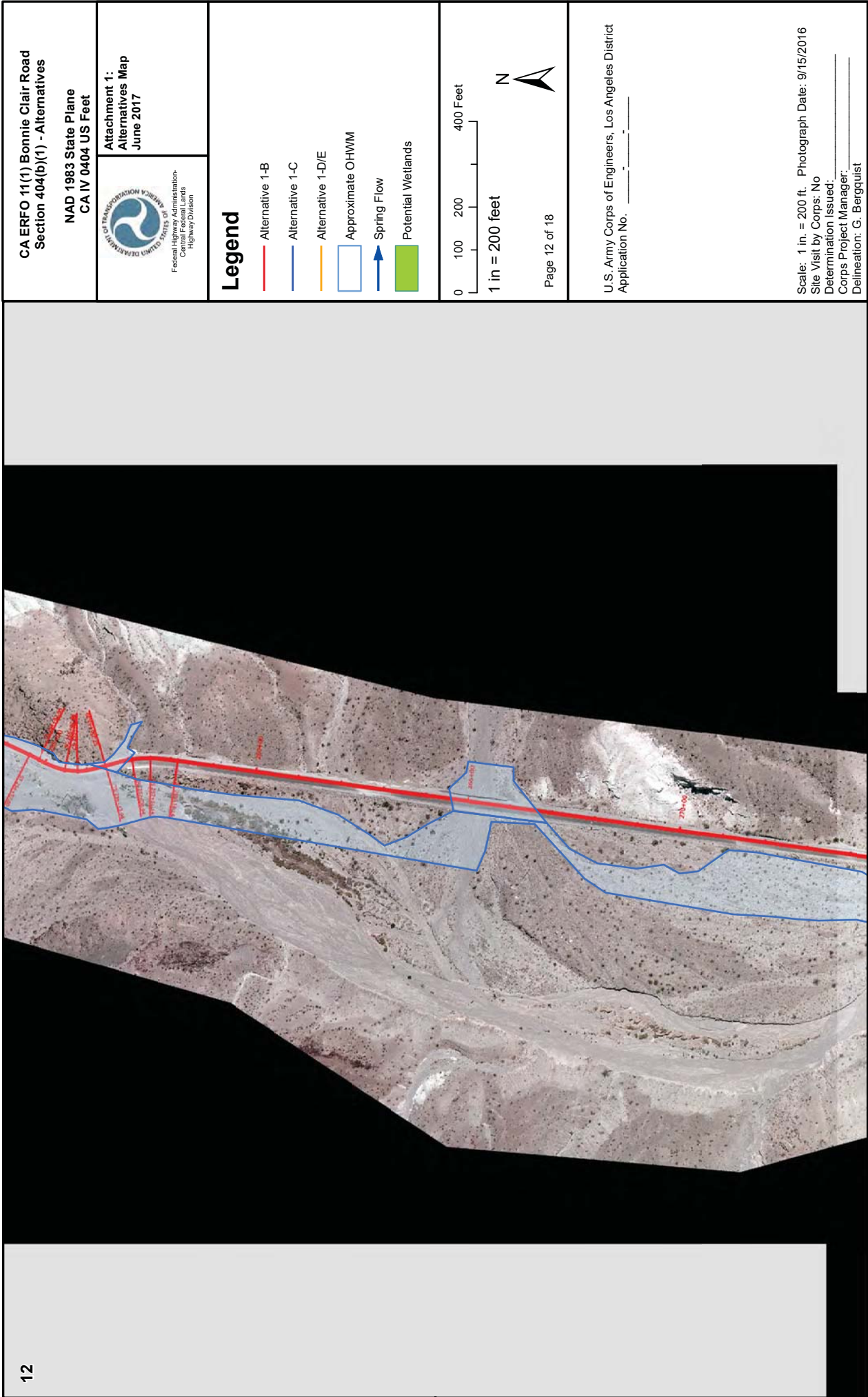
Page 11 of 18

U.S. Army Corps of Engineers, Los Angeles District  
Application No. \_\_\_\_\_ - \_\_\_\_\_

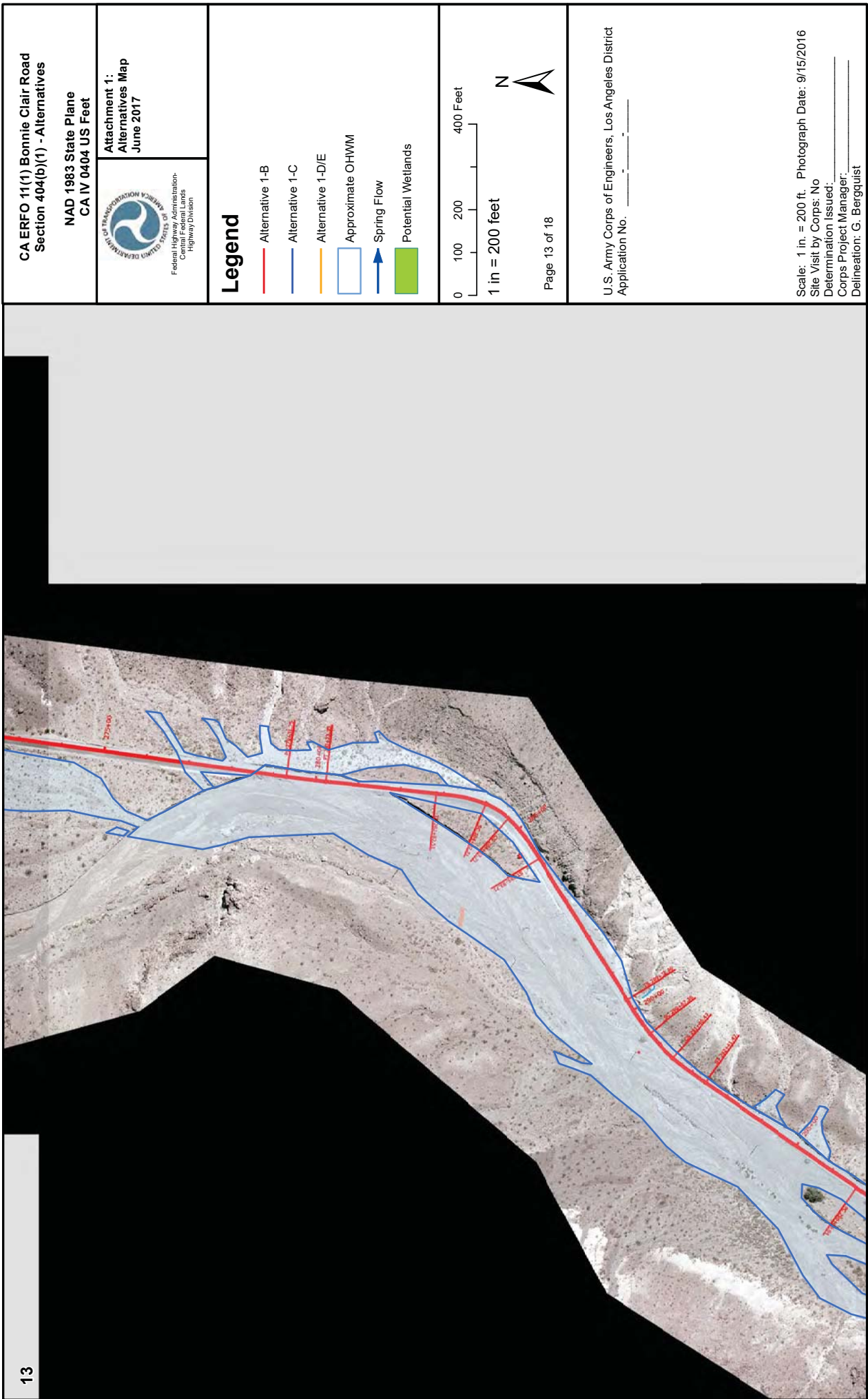
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Delineation: G. Bergquist



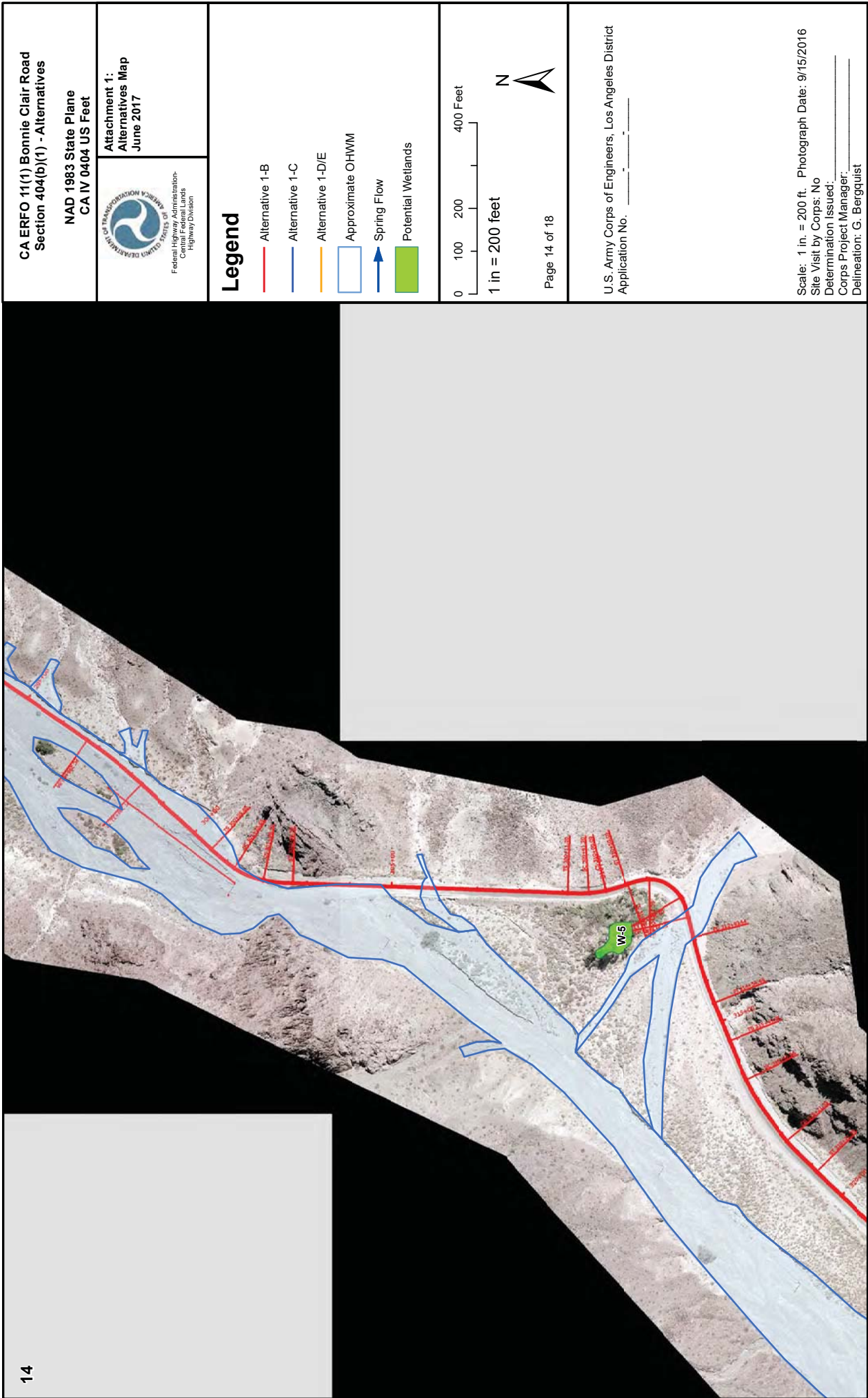




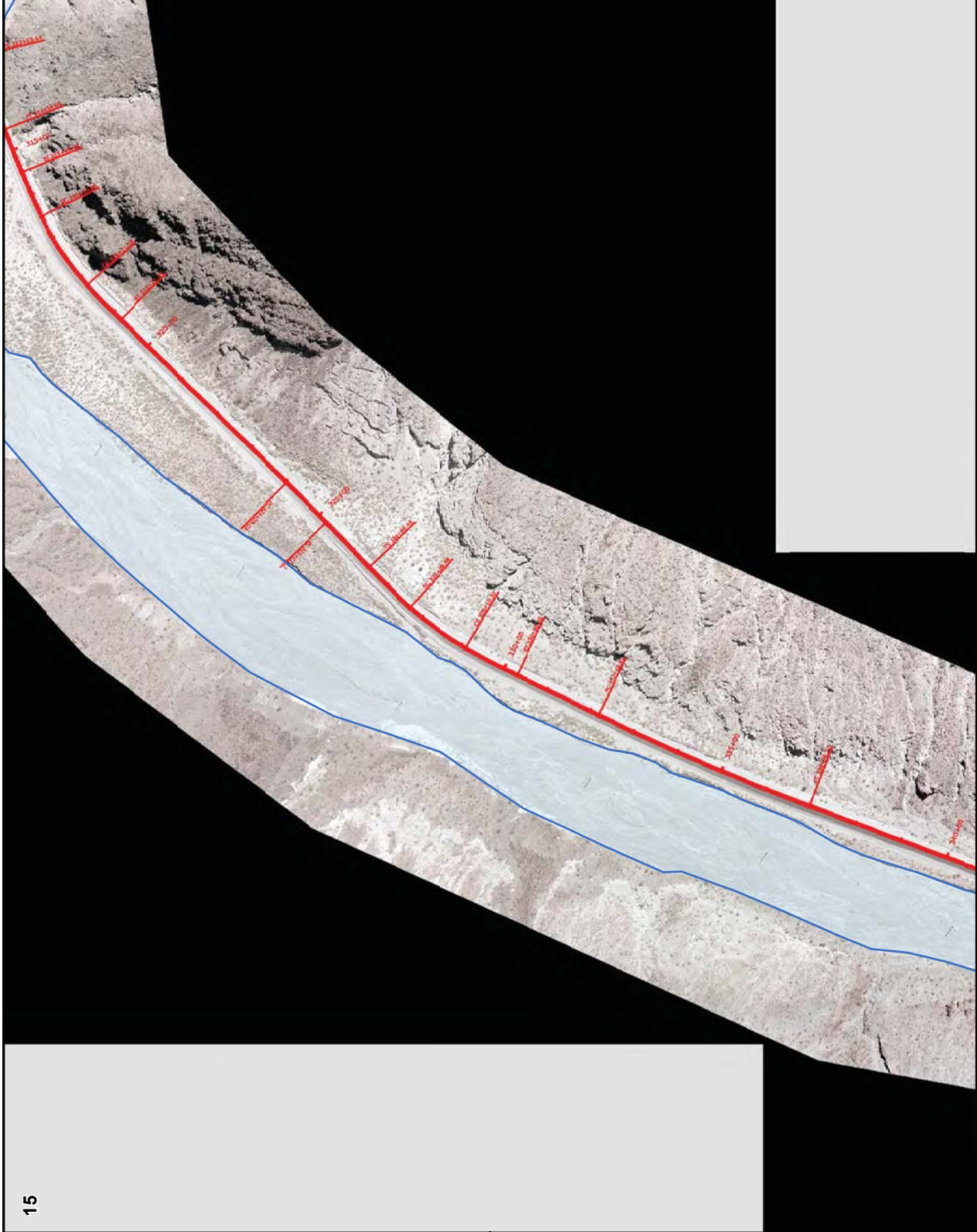











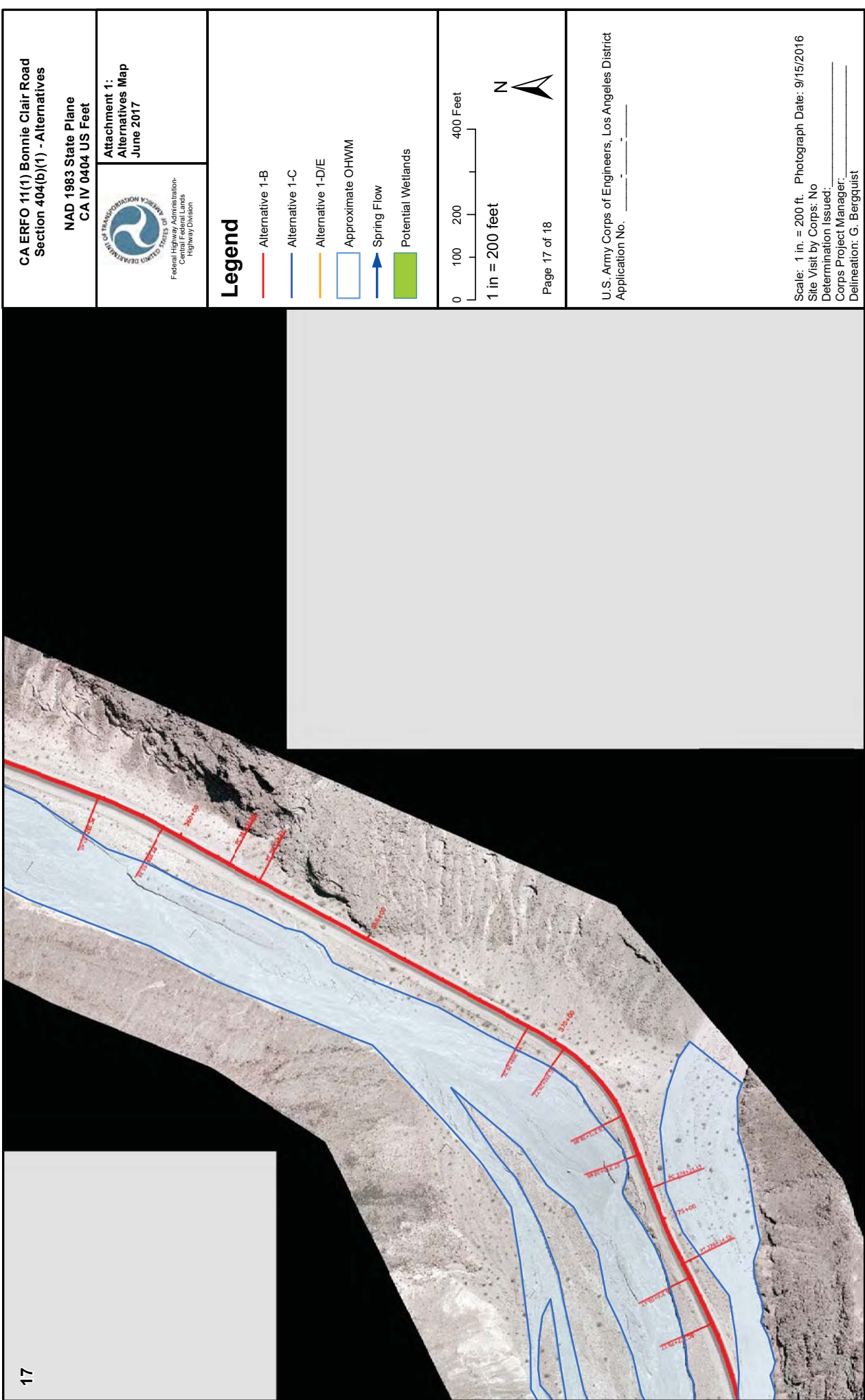


<b>CA ERFO 11(1) Bonnie Clair Road Section 404(b)(1) - Alternatives</b>	
<b>NAD 1983 State Plane CA IV 0404 US Feet</b>	
 FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	<b>Attachment 1: Alternatives Map June 2017</b>
<b>Legend</b> Alternative 1-B Alternative 1-C Alternative 1-D/E Approximate OHWM Spring Flow Potential Wetlands	
0 100 200 400 Feet 1 in = 200 feet N Page 15 of 18	
U.S. Army Corps of Engineers, Los Angeles District Application No. _____	
Scale: 1 in. = 200 ft. Photograph Date: 9/15/2016 Site Visit by Corps: No Determination Issued: _____ Corps Project Manager: _____ Delineation: G. Bergquist	



Scale: 1 in. = 200 ft. Photograph Date: 9/15/2016  
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 Determination Issued: \_\_\_\_\_  
 Corps Project Manager: \_\_\_\_\_  
 Delineation: G. Bergquist

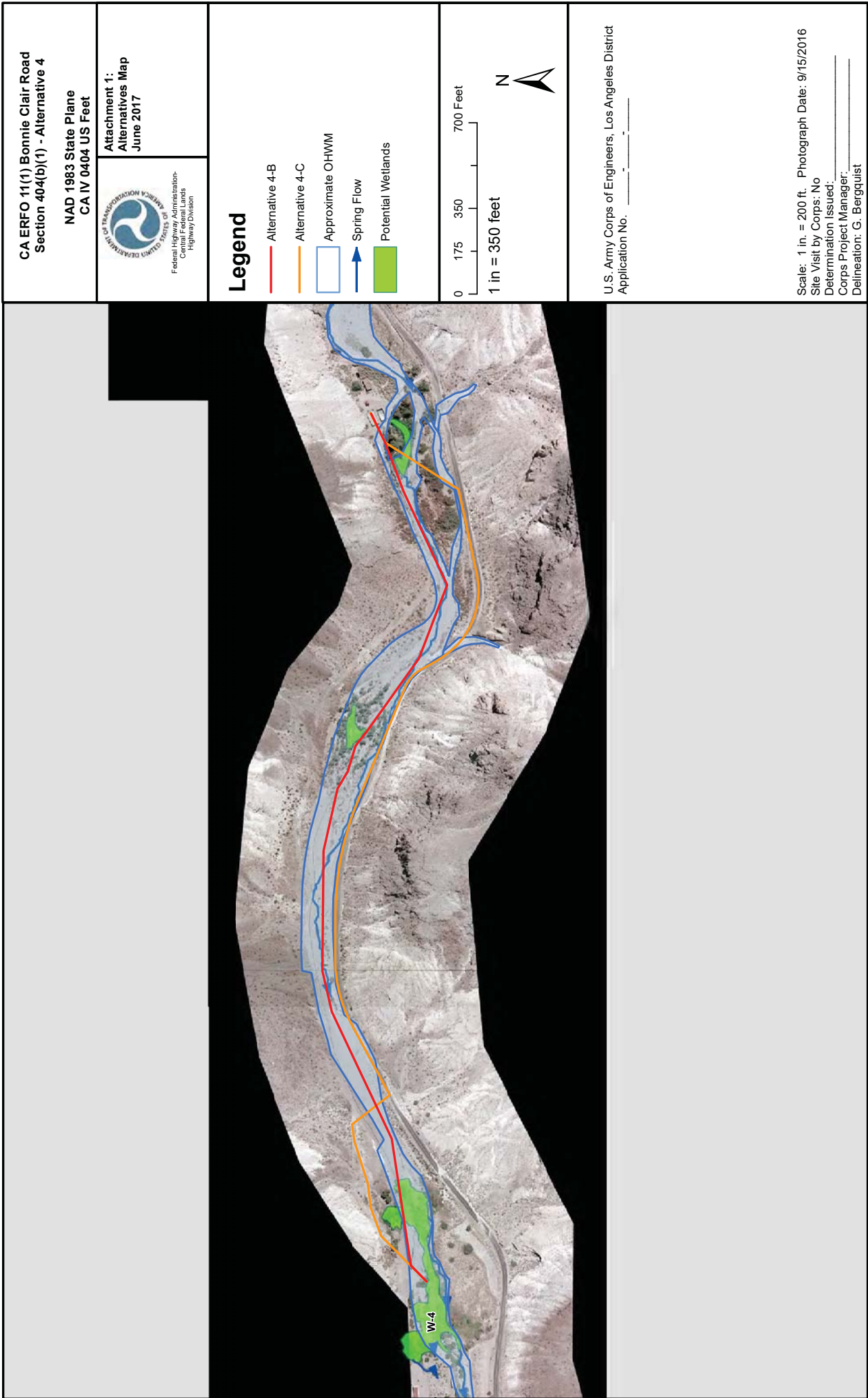








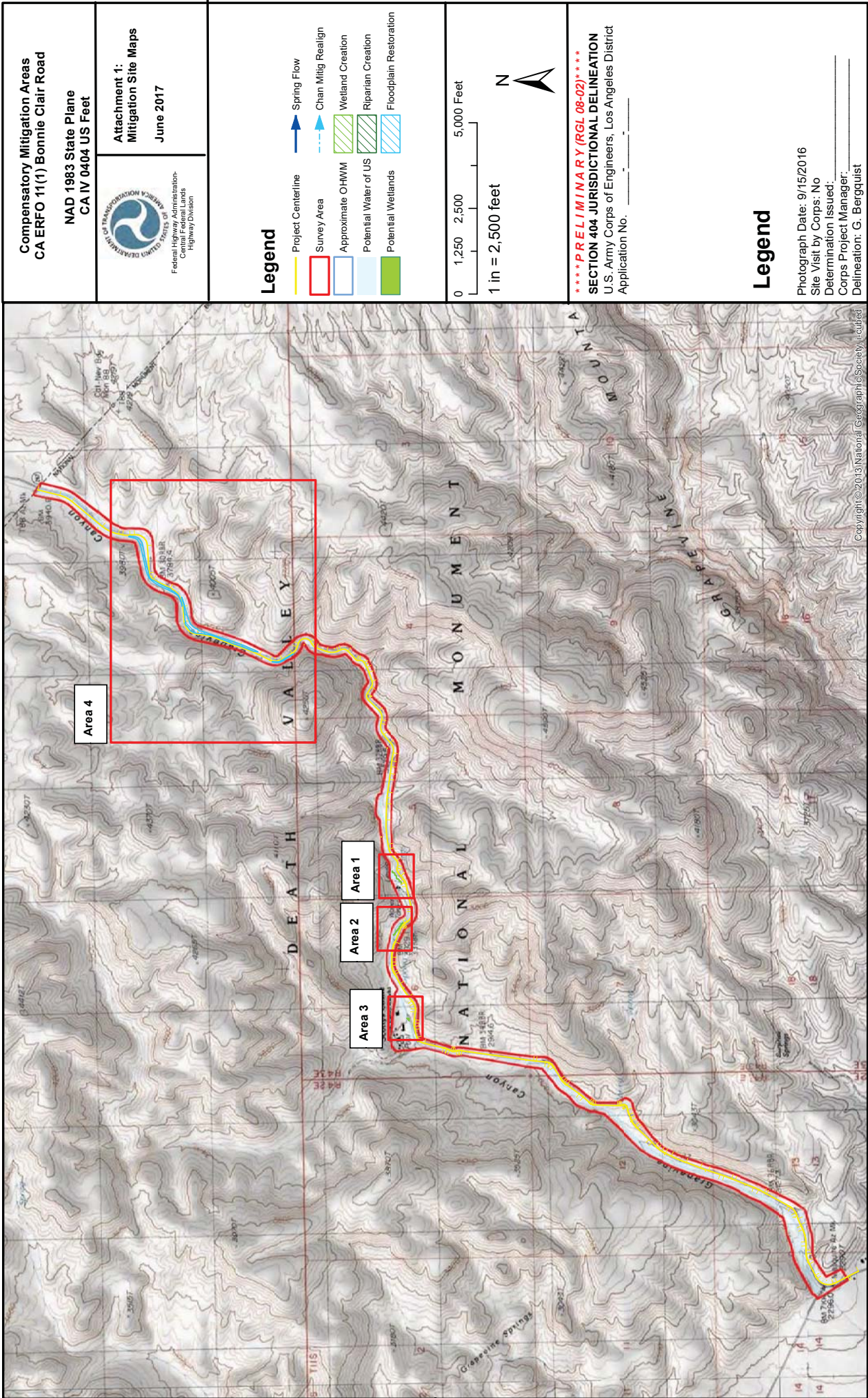






## Proposed Mitigation Site Figures:





Compensatory Mitigation Areas  
CA ERFO 11(1) Bonnie Clair Road  
NAD 1983 State Plane  
CA IV 0404 US Feet



Attachment 1:  
Mitigation Site Maps  
June 2017

Federal Highway Administration  
Central Federal Lands  
Highway Division

**Legend**

Project Centerline	Spring Flow
Survey Area	Chan Mitig Realign
Approximate OHWM	Wetland Creation
Potential Water of US	Riparian Creation
Potential Wetlands	Floodplain Restoration

0 1,250 2,500 5,000 Feet

1 in = 2,500 feet

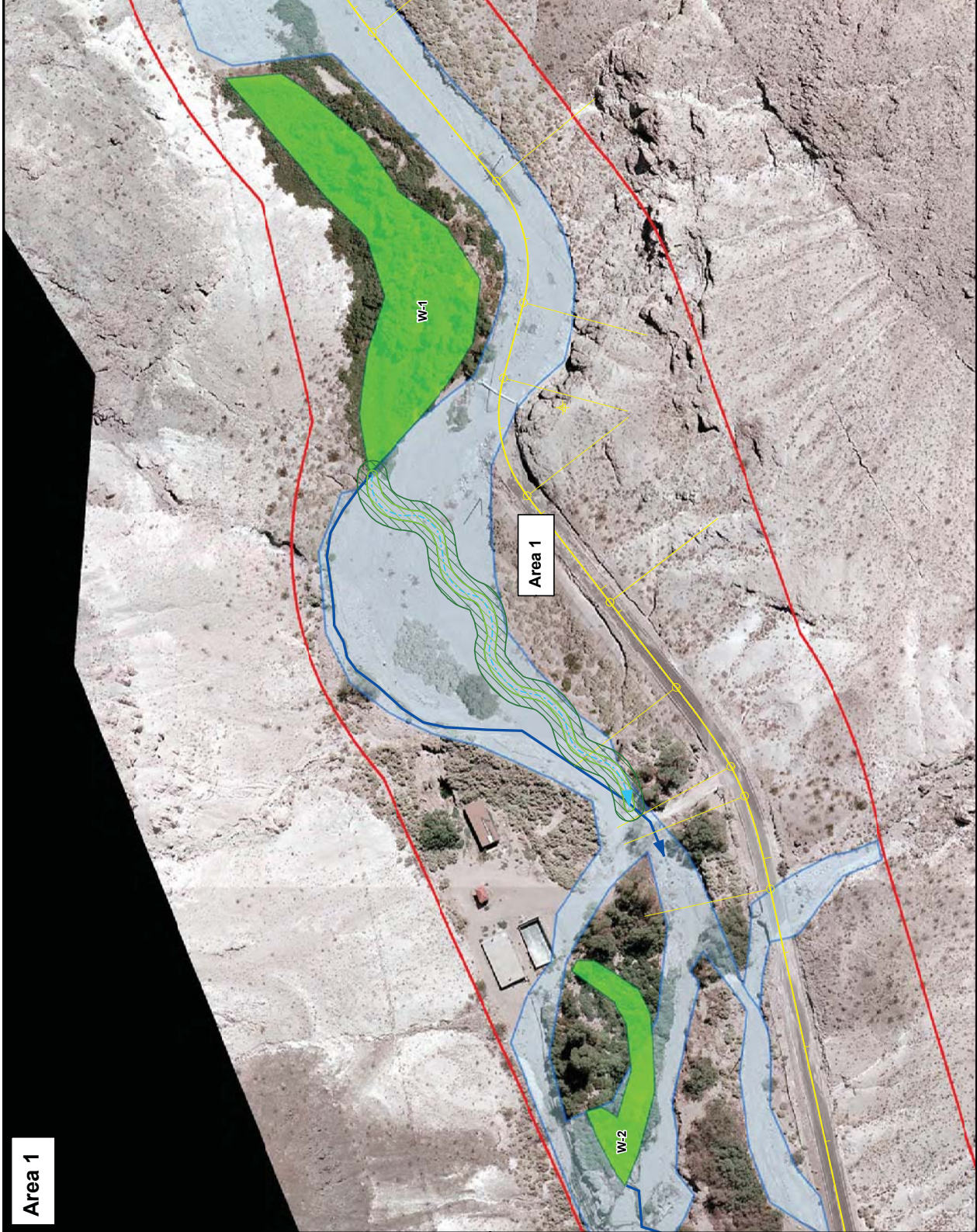
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\*\*\*\*\*PRELIMINARY (RGL 08-02)\*\*\*\*\*  
SECTION 404 JURISDICTIONAL DELINEATION  
U.S. Army Corps of Engineers, Los Angeles District  
Application No. \_\_\_\_\_

**Legend**

Photograph Date: 9/15/2016  
Site Visit by Corps: No  
Determination Issued: \_\_\_\_\_  
Corps Project Manager: \_\_\_\_\_  
Delineation: G. Bergquist





Area 1

Area 1

W-1

W-2

Compensatory Mitigation Areas  
CA ERFO 11(1) Bonnie Clair Road

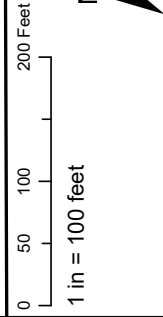
NAD 1983 State Plane  
CA IV 0404 US Feet



Attachment 1:  
Mitigation Site Maps  
June 2017

### Legend

- Project Centerline
- Survey Area
- Approximate OHWM
- Potential Water of US
- Potential Wetlands
- Spring Flow
- Chan Mitig Realign
- Wetland Creation
- Riparian Creation



\*\*\*PRELIMINARY (RGL 08-02)\*\*\*  
**SECTION 404 JURISDICTIONAL DELINEATION**  
U.S. Army Corps of Engineers, Los Angeles District  
Application No. \_\_\_\_\_

### Legend

Photograph Date: 9/15/2016  
Site Visit by Corps: No  
Determination Issued: \_\_\_\_\_  
Corps Project Manager: \_\_\_\_\_  
Delineation: G. Bergquist



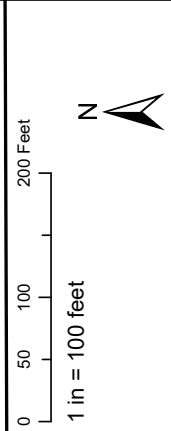
Compensatory Mitigation Areas  
CA ERFO 11(1) Bonnie Clair Road  
NAD 1983 State Plane  
CA IV 0404 US Feet



Attachment 1:  
Mitigation Site Maps  
June 2017

Legend

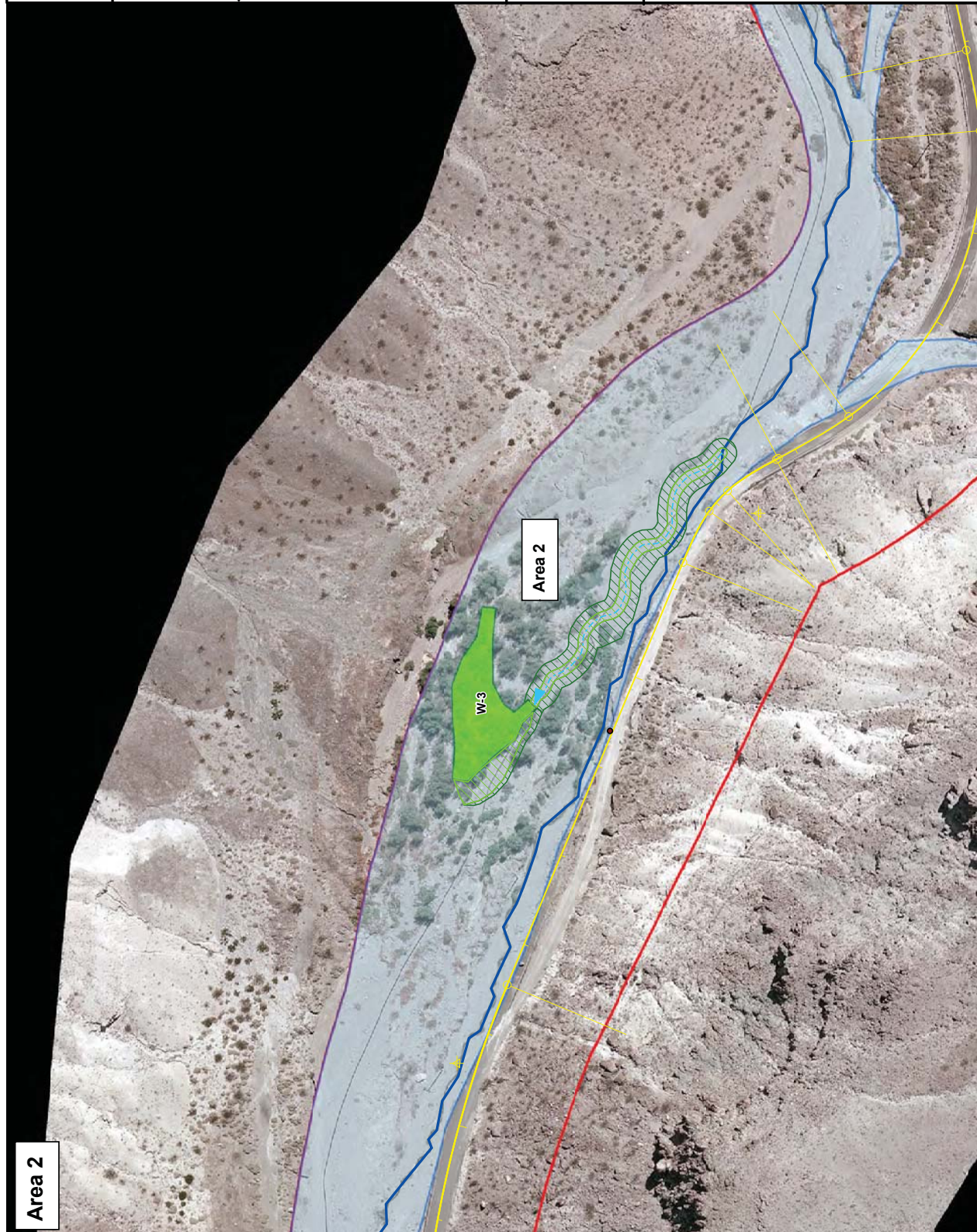
- Project Centerline
- Survey Area
- Approximate OHWM
- Potential Water of US
- Potential Wetlands
- Spring Flow
- Chan Mitig Realign
- Wetland Creation
- Riparian Creation



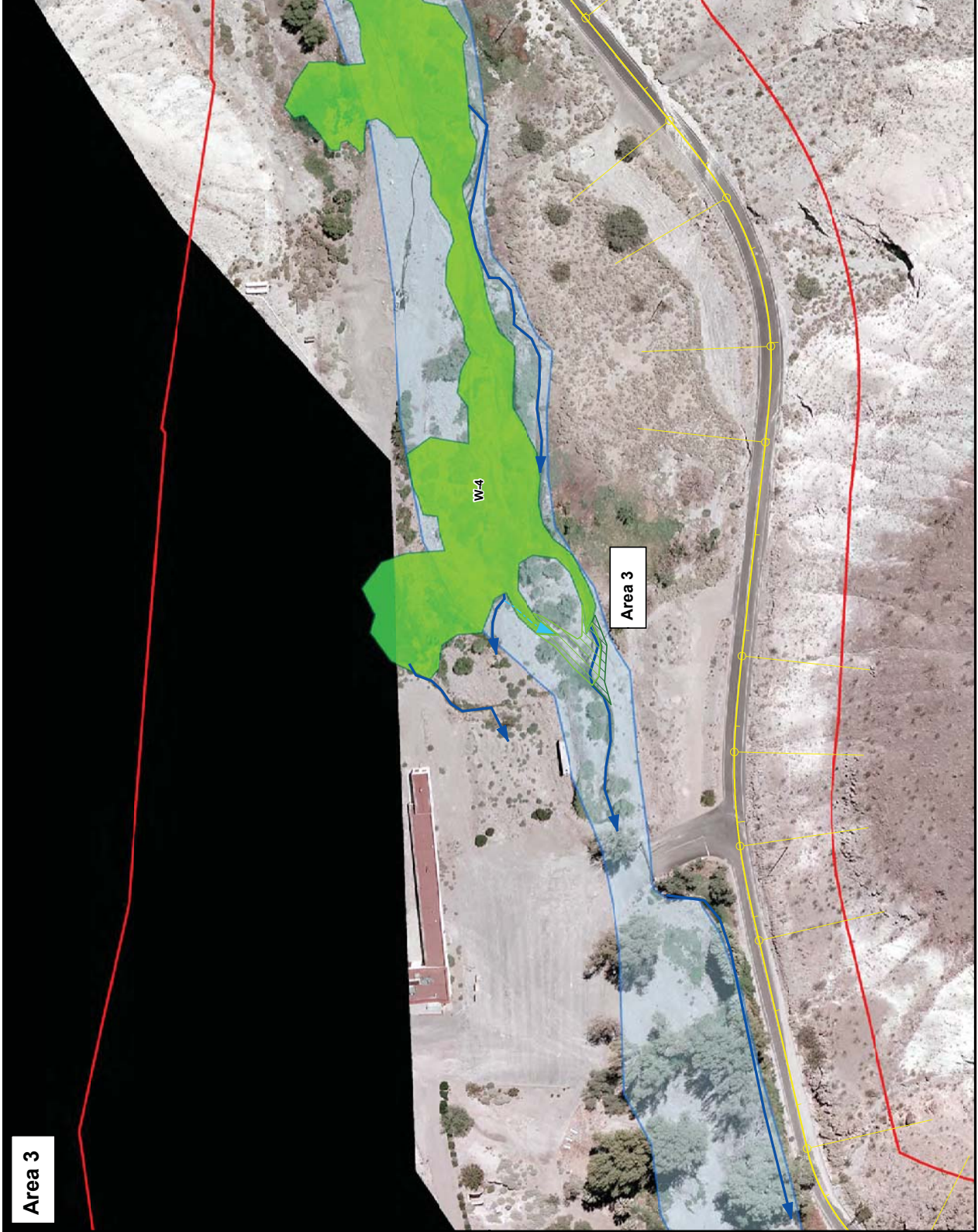
\*\*\*PRELIMINARY (RGL 08-02)\*\*\*  
SECTION 404 JURISDICTIONAL DELINEATION  
U.S. Army Corps of Engineers, Los Angeles District  
Application No. \_\_\_\_\_

Legend

Photograph Date: 9/15/2016  
Site Visit by Corps: No  
Determination Issued: \_\_\_\_\_  
Corps Project Manager: \_\_\_\_\_  
Delineation: G. Bergquist







Area 3

Compensatory Mitigation Areas  
CA ERFO 11(1) Bonnie Clair Road

NAD 1983 State Plane  
CA IV 0404 US Feet



Attachment 1:  
Mitigation Site Maps  
June 2017

### Legend

- Project Centerline
- Survey Area
- Approximate OHWM
- Potential Water of US
- Potential Wetlands
- Spring Flow
- Chan Mitig Realign
- Wetland Creation
- Riparian Creation

0 50 100 200 Feet  
1 in = 100 feet

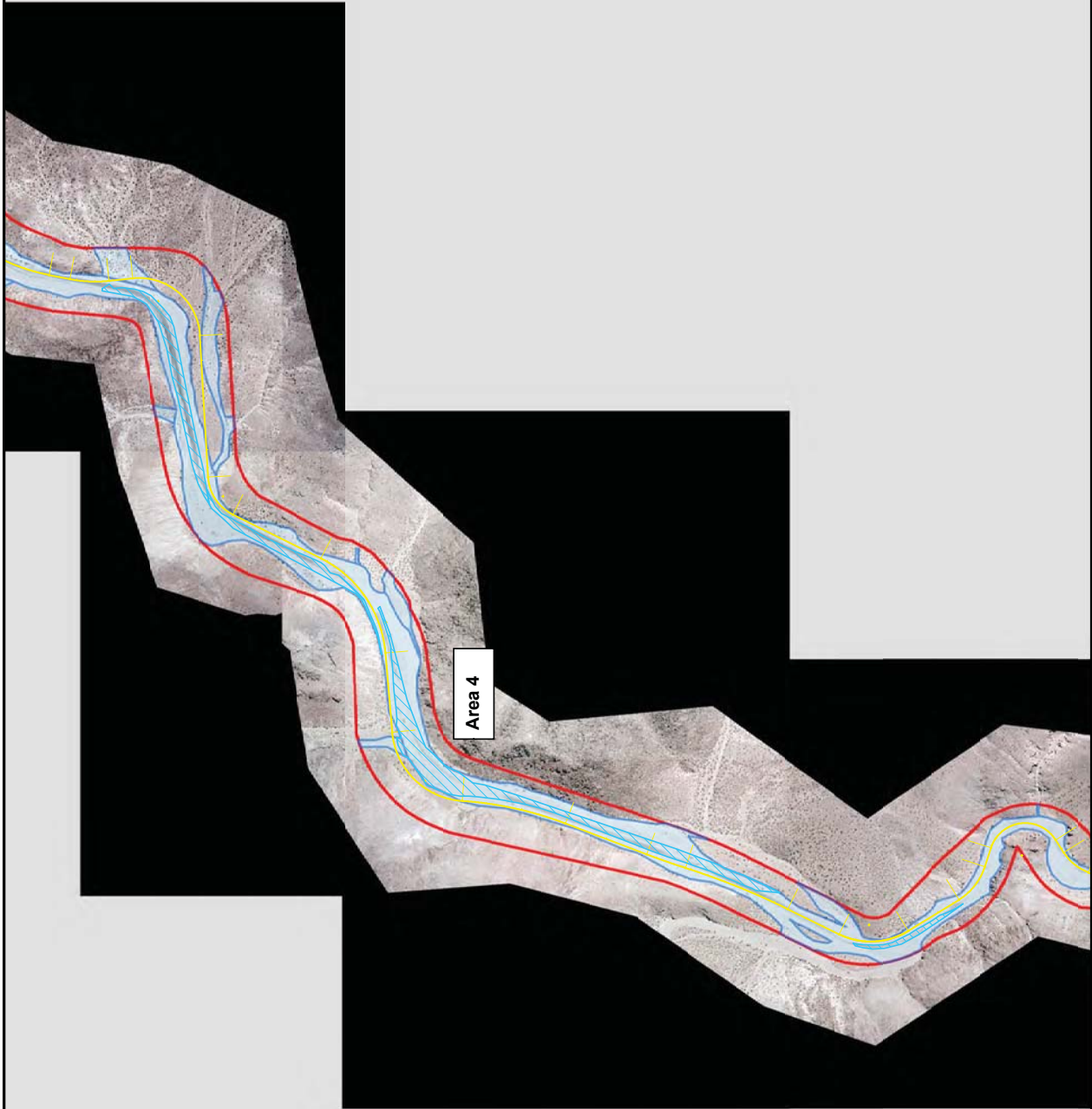


\*\*\*PRELIMINARY (RGL 08-02)\*\*\*  
SECTION 404 JURISDICTIONAL DELINEATION  
U.S. Army Corps of Engineers, Los Angeles District  
Application No. \_\_\_\_\_


### Legend

Photograph Date: 9/15/2016  
Site Visit by Corps: No  
Determination Issued: \_\_\_\_\_  
Corps Project Manager: \_\_\_\_\_  
Delineation: G. Bergquist





Area 4

<b>Compensatory Mitigation Areas</b> CA ERFO 11(1) Bonnie Clair Road  NAD 1983 State Plane CA IV 0404 US Feet	
 U.S. Army Corps of Engineers Central Federal Lands Highway Division	<b>Attachment 1:</b> <b>Mitigation Site Maps</b> <b>June 2017</b>
<b>Legend</b> Project Centerline Survey Area Chan Mitig Realignment Approximate OHWM Potential Water of US Potential Wetlands Spring Flow Wetland Creation Riparian Creation Floodplain Restoration	
0 300 600 1,200 Feet 1 in = 600 feet N	
<b>***PRELIMINARY (RGL 08-02)***</b> <b>SECTION 404 JURISDICTIONAL DELINEATION</b> U.S. Army Corps of Engineers, Los Angeles District Application No. _____	
<b>Legend</b>  Photograph Date: 9/15/2016 Site Visit by Corps: No Determination Issued: _____ Corps Project Manager: _____ Delineation: G. Bergquist	