3.11 Cultural Resources and Native American Concerns

Cultural resources are locations of human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral history. The term includes archaeological, historic, or architectural sites, structures, or places with important public and scientific uses, and may include locations (sites or places) of traditional, religious, and cultural importance to specified social and/or cultural groups. Cultural resources are material places and things that are located, classified, ranked, and managed through the system of identifying, protecting, and utilizing for public benefit.

3.11.1 Regulatory Background

3.11.1.1 Historic Properties

Federal historic preservation laws provide a legal framework for documentation, evaluation, and protection of cultural resources that may be affected by federal undertakings. NEPA states that federal agencies shall take into consideration impacts to the environment with respect to an array of resources, and that alternatives must be considered. The courts have made clear that cultural resources are regarded as part of the environment and are to be considered under NEPA. The NHPA of 1966, as amended, established the ACHP and the NRHP, and mandates that federal agencies consider an undertaking's effects on cultural resources that are listed or eligible for listing on the NRHP. Cultural resources listed on or eligible for inclusion on the NRHP are referred to as historic properties. It should be noted that unevaluated cultural resources or those requiring additional data are treated as eligible for inclusion on the NRHP until final eligibility is determined. For the purposes of this EIS, the term "historic properties" will be used to be consistent with historic preservation laws and regulations.

In addition to the NHPA, other federal historic preservation laws include, but are not limited to:

- The Antiquities Act of 1906 (16 USC 431-433), which was the first general law providing protection for archaeological resources. The Act protects all historic and prehistoric sites on federal lands and prohibits excavation or destruction of such antiquities without the permission (antiquities permit) of the Secretary of the department having jurisdiction.
- The Archaeological Resources Protection Act of 1979 (16 USC 470aa-mm) was enacted ..."to secure, for the present and future benefit of the American people, the protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals" (Sec. 2(4)(b)). The Act makes it illegal to excavate or remove from federal or Indian lands any archaeological resources without a permit from the land manager. Major penalties for violating the law include both fines and imprisonment.
- National Trails System Act of 1968 (P.L. 90-543 as amended through P.L. 111-11, March 30, 2009) established a national trails system to promote preservation of, public access to, travel within, and enjoyment of the open-air, outdoor areas, and historic resources of the nation. Furthermore, the Act designated initial trail system components and established methods and standards for adding additional components.

The ACHP is authorized by Section 211 of the NHPA to issue regulations to govern the implementation of Section 106 of the NHPA. These regulations, "Protection of Historic Properties" (36 CFR Part 800), establish the process that federal agencies must follow in order to take into account the effects of their undertakings on historic properties and provide the ACHP its required opportunity to comment. Section 106 establishes a four-step review process by which historic properties are given consideration during the conduct of federal undertakings.

The four steps are as follows:

1. Initiate the Section 106 process by establishing the undertaking, defining the Area of Potential Effect (APE), and consulting with the appropriate parties, including federal agencies, SHPOs, ACHP, Native American Tribes, local governments, interested parties, and the public;
2. Identify historic properties through inventory and evaluation;
3. Determine effects to historic properties using the criteria of adverse effects found in 36 CFR 800.5; and
4. If adverse effects occur, take appropriate measures to avoid, minimize, or mitigate those effects.

Regulations in 36 CFR 800 outline the process through which historic preservation legislation under the NHPA is administered. Regulations in 36 CFR 800.14 allow federal agencies to adopt program alternatives to 36 CFR 800 and to tailor the Section 106 process to better fit agency procedures or a specific project. The most common program alternative is a PA, which is negotiated between the federal agency, SHPO, and ACHP (if they choose to participate). A PA for a complex project lays out the steps the agency, SHPO, Native American Tribes, and other consulting parties agree to take to consider and resolve any adverse effects an undertaking might have on historic properties.

A PA among BLM, Western, USFS, ACHP, Bureau of Reclamation, BIA, NPS, USFWS, the Applicant, and the Wyoming, Colorado, Utah, and Nevada SHPOs was developed as allowed in 36 CFR 800.14 b(1) (ii) when effects on historic properties cannot be fully determined prior to approval of the undertaking. The PA outlines general and specific measures the federal agencies will take to fulfill their objectives and responsibilities regarding the protection of historic properties under the NHPA. Western and the BLM will consult with Native American Tribes and other consulting parties on the PA.

As part of the PA process, the BLM and Western sent letters to local governments, organizations, agencies, interested parties, and Native American Tribes in September 2011 inviting them to be consulting parties to the agreement. In addition, these groups were invited to participate in an all-day meeting on October 18, 2011, in Salt Lake City, Utah, to discuss the proposed Project, Section 106, NEPA, and development of the draft PA. These groups included the following:

- Oregon-California Trail Association (OCTA)
- Alliance for Historic Wyoming
- The Old Spanish Trail Association
- Moffat County
- Mesa County
- Utah Governor's Public Lands Policy Coordination Office (PLPCO)
- Church History Department of The Church of Jesus Christ of Latter-day Saints
- Milford Archaeological Research Institute
- Mountain Meadows Association
- Mountain Meadows Massacre Descendents
- Mountain Meadows Monument Foundation
- National Trust for Historic Preservation
- Utah Rock Art Research Association
- Utah Professional Archaeological Council
- Huntington Eccles Scenic Byway
- Utah Statewide Archaeology Society (USAS)
- Archaeo-Nevada Society
- Nevada Rock Art Foundation
- Nevada Archaeological Association (NAA)
- Lincoln County Chapter of the NAA
- Clark County Cultural Site Stewardship Program
- National Park Service
- State of Utah Trust Lands Administration (SITLA)

See Section 3.11.4.3 for a list of the Native American Tribes who were invited to the October 18, 2011, meeting.

Representatives of the OCTA, USAS, Latter Day Saints Church, Public Lands Policy Coordination Office, and Mountain Meadows Massacre Descendents were able to attend the meeting on October 18, 2011, in Salt Lake City. Two additional groups (NPS and Alliance for Historic Wyoming) participated in the meeting via conference call. Additional meetings were held in Salt Lake City, Utah on June 17-18, 2014. Invitations were sent to all interested parties with opportunities for in-person and teleconference participation. The following signatories were in attendance: BLM; Western; USFS; ACHP; NPS; TransWest; and the Wyoming, Colorado, Utah, and Nevada SHPOs. Participating consulting parties were as follows: OCTA, SITLA, PLPCO, Uinta Band of Utah Shoshone Indians, Church History Department of The Church of Jesus Christ of Latter-day Saints, the Old Spanish Trail Association, Nevada Archeology Association, Pueblo of Santa Anna, Tracks Across Wyoming, Alliance for Historic Wyoming, Mountain Meadows Massacre Descendants (unaffiliated).

Consulting parties are defined by the NHPA regulations as “certain individuals and organizations with a demonstrated interest in the undertaking [who] may participate as consulting parties due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking’s effect on historic properties” (36 CFR 800.2[c][5]). The regulations emphasize that the “views of the public are essential to informed Federal decision-making in the Section 106 process” (36 CFR 800.2[d][1]). Each of the consulting parties has been afforded an opportunity to participate in development of the PA and may be invited to participate as a concurring party. A concurring party concurs with the terms of the PA and may participate in implementing the stipulations of the PA or may benefit from the PA. It should be noted that consulting and concurring parties do not have authority to execute, amend, or terminate the PA; that authority is confined to the signatories (36 CFR 800.6[c][1]). For the Project, the signatories include BLM, Western, ACHP, USFS, Bureau of Reclamation, NPS, BIA, USFWS, TransWest, and the Wyoming, Colorado, Utah, and Nevada SHPOs.

In addition to the organizations, local governments, interested parties, and agencies listed above, the BLM and Western have made a reasonable and good faith effort to identify and seek government-to-government consultation with federally recognized Native American Tribes with religious and cultural ties to the analysis area that “attach religious and cultural significance to historic properties that may be affected by an undertaking” (Section 101[d][6][B] of the NHPA). “Such Indian Tribes shall be a consulting party” (36 CFR 800.2[c][2][B][ii]). Each of the Native American Tribes has been afforded an opportunity to participate in development of the PA and may be invited to participate as a concurring party. See Section 3.11.4.3 for a list of the Native American Tribes who have been invited to participate in development of the PA.

3.11.1.2 NRHP Criteria of Eligibility

Cultural resources are assessed for integrity and qualities that make the resources eligible for the NRHP. There are three main standards that a cultural resource must meet to qualify for listing on the NRHP: age, integrity, and significance. To meet the age criteria, the resource generally must be at least 50 years old. To meet the integrity criteria, the resources must possess the applicable aspects of integrity, which may include: location, design, setting, materials, workmanship, feeling, and association. Finally, the resource must be significant according to one or more of the following criteria:

- Criterion A – Be associated with events that have made a significant contribution to the broad patterns of history;
- Criterion B – Be associated with the lives of persons significant in history;
- Criterion C – Embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or

- Criterion D – Have yielded, or may be likely to yield, information important in prehistory or history.

Traditional Cultural Properties

If a cultural resource has been identified as having importance in traditional cultural practices and the continuing cultural identity of a community, it may be considered a TCP. The term "traditional cultural property" first came into use within the federal legal framework for historic preservation and cultural resource management in an attempt to categorize historic properties containing traditional cultural significance.

A TCP is defined as one that is eligible for the NRHP because of its association with cultural practices or beliefs of a living community that are: 1) rooted in that community's history and 2) important in maintaining the continuing cultural identity of the community (NPS 1998). To qualify for eligibility to the NRHP, a TCP must be more than 50 years old, must be a place with definable boundaries, must retain integrity, and must meet the criteria of eligibility as described above for cultural resources.

Examples of TCPs include:

- A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents;
- An urban neighborhood that is the traditional home of a particular cultural group and reflects its beliefs and practices;
- A location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity; and
- A location associated with the traditional beliefs of a Native American Tribe about its origins, its cultural history, or the nature of the world (NPS 1998).

In addition to NRHP eligibility and TCP evaluation, places of cultural and religious importance to Native American Tribes also must be evaluated to determine if they should be considered under other federal laws or EOs. These include, but are not limited to, the NAGPRA, American Indian Religious Freedom Act (AIRFA), Religious Freedom Restoration Act (RFRA), EO 13007 (Sacred Sites), and Secretarial Order 3206 (Tribal Rights, Federal-Tribal Trust Responsibilities, and the ESA).

The NAGPRA established a means for Native Americans, including Indian Tribes, to request the return of human remains and funerary objects, sacred objects, or objects of cultural patrimony held by federal agencies or federally assisted museums or institutions. NAGPRA also contains provisions regarding the intentional excavation and removal of, inadvertent discovery of, and illegal trafficking in Native American human remains and sensitive cultural items.

The AIRFA established federal policy for protecting and preserving the inherent right of individual Native Americans to believe, express, and exercise their traditional religions including, but not limited to, access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.

RFRA is a 1993 U.S. federal law aimed at preventing laws that substantially burden a person's free exercise of their religion. The Act applies to all religions, but is most pertinent to Native American religions that are burdened by increasing expansion of government projects onto lands considered sacred by Indian Tribes.

EO 13007 requires federal agencies, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions to: 1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and 2) avoid adversely affecting the physical

integrity of such sacred sites. It also requires agencies to develop procedures for reasonable notification of proposed actions or land management policies that may restrict access to or ceremonial use of, or adversely affect, sacred sites. Sacred sites are defined in EO 13007 as "any specific, discrete, narrowly delineated location on federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site."

Secretarial Order 3206: American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the ESA (June 5, 1997). This Order was issued by the Secretary of the Interior and the Secretary of Commerce pursuant to the ESA of 1973, 16 USC 1531, as amended, the federal-tribal trust relationship, and other federal law. Specifically, this Order clarifies the responsibilities of the component agencies, bureaus and offices of the USDOI and the Department of Commerce when actions taken under authority of the Act and associated implementing regulations affect, or may affect, Indian lands, tribal trust resources, or the exercise of American Indian tribal rights, as defined in this Order. The Order further acknowledges the trust responsibility and treaty obligations of the U.S. toward Indian tribes and tribal members and its government-to-government relationship in dealing with tribes.

Indian Trust Assets (ITAs) are legal interests in property held in trust by the U.S. for Native American Tribes or Native American individuals. The Secretary of the Interior, acting as the trustee, holds many assets in trust. Examples of assets that may be trust assets are lands, minerals, hunting and fishing rights, and water rights. While most ITAs are on reservations, they also may be found off reservations. The U.S. has an Indian trust responsibility to protect and maintain rights reserved by or granted to Indian Tribes or Indian individuals by treaties, statutes, and EOs. These sources of trust responsibility are sometimes further interpreted through court decisions and regulations.

3.11.2 Data Sources

In winter and spring 2011, a cultural resource files search was conducted to identify all previously conducted archaeological investigations and previously recorded cultural resources within a 2-mile-wide corridor centered on each transmission alignment (SWCA 2011a-d). During the first phase of the files search, cultural data were collected online through the individual SHPOs. The second phase of the files search included visits to relevant BLM and USFS FOs to collect information on sites not available online. Bureau of Reclamation offices responsible for administering lands crossed by the proposed Project also were contacted regarding cultural resources previously recorded within their jurisdiction. Additional information was collected through review of General Land Office (GLO) survey plats and historic maps. All of the collected cultural resources information was incorporated into four individual overview reports submitted to the BLM, Western, Bureau of Reclamation, USFS, and Wyoming, Colorado, Utah, and Nevada SHPOs.

Additional file searches were conducted online and at the relevant BLM and USFS FOs in 2012 for newly proposed alignments within Wyoming, Colorado, and Utah (SWCA 2012a-c), and again in 2014 for minor revisions to the alignments in Utah and Colorado (SWCA 2014a,b). Results of these additional files searches were incorporated into addendum reports and have been submitted to the BLM, Western, Bureau of Reclamation, USFS, and Wyoming, Colorado, and Utah SHPOs, as applicable.

3.11.3 Analysis Area

The analysis area for the affected environment (baseline description) encompasses the 2-mile-wide file search area. For the environmental consequences discussion, the analysis focuses on a 500-foot-wide corridor centered on the alignments of each alternative, or APE. Data collected for the

files search reports were used in developing the following baseline description, which provides the reader with a general cultural overview of the region crossed by the Project.

3.11.4 Baseline Description

Based on the files search data, cultural resources in the analysis area have been classified according to one or more site types (e.g., lithic scatter, open camp, structure). Complete information may not be readily available during the original recordation to determine the functional or cultural site type. Consequently, some sites may be re-categorized after additional research or survey. Sites fitting into more than one category usually are more complex and have more information potential than do single-category sites. At the broadest level, cultural resources are categorized as either prehistoric or historic.

3.11.4.1 Prehistoric Resources

Prehistoric sites in the analysis area represent a wide range of human activities. Most of the sites are surface manifestations of hunter-gatherer campsites, which sometimes represent repeated occupations over thousands of years. Other sites are buried and contain intact, stratified cultural components. A broad range of activities, including lithic reduction, animal butchering, plant processing, heating/cooking, and lithic procurement, are represented at prehistoric sites previously documented in the analysis area. Less common sites intersected by the proposed Project corridors are rock shelters, conical wooden structures, rock art, bison kill sites, burials, stone circles, cairns, and house pits. These sites typically are considered important to Native American Tribes.

<u>Wyoming</u>

South-central Wyoming has been broadly defined as the Northwestern Plains prehistoric culture area. There are six periods of human occupation in the Northwestern Plains that span approximately 12,000 years: Paleoindian (ca.12,000-7,500 Before Present [B.P.]); Early Plains Archaic (ca. 7,500-5,000 B.P.); Middle Plains Archaic (ca. 5,000-3,000 B.P.); Late Plains Archaic (ca. 3,000-1,500 B.P.); Late Prehistoric (ca. 1,500-300 B.P.); and Protohistoric (ca. 300-150 B.P.). Of the previously documented prehistoric sites, two sites (lithic scatter and open camp) have Paleoindian components.

Archaic and Late Prehistoric period sites are more common within the analysis area than Paleoindian sites. A total of 65 are dated to the Archaic and 39 to the Late Prehistoric. Most of the Archaic and Late Prehistoric sites are surface lithic scatters or open camps with one or more features, although stone circles, cairns, and potential sites of tribal importance also are present.

Lastly, two of the previously recorded prehistoric sites yielded radiocarbon dates that fall within the Protohistoric period. The first is a large site containing dated components ranging in age from the Early Archaic to the Protohistoric. Excavations conducted at the site revealed dozens of Archaic-period pit features and intact activity areas. The second site contained fur trade items such as gun parts, horse tack, trade jewelry, glass beads, and metal points.

<u>Colorado</u>

The Northern Colorado River Basin was used by a variety of Native American Tribes, which began with the Clovis hunter-gatherers at the end of the Pleistocene and continued to European occupation of the area. Regional prehistory of the area is divided into the Paleoindian era (ca. 13,500-8,400 B.P.); Archaic era (ca. 8,400-2,400 B.P.); Formative era (ca. 2,400-700 B.P., which includes the Fremont tradition [ca. 2,000-700 B.P.]; and Protohistoric era (ca. 700-130 B.P.). Of the previously recorded prehistoric sites, five within the Northern Colorado River Basin have provided radiocarbon dates and diagnostic artifacts, including bone beds, associated with Paleoindian projectile points indicative of temporary human occupation prior to 7,500 B.P.

A total of 31 Archaic period sites have been previously recorded within the analysis area, the majority of which are open camps and open lithic sites. A large number of the Archaic period sites that have undergone test excavations have yielded radiocarbon dates as early as 5,000 B.P. Open camps and lithic scatters constitute the majority of the 24 Formative era sites previously recorded in the analysis area. Of the Formative era sites, several yielded architectural remains (e.g., stone circles) and rock art. Most of the Fremont sites in northwestern Colorado consist of open and sheltered artifact scatters, open and sheltered architectural sites, and rock art.

A total of four Protohistoric sites have been previously documented in the analysis area. The majority of the previously recorded Protohistoric sites are open camps and open lithic scatters. Documented Protohistoric components have been located at open architectural sites, sheltered camps, rock art sites, a burial, and a trail (Ute Trail/Meeker Massacre Trail).

Utah

In general, the prehistory of the area is divided into eight time periods, some of which have associated phases. These periods are: Paleoindian (ca. 11,000-8,000 B.P.); Early Archaic (ca. 8,000-5,000 B.P.); Middle Archaic (ca. 5,000-3,000 B.P.); Late Archaic (ca. 3,000-2,000 B.P.); Terminal Archaic (ca. 2,000-1,500 B.P.); Formative (ca. 1,500-800 B.P. including both the Fremont Complex [ca. 1,500-800 B.P.] and Virgin River Anasazi Complex [ca. 1,600-800 B.P.]); and Late Prehistoric (ca. 800-200 B.P. including the Protohistoric Phase [ca. 500-150 B.P.]; during which there was an expansion of Numic-speaking peoples [Ute, Shoshone, Paiute] into the region from the Mojave Desert area).

As a result of the files search, only 14 previously recorded sites were identified that fall within the Paleoindian period. These sites are categorized as sparse lithic scatters with temporally diagnostic flaked stone tools. A total of 255 Archaic period sites have been previously recorded in the analysis area. Most of the sites consist of lithic scatters, open and sheltered campsites, and lithic quarries. Several of the sites contain large amounts of ground stone and small to large thermal features with fire-cracked rock, which become more prevalent in sites dating to the Late Archaic.

The majority of the 709 identified Formative period sites are artifact scatters. Of the 709 sites, 18 exhibit evidence of long-term habitation, some of which are located in caves and rock shelters. Other identified Formative period sites include lithic and ceramic scatters, villages, Fremont mounds, rock art, lithic scatters with pit house remains, and burials.

Only 94 sites identified during the files search are dated to the Late Prehistoric or Protohistoric periods. The majority of the sites are open campsites, caves, and shelters. Of the 94 sites, one is a prehistoric rock shelter that was identified as a TCP by a Ute spiritual leader. A number of TCPs have been documented within an area encompassing a creek and associated canyon. The area, which contains rock art and human occupation sites, was identified as a sacred site by Southern Paiute tribal representatives during an ethnographic study. Although none of the TCPs are located within the analysis area, the creek would be intersected by one of the alternatives.

Also included in the Utah analysis area are the Rock Art ACEC, Nine Mile Canyon ACEC, and Browns Park SRMA. The Rock Art ACEC is a collection of rock art sites encompassed in a 5,300-acre area. These sites represent some of the best examples of prehistoric rock art in the Colorado Plateau. Protection of these sites is afforded by the ACEC status, but some designated areas also are protected under Mexican Mountain and San Rafael Reef's WSA. Nine Mile Canyon ACEC is known for its many petroglyphs and pictographs, many of which were created by the Fremont culture and Ute people. In addition to rock art, cultural sites such as granaries, ancient village sites, pit houses, rock shelters, settlers' cabins, and ranches also have been identified within the canyon. Browns Park SRMA is significant because of its high value scenery, wildlife habitats, and cultural resources, including some of the earliest visible cultural sites associated with the Fremont culture (see

Section 3.14, Land Use, and Section 3.15, Special Designation and Management Areas, for an expanded discussion of the ACECs and SRMAs).

Nevada

The earliest documented occupation of southern Nevada is the Paleoindian period (13,100-12,800 B.P.) followed by the Early Archaic period (11,000-7,500 B.P.). Both the Paleoindian and Early Archaic periods fall within the Paleoarchaic period. Following the Paleoarchaic is the Middle Archaic-Pinto period (7,500-4,000 B.P.); Late Archaic-Gypsum period (4,000-1,550 B.P.); Terminal Archaic period (1,550 B.P. – A.D. 200); Puebloan period (A.D 200-1300), including the Virgin Anasazi, Patayan, Fremont, and Numic traditions; and, Post-Puebloan period (A.D. 1300-1776), which is viewed as the time of change that bridges the gap between the end of the Puebloan era and the beginning of the Historic period.

Paleoarchaic sites are rare, with only six sites containing components dated to this period. The components consist of lithic scatters, isolated projectile points, and a rock shelter. A total of 63 Archaic period sites, including caves and rock shelters, habitation sites, subsistence/resource extraction sites, rock art sites, milling assemblages, and lithic or artifact scatters, have been previously recorded in the analysis area.

Archaeological traditions present in southern Nevada during the Puebloan period include the Ancestral Puebloan (Anasazi), Patayan, Fremont, and Numic. A branch of the Anasazi culture, called the “Virgin Anasazi,” occupied the Moapa Valley and Virgin River area northeast of the Las Vegas Valley. “Patayan” refers to groups located primarily south of the Las Vegas and Ivanpah valleys to the lower Colorado River drainage and incorporates groups previously called “Yuman.” The Fremont complex extended into eastern Nevada as far south and west as the Pahranagat Valley. Typically, the Numic tradition is associated with the immediate ancestors of the historic Paiute and Chemehuevi people of southern Nevada. A total of 79 sites dating to the Puebloan period have been previously documented in the analysis area. Rock shelters, ceramic scatters, artifact scatters, roasting pit sites, and habitation sites comprise the site types.

A total of 50 previously recorded sites are dated to the Post-Puebloan period, 41 of which have Numic tradition components and 5 with Patayan tradition components. Site types consist of rock shelters, ceramic scatters, campsites and roasting pits, and artifact and lithic scatters.

Also included in the analysis area are the NRHP-listed Panaca Summit Archaeological District, Sloan Canyon National Conservation Area/Sloan Rock Art ACEC, Rainbow Gardens ACEC, proposed Shooting Gallery ACEC, proposed Pahroc Rock Art ACEC, and an NRHP-listed TCP dating to the Middle to Late Archaic periods The Panaca Summit Archaeological District contains over 70 prehistoric sites, including residential bases, short-term campsites, activity loci, and isolates ranging in age from approximately 5,500 B.P. to the Protohistoric Period. The Sloan Rock Art District, which is listed on the NRHP, is a 1,920-acre ACEC within the North McCullough Wilderness Area consisting of prehistoric habitation and rock art sites. Rainbow Gardens (36,412 acres) was designated as an ACEC because of its high geological, scientific, scenic, cultural, and sensitive plant values. The proposed Shooting Gallery ACEC is located in Lincoln County and is a multi-component cultural landscape consisting of a large complex of scattered rock art sites in association with several well-developed habitation areas. The Pahroc Rock Art site, located in Lincoln County, is proposed as an ACEC based on the prehistoric values in the form of archaeological rock art and rock shelter sites. (See Section 3.14, Land Use, and Section 3.15, Special Designation and Management Areas, for an expanded discussion of the Sloan Canyon National Conservation Area and Rainbow Gardens ACEC.)

3.11.4.2 Historic Resources

Historic resources are districts, sites, buildings, structures, or other objects that are associated with or convey some aspect of history, architecture, engineering, and/or culture. Historic resources in the

analysis area could be eligible for the NRHP if they relate directly to national, state, regional, or local themes such as exploration, transportation, communication, mining, ranching and farming, urban development, or government and political activity. Historic sites can be significant under Criteria A, B, C, or D. Examples of historic resources previously identified in the analysis area include, but are not limited to, railroad construction camps, railroad alignments, debris scatters, mining activities, roads, trails, structures, ranches, homesteads, rock art, and stone cairns.

Wyoming

Approximately 122 historic sites and 72 historic components have been previously documented in the Wyoming analysis area. Common site types include railroad construction camps, mining sites, highways and trails, debris scatters, railroad alignments, structures, and habitations. Most notable of the historic sites are the Cherokee Trail, Overland Trail, Lincoln Highway, Rawlins to Baggs Road, Rock Springs to Browns Park Road, Stockgrowers Bank/Dixon Town Hall, and the Red Rock.

The Cherokee Trail is most commonly known for its use by the Cherokee emigrants as an alternative route to the Oregon Trail, but it also served as a transportation route for freight, cattle, and passengers between Utah and Colorado to the Union Pacific Railroad in Wyoming. A segment of the Cherokee Trail eventually became known as the Overland Trail, which was heavily used by emigrants and prospectors largely as an alternative route to the Oregon Trail. In southern Wyoming, the Union Pacific Railroad generally followed the route of the Overland Trail and ultimately rendered the Oregon and Overland trails obsolete. All subsequent major transportation developments would parallel the Union Pacific Railroad route. One of the most notable is the Lincoln Highway, which was the first transcontinental automotive travel-way developed in the U.S. The Cherokee and Overland trails, as well as the Lincoln Highway, are eligible for inclusion on the NRHP; however, not all of their segments contribute to the overall NRHP eligibility of these resources.

Throughout the late nineteenth century and continuing into the first decades of the twentieth century, the Rawlins to Baggs Road, known alternatively as the Rawlins to White River Agency Road, was a primary stage and mail route connecting the White River Ute Indian Agency in present-day Rio Blanco, Colorado, to the railhead at Rawlins. During the 1800s, the Rock Springs to Browns Park Road traveled through the Jesse Ewing Canyon taking travelers to the Browns Park area of Utah. Both of the roads are eligible for inclusion on the NRHP. The Stockgrowers Bank/Dixon Town Hall is a single-story ornamented block structure with a canted façade within the Dixon township plat. Lastly, the Red Rock is one of several landmarks located along the Overland Trail and contains inscribed names of people who traveled along the trail. Both the Stockgrowers Bank/Dixon Town Hall and Red Rock are listed on the NRHP.

Colorado

Approximately 257 historic sites and 33 historic components have been previously documented in the Colorado analysis area. The most common site types are railroad construction camps, railroad alignments, habitations, trails/roads, debris scatters, highways, and transmission lines. Review of GLO maps indicates numerous named and unnamed roads and ranches, houses, railroads, trails, irrigation ditches, telephone lines, mining operations, pipelines, and fences. The majority of the roads, telephone lines, irrigation ditches, ranches, and homesteads are near the towns of Craig and Hayden and most likely are associated with the original establishment of these towns as a result of the Union Pacific Railroad first crossing southern Wyoming around 1868 and the Denver and Salt Lake Railroad reaching Craig in 1913.

Notable previously recorded historic sites within the analysis area include the Thornburg Wagon Road, Baggs to Craig Road, Victory Highway (US-40), Road to Browns Park, Meeker to Bear River Road, and Road from Lily Park to Maybell. The Thornburg Road, which is eligible for the NRHP, was constructed between 1877 and 1906 and served as an important transportation route for freight wagons between Maybell, Colorado, and Baggs, Wyoming. From the late 1870s to the 1920s, the

Baggs to Craig Road was a major transportation route between the Union Pacific Railroad in Wyoming and Colorado communities. In Moffat County, there are two segments of the road that are eligible for the NRHP. The Victory Highway, which was established following WWI as a memorial to those who fought and died in the war, ran from Kansas City to San Francisco and for the most part follows the path of US-40. Although the Road to Browns Park, Meeker to Bear River Road, and Road from Lily Park to Maybell are not eligible for the NRHP, they provided a connection between local communities or to larger communities outside of the region.

Utah

Approximately 722 historic sites and 60 historic components have been previously documented in the Utah analysis area. Common site types include debris scatters, railroads, roads, canals and ditches, homesteads, mining sites, and telegraph lines. Notable historic sites in the analysis area include, but are not limited to, the Old Spanish Trail, Mountain Meadows Massacre Site, Soldier Creek Kilns (NRHP-listed), Aspen-Cloud Rock Shelters (NRHP-listed), Red Creek Canal, Dry Gulch Creek Bridge (Old 593), Durfey Farmstead, Sorensen's Country Store, Aurora Latter-day Saints Meetinghouse, Nebeker Adelman House, Emery Town Site, Helper Town Site, Denver & Rio Grande Western Railroad, US-6 and US-50, and Modena Elementary School (NRHP-listed).

The Old Spanish Trail is a NHT that was established in the early 1800s as a trade, transportation, and communication corridor between Santa Fe and Los Angeles. Multiple variants of the trail allowed travelers to take alternative routes or shortcuts based on the time of year, weather, size of the traveler's caravan, or the traveler's preference (see Section 3.15, Special Designation and Management Areas, for additional information on the Old Spanish Trail). Other notable travel routes in the Project vicinity include the Rivera Expedition of 1765 and the Dominguez-Escalante expedition that crossed the Uinta Basin and continued through southwest Utah in 1776.

The Mountain Meadows Massacre site is listed on the National Register as a Historic Site. Three parcels within the larger site, each a known location of a significant event associated with the massacre attained status as a NHL in 2011 and 2014. The site is the location of the September 11, 1857, massacre of 120 Arkansas emigrants by Mormon militiamen. There also are prehistoric sites within the large boundary of the National Register and Landmark site.

Nevada

Approximately 221 historic sites and 18 historic components have been previously documented in the Nevada analysis area. Some of the historic components are affiliated with Native American, Chinese/Oriental, or Euro-American cultures. Common site types are railroad construction camps, railroad alignments, debris scatters, mining sites, highways, transmission lines, structures, ditches, trails, and habitations. Notable historic sites are the Old Spanish Trail, 48 historic-built environment resources, and five NRHP-listed historic or archaeological districts. As stated previously, the Old Spanish Trail had multiple variants that broke off of the main trail allowing travelers to take alternative routes or shortcuts. In southern Nevada, one of the well-traveled variants or routes became known as the Mormon Road.

The 48 historic-built environmental resources are all within or immediately adjacent to Boulder City, Nevada. These resources consist of residential homes, the Boulder City Pumping Station, Old Airport Hangar, and Lake Mead NRA Maintenance Warehouse Complex.

The Boulder City Historic District, Tule Springs Archaeological Site, Tule Springs Ranch, and Las Vegas Wash Archaeological District constitute the five NRHP-listed historic or archaeological districts located within the analysis area. The Boulder City Historic District is Nevada's largest listing on the NRHP with 408 buildings. The Tule Springs Archaeological Site contained extinct mammoth, bison, horse, ground sloth, and camel dating to 28,000 years ago that were recovered during excavations conducted in the 1930s, 1950s, and 1960s. Inside Floyd Lamb State Park is Tule Springs Ranch,

which served as a watering hole for Native Americans and prospectors traveling across Nevada in the 1800s. The Las Vegas Wash Archaeological District falls primarily within the Clark County Wetlands Park and contains over 30 prehistoric and historic sites.

3.11.4.3 Native American Consultation and Communication

It is the responsibility of all federal agencies to comply with the requirements of Section 106 of the NHPA and the ACHP regulations when planning and carrying out their undertakings. In doing so, they are required to consult with Native American Tribes depending on the specifics of the undertaking. Such consultation with Native American Tribes is central to the Section 106 process. Consultation is defined in the ACHP regulations as "the process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the Section 106 process" [36 CFR 800.16(f)]. Other consultation statutory requirements include, but are not limited to:

- EO 13175, Consultation and Coordination with Indian Tribal Governments, 63 FR 96 (November 6, 2000). EO 13175 was issued to establish regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications. When implementing such policies, agencies shall consult with tribal officials as to the need for federal standards and any alternatives that limit their scope or otherwise preserve the prerogatives and authority of Indian tribes.
- Government-to-Government Relations with Native American Tribal Governments (Memorandum signed by President Clinton, April 29, 1994), 59 FR 22951 (May 4, 1994). The Memorandum directs federal agencies to consult, to the greatest extent practicable and to the extent permitted by law, with tribal governments prior to taking actions that affect federally recognized tribal governments. Federal agencies must assess the impact of federal government plans, projects, programs, and activities on tribal trust resources and assure that tribal government rights and concerns are considered during such development.
- Department of the Interior Policy on Consultation with Indian Tribes. This Policy requires government-to-government consultation between appropriate Tribal Officials and Departmental officials. The appropriate Departmental officials are those individuals who are knowledgeable about the matters at hand, are authorized to speak for the Department, and exercise delegated authority in the disposition and implementation of an agency action. Departmental officials will identify appropriate Tribal consulting parties early in the planning process and provide Indian Tribes a meaningful opportunity to participate in the consultation process. Departmental officials will participate in the consultation process in a manner that demonstrates a meaningful commitment and ensures continuity in the process. The Policy thus honors the government-to-government relationship between the U.S. and Indian Tribes, and complies with the Presidential Memorandum of November 5, 2009, which affirms this relationship and obligates the Department to meet the spirit and intent of EO 13175.

As the lead for Government-to-Government, the BLM sent letters to tribes and consulting parties, offering consultation opportunities regarding this Project. BLM managers and line officers from other federal agencies such as Western and USFS participated in multiple meetings with tribes. For purposes of Section 106 compliance, tribal consultation for the Project began when a certified letter was mailed on July 20, 2010, to all federally recognized Native American Tribes either residing in or with cultural ties to the analysis area as depicted in **Table 3.11-1**. The letter initiated formal government-to-government consultation, informed the Tribes of the proposed undertaking, and solicited their concern/comments regarding possible historical and/or traditional ties to the area or the presence of properties of traditional religious and cultural importance. Included in the letters were a Project map, response form, and return address stamped envelope. The response form and return address envelope were enclosed with the letters as a means to inform the BLM and Western if any of

the Tribes wished to participate in the consultation efforts or had any concerns associated with the Project.

Table 3.11-1 Initial Contact with Federally Recognized Native American Tribes, July 20, 2010

Eastern Shoshone Tribe of the Wind River Reservation	Winnemucca Indian Colony of Nevada
Northern Arapaho Tribe of the Wind River Reservation	Yerington Paiute Tribe of the Yerington Colony & Campbell Ranch
Southern Ute Indian Tribe of the Southern Ute Reservation	Yomba Shoshone Tribe of the Yomba Reservation
Ute Mountain Tribe of the Ute Mountain Reservation	Fort Mojave Indian Tribe
Confederated Tribes of the Goshute Reservation*	Hopi Tribe of Arizona
Northwestern Band of Shoshone Nation	Kaibab Paiute Tribe
Paiute Indian Tribe of Utah	Navajo Nation
Skull Valley Band of Goshute Indians of Utah	San Juan Southern Paiute Tribe
Ute Indian Tribe of the Uintah and Ouray Reservation	Jicarilla Apache Tribe
Shoshone-Bannock Tribes of the Fort Hall Reservation of Idaho	Pueblo of Acoma
Duckwater Shoshone Tribe of the Duckwater Reservation	Pueblo of Cochiti
Ely Shoshone Tribe of Nevada	Pueblo of Isleta
Fort McDermitt Paiute-Shoshone Tribe of the Fort McDermitt Indian Reservation	Pueblo of Jemez
Las Vegas Tribe of Paiute Indians of the Las Vegas Indian Colony	Pueblo of Laguna
Lovelock Paiute Tribe of the Lovelock Indian Colony	Pueblo of Nambe
Moapa Band of Paiute Indians of the Moapa River Indian Reservation	Pueblo of Picuris
Paiute-Shoshone Tribe of the Fallon Reservation and Colony	Pueblo of Pojoaque
Pyramid Lake Paiute Tribe of the Pyramid Lake Reservation	Pueblo of San Felipe
Reno-Sparks Indian Colony*	Pueblo of San Juan
Shoshone-Paiute Tribes of the Duck Valley Reservation	Pueblo of Santa Ana
Summit Lake Paiute Tribe of Nevada	Pueblo of Santo Domingo
Te-Moak Tribe of Western Shoshone Indians of Nevada	Pueblo of Tesuque
Walker River Paiute Tribe of the Walker River Reservation	Pueblo of Zuni
Washoe Tribe of Nevada & California	Chemehuevi Indian Tribe
Five Additional Pueblos Contacted on November 26, 2012	
Pueblo of San Ildefonso	Pueblo of Santa Clara
Pueblo of Sandia	Pueblo of Taos
Pueblo of Zia	

* After the July 20, 2010, letters were sent out to the tribes listed in **Table 3.11-1**, the Confederated Tribes of the Goshute Reservation and the Reno-Sparks Indian Colony elected not to participate in the consultation process for the Project

Seven of the Native American Tribes responded to the initial consultation letter dated July 20, 2010 (Confederated Tribes of the Goshute Reservation, Duckwater Shoshone Tribe of the Duckwater Reservation, Ely Shoshone Tribe of Nevada, Las Vegas Paiute Tribe, Paiute Indian Tribe of Utah, Pueblo of Laguna, and Pueblo of Santo Domingo). A tribal member of the Ely Shoshone Tribe of Nevada requested copies of the proposed Project maps, which were provided via email. The Las Vegas Paiute Tribe and Pueblo of Santo Domingo indicated on the response form that they did not require consultation at this time; however, they may request other opportunities to consult with the BLM and Western in the future. In their response, the Pueblo of Laguna indicated that the proposed Project would not have a significant impact, but requested an opportunity to review any newly

discovered archaeological sites and that photographs be taken of the sites. Face-to-face meetings with the BLM and Western were requested by the remaining three tribes (Goshute, Duckwater Shoshone, and Paiute Tribe of Utah).

On December 1, 2010, the BLM and Western met with the Tribal Council of the Paiute Indian Tribe of Utah during their scheduled council meeting to provide a presentation on the proposed Project. A large format map showing the proposed route and alternatives was displayed during the presentation. Council members had questions regarding construction of the transmission line and asked if there was a Project website where they could find additional Project information (the BLM provided the Council members with the website). At the end of the meeting, the Council provided the BLM and Western with the appropriate tribal contact for any future correspondence.

The BLM and Western met with the Duckwater Shoshone and Ely Shoshone tribes in Ely, Nevada, on January 12, 2011, to present an overview of the Project. At the start of the meeting, the Tribal chair stated that the meeting was an informational meeting and not considered government-to-government consultation because not all members of the Tribal council were present. The tribes had questions regarding the status of the cultural resources investigations and selection of the cultural contractor. Railroad Valley, which is located over 65 miles from the closest alternative (Alternative III-C), was mentioned as an area of concern by several tribal members. At the end of the meeting, the Tribes requested large-scale maps of the Project where it would cross or be close to their tribal lands. Following the meeting, the BLM delivered the maps to the tribes. To date, no other meetings have been held with the Duckwater Shoshone and Ely Shoshone tribes.

On January 19, 2011, the BLM telephoned the Confederated Tribe of the Goshute Reservation to discuss their request for a face-to-face meeting. During the call, the BLM provided additional information on the Project, in particular, the location of the proposed transmission lines. Since the proposed location of the transmission line would not be within Goshute Tribal lands, the tribal Administrator indicated there was no need for additional information or a face-to-face meeting.

In late September 2011, a second set of letters was sent to the Native American Tribes listed in **Table 3.11-1** inviting them to participate in development of the PA. The letters included details of the proposed Project, a description of historic properties identified through the files search, and information on an upcoming meeting on October 18, 2011, in Salt Lake City, Utah, to discuss the PA process. Enclosed with the letters were a Project map and flyer with specific information regarding the date, time, and location of the meeting in Salt Lake City. Only the Hopi Tribe responded to the second letter. The Hopi stated they were interested in ongoing consultation on the Project and requested copies of the cultural resources inventory report and any proposed treatment plans for review and comment. In addition, the Hopi requested an ethnographic overview of the proposed Project area.

Follow-up calls to all of the Native American Tribes were conducted after the second set of letters to verify receipt of the letters and to ask if a tribal representative would be attending the October 18 PA meeting in Salt Lake City. None of the Tribes attended the October 18 meeting in Salt Lake City.

On December 21, 2011, and January 4, 2012, letters were sent to the Native American Tribes listed in **Table 3.11-1** inviting them to attend the RRTT meetings held on:

- January 9, 2012, in Cheyenne, Wyoming;
- January 10, 2012, in Denver, Colorado;
- January 11, 2012, in Las Vegas, Nevada; and
- January 12, 2012, in Salt Lake City, Utah.

The BLM and Western, on behalf of the RRTT, held these meetings to help the RRTT better understand the proposed Project as the RRTT worked to expedite and improve the federal

government's evaluation of transmission line applications. Representatives from the RRTT who attended the meetings included the BLM Deputy Chief of Staff, Department of Energy-Renewable Energy Senior Advisor, Department of the Interior Special Assistant to the Counselor, and BLM Rights-of-Way Branch Chief. A conference line (call-in number) was provided to those who were unable to attend the meetings in person. None of the invited Native American Tribes attended the meetings.

On April 19, 2012, the BLM and Western held an online conference call to discuss the status of the draft PA. The USFS attended the call. The consulting parties listed in Section 3.11.1.1 and the Native American Tribes listed in **Table 3.11-1** were invited to participate on the conference call. None of the invited Native American Tribes participated on the call.

At the request of the Tri-Ute Council, the BLM and Western attended a Tri-Ute Tribal Council Meeting on May 31, 2012, and met with the Ute Mountain Ute Tribe, Southern Ute Tribe, and Ute Indian Tribe of the Uintah and Ouray Reservation to discuss the proposed Project. The BLM and Western gave a presentation of the proposed Project and answered questions from the Tribes. In general, the questions focused on proposed Project components, tribal consultation, BIA responsibilities, and ROWs on tribal lands. In general, the Ute Mountain Ute Tribe was concerned about Project impacts to human remains, cultural landscapes, TCPs, and sacred sites.

Western and the BLM attended a Business Committee meeting of the Ute Tribe, Uintah and Ouray Indian Reservation on August 28, 2012. During this meeting, detailed Project maps of the alternatives, a Project description, and a schedule for completion of the Draft EIS were presented to the Council members. As requested by the Council, Western and the BLM also met with the Ute Tribe's Energy and Minerals Department. Project information, a Project map, and contact information were left with the Council members and the Energy and Minerals Department.

On November 8, 2012, the BLM and Western held an online conference call to discuss the status of the PA. The consulting parties listed in Section 3.11.1.1 and the Native American Tribes listed in **Table 3.11-1** were invited to participate on the conference call. None of the invited Native American Tribes participated on the call.

On November 26, 2012, the BLM and Western sent letters to five additional pueblos as part of the consultation process. The five pueblos included the Pueblo of San Ildefonso, Pueblo of Santa Clara, Pueblo of Sandia, Pueblo of Taos, and Pueblo of Zia. Included in the letters were a Project map, response form, and return address stamped envelope. The letters provided information on the proposed Project, APE, PA process, and historic properties identified as a result of the files search. Of the five Pueblos, only the Pueblo of Santa Clara responded to the letter. In his response, the Governor of the Santa Clara Pueblo stated that the Pueblo does not require consultation at this time. None of the other contacted pueblos responded to the letters.

On April 19, 2013, the BLM and Western held another online conference call to discuss the status of the PA. The consulting parties listed in Section 3.11.1.1 and the Native American Tribes listed in **Table 3.11-1** were invited to participate on the conference call. None of the invited Native American Tribes participated on the call.

On May 23, 2013, the BLM and Western sent letters to the Northern Arapaho Tribe of the Wind River Reservation, Eastern Shoshone of the Wind River Reservation, Paiute Indian Tribe of Utah, Moapa Band of Paiute Indians of the Moapa River Indian Reservation, and the Energy and Mineral Department of the Ute Indian Tribe of the Uintah and Ouray Reservation requesting a meeting with each of the Tribes. Updated Project maps were enclosed with the letters. Attached to the Moapa Band of Paiute Indians' letter was a copy of the fully executed MOU between the BLM and Moapa signed by the Tribal Chairman and BLM Wyoming State Director (January 13, 2012). The MOU establishes the Moapa as a cooperating agency in the environmental impact analysis and documentation process.

Attached to the letter to the Ute Indian Tribe was a draft MOU between the Ute Indian Tribe and BLM for the Tribe's review and consideration. The Tribe was asked to sign the MOU and return it to the BLM if it was acceptable. On December 23, 2013, the BLM received a signed copy of the MOU from the Ute Tribe. No responses were received from the other Tribes.

On July 8, 2013, the BLM sent a letter and a copy of the PA to the consulting parties listed in Section 3.11.1.1 and the Native American Tribes listed in **Table 3.11-1**. The consulting parties and Tribes were requested to review the PA, and to use the enclosed comment form to document their comments and return the form to the BLM. The consulting parties and Tribes also were informed of a series of face-to-face meetings to be held at the BLM Rawlins FO in Wyoming (July 25, 2013), BLM Craig FO in Colorado (July 26, 2013), BLM Price FO in Utah (July 30, 2013), BLM Cedar City FO in Utah (July 31, 2013), BLM St. George FO in Utah (August 1, 2013), and BLM Las Vegas FO in Nevada (August 2, 2013). The purpose of the meetings was to review and discuss the PA. None of the invited Tribes attended the meetings. Representatives from the Alliance for Historic Wyoming, Mountain Meadows Massacre Descendents, Latter-day Saints Church, PLPCO, and State of Utah Trust Lands Administration attended the meetings.

On July 16, 2013, the BLM received a letter from the Hopi Tribe in the response to the BLM letter sent on July 8, 2013. Per the letter, the Hopi Tribe deferred comments on the PA to the SHPOs and other interested Tribes. However, the Tribe expressed interest in consulting on any proposal that has the potential to adversely affect Ancestral Puebloan or Fremont prehistoric sites that may be located in the area of the proposed Project, and the Tribe "looks forward" to receiving copies of the overview and cultural resources inventory reports for review and comment.

BLM provided the text of the Cultural Resources Overview reports for Wyoming, Colorado, Utah, and Nevada to Hopi on April 18, 2014. In a letter to BLM dated April 25, 2014, the Hopi Tribe requested continuing consultation of the Class III cultural resources inventories in Utah, Colorado, and Nevada, along with proposed treatment plans for any Ancestral Puebloan or Fremont prehistoric sites that may be adversely affected by project activities. The Hopi Tribe also may request a Hopi ethnographic overview of the project area.

The BLM received a letter dated September 4, 2013, from the Reno-Sparks Indian Colony Tribal Historic Preservation Officer (THPO). Per the letter, the Reno-Sparks Indian Colony elected to not participate in the Project. The THPO expressed her concern with the use of the term "government-to-government consultation" in reference to the Reno-Sparks Indian Colony when no consultation with the Tribe has occurred. As such, the THPO requested that the Reno-Sparks Indian Colony be removed from the list of "consulted" Tribes in the PA and EIS.

On November 4, 2013, the BLM and Western sent a letter to the Ute Indian Tribe of the Uintah and Ouray Reservation initiating government-to-government consultation with the new administration of the Ute Indian Tribe and requesting a meeting with the Business Committee to discuss the proposed Project. Enclosed with the letter were updated Project maps.

On January 7, 2014, representatives from the BLM (including the Utah State Director), Western (Project Manager and Tribal Coordinator), USFS (Forest Supervisor), BIA, and TransWest met with the Ute Business Committee of the Uintah and Ouray Indian Reservation to provide an update on the proposed Project; to discuss the alignment that would cross approximately 3 miles of Tribal trust lands; and, to answer questions or address any concerns the Tribe had regarding the proposed Project. Copies of the Project PowerPoint presentation and Project maps were provided to the Committee members. In addition, the BLM presented the signed MOA between the BLM and Ute Indian Tribe to the Ute Business Council Chairman for their tribal records. The Ute Business Committee's discussions focused on the importance of the status of the Ute Tribe as a sovereign nation, the importance of economic development to the Tribe, the effects of the proposed Project on property values of private and tribal lands, and solutions that would benefit both the Tribe and the proposed Project. At the

conclusion of the meeting, the Chairman of the Committee stated that the Committee will decide whether or not the Tribe supports the ROW across tribal lands. If they agree to support the ROW, the Committee will provide a contact person to the BLM and will be open to negotiations, including a meeting with the Project proponent.

Representatives from the BLM (including the Acting Las Vegas FO Manager, the project manager, cultural resources lead, national transmission support team archaeologist, district archaeologist, and Native American coordinator); Western (the project manager and tribal coordinator); and the USFS (cultural resources lead) met with the Business Council of the Moapa Band of Paiutes on April 8, 2014. The Business Council expressed their wish that the proposed Project stay within the existing energy corridor through the Moapa Reservation. Discussion focused on the status of other transmission projects, as well as energy marketing.

On May 22, 2014, the BLM's Cedar City FO Manager, national transmission support team archaeologist, district archaeologist, and project manager; Western's project manager and tribal coordinator; and the USFS's cultural resources lead and project manager for major transmission projects met with the Paiute Tribe of Utah Tribal Council to provide a Project update and discuss resources of concern to the Tribal Council. In general, the questions from the Tribal Council focused on location of the agency preferred alternative, whether affected tribes have given permission to cross tribal lands, and how the agency preferred alternative might change if they do not receive ROW permits from affected tribes. The Tribal Council also expressed the need for tribal monitors and ongoing coordination with the Tribe. The BLM distributed copies of the draft PA and invited them to upcoming meetings to discuss the PA content. The Tribal Council indicated they would be interested in meeting to discuss the PA.

A second set of PA meetings were held in Salt Lake City, Utah on June 17-18, 2014. Invitations were sent to all interested parties with opportunities for in-person and teleconference participation. One federally recognized Native American Tribe, the Pueblo of Santa Anna, participated by teleconference. The Uinta Band of Utah Shoshone Indians (a non-federally recognized tribe) attended the meeting.

On August 4, 2014, representative from the BLM (the BLM Utah State Director and Deputy State Director of Lands and Minerals, the Vernal FO Manager and Assistant Field Manager, the cultural resources lead and national transmission support team archaeologist and the BLM project managers for the TransWest and Energy Gateway South projects); Western (the project manager), the USFS (the Uinta-Wasatch-Cache National Forest Supervisor and project manager for major transmission projects) along with representatives from TransWest Express and Rocky Mountain Power met with Ute Business Committee of the Uintah and Ouray Indian Reservation to provide updates on the TWE and EGS Projects and discuss the TWE BLM/USFS-preferred and Western-preferred alternatives. The Ute Business Committee indicated they would meet with the proponents through the tribal attorney to negotiate project ROWs.

To date, no specific properties of traditional religious and cultural importance to the contacted Native American Tribes have been identified within or near the analysis area through the government-to-government consultation efforts. In general, concerns expressed by the Tribes have been with human remains, TCPs, cultural landscapes, and sacred sites; however, the Tribes have yet to identify any specific sites or properties of tribal importance (including TCPs and sacred sites). Opportunities for the identification of locations of possible traditional religious and cultural importance that may be affected by the proposed Project, as well as opportunities for the Tribes to express their concerns would remain open throughout the consultation process, which currently is ongoing and would continue through Project construction.

3.11.5 Regional Summary

Tables 3.11-2 and **3.11-3** summarize the cultural types and eligibility status by region and state of those sites identified through file searches of the four states' Historic Preservation Office site file data.

Table 3.11-2 summarizes the findings for those sites located within the analysis area; whereas, **Table 3.11-3** summarizes the findings for those sites located within the 500-foot-wide APE.

3.11.6 Impacts to Historic Properties and Sites of Native American Concern

The analysis area for impacts to historic properties and Native American concerns is a 500-foot-wide corridor centered on the transmission alignments, or APE. Under Section 106 of the NHPA, the APE is defined as "those areas in which impacts are planned or are likely to occur. Specifically, the APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. Additionally, the APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking (36 CFR 800.16[d])."

Per the PA and for purposes of this EIS, the APE for direct effects is the area within which historic properties may sustain physical alteration or destruction as a result of the proposed Project. The APE for direct effects is limited to the area of potential ground disturbance by activities related to the proposed Project that may directly cause alterations in the character or use of historic properties.

The APE, as currently defined, encompasses an area sufficient to accommodate all of the proposed Project components under consideration. The APE may be modified when tribal consultation, additional field research or literature review, consultation with consulting parties, or other factors indicate that the qualities and values of historic properties that lie outside the boundaries of the currently defined APE may be affected directly, indirectly, or cumulatively.

Table 3.11-2 Site Types and NRHP Status by Region and State within the Analysis Area

Site Types and NRHP Status by Region and State – Analysis Area									
	Summary of Site Types					Summary of NRHP Status			
State	Prehistoric Sites	Historic Sites	Multi-component Sites	Potential TCPs[1,2]	No Information	Listed	Eligible for Listing	Not Eligible	Unevaluated
Region I									
Wyoming	1,455	122	145	14	91	2	447	858	506
Colorado	408	44	26	7	5	0	59	321	103
Region II									
Colorado	693	213	41	49	27	2	73	693	206
Utah	1,399	695	103	144	53	2	773	1,059	416
Region III									
Utah	530	27	18	27	22	1	284	235	78
Nevada	763	103	20	188	122	0	150	563	295
Region IV									
Nevada	231	118	17	117	11	7	88	205	77

[1] In general, sites in which Native American Tribes attach traditional religious and cultural significance are referred to as TCPs by the Tribes. TCPs can include, but are not limited to, stone cairns, stone circles, rock shelters, rock art, prehistoric campsites, and village sites. At this time, no tribal consultation regarding verification of these sites as TCPs or other sites of importance to the Tribes has occurred. Until consultation with Native American Tribes to evaluate these sites has occurred, these sites are considered "potential TCPs" based on their site type and description.

[2] All of the potential TCPs also are prehistoric sites. As such, they are counted twice in the site totals.

Sources: SWCA 2012a-e, 2011a-d.

Table 3.11-3 Site Types and NRHP Status by Region and State within the 500-foot-wide APE

Site Types and NRHP Status by Region and State – 500-foot-wide APE									
	Summary of Site Types					Summary of NRHP Status			
State	Prehistoric Sites	Historic Sites	Multi-component Sites	Potential TCPs[1,2]	No Information	Listed	Eligible for Listing	Not Eligible	Unevaluated
Region I									
Wyoming	119	38	26	4	20	0	86	70	47
Colorado	66	6	12	3	0	0	14	52	18
Region II									
Colorado	146	70	10	8	4	2	36	146	46
Utah	185	146	19	15	17	0	149	164	54
Region III									
Utah	153	12	6	0	7	0	130	39	9
Nevada	145	30	4	32	25	0	39	116	49
Region IV									
Nevada	50	63	4	35	1	3	45	45	25

[1] In general, sites in which Native American Tribes attach traditional religious and cultural significance are referred to as TCPs by the Tribes. TCPs can include, but are not limited to, stone cairns, stone circles, rock shelters, rock art, prehistoric campsites, and village sites. At this time, no tribal consultation regarding verification of these sites as TCPs or other sites of importance to the Tribes has occurred. Until consultation with Native American Tribes to evaluate these sites has occurred, these sites are considered "potential TCPs" based on their site type and description.

[2] All of the potential TCPs also are prehistoric sites. As such, they are counted twice in the sites totals.

Sources: SWCA 2012a-e, 2011a-d.

If the BLM determines that the proposed Project or changes to the proposed Project may cause unforeseen direct, indirect, or cumulative effects to historic properties beyond the extent of the established APE, then the BLM may use the process set forth in the PA to determine whether to modify the APE.

The APE for indirect effects on historic properties considers visual, audible, and atmospheric elements that could diminish the integrity of properties for which setting, feeling, and/or association are qualifying characteristics of NRHP eligibility. The indirect APE for the proposed Project extends for 5 miles on either side of the transmission line centerline or to the visual horizon, whichever is closer. Where the indirect APE includes TCPs, NHLs, NHTs, or other classes of historic properties for which setting contributes to eligibility, additional analyses may be required and the indirect APE may need to be modified accordingly, as it may extend beyond the 5-mile convention when effects have been determined to extend beyond this distance.

Cumulative effects include reasonably foreseeable effects caused by the proposed Project that may occur later in time, be farther removed in distance or be cumulative (36 CFR Part 800.5(a)(1)). For purposes of this EIS and per the PA, the APE for cumulative effects is the same as described for direct and indirect effects.

Impacts to historic properties, including TCPs and properties of traditional religious and cultural importance to Native Americans, were evaluated for each alternative using the following methods:

- The analysis of potential direct and indirect impacts was based on review of existing files and information obtained from the Wyoming, Colorado, Utah, and Nevada SHPOs, BLM, USFS, and Bureau of Reclamation, and by review of GLO maps.

- Potential effects were quantified where possible. Where quantitative data are unavailable, best professional judgment or qualitative assessments were used to describe impacts.

To date, no Class III pedestrian inventories have been conducted for the proposed Project. Once the final route has been selected and a ROD has been issued, an intensive Class III inventory of previously uninventoried areas would be conducted to identify historic properties in the APE. A combination of inventory and consultation would be used to determine the presence of historic properties within the APE. In recognition of their particular expertise, Native American Tribes and their designated representatives would be consulted to establish the locations and significance of properties of traditional religious and cultural importance to the Tribes. The BLM would be responsible for reviewing the results of the inventories, determine NRHP eligibility, assess effects, and seek resolution of adverse effects in consultation with Western, the SHPOs, USFS, Bureau of Reclamation, NPS, USFWS, Native American Tribes, and other consulting parties.

In addition to the pedestrian inventory, an in-depth visual analysis along the final route would be conducted to accurately identify whether any historic properties, including properties of traditional religious and cultural importance in which setting contributes to their eligibility, would be visually impacted by the proposed Project. In addition to properties of traditional religious and cultural importance, sacred sites or other sensitive sites identified by Native Americans during consultation also may require visual analysis. The analysis would include on-the-ground verification of historic property/tribal site locations, as well as verification of proposed Project visibility from the historic property or site. In some instances it may be necessary to set up a Key Observation Point (KOP) at the location of the historic property or site to observe and analyze the visibility of aboveground Project facilities during different times of day and during different weather conditions (e.g., cloudy versus sunny skies). Results of the analysis would be used to determine the magnitude of visual effects to the setting of historic properties or sites from which aboveground Project facilities are visible.

Although no Class III inventories or in-depth visual analyses have been conducted to date for the proposed Project, the EIS analysis of impacts to the Old Spanish Trail, which is a congressionally designated NHT, was supplemented with data obtained from the NHTs Inventory (AECOM 2012). The inventory was not conducted for the proposed Project, but was a separate endeavor conducted by the BLM using American Recovery and Reinvestment Act funding and staff resources to develop and apply new inventory and management tools that include consistent standards for trail resource documentation, protection, use, and preservation. The BLM's NHT Inventory was a significant undertaking to document NHT settings, record trail attributes and resources, create trail information archives, and manage trail data. The inventory's goal was to: 1) understand the resources associated with each trail, which meant determining where the route lies in some instances; 2) determine where physical traces or archaeological resources are present; and, 3) evaluate settings where trail segments are located and identify those locations where historic integrity and scenic quality have been maintained. A total of six NHTs across the western U.S. were investigated as part of the inventory. Of these six trails, only the Old Spanish Trail is located within the direct and indirect APEs for the proposed Project. The Cherokee and Overland trails, which also are located in the direct and indirect APEs, currently are being evaluated for inclusion in the NHT system.

In general, primary issues identified by federal and state agencies during previous NEPA transmission line analyses that are related to the proposed Project include:

- Construction of the transmission line and associated facilities could adversely affect historic properties such as prehistoric or historic archaeological sites, districts, buildings, structures, roads and trails, and objects.
- Previously undiscovered cultural resources, including burials and associated funerary objects, could be discovered and adversely affected during ground-disturbing activities associated with construction.

- Unauthorized artifact collection and/or vandalism.
- Introduction of visual, atmospheric, or auditory elements that diminish the integrity of a historic property's setting.

Issues identified at the public scoping meetings included:

- Potential impacts to the Mountain Meadows Massacre site and Mountain Meadows NHL.
- Potential impacts to the Old Spanish Trail and Overland and Cherokee trails.
- Potential impacts to the archaeological resources within the Adobe Town WSA, Wyoming.

For purposes of this EIS, impacts are considered significant if management actions result in adverse effects to the qualities that make a property eligible for inclusion in the NRHP or considered important to Native American Tribes as measured by:

- Physical destruction or alteration of a property or relocation from its historic location;
- Isolation or restriction of access to Tribes;
- Change in the character of the property's use or of physical features within the property's setting, or the introduction of visible, audible, or atmospheric elements that are out of character with the significant historic features of the property;
- Neglect that leads to deterioration or vandalism; and
- Transfer, sale, or lease from federal to non-federal control, without adequate and legally enforceable restrictions or conditions to ensure the preservation of the historic significance of the property.

3.11.6.1 Impacts from Terminal Construction and Operation

Northern Terminal

Construction of the Northern Terminal would result in 519 acres of ground disturbance. Surface disturbance activities associated with the terminal would include pre-development geotechnical sample drilling and site development, which would involve vegetation clearing, grading, and facility construction. Construction-associated surface disturbance would include land cleared for storage areas, a concrete batch plant site, temporary work areas, and pulling, tensioning, and splicing sites. Operation surface disturbance would include footprints of the access roads, the footprints of the station facilities, and installation of the perimeter fence. The types of direct, indirect, and visual impacts to historic properties that could occur during construction and operation of the terminal would be the same as discussed in Section 3.11.6.2, Impacts Common to All Alternative Routes and Associated Components.

No previously recorded cultural resources were identified within the proposed location of the Northern Terminal. Prior to construction, a Class III pedestrian inventory would be conducted for the proposed location of the terminal. If historic properties, including TCPs and properties of traditional religious and cultural importance are identified within the direct effects APE and would be adversely affected, the property would be avoided unless avoidance is not feasible. Adverse effects would be minimized or mitigated as stipulated in the PA and through implementation of design features. Any previously unknown cultural resources (other than isolates) discovered during construction and operation activities would be handled as detailed in the PA (see Section 3.11.6.2 for additional details regarding the PA).

Summary: Unavoidable adverse effects to historic properties that may be located within the disturbance area of the Northern Terminal would be minimized or mitigated as stipulated in the PA and

through implementation of design features. Unanticipated discoveries would be handled as stipulated in the PA.

Southern Terminal

Construction of the Southern Terminal would result in 557 acres of ground disturbance. Surface disturbance activities and site clearing associated with the Southern Terminal would be identical to those associated with the Northern Terminal. Potential direct, indirect, and visual impacts to historic properties as a result of constructing and operating the Southern Terminal would be the same as described in Section 3.11.6.2, Impacts Common to All Alternative Routes and Associated Components.

As a result of the files search, only one previously recorded isolated artifact was identified within the proposed location of the Southern Terminal. As described for the Northern Terminal, a Class III inventory would be conducted prior to construction. If historic properties are identified as a result of the inventory, the properties would be avoided unless avoidance is not feasible. Adverse effects would be minimized or mitigated as stipulated in the PA and through implementation of design features.

Summary: Unavoidable adverse effects to historic properties that may be located within the disturbance area of the Southern Terminal would be minimized or mitigated as stipulated in the PA and through implementation of design features. Unanticipated discoveries would be handled as stipulated in the PA.

Southern Terminal Alternate

Impacts associated with the Southern Terminal Alternate would be the same as described for the Southern Terminal with the exception of disturbance acreage, which would be 755 acres.

Design Option 2

The impacts of constructing and operating Design Option 2 would be similar to those discussed under the alternative routes because the implementation of this design would utilize the same alternative routes and construction techniques. Differences between this design option and the (or Applicant and Agency preferred alternatives) proposed Project include the locations of the southern converter station and ground electrode system as well as the addition of a series compensation station midway between the IPP and Marketplace. The southern converter station would be located near the IPP in Utah instead of at the Marketplace in Nevada and the ground electrode system would be within 50 miles of the IPP. Potential adverse effects to known and unknown historic properties would be the same as described in Section 3.11.6.2, Impacts Common to All Alternative Routes and Associated Components. The same design features and stipulations outlined in the PA would be implemented to minimize or mitigate potential adverse effects to known and unknown historic properties associated with Design Option 2.

Design Option 3

Implementation of Design Option 3 would utilize the same alternative routes, facilities, and construction techniques as the proposed Project; therefore, impacts from construction and operation of this design option would be similar to those discussed under the alternative routes. Differences between this design option and the proposed Project include the construction of an interim substation and connection at IPP and a series compensation station midway between Sinclair, Wyoming and IPP. These would operate during Phase I of the design option as described in Chapter 2.0. The series compensation station would be located adjacent to the transmission line; therefore impacts are disclosed within the description of the proposed Project routes. Potential adverse effects to known and unknown historic properties would be the same as described in Section 3.11.6.2, Impacts Common to All Alternative Routes and Associated Components. The same design features and stipulations

outlined in the PA would be implemented to minimize or mitigate impacts to known and unknown historic properties associated with Design Option 3.

3.11.6.2 Impacts Common to All Alternative Routes and Associated Components

Construction Impacts

Ground-disturbing activities, such as installation of the transmission line foundations and anchors; construction of new access roads and upgrade of existing access roads; construction of electrical substations and other ancillary facilities; and, use of temporary work areas and staging areas for storing equipment and supplies would have the potential to directly impact historic properties, including TCPs and properties of traditional religious and cultural importance to Native American Tribes. These physical impacts could occur to both known sites and subsurface sites and could result in the vertical and horizontal displacement of soil containing cultural materials, damage to or destruction of artifacts and features, and loss of archaeological data.

Other potential effects associated with the proposed Project could include ORV traffic associated with construction and erosion due to construction activities, soil compaction, or vegetation removal. In addition, vandalism, inadvertent damage, or illegal artifact collection could occur as a result of increased access via newly constructed roads and numbers of construction personnel working within and adjacent to the 500-foot-wide APE. New road construction would make sites more accessible and studies have shown most site vandalism happens near roads. The presence of more people in the construction zone may lead to artifact collection during work breaks or after hours.

Visual impacts to historic properties (as well as cultural/historic landscapes) where setting is an aspect of integrity could occur as a result of introducing visual elements out of character with a property located within the visual APE. Introduction of structures such as the proposed transmission line and associated towers into an otherwise rural or natural setting could diminish the integrity of a property's features that contribute to its significance. Assessment of effects (including visual effects) on historic properties is based in part on the evaluation of integrity. According to the NRHP guidelines, integrity is defined as the ability of an historic property to convey its own significance; evaluations of integrity must always be grounded in an understanding of a property's physical features and whether they remain sufficiently intact to convey its significance. A historic property's integrity includes seven unique aspects: location, setting, design, materials, feeling, workmanship, and association. Based on these aspects, the types of sites considered visually sensitive include, but are not limited to, National Historic Monuments, Districts, Landmarks, and Trails; sites eligible under criteria A, B, or C; and TCPs.

During public scoping, concerns were expressed regarding possible direct and visual effects to the Cherokee and Overland trails, Old Spanish Trail, Mountain Meadows Massacre Site and Mountain Meadows NHL, and Adobe Town WSA. The Cherokee and Overland trails would be crossed by the alternatives in Wyoming; whereas, the Old Spanish Trail would be crossed by the alternatives in Utah and Nevada. In Wyoming, there are two routes of the Cherokee Trail, a northern route and a southern route. The northern route has been erased and no visible remnants remain; therefore, the EIS analysis focuses on the southern route. It should be noted that the NPS guidelines disqualify cultural sites listed under the NRHP when their physical features are no longer visible (NPS 2002). Although none of the alternatives cross the Mountain Meadows Massacre Site and Mountain Meadows NHL, there were concerns about visual effects to the site and possible disturbance to unmarked graves that may be located outside of the site's boundary. The Adobe Town WSA is located more than 6 miles from the alternatives; therefore, no impacts to historic properties located in the WSA would be anticipated.

The potential for the discovery of unanticipated historic properties during construction activities exists within the direct effects APE and could result in an adverse effect. Unanticipated discoveries could result in displacement or loss (either complete or partial) of the discovered cultural material. Displacement of cultural material affects the potential to understand the context of the property and limits the ability to extrapolate data regarding prehistoric settlement and subsistence patterns.

Potential impacts to unanticipated discoveries could be greater than impacts to properties previously identified because damage to unanticipated discoveries occurs prior to their recordation and evaluation, thereby complicating mitigation procedures.

Resolution of Adverse Effects

The following mitigations have been developed to reduce impacts to historic properties.

- ***CUL-1:*** *On-site and off-site mitigation to compensate specifically for cumulative impacts, as well as direct and indirect adverse effects to the Old Spanish National Historic Trail in Nevada, as directed in the National Trails System Act (NTSA). Mitigation may include development of interpretive material; signage and protection for the trail; and development of education materials that may include support for the Project Archaeology: Investigating Migration curriculum context and a Old Spanish NHT module for Nevada. Future discussion with consulting parties will provide further mitigation guidance.*
- ***CUL-2:*** *On-site and off-site mitigation to compensate specifically for cumulative impacts, as well as unavoidable direct and indirect adverse effects to Gypsum Cave Traditional Cultural Property in Nevada. Mitigation may include clean-up and graffiti removal; post and cable fencing to further prevent vehicles from approaching the cave; road closures and mitigation of road scars within the TCP; bat gates for the inner chambers of the cave; support for tribal involvement in mitigation efforts; interpretation of the archaeological site; and development of educational materials regarding the archaeological site. Future discussion with consulting parties will provide further mitigation guidance.*
- ***CUL-3:*** *On-site and off-site mitigation to compensate for adverse cumulative impacts under NTSA, as well as direct and indirect adverse effects under NHPA to the Old Spanish NHT Trail, the California Wagon Road and other historic trails in Wyoming, Colorado, and Utah. Mitigation may include, and is not limited to, development of interpretive material; signage and protection for the trails; and development of educational materials to include support for the Project Archaeology: Investigating Migration curriculum context and modules for each affected resource. Future discussion with consulting parties as part of the Historic Properties Treatment Plan will provide further mitigation guidance.*
- ***CUL-4:*** *On-site and off-site mitigation to compensate for direct and indirect adverse effects to historic properties in Wyoming, Colorado, Utah, and Nevada. Future discussion with consulting parties as part of the Historic Properties Treatment Plan will provide further mitigation guidance.*

Effectiveness: Although these compensatory mitigations would not reduce the level of direct impact the Project might have to cultural resources, they would offset the impacts through improvement of other on- and off-site resources.

To date, the number of historic properties that would be adversely affected by the proposed Project is unknown. As stipulated in the PA, an intensive Class III pedestrian inventory would be required after the final route is selected by the BLM and Western. The pedestrian inventory of the final route would be completed prior to construction and with enough lead time to allow for NRHP evaluation of identified sites, impact assessments, and resolution of adverse effects, if necessary. The inventory would be performed regardless of land ownership. All cultural resources located within the APE would be evaluated for eligibility to the NRHP and for Native American traditional religious and cultural importance in consultation with Native American Tribes.

Through the NEPA process, the BLM Las Vegas Field Office identified cumulative impacts to cultural and historic properties from the construction, operation, and maintenance of the 600-kV TransWest transmission line. The Project is located within a designated WWEC and passes through the Rainbow Gardens Area of Critical Environmental Concern (identified as "corridor of concern" 39-231 in the July 11, 2012, settlement agreement establishing an inter-agency MOU, work plan, and BLM policy guidance providing for the review of WWECs). Because the Project is in a designated Section 368 energy corridor, meaningful mitigation measures are needed to ensure that impacts to sensitive resources are minimized and that the public has an opportunity to participate in the mitigation process.

The Gypsum Cave Traditional Cultural Property and portions of the Old Spanish National Historic Trail are impacted by this Project. The TWE alignment runs adjacent to the Gypsum Cave TCP, which is held as sacred to the Nuwu (Paiute) people. The TCP designation came about through consultation with the Nuwu and the Nevada SHPO as part of the mitigation of the Harry Allen to Mead transmission line, which was constructed within the WWEC corridor in 2009. The cumulative impacts identified include vandalism and the proliferation of unauthorized roads and trails because of increased access to the cave resources as well as visual, audible and atmospheric impacts on the integrity of setting, feeling and association of the TCP. **CUL-2** provides for on-site and off-site mitigation to compensate for cumulative impacts, as well as unavoidable direct and indirect adverse effects to Gypsum Cave TCP.

The Old Spanish National Historic Trail runs adjacent to the Project for 15 miles in the California Wash area near Moapa. This segment of the Old Spanish NHT could include a high potential segment of the trail which would be conducive to recreation and interpretation of native habitats and ecosystems. Impacts to the Old Spanish NHT include visual impacts on the integrity of setting, feeling and association of the trail. **CUL-1** and **CUL-3** provide for on-site and off-site mitigation to compensate for cumulative impacts, as well as direct and indirect adverse effects to the Old Spanish NHT in Nevada, as directed in the NTSA.

The proposed mitigation will support meaningful measures to offset the cumulative impacts from this and other transmission projects in the area. BLM will require current cost estimates from the applicant based upon mitigation specific for the Project. This mitigation for cumulative effects does not relieve TransWest of its responsibilities under Section 106 of the NHPA or Project-specific BMPs for cultural resources.

BLM and consulting parties (including federal agencies, state and local governments, tribes, and many other stakeholders) will evaluate and select appropriate mitigation action(s) to address cumulative effects of the Project. Available mitigation actions include:

Project Archaeology – Investigating Migration: The national award-winning Project Archaeology program is developing 7-12th grade curriculum on westward migration, including a context document that summarizes baseline research on the National Historic Trails. This context would provide a structure for developing individual teaching modules that could be used in southern Nevada schools on specific Old Spanish NHT locations or on the Old Spanish NHT in Nevada.

Recreational/Interpretative/Educational Walking Trails: A 15-mile trail along the segment identified as California Crossing (California Wash) would be developed, including as-needed National Historic Trail inventory (M-6280) as well as metal detecting to locate trail trace in advance of any proposed trail construction.

Old Spanish Trail Application (App) for the Southern Nevada District: The Old Spanish NHT App is a trail interpretation app for smartphones and tablets currently being planned by the NPS. NPS and BLM are co-administrators of the Old Spanish NHT. Development of the app would be coordinated in partnership with NPS.

Management plan for each of the five high potential Old Spanish NHT segments in Clark County: This plan would include, as needed: National Historic Trail inventory (M-6280), a Class I records search, visual assessment of the significant segments, a Class III inventory of the segments, condition assessments, and recommendations for proposed development and use of each trail segment based on the information gathered.

Mobile exhibit of the Old Spanish NHT: In conjunction with the Project Archaeology context and individual curriculum modules for the Old Spanish NHT, this mobile exhibit to be developed in partnership with the Old Spanish Trail Association would travel to schools and events across Nevada to inform the public about the trail.

Interpretation Plan for the Old Spanish NHT Auto Route across Clark County: BLM and its partners would work with the NPS to develop and implement an interpretive plan for a proposed auto route of the Old Spanish NHT across Nevada.

Post and cable fencing to protect portions of the Old Spanish NHT West of Mountain Springs: BLM would develop and implement a plan for post and cable fencing to protect sections of the Old Spanish NHT in the vicinity or Stump Springs and Sandy Valley Road west of Las Vegas.

Interpretation of the History of Transportation: In conjunction with its partners, BLM would explore possibilities for developing exhibits at locations where Native American Trails, the Old Spanish NHT, the Mormon Wagon Road, the Union Pacific Railroad, and Arrowhead highway could be interpreted to inform the public about the history of transportation in Southern Nevada.

Gypsum Cave post and cable fencing, site reclamation, and travel management: These actions would limit access of vehicles to the cave over power line roads, close and reclaim unauthorized roads, and clean up vandalism of the cave and associated areas.

Designation of other TCPs valued by the Nuwu people: In consultation with the Nuwu, BLM would propose, document, and manage other TCPs on BLM lands in southern Nevada.

Per the PA, the BLM Wyoming State Office is lead for compliance with Section 106 of the NHPA on behalf of the federal agencies (36 CFR 800.2(a)(2)), as evidenced by the Memorandum of Understanding between BLM and Western. In consultation with Western, the four SHPOs (Wyoming, Colorado, Utah, and Nevada), USFS, Bureau of Reclamation, Native American Tribes, and other

consulting parties, the BLM would determine whether construction of the Project would have an adverse effect on any historic properties, including TCPs and properties of traditional religious and cultural importance to Native American Tribes. If the BLM determines that a property would be adversely affected, mitigation would be proposed to minimize or mitigate those effects in accordance with the PA. Mitigation to minimize or mitigate adverse effects may include, but would not be limited to, one or more of the following measures:

- Data recovery, which might include the systematic professional excavation of a historic property;
- Use of landscaping or other techniques that would minimize or eliminate visual effects to a property's setting;
- Development of interpretive materials (e.g., historic markers, exhibits, interpretive brochures, or publications);
- Historic American Buildings Survey/Historic American Engineering Record or other agreed upon historic recordation process; or
- Other mitigation determined by the BLM through consultation with Western, the SHPOs, USFS, Bureau of Reclamation, Native American Tribes, and other consulting parties.

Mitigation measures would be based on the types of impacts relevant to the site type and to the scope and nature of the impact. Per the PA, unavoidable adverse effects to historic properties, including TCPs and properties of traditional religious and cultural importance, would be minimized or mitigated through implementation of a historic properties treatment plan (HPTP). The HPTP would address the property adversely affected and set forth means to minimize or mitigate the proposed Project's effects. A detailed description of treatment proposed for historic properties, including TCPs and properties of traditional religious and cultural importance, as well as the rationale would be provided in the plan. Proposed treatment also would take into account visual, atmospheric, and auditory effects to a property's setting where those aspects of integrity help convey its significance. If data recovery is the preferred treatment option for a site, then the BLM would ensure that the developed treatment is based on an appropriate research design and is reviewed and approved by Western, the SHPOs, USFS, Bureau of Reclamation, Native American Tribes, and other consulting parties.

Visual impacts to historic properties where setting contributes to their NRHP eligibility and from which the proposed Project would be visible would be determined through viewshed analysis, on-site inspection, and photo inspection. The analysis also may be conducted for sites identified by tribal representatives as those sites in which visual impacts could occur. The viewshed analysis would be used to determine which physical feature of the proposed Project would be visible from a property for which setting is an important aspect of integrity. Non-specular conductors and shield/ground wires would be used as a design feature to reduce potential visual effects (see applicant committed design features in **Appendix C**, **Table C-2**). Adverse effects to the integrity of a property's setting would be minimized or mitigated as stipulated in the PA and HPTP.

Based on the proposed surface water control system and implementation of erosion control measures, potential effects to historic properties located within and outside of the APE as a result of drainage or soil erosion are anticipated to be minor (see design features in **Appendix C**, **Table C-2**).

To minimize the potential for illegal collection, vandalism, and inadvertent damage associated with increases in the number of construction personnel in the construction zone, Project personnel would be instructed on the federal, state, and tribal laws that protect historic properties, including prohibition of collection and removal of cultural material as outlined in the PA and applicant committed design features (**Appendix C**, **Table C-2**). Illegal collection and vandalism associated with increased access to the APE by the general public via newly created access roads potentially would be reduced in some

areas where construction roads would be reclaimed and access restricted to operation and maintenance personnel.

An additional means of reducing the potential for illegal collecting of and vandalism to historic properties located within or adjacent to the APE may be through the "Site Stewardship Program," which is a state-sponsored program consisting mainly of volunteers who are educated on the importance of protecting our cultural heritage. The volunteers assist land managers in monitoring archaeological resources and reporting destruction, vandalism, or degradation of sites through regularly scheduled site visits. It should be noted that these programs may not be available in every part of the states crossed by the proposed Project and, therefore, may not be applicable in many instances.

To minimize impacts associated with ORVs, construction and maintenance traffic outside of the ROW normally would be restricted to pre-designated access or public roads as stipulated in the applicant committed design features (**Appendix C, Table C-2**).

As provided in the PA, if any previously unknown archaeological sites are discovered during construction, all construction activities would cease in the area of the discovery, and the BLM or applicable land management agency would be notified of the find. The BLM would implement an Inadvertent Discovery Plan, which would be developed prior to issuance of a Notice to Proceed. The plan would be included as an appendix to the HPTP.

Per the PA, Native American human remains, funerary objects, and items of cultural patrimony encountered on federal land during construction would be handled according to the provisions of the NAGPRA and its implementing regulations (43 CFR 10). Construction would not resume in the area of the discovery until the BLM or applicable land management agency has issued a Notice to Proceed. Native American human remains and associated grave offerings found on state or private land would be handled in accordance with applicable state law. Non-Native American human remains found on federal, state, or private land would be treated in accordance with applicable state laws.

Summary: As previously stated, once the final route has been selected by the agencies, an intensive Class III inventory and viewshed analysis would be conducted to identify historic properties within the direct, indirect, and cumulative effects APEs and determination of adverse effects to those properties would occur. Until that time, it is unknown how many historic properties would be adversely affected by the proposed Project. Currently, a PA is being developed for the proposed Project. Unavoidable adverse effects to historic properties, including TCPs and properties of traditional religious and cultural importance as a result of construction would be minimized or mitigated as stipulated in the PA, and through implementation of the HPTP and design features. Any previously unknown cultural resources (other than isolates) discovered during construction activities would be handled as detailed in the PA.

Information obtained from the NHTs Inventory was used to assess impacts to the Old Spanish Trail, which is a congressionally designated NHT. Many segments of the Old Spanish Trail would be crossed by alternatives in Utah and Nevada; several of those segments are categorized as NHT 1 (verified, evident, and unaltered). Additionally, some of the alternatives in Utah and Nevada would be visible from segments of the trail that are categorized as NHT 1 for several miles. Those segments crossed by the alternatives or from which the alternatives would be visible are identified later in this section under the comparison of alternatives for each region. Depending on which alternative is chosen as the final route, direct and visual impacts to the Old Spanish Trail could occur as a result of the proposed Project. If direct and/or visual impacts to the Old Spanish Trail would occur, the impacts would be minimized or mitigated as stipulated in the PA and HPTP as well as through implementation of the applicant committed design features (**Appendix C, Table C-2**).

Operation Impacts

Direct adverse effects to historic properties, including TCPs and properties of traditional religious and cultural importance to Native American Tribes, would be minimized or mitigated as stipulated in the PA and HPTP prior to construction. In some instances, impacts to these properties would be avoided by spanning the property. Although spanning the property would eliminate direct effects, the property itself would be left in place and at risk of inadvertent damage, illegal collecting of artifacts, and/or vandalism during routine maintenance or if emergency maintenance is required. To minimize the potential for illegal collection, vandalism, and inadvertent damage, Project personnel would be instructed on the federal, state, and tribal laws that protect historic properties, including prohibition of collection and removal of cultural material, as stipulated in the applicant committed design features (**Appendix C**, **Table C-2**).

Summary: The design feature prohibiting collection or removal of cultural material would reduce the incidence of vandalism or illegal collection of artifacts by Project personnel. However, these types of impacts may still occur as a result of increased public access to previously inaccessible areas.

Decommissioning Impacts

Decommissioning impacts to historic properties, including TCPs and properties of traditional religious and cultural importance would be similar to those described for operation impacts. There would be a beneficial effect to historic properties located in the viewshed of the proposed Project as the transmission line structures are removed from view.

Summary: The design feature prohibiting collection or removal of cultural material would reduce the incidence of vandalism, inadvertent damage, and/or illegal collection of artifacts by Project personnel during activities associated with decommission. Visual impacts to historic properties and cultural landscapes would be reduced.

3.11.6.3 Region I

Construction, operation, and decommissioning impacts in Region I and the means to minimize or mitigate those impacts would be the same as those discussed in Section 3.11.6.2, Impacts Common to All Alternative Routes and Associated Components. However, the magnitude of impacts would vary depending on the amount of ground disturbance, the length of the transmission line, and the visibility of the transmission line and other aboveground facilities. It should be noted that the site totals provided in the site summary tables are based on databases of previously recorded sites documented during field inventories conducted for other projects that fall within the APE. As such, if areas along an alternative have been previously inventoried, site totals most likely will be high; however, there are occasions when a small number of sites or no sites are located during field inventories. Conversely, if no or limited field inventories have been previously conducted along an alternative, site totals will be low or zero. Given this bias, the site totals may not be indicative of actual site occurrence, but do provide a baseline for the impact analysis.

Table 3.11-4 provides a comparison of site totals (within the 500-foot-wide APE), NRHP eligibility, historic trail/road crossings, visibility of the alternative from the historic trail/road, inventory coverage, site density, disturbance acreage, and miles of transmission line and access roads associated with each alternative route in Region I. The site information is based on the files search data.

Table 3.11-4 Summary of Region I Alternative Route Impacts

Parameter		Alternative I-A	Alternative I-B	Alternative I-C	Alternative I-D
Site Types	Prehistoric	38	40	54	53
	Historic	9	9	15	11
	Multi-component	6	7	13	12
	Potential TCPs[1]	2	2	1	2
	No information	5	5	7	3
Site Totals[2]		60	63	90	81
Historic Trails/Roads Crossed and Visibility	Cherokee Trail	1 non-contributing segment crossed; visibility of the alternative – 24 miles	1 non-contributing segment crossed; visibility of the alternative – 27 miles	1 contributing segment crossed; visibility of the alternative – 10 miles	3 non-contributing segments crossed; visibility of the alternative – 29 miles
	Overland Trail	1 non-contributing segment crossed; visibility of the alternative – 9 miles	1 non-contributing segment crossed; visibility of the alternative – 9 miles	1 contributing segment crossed; visibility of the alternative – 8 miles	1 contributing segment crossed; visibility of the alternative – 8 miles
	Lincoln Highway	No segments crossed; visibility of the alternative – 65 miles	No segments crossed; visibility of the alternative – 65 miles	No segments crossed; visibility of the alternative – 64 miles	No segments crossed; visibility of the alternative – 65 miles
	Rawlins to Baggs Road	1 segment crossed (unknown if contributing); visibility of the alternative – 5 miles	1 segment crossed (unknown if contributing); visibility of the alternative – 5 miles	3 segments crossed (1 contributing; 2 unknown if contributing); visibility of the alternative – 29 miles	1 segment crossed (unknown if contributing); visibility of the alternative – 9 miles
Approximate Percent APE Inventory Coverage		14 percent	14 percent	9 percent	14 percent
Average Site Density[3]		4 sites per 100 acres inventoried	5 sites per 100 acres inventoried	9 sites per 100 acres inventoried	6 sites per 100 acres inventoried
Initial Disturbance[4]		2,072 acres	2,101 acres	2,484 acres	2,212 acres
Miles of Transmission Line and Access Roads		156 miles; 201 miles	158 miles; 204 miles	186 miles; 237 miles	168 miles; 213 miles
NRHP Status[5]	Listed	0	0	0	0
	Eligible for Listing	19	20	34	27
	Not Eligible	26	28	32	36
	Unevaluated	13	13	23	16

[1] In general, sites in which Native American Tribes attach traditional religious and cultural significance are referred to as TCPs by the Tribes. TCPs can include, but are not limited to, stone cairns, stone circles, rock shelters, rock art, prehistoric campsites, and village sites. At this time, no tribal consultation regarding verification of these sites as TCPs or other sites of importance to the Tribes has occurred. Until consultation with Native American Tribes to evaluate these sites has occurred, these sites are considered potential TCPs based on their site type and description.

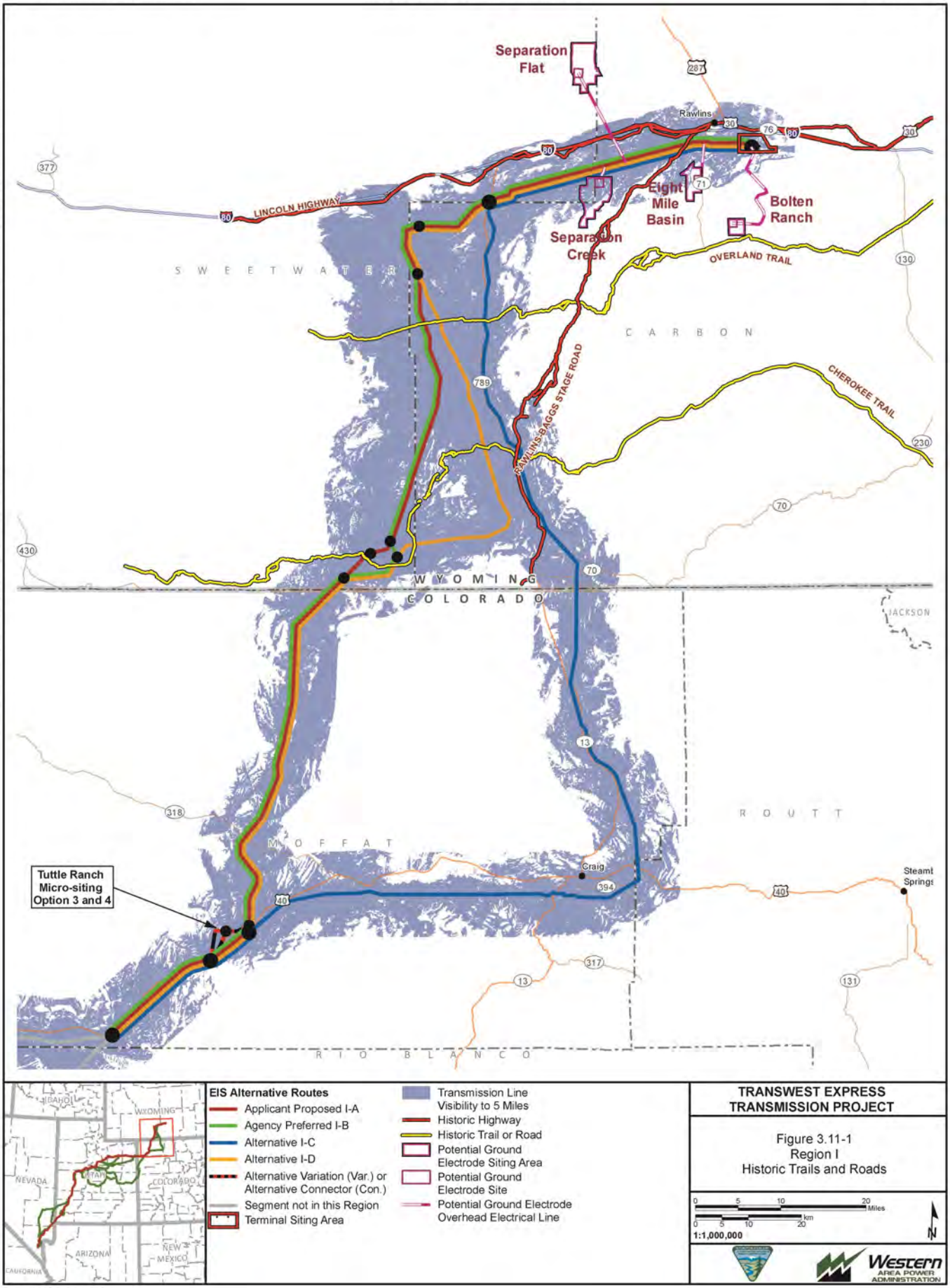
[2] Site totals are for the 500-foot-wide APE.

[3] Site densities were calculated using previous inventory data and reflect how many sites were documented per 100 acres inventoried.

[4] In general, direct impacts to historic properties could increase in relation to the amount of ground disturbance associated with construction.

[5] The discrepancy between the overall site total and the total for NRHP eligibility status is due to the fact that the potential TCPs also are prehistoric sites and therefore are counted twice in the overall site total. As such, the difference between the overall site total and total for eligibility is equal to the number of potential TCPs.

Sources: SWCA 2012a,b, 2011a,b.



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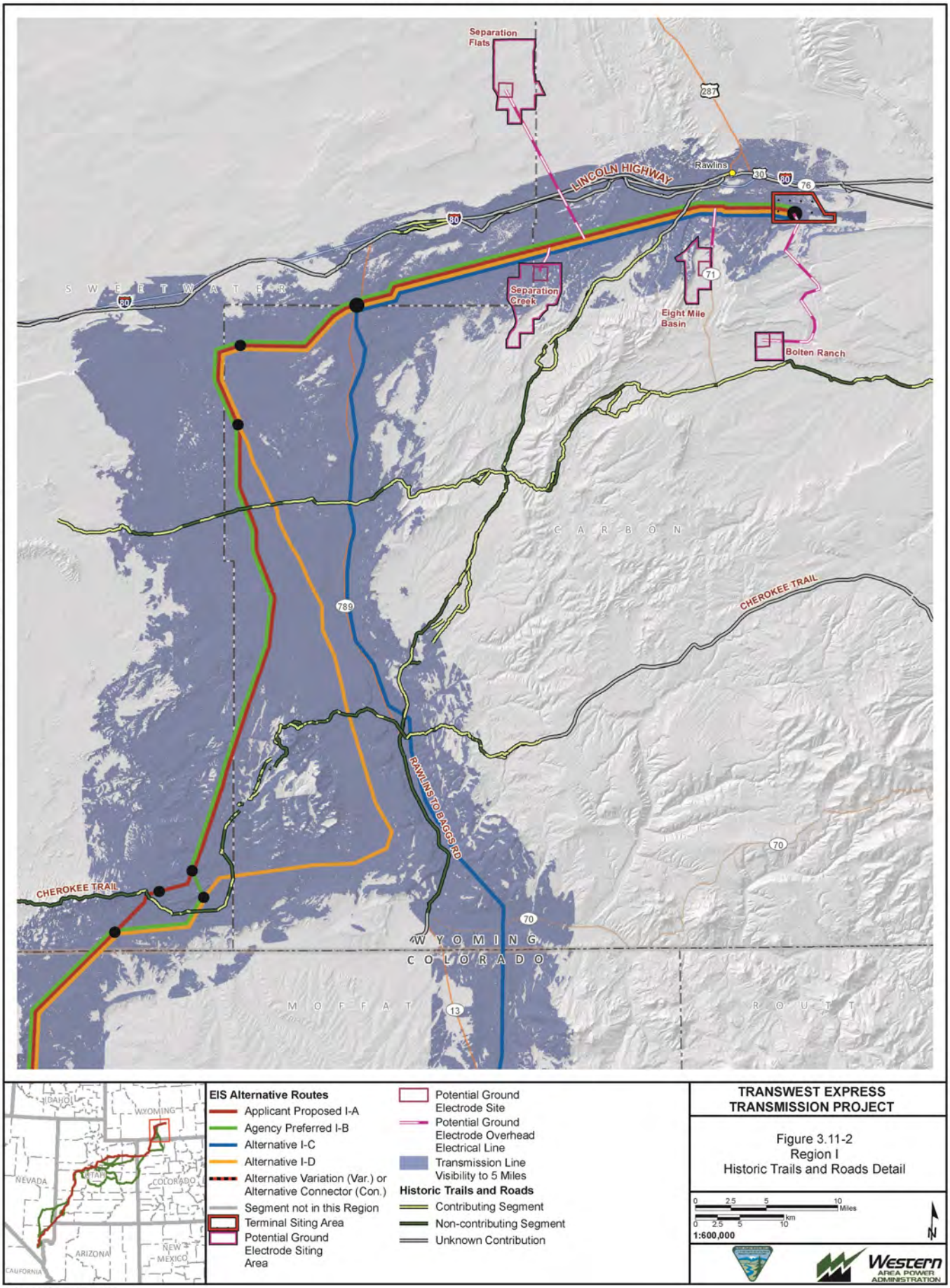

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Alternative I-A (Applicant Proposed)

Under Alternative I-A, there would be approximately 2,072 acres of initial ground disturbance with 156 miles of transmission line and 201 miles of access roads. A total of 60 previously recorded cultural resources have been identified within the 500-foot-wide APE of Alternative I-A, including 38 prehistoric sites, 9 historic sites, 6 multi-component sites containing both prehistoric and historic components, 2 potential TCPs, and 5 sites with no descriptive information. The majority of prehistoric sites are open lithic sites with no features, ground stone or ceramics, and open camps. Historic sites consist mainly of artifact scatters with no evidence of structures or features, campsites, and historic trails and roads (including the Victory Highway [US-40]). Of the previously recorded sites, 19 are eligible for the NRHP, 26 are not eligible, and 13 are unevaluated. It should be noted that unevaluated sites are treated as eligible until a determination of NRHP eligibility can be made. Average site density is comparatively low at 4 sites per 100 acres inventoried, with approximately14 percent of the APE inventoried.

Alternative I-A would cross one segment of the Cherokee and Overland trails and one segment of the Rawlins to Baggs Road; the Lincoln Highway would not be crossed (**Figure 3.11-1** and **Figure 3.11-2**). The segments of the Cherokee and Overland trails crossed by the alternative are both non-contributing segments to each trail's overall NRHP eligibility. At this time, it is unknown whether the segment of the Rawlins to Baggs Road crossed by the alternative is a contributing segment. This alternative would be visible from the Cherokee Trail for approximately 24 miles (10 of the 24 miles from contributing segments), Overland Trail for approximately 9 miles (4 of the 9 miles from contributing segments), and Rawlins to Baggs Road for approximately 5 miles (4 of the 5 miles from contributing segments). Although the Lincoln Highway would not be crossed by Alternative I-A, the alternative would be visible from the highway for approximately 65 miles (4 of the 65 miles from contributing segments). Visibility of the alternative from historic trails, road, and highway is based on the 5-mile (either side of the 500-foot-wide APE) viewshed.

Alternative I-B (Agency Preferred)

Under Alternative I-B, there would be approximately 2,101 acres of initial ground disturbance with 158 miles of transmission line and 204 miles of access roads. A total of 63 previously recorded cultural resources have been identified within the 500-foot-wide APE of Alternative I-B, including 40 prehistoric sites, 9 historic sites, 7 multi-components sites with both prehistoric and historic components, 2 potential TCPs, and 5 sites with no descriptive information. The majority of prehistoric sites are open lithic sites with no features, ground stone or ceramics, open camps, and stone features. Historic sites consist mainly of artifact scatters with no evidence of structures or features, campsites, and historic trails and roads (including the Victory Highway [US-40]). Of the previously recorded sites in the 500-foot-wide APE, 20 are eligible for the NRHP, 28 are not eligible, and 13 are unevaluated. Average site density is 5 sites per 100 acres inventoried, with approximately 14 percent of the APE inventoried. The Tuttle Ranch micro-siting options would not substantially affect the results of the cultural resources analysis.

The Cherokee and Overland trails and Rawlins to Baggs Road each would be crossed once by Alternative I-B; no segments of the Lincoln Highway would be crossed (**Figure 3.11-1** and **Figure 3.11-2**). The segments of the Cherokee and Overland trails crossed by the alternative are both non-contributing segments to each trail's overall NRHP eligibility. At this time, it is unknown whether the segment of the Rawlins to Baggs Road crossed by the alternative is a contributing segment. Alternative I-B would be visible from the Cherokee Trail for approximately 27 miles (11 of the 27 miles from contributing segments), Overland Trail for approximately 9 miles (4 of the 9 miles from contributing segments), and the Rawlins to Baggs Road for approximately 5 miles (1 of the 5 miles from contributing segments). Although the Lincoln Highway would not be crossed by Alternative I-B, the alternative would be visible from the highway for approximately 65 miles (3 of the 65 miles from contributing segments). Visibility of the alternative from the historic trails, road, and highway is based on the 5-mile (either side of the 500-foot-wide APE) viewshed.

Alternative I-C

Under Alternative I-C, there would be approximately 2,484 acres of initial ground disturbance with 186 miles of transmission line and 237 miles of access roads. A total of 90 previously recorded cultural resources have been identified within the 500-foot-wide APE of Alternative I-C, including 54 prehistoric sites, 15 historic sites, 13 multi-component sites, 1 potential TCP, and 7 sites with no descriptive information. Prehistoric sites consist mainly of open camps and open lithic sites while the majority of historic sites consist of artifact scatters, trails, roads (including the Victory Highway [US-40]), and ditches/canals. Of the previously recorded sites in the 500-foot-wide APE, 34 are eligible for the NRHP, 32 are not eligible, and 23 are unevaluated. Average site density is comparatively high at 9 sites per 100 acres inventoried with approximately 9 percent of the APE inventoried.

Alternative I-C would cross the Cherokee and Overland trails once, and the Rawlins to Baggs Road three times; no segments of the Lincoln Highway would be crossed (**Figure 3.11-1** and **Figure 3.11-2**). The segments of the Cherokee and Overland trails crossed by Alternative I-C are both contributing segments to the trail's overall NRHP eligibility. Of the three segments of the Rawlins to Baggs Road crossed by the alternative, one is a contributing segment. At this time, it is unknown whether the remaining two segments of the road are contributing segments. This alternative would be visible from the Cherokee Trail for approximately 10 miles (4 of the 10 miles from contributing segments), Overland Trail for approximately 8 miles (6 of the 8 miles from contributing segments), and the Rawlins to Baggs Road for approximately 29 miles (6 of the 29 miles from contributing segments). Although the Lincoln Highway would not be crossed by Alternative I-C, the alternative would be visible from the highway for approximately 64 miles (3 of the 64 miles from contributing segments). Visibility of Alternative I-C from the historic trails, road, and highway is based on the 5-mile (either side of the 500-foot-wide APE) viewshed.

Alternative I-D

Under Alternative I-D, there would be approximately 2,212 acres of initial ground disturbance with 168 miles of transmission line and 213 miles of access roads. A total of 81 previously recorded cultural resources have been identified within of the 500-foot-wide APE of Alternative I-D, including 53 prehistoric sites, 11 historic sites, 12 multi-component sites, 2 potential TCPs, and 3 sites with no descriptive information. Prehistoric sites mainly consist of open camps, open lithic, stone circles, and cairns. Historic sites mainly consist of artifact scatters, trails, roads (including the Victory Highway [US-40]), and structures. Of the previously recorded sites, 27 are eligible for the NRHP, 36 are not eligible, and 16 are unevaluated. Average site density is 6 sites per 100 acres inventoried with approximately14 percent of the APE inventoried.

Alternative I-D would cross the Cherokee Trail three times, and the Overland Trail and Rawlins to Baggs Road would be crossed once; the Lincoln Highway would not be crossed (**Figure 3.11-1** and **Figure 3.11-2**). The three segments of the Cherokee Trail and one segment of the Overland Trail crossed by Alternative I-D are non-contributing segments to the trails' overall NRHP eligibility. At this time, it is unknown whether the segment of the Rawlins to Baggs Road crossed by the alternative is a contributing segment. This alternative would be visible from the Cherokee Trail for approximately 29 miles (11 of the 29 miles from contributing segments), the Overland Trail for approximately 8 miles (4 of the 8 miles from contributing segments), and the Rawlins to Baggs Road for approximately 9 miles (1 of the 9 miles from contributing segments). Although the Lincoln Highway would not be crossed by Alternative I-D, the alternative would be visible from the highway for approximately 65 miles (3 of the 65 miles from contributing segments). Visibility of the alternative from the historic trails, road, and highway is based on the 5-mile (either side of the 500-foot-wide APE) viewshed.

Region I Conclusion

Initial ground disturbance associated with Alternative I-A would be less than the other alternatives. Decreased ground disturbance could decrease the potential for direct impacts to known and unknown historic properties compared to the other alternatives. Under Alternative I-A, historic trail and road

crossings would be less than Alternatives I-C and I-D, but similar to Alternative I-B. Overall visibility of the transmission line from the historic trails, road, and highway would be similar under Alternatives I-A and I-B and less than under Alternatives I-C and I-D. There are 32 historic properties (including eligible and unevaluated sites) previously identified within the 500-foot-wide APE of Alternative I-A, which is less than under the other alternatives. Compared to the other alternatives, Alternative I-A has fewer average sites per 100 acres inventoried with approximately 14 percent. Proposed mitigations **CUL-3** and **CUL-4** would be applied to reduce impacts to historic properties in Region I. Adverse effects would be minimized or mitigated as stipulated in the PA. Unanticipated discoveries would be handled as outlined in the PA.

Alternative Ground Electrode Systems in Region I

The northern ground electrode system would be necessary within 100 miles of the Northern Terminal as discussed in Chapter 2.0. Although the location for this system has not been determined, conceptual locations and connections to the alternative routes have been provided in the Project POD. At this time, no file searches have been completed for the alternative ground electrode system locations in Region I. Cultural resources inventories, including a files search, would be conducted prior to construction. If historic properties are located within the direct effects APE and would be adversely affected, the properties would be avoided unless avoidance is not feasible. Proposed mitigation **CUL-3** and **CUL-4** would be applied to reduce impacts to historic properties in Region I. Adverse effects would be minimized or mitigated as stipulated in the PA and through implementation of design features. Unanticipated discoveries would be handled as outlined in the PA.

Table 3.11-5 provides a summary of potential impacts associated with the four combinations of alternative route and location possibilities for the northern ground electrode system. Included in the table are disturbance acreages, miles of transmission line and access road, and the number of historic roads or trails crossed by the siting area and/or access road. It should be noted that direct impacts to historic properties could increase in relation to the amount of ground disturbance associated with construction of the electrode systems.

Table 3.11-5 Summary of Region I Alternative Ground Electrode System Impacts

Alternative Ground Electrode System Locations	Analysis
Bolten Ranch (All Alternatives)	Ground disturbance associated with this alternative ground electrode system location would be 151 acres. There would be 15 miles of transmission line and 21 miles of access road. No historic trails or roads would be crossed by the Bolten Ranch alternative ground electrode system.
Separation Flat (All Alternatives)	Ground disturbance associated with this alternative ground electrode system location would be 121 acres. There would be 12 miles of transmission line and 15 miles of access road. The access road associated with the Separation Flat alternative ground electrode system would cross three non-contributing segments of the Lincoln Highway.
Separation Creek (All Alternatives)	Ground disturbance associated with this alternative ground electrode system location would be 76 acres. There would be 2 miles of transmission line and 3 miles of access road. No historic trails or roads would be crossed by the Separation Creek alternative ground electrode system.
Eight Mile Basin (All Alternatives)	Ground disturbance associated with this alternative ground electrode system location would be 89 acres. There would be 5 miles of transmission line and 1 mile of access road. No historic trails or roads would be crossed by the Eight Mile Basin alternative ground electrode system.

Sources: SWCA 2012a, 2011a.

3.11.6.4 Region II

Construction, operation, and decommissioning impacts in Region II and the means to minimize or mitigate those impacts would be the same as those discussed in Section 3.11.6.2, Impacts Common to All Alternative Routes and Associated Components. However, the magnitude of impacts would vary

depending on the amount of ground disturbance, the length of the transmission line, and the visibility of the transmission line and other aboveground facilities. **Table 3.11-6** provides a comparison of site totals (within the 500-foot-wide APE), NRHP eligibility, historic trail crossings, visibility of the alternative from the historic trail, inventory coverage, site density, disturbance acreage, and miles of transmission line and access roads associated with each alternative route in Region II.

Alternative II-A (Applicant Proposed)

Under Alternative II-A, there would be approximately 3,759 acres of initial ground disturbance with 258 miles of transmission line and 395 miles of access roads. A total of 41 previously recorded cultural resources have been identified within the 500-foot-wide APE of Alternative II-A, including 19 prehistoric sites, 19 historic sites, 1 multi-component site, and 2 sites with no descriptive information. The majority of prehistoric sites are lithic scatters, open campsites, and lithic and ceramic scatters. Historic sites consist mainly of trash scatters, railroads, roads, and ditches/canals. Of the previously recorded sites in the 500-foot-wide APE, 13 are eligible for the NRHP, 27 are not eligible, and 1 is unevaluated. Average site density is 2 sites per 100 acres inventoried with comparatively low inventory coverage of 14 percent of the APE inventoried.

The Strawberry IRA and Fruitland micro-siting options would not substantially affect the results of the cultural resources impact analyses. Alternative II-A would not cross or parallel the Old Spanish Trail.

Table 3.11-6 Summary of Region II Alternative Route Impacts

Parameter		Alternative						
		II-A	**II-B**	**II-C**	**II-D**	**II-E**	**II-F**	**II-G**
Site Type	Prehistoric	19	97	136	28	21	28	17
	Historic	19	51	50	42	27	26	17
	Multi-component	1	9	9	4	3	3	1
	Potential TCPs[1]	0	8	14	1	0	0	0
	No information	2	8	7	1	1	0	1
Site Totals[2]		41	173	216	76	52	57	36
Historic Trails Crossed	Old Spanish Trail	No segments crossed	4 segments crossed: 1 segment NHT II, 1 segment NHT III, 2 segments NHT V	11 segments crossed: 1 segment NHT II, 1 segment NHT III, and 5 segments NHT V, and 4 segments not categorized	No segments crossed	No segments crossed	No segments crossed	No segments crossed
	Visibility of the alternative from the Trail	No visibility	58 miles – 7 miles NHT II, 6 miles NHT III, 27 miles NHT IV, and 18 miles NHT V	108 miles – 17 miles NHT II, 8 miles NHT III, 31 miles NHT IV, 27 miles of NHT V, and 25 miles not categorized	No visibility	No visibility	No visibility	No visibility
Approximate Percent APE Inventory Coverage		14 percent	19 percent	21 percent	24 percent	17 percent	22 percent	14 percent
Average Site Density[3]		2 sites per 100 acres inventoried	4.2 sites per 100 acres inventoried	4.4 sites per 100 acres inventoried	2 sites per 100 acres inventoried	2 sites per 100 acres inventoried	2 sites per 100 acres inventoried	2 sites per 100 acres inventoried

Table 3.11-6 Summary of Region II Alternative Route Impacts

Parameter		Alternative						
		II-A	II-B	II-C	II-D	II-E	II-F	II-G
Initial Disturbance[4]		3,759 acres	4,874 acres	4,981 acres	3,970 acres	3,977 acres	4,226 acres	3,703 acres
Miles of Transmission Line and Access Roads		258 miles; 395 miles	346 miles; 492 miles	365 miles: 488 miles	259 miles: 422 miles	268 miles; 412 miles	265 miles; 455 miles	252 miles; 395 miles
NRHP Status[5]	Listed	0	1	1	0	0	0	0
	Eligible for Listing	13	60	57	22	18	14	12
	Not Eligible	27	81	79	48	31	40	23
	Unevaluated	1	23	65	5	3	3	0

[1] In general, sites in which Native American Tribes attach traditional religious and cultural significance are referred to as TCPs by the Tribes. TCPs can include, but are not limited to, stone cairns, stone circles, rock shelters, rock art, prehistoric campsites, and village sites. At this time, no tribal consultation regarding verification of these sites as TCPs or other sites of importance to the Tribes has occurred. Until consultation with Native American Tribes to evaluate these sites has occurred, these sites are considered potential TCPs based on their site type and description.

[2] Site totals are for the 500-foot-wide APE.

[3] Site densities were calculated using previous inventory data and reflect how many sites were documented per 100 acres inventoried

[4] In general, direct impacts to historic properties could increase in relation to the amount of ground disturbance associated with construction.

[5] The discrepancy between the overall site total and the total for NRHP eligibility status is due to the fact that the potential TCPs also are prehistoric sites and therefore are counted twice in the overall site total. As such, the difference between the overall site total and total for eligibility is equal to the number of potential TCPs.

Sources: SWCA 2012b,c,e, 2011b,c.

Alternative II-B

Under Alternative II-B, there would be approximately 4,874 acres of initial ground disturbance with 346 miles of transmission line and 492 miles of access roads. A total of 173 previously recorded cultural resources have been identified within the 500-foot-wide APE of Alternative II-B, including 97 prehistoric sites, 51 historic sites, 9 multi-component sites, 8 potential TCPs, and 8 sites with no descriptive information. The majority of sites recorded in the APE are prehistoric open campsites, lithic scatters, and limited activity areas, and historic artifact scatters, irrigation ditches, railroads, and roads. Of the previously recorded sites in the 500-foot-wide APE, 1 is listed on the NRHP, 60 are eligible for the NRHP, 81 are not eligible, and 23 are unevaluated. It should be noted that unevaluated sites are treated as eligible until a determination of NRHP eligibility can be made. Average site density is 4.2 sites per 100 acres inventoried with approximately 19 percent of the APE inventoried.

As previously discussed, the information obtained from the NHTs Inventory was used in the analysis of impacts to the Old Spanish Trail, which is a congressionally designated NHT. As part of the inventory, each trail segment was categorized under the NHT Condition Categories, which are inter-agency standard classifications designed to assess the comparative character of visible trail remnants observed during the inventory (AECOM 2012). The categories only encompass the condition of the trail tread, and do not reflect the scenic or historic character or integrity of the NHT setting or surrounding landscape. In addition, the categories are not intended to, nor do they provide criteria for, assessing the NRHP eligibility; however, they do provide an assessment of conditions that can be used as part of the NRHP evaluation. There are six NHT Condition Categories:

NHT I – Location verified, evident, and unaltered

NHT II – Location verified and evident with minor alteration

NHT III – Location verified with little remaining evidence

NHT IV – Location verified and permanently altered

NHT V – Location approximate or not verified

NHT VI – Location verified with historic reconstruction

Alternative II-B would cross the Old Spanish Trail four times (**Figure 3.11-3** and **Figure 3.11-4**). Of the four segments crossed by the alternative, one is categorized as NHT II, one is categorized as NHT III, and two are categorized as NHT V. This alternative would be visible from the Old Spanish Trail for approximately 58 miles. Of those 58 miles, approximately 7 miles of trail segments are categorized as NHT II, approximately 6 miles of trail segments are categorized as NHT III, approximately 27 miles of trail segments are categorized as NHT IV, and, approximately 18 miles are categorized as NHT V. Visibility of Alternative II-B from the historic trail is based on the 5-mile (either side of the 500-foot-wide APE) viewshed.

Alternative II-C

Under Alternative II-C, there would be approximately 4,981 acres of initial ground disturbance with 365 miles of transmission line and 488 miles of access roads. A total of 216 previously recorded cultural resources have been identified within the 500-foot-wide APE of Alternative II-C, including 136 prehistoric sites, 50 historic sites, 9 multi-component sites, 14 potential TCPs, and 7 sites with no descriptive information. Prehistoric sites mainly consist of lithic scatters and temporary campsites, while historic sites mainly consist of artifact scatters, habitation, roads, railroads, and ditches. Of the sites previously recorded in the 500-foot-wide APE, 1 is listed on the NRHP, 57 are eligible for the NRHP, 79 are not eligible, and 65 are unevaluated. Average site density is comparatively high at 4.4 sites per 100 acres inventoried with approximately 21 percent of the APE inventoried.

This alternative would cross the Old Spanish Trail 11 times (**Figure 3.11-3** and **Figure 3.11-4**). Of the 11 segments crossed by the alternative, 1 is categorized as NHT II, 1 is categorized as NHT III, 5 are categorized as NHT V, and 4 are on NFS land and are not categorized. Alternative II-C would be visible from the Old Spanish Trail for approximately 108 miles. Of those 108 miles, approximately 17 miles of trail segments are categorized as NHT II, approximately 8 miles are categorized as NHT III, approximately 31 miles are categorized as NHT IV, approximately 27 miles are categorized as NHT V, and approximately 25 miles are not categorized and are located on NFS lands. Visibility of the alternative from the historic trail is based on the 5-mile (either side of the 500-foot-wide APE) viewshed.

Alternative II-D

Under Alternative II-D, there would be approximately 3,970 acres of initial ground disturbance with 259 miles of transmission line and 422 miles of access roads. A total of 76 previously recorded cultural resources have been identified within the 500-foot-wide APE of Alternative II-D, including 28 prehistoric sites, 42 historic sites, 4 multi-component sites, 1 potential TCP, and 1 site with no descriptive information. The majority of sites include prehistoric lithic scatters and temporary campsites, and historic ditches, roads, structures, and artifact scatters. Of the sites previously recorded in the 500-foot-wide APE, 22 are eligible for the NRHP, 48 are not eligible, and 5 are unevaluated. Average site density is 2 sites per 100 acres inventoried with a comparatively high APE inventory coverage of 24 percentage.

Alternative II-D would not cross or parallel the Old Spanish Trail.

Alternative II-E

Under Alternative II-E, there would be approximately 3,977 acres of initial ground disturbance with 268 miles of transmission line and 412 miles of access roads. A total of 52 previously recorded cultural resources have been identified within the 500-foot-wide APE of Alternative II-E, including 21 prehistoric sites, 27 historic sites, 3 multi-component sites, and 1 site with no descriptive information. Of the previously recorded sites, 18 are eligible for the NRHP, 31 are not eligible, and 3 are unevaluated. The majority of previously recorded sites include historic trash scatters, structures, ditches/canals, and roads, and prehistoric open campsites and lithic scatters. Average site density is 2 sites per 100 acres inventoried with approximately 17 percent of the APE inventoried.

Alternative II-E would not cross or parallel the Old Spanish Trail.

Alternative II-F

Under Alternative II-F, there would be approximately 4,226 acres of initial ground disturbance with 265 miles of transmission line and 455 miles of access roads. A total of 57 previously recorded cultural resources have been identified within the 500-foot-wide APE of Alternative II-F, including 28 prehistoric sites, 26 historic sites, and 3 multi-component sites. The majority of previously recorded sites include historic trash scatters, structures, ditches/canals, and roads and prehistoric open campsites and lithic scatters. Of the sites previously recorded in the 500-foot-wide APE, 14 are eligible for the NRHP, 40 are not eligible, and 3 are unevaluated. Average site density is 2 sites per 100 acres inventoried with approximately 22 percent of the APE inventoried.

Alternative II-F would not cross or parallel the Old Spanish Trail.

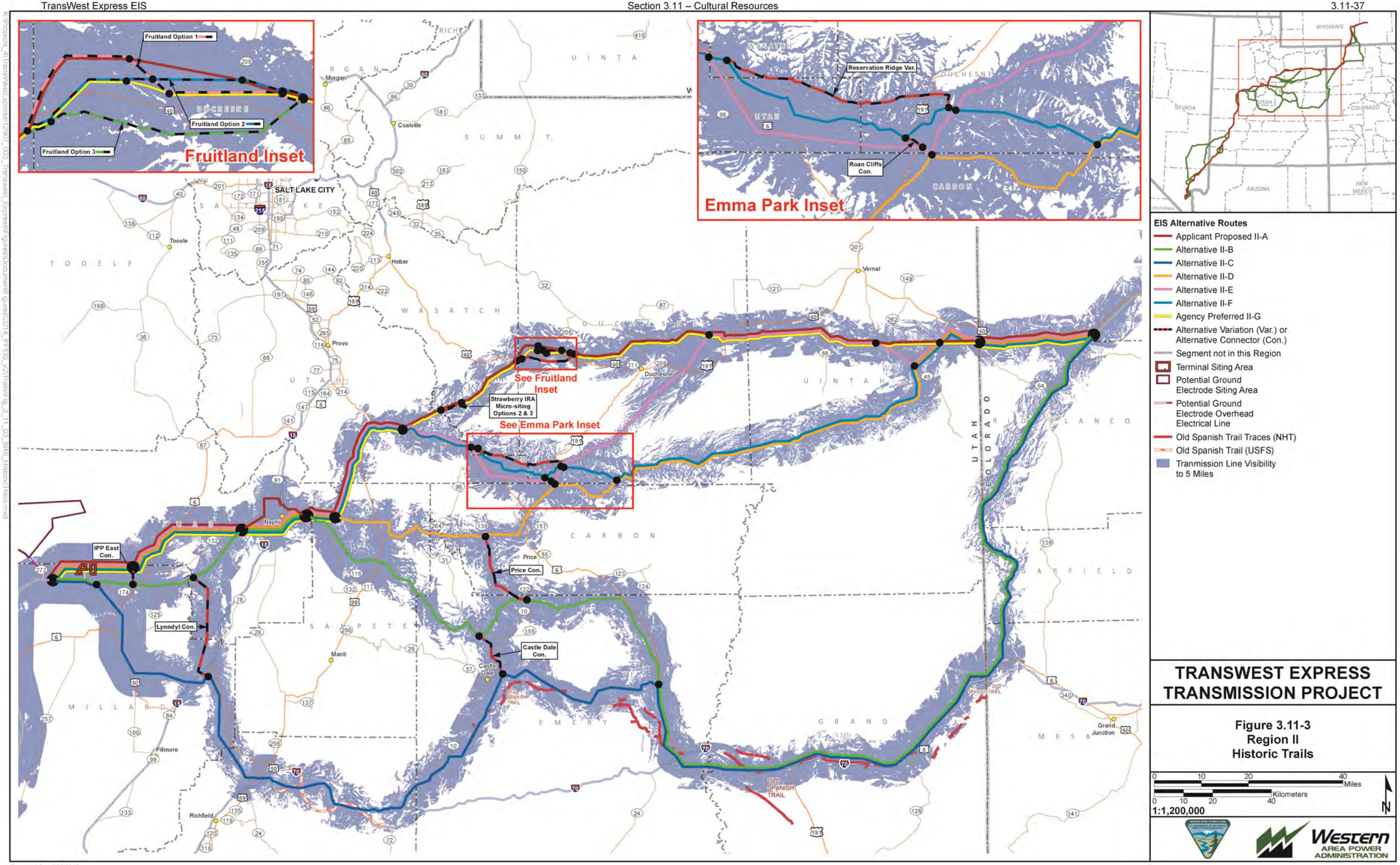
Alternative II-G (Agency Preferred)

Under Alternative II-G, there would be approximately 3,703 acres of initial ground disturbance with 252 miles of transmission line and 395 miles of access roads. A total of 36 previously recorded cultural resources have been identified within the 500-foot-wide APE of Alternative II-G, including 17 prehistoric sites, 17 historic sites, 1 multi-component site, and 1 site with no descriptive information. The majority of previously recorded sites include historic trash scatters, structures, ditches/canals, and roads and prehistoric open campsites and lithic scatters. Of the sites previously recorded in the 500-foot-wide APE, 12 are eligible for the NRHP, 23 are not eligible, and 1 is unevaluated. Average site density is 2 sites per 100 acres inventoried with approximately 14 percent of the APE inventoried.

Alternative II-G would not cross or parallel the Old Spanish Trail.

Region II Conclusion

Initial ground disturbance associated with Alternative II-G would be less than the other alternatives. Decreased ground disturbance could decrease the potential for direct impacts to known and unknown historic properties compared to the other alternatives. Under Alternative II-G, no segments of the Old Spanish Trail would be crossed by the alternative nor would the alternative be visible from the trail. In comparison, Alternatives II-B and II-C would cross the trail 4 times and 11 times, respectively, and would be visible from the trail for more than 50 miles. There are 17 historic properties previously identified within the 500-foot-wide APE of Alternative II-G, which is less than the other alternatives. Average site density for Alternative II-G is the same as Alternatives II-A II-D, II-E, and II-F, and less than Alternatives II-B and II-C. The APE coverage of 14 percent for Alternative II-G is the same as Alternative II-A, and lower than the other alternatives. Proposed mitigation **CUL-3** and **CUL-4** would be applied to reduce impacts to historic properties in Region II. Adverse effects would be minimized or mitigated as stipulated in the PA. Unanticipated discoveries would be handled as outlined in the PA.



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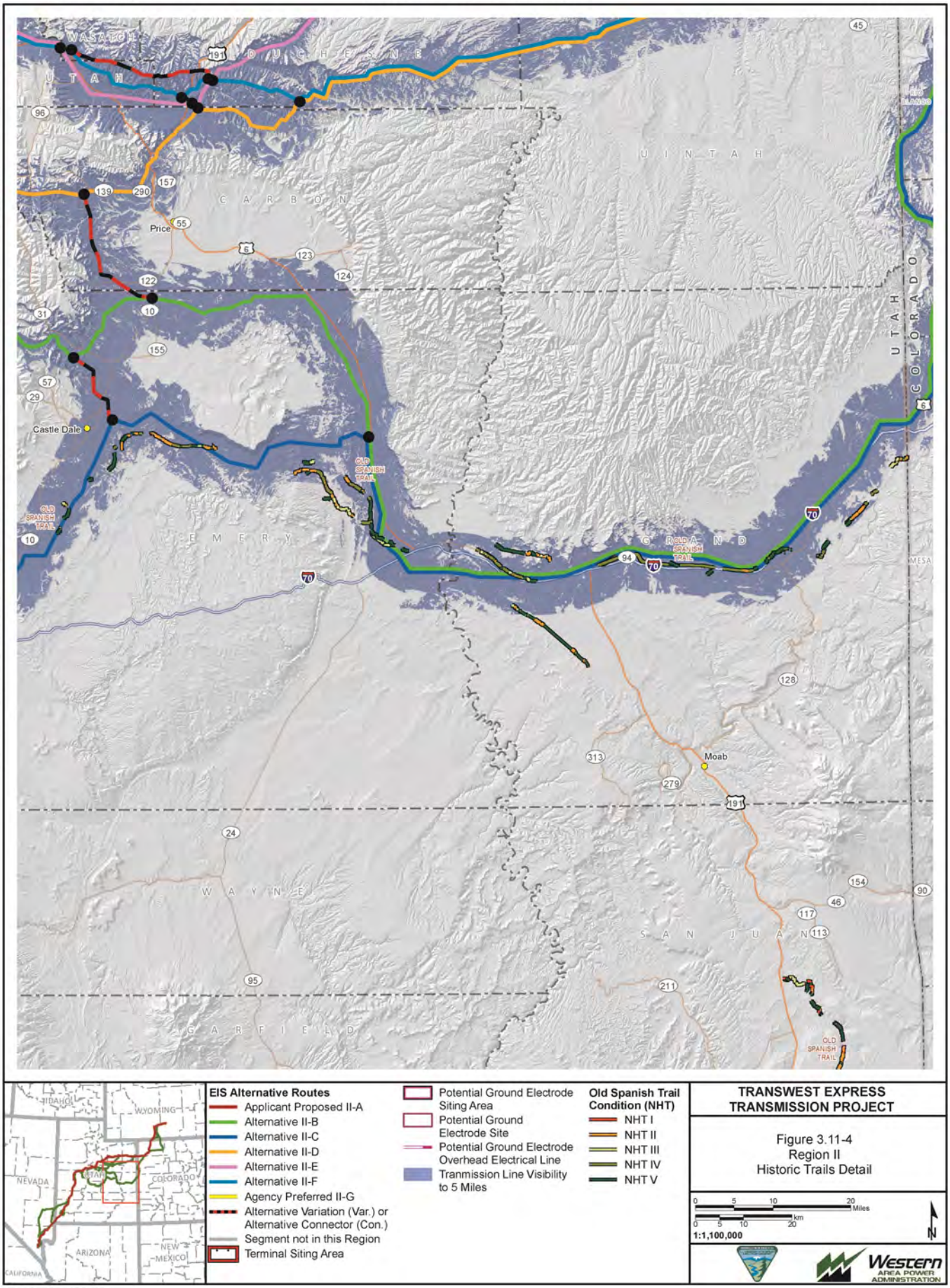

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Alternative Variation in Region II

Table 3.11-7 summarizes the impacts associated with the alternative variation in Region II.

Table 3.11-7 Summary of Region II Alternative Variation Impacts

Alternative Variation	Analysis
Reservation Ridge Alternative Variation	No cultural resources have been previously recorded within the 500-foot-wide APE of the Reservation Ridge Alternative Variation or of the portion of the alternative it would replace. No segments of the Old Spanish Trail would be crossed by the alternative variation or portion of the alternative it would replace. Ground disturbance associated with the Reservation Ridge Alternative Variation would be 422 acres compared to 444 acres of initial disturbance associated with the portion of the alternative it would replace.

Alternative Connectors in Region II

Table 3.11-8 summarizes the impacts associated with the alternative connectors in Region II.

Table 3.11-8 Summary of Region II Alternative Connector Impacts

Alternative Connector	Analysis	Conclusion
Roan Cliffs Alternative Connector	No cultural resources have been previously recorded within the 500-foot-wide APE of this alternative connector. Cultural resources inventory coverage is approximately 7 percent of the 500-foot-wide APE.	It is unknown at this time as to how many historic properties would be adversely affected by this alternative connector. Unavoidable adverse effects to historic properties would be minimized or mitigated as stipulated in the PA and through implementation of the design features. Any previously unknown cultural resources (other than isolates) discovered during construction activities would be handled as detailed in the PA.
Lynndyl Alternative Connector	A total of 4 cultural resources have been previously documented within the 500-foot-wide APE of this alternative connector. Of the 4 resources, 1 has been previously evaluated as eligible for the NRHP and the remaining 3 resources have been previously evaluated as not eligible for the NRHP. Cultural resources inventory coverage is approximately 12 percent.	Same conclusion as described above for the Roan Cliffs Alternative Connector.
IPP East Alternative Connector	No cultural resources have been previously recorded within the 500-foot-wide APE of this alternative connector. Cultural resources inventory coverage is approximately 26 percent.	Same conclusion as described above for the Roan Cliffs Alternative Connector.
Price Alternative Connector	A total of 15 cultural resources have been previously documented in the 500-foot-wide APE of this alternative connector. Of these, 5 are eligible for the NRHP, 9 are not eligible, and 1 is unevaluated. Cultural resources inventory coverage is approximately 22 percent.	Same conclusion as described above for the Roan Cliffs Alternative Connector.
Castle Dale Alternative Connector	A total of 6 cultural resources have been previously documented in the 500-foot-wide APE of this alternative connector. Of these, 2 are eligible for the NRHP, 3 are not eligible, and 1 is unevaluated. Cultural resources inventory coverage is approximately 9 percent.	Same conclusion as described above for the Roan Cliffs Alternative Connector.

Sources: SWCA 2012c,e, 2011c.

3.11.6.5 Region III

Construction, operation, and decommissioning impacts in Region III and the means to minimize or mitigate those impacts would be the same as those discussed in Section 3.11.6.2, Impacts Common to All Alternative Routes and Associated Components. However, the magnitude of impacts would vary depending on the amount of ground disturbance, the length of the transmission line, and the visibility of the transmission line and other aboveground facilities. **Table 3.11-9** provides a comparison of site totals (within the 500-foot-wide APE), NRHP eligibility, historic trail crossings, visibility of the alternative from the historic trail, inventory coverage, site density, disturbance acreage, and miles of transmission line associated with each alternative route in Region III.

Table 3.11-9 Summary of Region III Alternative Route Impacts for Cultural Resources

Parameter		Alternative III-A	Alternative III-B	Alternative III-C	Alternative III-D
Site Type	Prehistoric	72	107	119	115
	Historic	17	9	16	9
	Multi-component	4	2	4	2
	Potential TCPs[1]	5	21	6	20
	No Information	9	7	16	7
Site Totals[2]		107	146	161	153
Historic Trail Crossed and Visibility	Old Spanish Trail	2 to 4 segments crossed (I eligible); 1 NHT-1, 3 unrated	1 segment crossed: 1 segment NHT I; 1 segment not categorized	1 segments crossed: 1 segment NHT I; 1 segment not categorized	1 segment crossed: 1 segment NHT I; 1 segment not categorized
	Visibility of the alternative from the Trail	Visible along 53 miles (8 miles NHT-I, 2 miles NHT-II, < 0.1 mile NHT-IV; 43 miles-unevaluated[1])	Visible along 38 miles (5 miles NHT-I, 1 mile NHT-II, < 0.1 mile -NHT-IV; 32 miles unevaluated	Visible along 6 miles (none evaluated)	Visible along 38 miles (5 miles NHT-I, 1 mile NHT-II, < 0.1 mile -NHT-IV; 32 miles unevaluated
Approximate APE Percent Inventory Coverage		24 percent	26 percent	21 percent	27 percent
Average Site Density[3]		2.5 sites per 100 acres inventoried	3 sites per 100 acres inventoried	4 sites per 100 acres inventoried	2.8 sites per 100 acres inventoried
Initial Disturbance[4]		3,588 acres	3,558 acres	3,797 acres	3,500 acres
Miles of Transmission Line and Access Roads		276 miles; 335 miles	284 miles; 320 miles	308 miles; 338 miles	281 miles; 303 miles

Table 3.11-9 Summary of Region III Alternative Route Impacts for Cultural Resources

Parameter		Alternative III-A	Alternative III-B	Alternative III-C	Alternative III-D
NRHP Status[5]	Listed	0	0	0	0
	Eligible for Listing	61	44	64	51
	Not Eligible	30	49	76	49
	Unevaluated	11	32	15	33

[1] In general, sites in which Native American Tribes attach traditional religious and cultural significance are referred to as TCPs by the Tribes. TCPs can include, but are not limited to, stone cairns, stone circles, rock shelters, rock art, prehistoric campsites, and village sites. At this time, no tribal consultation regarding verification of these sites as TCPs or other sites of importance to the Tribes has occurred. Until consultation with Native American Tribes to evaluate these sites has occurred, these sites are considered potential TCPs based on their site type and description.

[2] Site totals are for the 500-foot-wide APE.

[3] Site densities were calculated using previous inventory data and reflect how many sites were documented per 100 acres inventoried

[4] In general, direct impacts to historic properties could increase in relation to the amount of ground disturbance associated with construction.

[5] The discrepancy between the overall site total and the total for NRHP eligibility status is due to the fact that the potential TCPs also are prehistoric sites and therefore are counted twice in the overall site total. As such, the difference between the overall site total and total for eligibility is equal to the number of potential TCPs.

Sources: SWCA 2012c-e; 2011c.

Alternative III-A (Applicant Proposed)

Under Alternative III-A, there would be approximately 3,588 acres of initial ground disturbance with 276 miles of transmission line and 335 miles of access roads. A total of 107 previously recorded cultural resources have been identified within the 500-foot-wide APE of Alternative III-A, including 72 prehistoric sites, 17 historic sites, 4 multi-component sites with both prehistoric and historic components,5 potential TCPs, and 9 sites with no descriptive information. Prehistoric sites consist mainly of open campsites and lithic scatters; historic sites mainly consist of artifact scatters, structures, and roads. Of the previously recorded sites, 61 are eligible for the NRHP, 30 are not eligible, and 11 are unevaluated. It should be noted that unevaluated sites are treated as eligible until a determination of NRHP eligibility can be made. The Mountain Meadows Massacre Site and Mountain Meadows NHL are located approximately 0.5 mile from Alternative III-A (see Section 3.12, Visual Resources, for the results of the viewshed analysis conducted for the Mountain Meadows Massacre Site). Average site density is 2.5 sites per 100 acres inventoried with 24 percent APE inventory coverage.

The Old Spanish Trail would be crossed between two and four times by Alternative III-A (**Figures 3.11-5**, **3.11-6**, and **3.11-7**; the exact number of crossing is not known because portions of the Old Spanish Trail near the Alternative III-A alignment have not been yet been fully mapped, inventoried, or evaluated. One segment has been categorized as NHT I (location verified, evident, and unaltered); remaining segments are not categorized. The segments that are not categorized are located on NFS lands and BLM lands that were not part of the BLM's NHT inventory. Alternative III-A would be visible from the Old Spanish Trail for approximately 53 miles. Of those 53 miles, approximately 8 miles of trail segments are categorized as NHT I, approximately 2 miles of trail segments are categorized as NHT II (location verified and evident with minor alteration), approximately 0.1 mile is categorized as NHT IV (location verified and permanently altered), and approximately 43 miles are not categorized. Visibility of Alternative III-A from the historic trail is based on the 5-mile (either side of the 500-foot-wide APE) viewshed.

Alternative III-B

Under Alternative III-B, there would be approximately 3,558 acres of initial ground disturbance with 284 miles of transmission line and 320 miles of access roads. A total of 146 previously recorded

cultural resources have been identified within the 500-foot-wide APE of Alternative III-B, including 107 prehistoric sites, 9 historic sites, 2 multi-component sites, 21 potential TCPs, and 7 sites with no descriptive information. The majority of prehistoric sites are open camps, temporary campsites, and lithic scatters, while the majority of historic sites are artifact scatters. Of the previously recorded sites, 44 are eligible for the NRHP, 49 are not eligible, and 32 are unevaluated. The Mountain Meadows Massacre Site and Mountain Meadows NHL are located approximately 31 miles from Alternative III-B. Average site density is 2.8 sites per 100 acres inventoried with a comparatively high APE inventory coverage of 26 percent.

The Old Spanish Trail would be crossed once by Alternative III-B (**Figures 3.11-5**, **3.11-6**, and **3.11-7**). The segment, which is on BLM land, was not evaluated as part of the BLM's NHT inventory. Alternative III-B would be visible from the trail for approximately 38 miles. Of those 38 miles, approximately 5 miles of trail segments are categorized as NHT I (location verified, evident, and unaltered) and approximately 1 mile of trail segments are categorized as NHT II (location verified and evident with minor alteration); the remaining mileage is unevaluated. Visibility of the alternative from the historic trail is based on the 5-mile (either side of the 500-foot-wide APE) viewshed.

Alternative III-C

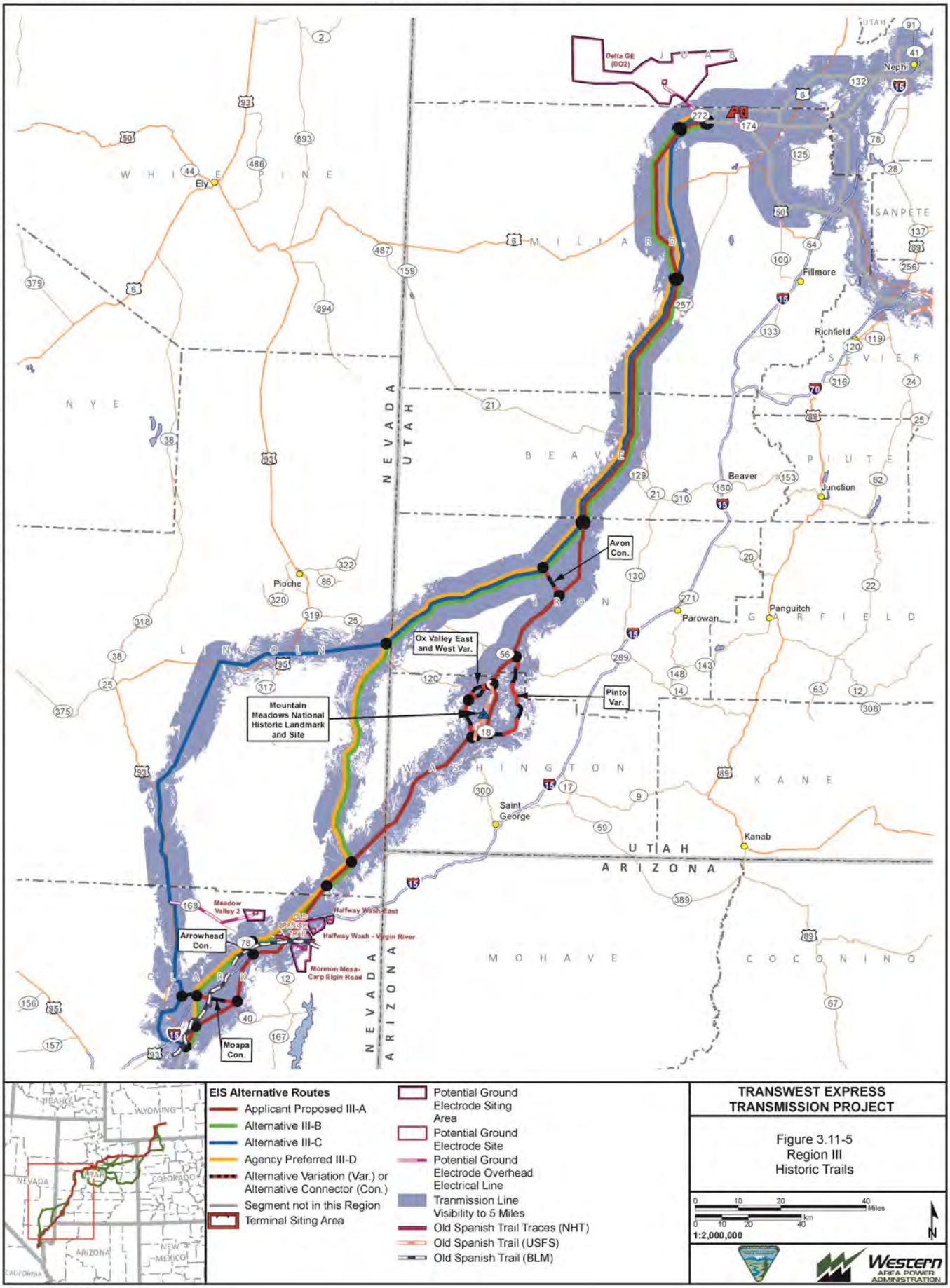
Under Alternative III-C, there would be approximately 3,797 acres of initial ground disturbance with 308 miles of transmission line and 338 miles of access roads. A total of 161 previously recorded cultural resources have been identified within the 500-foot-wide APE of Alternative III-C, including 119 prehistoric sites, 16 historic sites, 4 multi-component sites, 6 potential TCPs, and 16 sites with no descriptive information. Most of the sites consist of prehistoric open and sheltered lithic sites and open camps, while most of the historic sites are trash scatters. Of the previously recorded sites, 64 are eligible for the NRHP, 76 are not eligible, and 15 are unevaluated. The Mountain Meadows Massacre Site and Mountain Meadows NHL are located approximately 28 miles from Alternative III-C. Average site density is comparatively high at 4 sites per 100 acres inventoried with an APE inventory coverage of 21 percent.

The Old Spanish Trail would be crossed once by Alternative III-C (**Figures 3.11-5**, **3.11-6**, and **3.11-7**). The segment, which is on BLM land, was not evaluated as part of the BLM's NHT inventory. Alternative III-C would be visible from the trail for approximately 6 miles, none of which have been evaluated. Visibility of the alternative from the historic trail is based on the 5-mile (either side of the 500-foot-wide APE) viewshed.

Alternative III-D (Agency Preferred)

Under Alternative III-D, there would be approximately 3,500 acres of initial ground disturbance with 281 miles of transmission line and 303 miles of access roads. A total of 153 previously recorded cultural resources have been identified within the 500-foot-wide APE of Alternative III-D, including 115 prehistoric sites, 9 historic sites, 2 multi-component sites with both prehistoric and historic components, 20 potential TCPs, and 7 sites with no descriptive information. The majority of prehistoric sites are open camps, temporary campsites, and lithic scatters, while the majority of historic sites are artifact scatters. Of the previously recorded sites, 51 are eligible for the NRHP, 49 are not eligible, and 33 are unevaluated. The Mountain Meadows Massacre Site and Mountain Meadows NHL are located approximately 31 miles from Alternative III-D. Average site density is 3 sites per 100 acres inventoried with a comparatively high APE inventory coverage of 27 percent.

The Old Spanish Trail would be crossed once by Alternative III-D (**Figures 3.11-5**, **3.11-6**, and **3.11-7**). Impacts are the same as Alternative III-B because the crossing and trail viewshed are the same.



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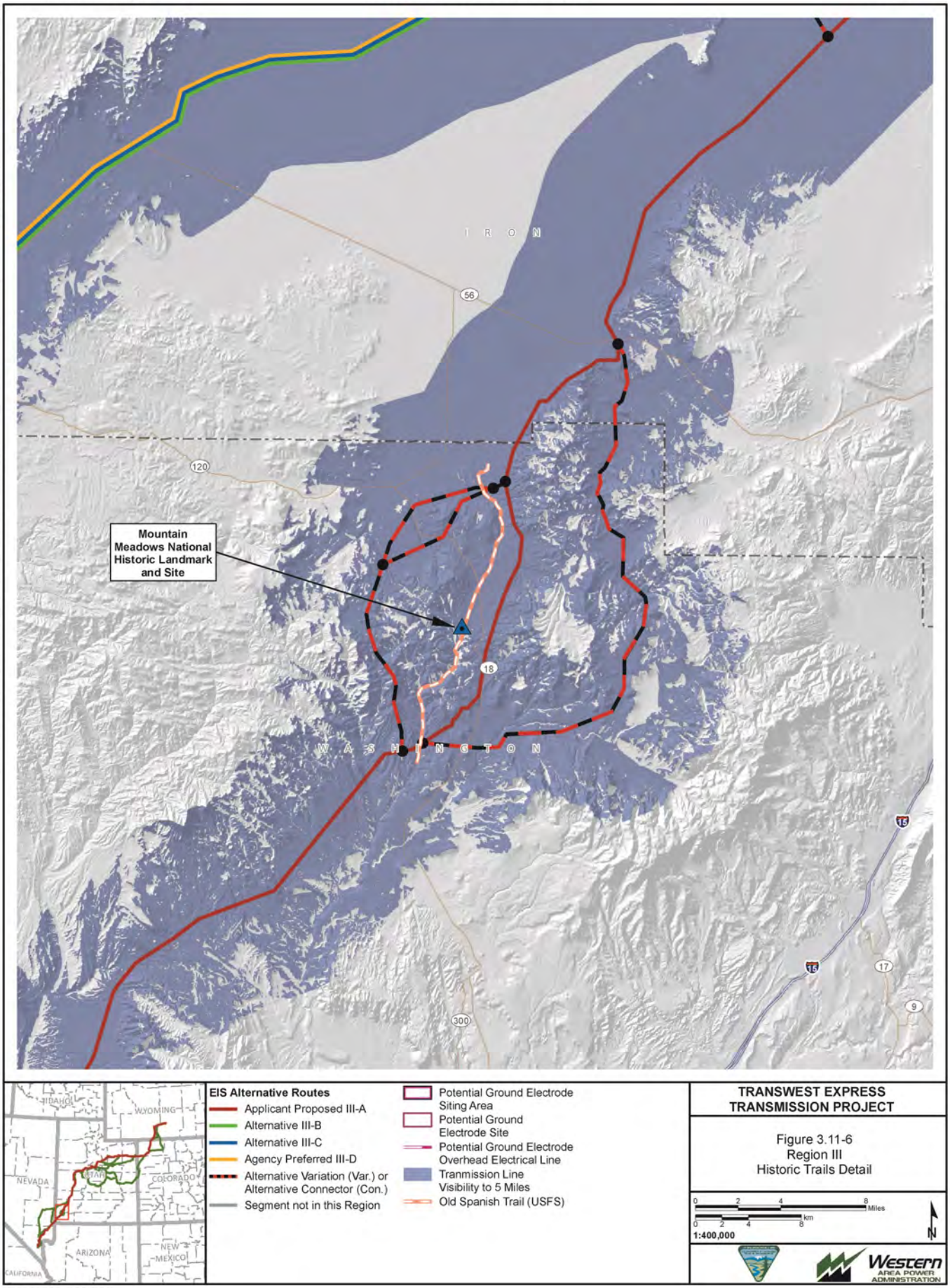

TRANSWEST EXPRESS TRANSMISSION PROJECT

Figure 3.11-6
Region III
Historic Trails Detail

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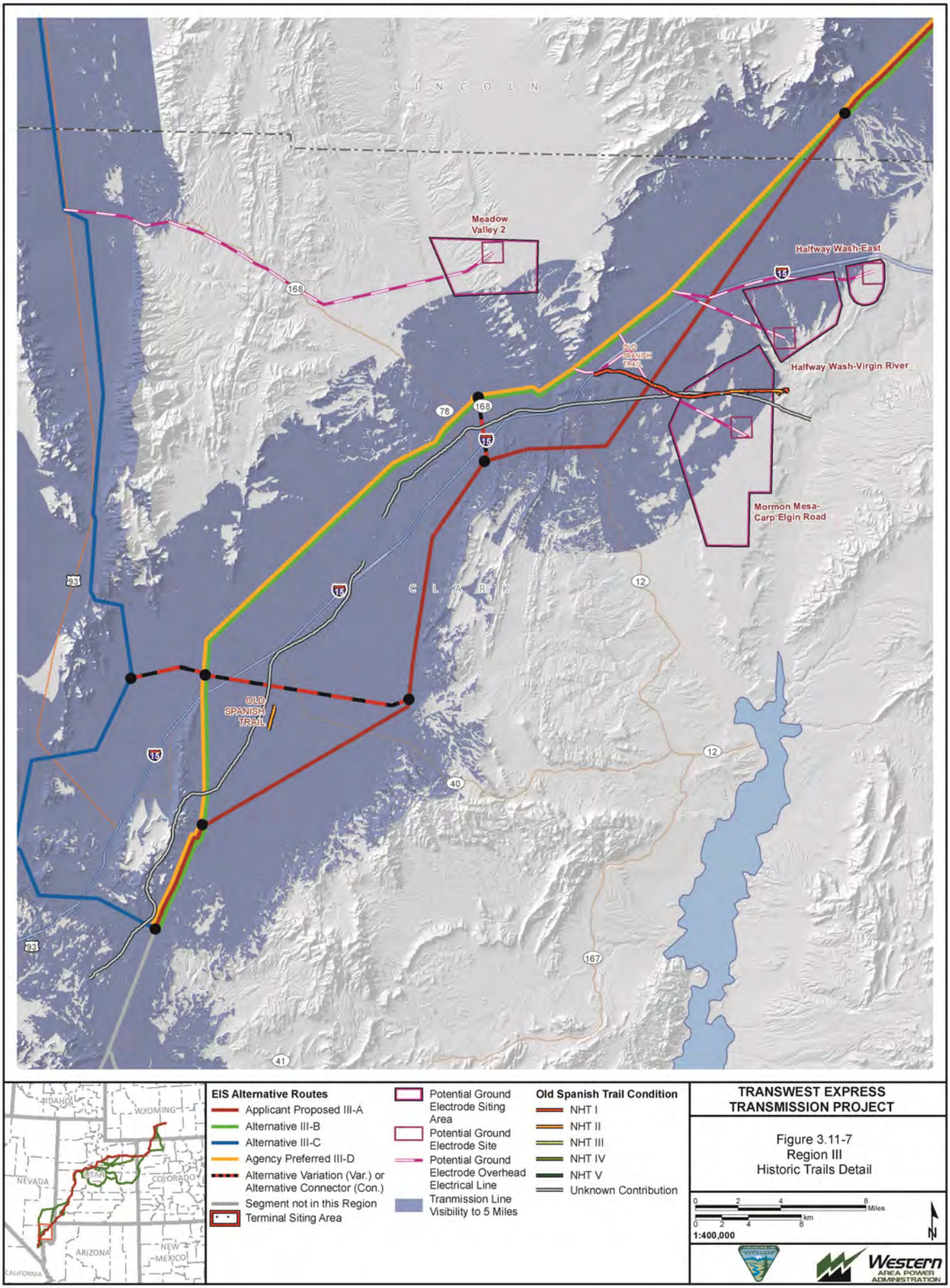

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Region III Conclusion

Alternative III-A would have more acres of initial ground disturbance than Alternative III-B and III-D, but less than Alternative III-C. Fewer previously recorded historic properties (including both eligible and unevaluated sites) have been identified within Alternative III-A compared to the other alternatives, with a comparatively low average site density of 2.5 sites per 100 acres inventoried and 24 percent inventory coverage. Alternative III-A would be located 0.5 mile from the Mountain Meadows Massacre Site and NHL; whereas, the other three alternatives are over 28 miles from the site and NHL. As such, Alternative III-A would have a greater potential to visually impact the Mountain Meadows Massacre Site and Mountain Meadows NHL due to its close proximity and a greater potential to directly impact unmarked graves associated with the massacre site (the exact locations of all of the gravesites are unknown). The Old Spanish Trail would be crossed by all alternatives. Alternative III-A would have the greatest impact on the Old Spanish Trail, crossing 2 to 4 segments and affecting the viewshed of approximately 53 miles of the Old Spanish Trail. Alternative III-C would have the least impact to the Old Spanish Trail. Proposed mitigation **CUL-1, CUL-3**, and **CUL-4** would be applied to reduce impacts to historic properties in Region III. Adverse effects would be minimized or mitigated as stipulated in the PA. Unanticipated discoveries would be handled as outlined in the PA.

Alternative Variations in Region III

Table 3.11-10 provides a comparison of impacts associated with the alternative variations in Region III.

Table 3.11-10 Summary of Region III Alternative Variation Impacts

Alternative Variation	Analysis
Ox Valley East Alternative Variation	A total of 6 cultural resources have been previously recorded within the 500-foot-wide APE of the Ox Valley East Alternative Variation compared to 12 cultural resources previously recorded within the 500-foot-wide APE of the portion of Alternative III-A it would replace. For the variation, 4 of the sites are NRHP-eligible, 1 is not eligible, and 1 is unevaluated. Along the portion of Alternative III-A, which would be replaced by the variation, 4 of the 12 sites are NRHP-eligible, 6 are not eligible, and 2 are unevaluated. Based on the files search of the Ox Valley East Alternative Variation, the percentage of cultural resources inventory coverage is approximately 50 percent of the 500-foot-wide APE. Average site density is approximately 1.2 sites per 100 acres inventoried. In comparison, the percentage of inventory coverage is approximately 8.5 percent with average site density at 15.4 sites per 100 sites inventoried for the portion of Alternative III-A, which would be replaced by the alternative variation. A non-categorized segment of the Old Spanish Trail would be crossed by the alternative variation and by the portion of the alternative it would replace. Visibility of the alternative variation from the trail would be approximately 6 miles compared to 13 miles for the portion of Alternative III-A it would replace. The variation would be located approximately 3 miles from the Mountain Meadows Massacre Site and Mountain Meadows NHL. In comparison, the portion of Alternative III-A which would be replaced by the variation, would be located 0.12 mile from the Mountain Meadows Massacre Site and Mountain Meadows NHL. Ground disturbance associated with the Ox Valley East Alternative Variation would be 319 acres compared to 282 acres of initial disturbance associated with the portion of Alternative III-A it would replace.
Ox Valley West Alternative Variation	A total of 6 cultural resources have been previously recorded within the 500-foot-wide APE of the Ox Valley West Alternative Variation compared to 12 cultural resources previously recorded within the 500-foot-wide APE of the portion of Alternative III-A it would replace. For the variation, 4 of the sites are NRHP-eligible, 1 is not eligible, and 1 is unevaluated. Along the portion of Alternative III-A which would be replaced by the variation, 4 of the 12 sites are NRHP-eligible, 6 are not eligible, and 2 are unevaluated. Based on the files search of the Ox Valley West Alternative Variation, the percentage of cultural resources inventory coverage is approximately 55 percent of the 500-foot-wide APE. Average site density is approximately 1.1 sites per 100 acres inventoried. In comparison, the percentage of inventory coverage is approximately 8.5 percent with average site density at 15.4 sites per 100 sites inventoried for the portion of Alternative III-A which would be replaced by the alternative variation. A non-categorized segment of the Old Spanish Trail would be crossed by the alternative variation and by the portion of the alternative it would replace. Visibility of the alternative variation from the trail would

Table 3.11-10 Summary of Region III Alternative Variation Impacts

Alternative Variation	Analysis
	be approximately 6 miles compared to 13 miles for the portion of Alternative III-A it would replace. The variation would be located approximately 3 miles from the Mountain Meadows Massacre Site and Mountain Meadows NHL. In comparison, the portion of Alternative III-A, which would be replaced by the variation, would be located 0.1 mile from the Mountain Meadows Massacre Site and Mountain Meadows NHL. Ground disturbance associated with the Ox Valley West Alternative Variation would be 313 acres compared to 282 acres of initial disturbance associated with the portion of Alternative III-A it would replace.
Pinto Alternative Variation[1]	A total of 40 cultural resources have been previously recorded within the transmission line ROW of the Pinto Alternative Variation compared to 13 cultural resources previously recorded within the 500-foot-wide APE of the portion of Alternative III-A it would replace. For the variation, 13 of the sites are NRHP-eligible, 15 are not eligible, and 12 are unevaluated (BLM 2012). Along the portion of Alternative III-A which would be replaced by the variation, 4 of the 13 sites are NRHP-eligible, 7 are not eligible, and 2 are unevaluated. Based on the files search of the Pinto Alternative Variation, the percentage of cultural resources inventory coverage is approximately 46 percent compared to 10 percent for the portion of Alternative III-A it would replace. No segment of the Old Spanish Trail would be crossed by the alternative variation or by the portion of the alternative it would replace. The alternative variation would not be visible from the trail; however, the alternative that would be replaced by the variation would be visible for 13 miles. This alternative variation would be located approximately 5 miles from the Mountain Meadows Massacre Site and Mountain Meadows NHL. In comparison, the portion of Alternative III-A which would be replaced by the variation, would be located 0.1 mile from the Mountain Meadows Massacre Site and Mountain Meadows NHL. Ground disturbance associated with the Pinto Alternative Variation would be 462 acres compared to 415 acres of initial disturbance associated with the portion of Alternative III-A it would replace.

[1] The cultural resources information for the Pinto Alternative Variation was tiered off of the Sigurd to Red Butte No. 2 – 345-kV Transmission Project EIS (BLM 2012). The Sigurd to Red Butte transmission line ROW is 350 feet; whereas, the Project APE is 500 feet. As such, the site counts for the Pinto Alternative Variation are based on a smaller area and are not a direct comparison to the portion of Alternative III-A it would replace.

Sources: BLM 2012; SWCA 2012c,e, 2011c.

Alternative Connectors in Region III

Table 3.11-11 summarizes the impacts associated with the alternative connectors in Region III.

Table 3.11-11 Summary of Region III Alternative Connector Impacts

Alternative Connector	Analysis	Conclusion
Moapa Alternative Connector	A total of four cultural resources have been previously recorded within the 500-foot-wide APE of this alternative connector. Of those, one is NRHP-eligible, one is not eligible, and two are unevaluated. The alternative connector would not be visible from the Old Spanish Trail.	It is unknown at this time as to how many historic properties would be adversely affected by this alternative connector. Unavoidable adverse effects to historic properties would be minimized or mitigated as stipulated in the PA and through implementation of design features. Any previously unknown cultural resources (other than isolates) discovered during construction activities would be handled as detailed in the PA.
Avon Alternative Connector	No cultural resources have been previously recorded within the 500-foot-wide APE of the Avon Alternative Connector.	Same as described above for the Moapa Alternative Connector.

Table 3.11-11 Summary of Region III Alternative Connector Impacts

Alternative Connector	Analysis	Conclusion
Arrowhead Alternative Connector	A total of eight cultural resources have been previously recorded within the 500-foot-wide APE of this alternative connector. Of those, two are not eligible and six are unevaluated. The alternative connector would not be visible from the Old Spanish Trail.	Same as described above for the Moapa Alternative Connector.

Sources: SWCA 2012c-e, 2011c,d.

Alternative Ground Electrode Systems in Region III

The southern ground electrode system would be necessary within 100 miles of the southern terminal as discussed in Chapter 2.0. Although the location for this system has not been determined, conceptual locations and connections to the alternative routes have been provided in the Project POD. At this time, no files searches have been completed for the alternative ground electrode system locations in Region III. Cultural resources inventories, including a files search, would be conducted prior to construction. If historic properties are located within the direct effects APE and would be adversely affected, the properties would be avoided unless avoidance is not feasible. Proposed mitigation **CUL-1, CUL-3**, and **CUL-4** would be applied to reduce impacts to historic properties in Region III. Adverse effects would be minimized or mitigated as stipulated in the PA and through implementation of design features. Unanticipated discoveries would be handled as outlined in the PA.

Table 3.11-12 provides a summary of impacts associated with the eight combinations of alternative route and location possibilities for the southern ground electrode system. Included in the table are disturbance acreages, miles of transmission line and access road, and the number of historic roads or trails crossed by the siting area and/or access road. It should be noted that direct impacts to historic properties could increase in relation to the amount of ground disturbance associated with construction of the electrode systems.

Table 3.11-12 Summary of Region III Alternative Ground Electrode System Location Impacts

Alternative Ground Electrode System Locations	Analysis
Mormon Mesa–Carp Elgin Rd (Alternative III-A)	Ground disturbance associated with this alternative ground electrode system location would be 90 acres. There would be 6 miles of transmission line and 7 miles of access road. The access road associated with this ground electrode system would intersect and parallel the Old Spanish Trail for approximately 4.45 miles. Of those 4.45 miles, 3.65 miles are categorized as NHT I (location verified, evident, and unaltered), 0.7 mile as NHT II (location verified and evident with minor alteration), and 0.1 mile as NHT IV (location verified and permanently altered).
Halfway Wash–Virgin River (Alternative III-A)	Ground disturbance associated with this alternative ground electrode system location would be 83 acres. There would be 8 miles of transmission line and 10 miles of access road. No segments of the Old Spanish Trail would be crossed by this ground electrode system.
Halfway Wash East (Alternative III-A)	Ground disturbance associated with this alternative ground electrode system location would be 101 acres. There would be 4 miles of transmission line and 5 miles of access road. No segments of the Old Spanish Trail would be crossed by this alternative ground electrode system.
Mormon Mesa–Carp Elgin Rd (Alternative III-B)	Ground disturbance associated with this alternative ground electrode system location would be 102 acres. There would be 6 miles of transmission line and 7 miles of access road. The Mormon Mesa-Carp Elgin Rd (Alternative III-B) alternative ground electrode system associated access road would intersect and parallel the Old Spanish Trail for approximately 4.45 miles. Of those 4.45 miles, 3.65 miles are categorized as NHT I (location verified, evident, and unaltered), 0.7 mile as NHT II (location verified and evident with minor alteration), and 0.1 mile as NHT IV (location verified and permanently altered).

Table 3.11-12 Summary of Region III Alternative Ground Electrode System Location Impacts

Alternative Ground Electrode System Locations	Analysis
Halfway Wash–Virgin River (Alternative III-B)	Ground disturbance associated with this alternative ground electrode system location would be 92 acres. There would be 8 miles of transmission line and 9 miles of access road. No segments of the Old Spanish Trail would be crossed by this alternative ground electrode system.
Halfway Wash East (Alternative III-B)	Ground disturbance associated with this alternative ground electrode system location would be 111 acres. There would be 10 miles of transmission line and 12 miles of access road. No segments of the Old Spanish Trail would be crossed by this alternative ground electrode system.
Meadow Valley 2 (Alternative III-C)	Ground disturbance associated with this alternative ground electrode system location would be 170 acres. There would be 22 miles of transmission line and 27 miles of access road. No segments of the Old Spanish Trail would be crossed by the Meadow Valley 2 alternative ground electrode system.
Delta (Design Option 2)	Ground disturbance associated with this alternative ground electrode system location would be 127 acres. There would be 14 miles of transmission line and 16 miles of access road. No segments of the Old Spanish Trail would be crossed by the Delta ground electrode system.

Sources: SWCA 2012a,c,d, 2011a,c,d.

3.11.6.6 Region IV

Construction, operation, and decommissioning impacts in Region IV and the means to minimize or mitigate those impacts would be the same as those discussed in Section 3.11.6.2, Impacts Common to All Alternative Routes and Associated Components. However, the magnitude of impacts would vary depending on the amount of ground disturbance, the length of the transmission line, and the visibility of the transmission line and other aboveground facilities. **Table 3.11-13** provides a comparison of site totals (within the 500-foot-wide APE), NRHP eligibility, historic trail crossings, inventory coverage, site density, disturbance acreage, and miles of transmission line associated with each alternative route in Region IV.

Table 3.11-13 Summary of Region IV Alternative Route Impacts

Parameter		Alternative IV-A	Alternative IV-B	Alternative IV-C
Site Types	Prehistoric	30	10	10
	Historic	17	19	27
	Multi-component	4	0	0
	Potential TCPs[1]	21	7	7
	No Information	1	0	0
Site Totals[2]		73	36	44
Historic Trail Crossed and Visibility	Old Spanish Trail	2 segments crossed (eligibility unknown)	3 segments crossed (eligibility unknown)	3 segments crossed (eligibility unknown)
	Visibility of the alternative from the Trail	36 miles: 5 miles Northern route; 23 miles Mojave route and 8 miles Armjio route	38 miles: 5 miles Northern route; 20 miles Mojave route and 13 miles Armjio route	38 miles: 5 miles Northern route; 20 miles Mojave route and 13 miles Armjio route
Approximate APE Percent Inventory Coverage		48 percent	23 percent	23 percent
Average Site Density[3]		4.8 sites per 100 acres inventoried	5.2 sites per 100 acres inventoried	6 sites per 100 acres inventoried
Initial Disturbance[4]		547 acres	565 acres	623 acres
Miles of Transmission Line and Access Roads		37 miles; 49 miles	40 miles; 51 miles	44 miles; 54 miles

Table 3.11-13 Summary of Region IV Alternative Route Impacts

Parameter		Alternative IV-A	Alternative IV-B	Alternative IV-C
NRHP Status[5]	Listed	3	0	0
	Eligible for Listing	16	13	16
	Not Eligible	23	9	13
	Unevaluated	10	7	8

[1] In general, sites in which Native American Tribes attach traditional religious and cultural significance are referred to as TCPs by the Tribes. TCPs can include, but are not limited to, stone cairns, stone circles, rock shelters, rock art, prehistoric campsites, and village sites. At this time, no tribal consultation regarding verification of these sites as TCPs or other sites of importance to the Tribes has occurred. Until consultation with Native American Tribes to evaluate these sites has occurred, these sites are considered potential TCPs based on their site type and description.

[2] Site totals are for the 500-foot-wide APE.

[3] Site densities were calculated using previous inventory data and reflect how many sites were documented per 100 acres inventoried

[4] In general, direct impacts to historic properties could increase in relation to the amount of ground disturbance associated with construction.

[5] The discrepancy between the overall site total and the total for NRHP eligibility status is due to the fact that the potential TCPs also are prehistoric sites and therefore are counted twice in the overall site total. As such, the difference between the overall site total and total for eligibility is equal to the number of potential TCPs.

Sources: SWCA 2012d,e, 2011d.

Alternative IV-A (Applicant Proposed and Agency Preferred)

Under Alternative IV-A, there would be approximately 547 acres of initial ground disturbance with 37 miles of transmission line and 49 miles of access roads. A total of 73 previously recorded cultural resources have been identified within the 500-foot-wide APE of Alternative IV-A, including 30 prehistoric sites, 17 historic sites, 4 multi-component sites, 21 potential TCPs, and 1 site with no descriptive information. The majority of prehistoric sites are open lithic and open architectural (e.g., stone circles, stone features), while the majority of historic sites are artifact scatters and structures. Of the previously recorded sites, 3 are listed on the NRHP, 16 are eligible for the NRHP, 23 are not eligible, and 10 are unevaluated. It should be noted that unevaluated sites are considered eligible until a determination of NRHP eligibility can be made. Average site density is 4.8 sites per 100 acres inventoried with a comparatively high APE inventory coverage of 48 percent.

Under Alternative IV-A, there would be two crossings of the Old Spanish Trail, one crossing of the Armijo route and one crossing of the Mojave route. The Old Spanish Trail Armijo route would be crossed once by Alternative IV-A (**Figures 3.11-8** and **3.11-9**) within the Clark County Wetlands Park. The Old Spanish NHT Mojave route would be crossed on the southwest side of the River Mountains, about 0.6 miles from a residential neighborhood. Neither segment of the Old Spanish Trail was evaluated as part of the BLM's NHT inventory. Alternative IV-A would be visible from the trail for approximately 36 miles, none of which have been evaluated. The viewshed would include 5 miles of the Northern route, 23 miles of the Mojave route and 8 miles of the Armijo route. Visibility of the alternative from the historic trail is based on the 5-mile (either side of the 500-foot-wide APE) viewshed.

Alternative IV-B

Under Alternative IV-B, there would be approximately 565 acres of initial ground disturbance with 40 miles of transmission line and 51 miles of access roads. A total of 36 previously recorded cultural resources have been identified within the 500-foot-wide APE of Alternative IV-B, including 10 prehistoric sites, 19 historic sites, and 7 potential TCPs. Prehistoric sites mainly consist of sheltered lithic and open lithic sites, while historic sites are mainly habitation sites, roads, and structures. Of the previously recorded sites, 13 are eligible for the NRHP, 9 are not eligible, and 7 are unevaluated.

Average site density is 5.2 sites per 100 acres inventoried with an APE inventory coverage of 23 percent.

Alternative IV-B would cross the Old Spanish NHT Armijo route once and the Mojave route twice (**Figures 3.11-8** and **3.11.9**). The Armijo route would be crossed within the Las Vegas Wash, about two miles west of Lake Mead. The Mohave route crossing would be about 0.5 mile south of the Armijo crossing. The second Mohave route crossing would be on DOE lands about 2 miles south of Railroad Pass, where US-95 and old US-95 converge. None of the segments were evaluated as part of the BLM's NHT inventory. Alternative IV-B would be visible from the trail for approximately 38 miles, none of which have been evaluated. The viewshed would include 5 miles of the Northern route, 20 miles of the Mojave route and 13 miles of the Armijo route. Visibility of the alternative from the historic trail is based on the 5-mile (either side of the 500-foot-wide APE) viewshed.

Alternative IV-C

Under Alternative IV-C, there would be approximately 623 acres of initial ground disturbance with 44 miles of transmission line and 54 miles of access roads. A total of 44 previously recorded cultural resources have been identified within the 500-foot-wide APE of Alternative IV-C, including 10 prehistoric sites, 27 historic sites, and 7 potential TCPs. Open and sheltered lithic sites comprise the majority of prehistoric sites, while artifact scatters, roads, and structures comprise the majority of historic sites. Of the previously recorded sites, 16 are eligible for the NRHP, 13 are not eligible, and 8 are unevaluated. Average site density is 6 sites per 100 acres inventoried with an APE inventory coverage of 23 percent.

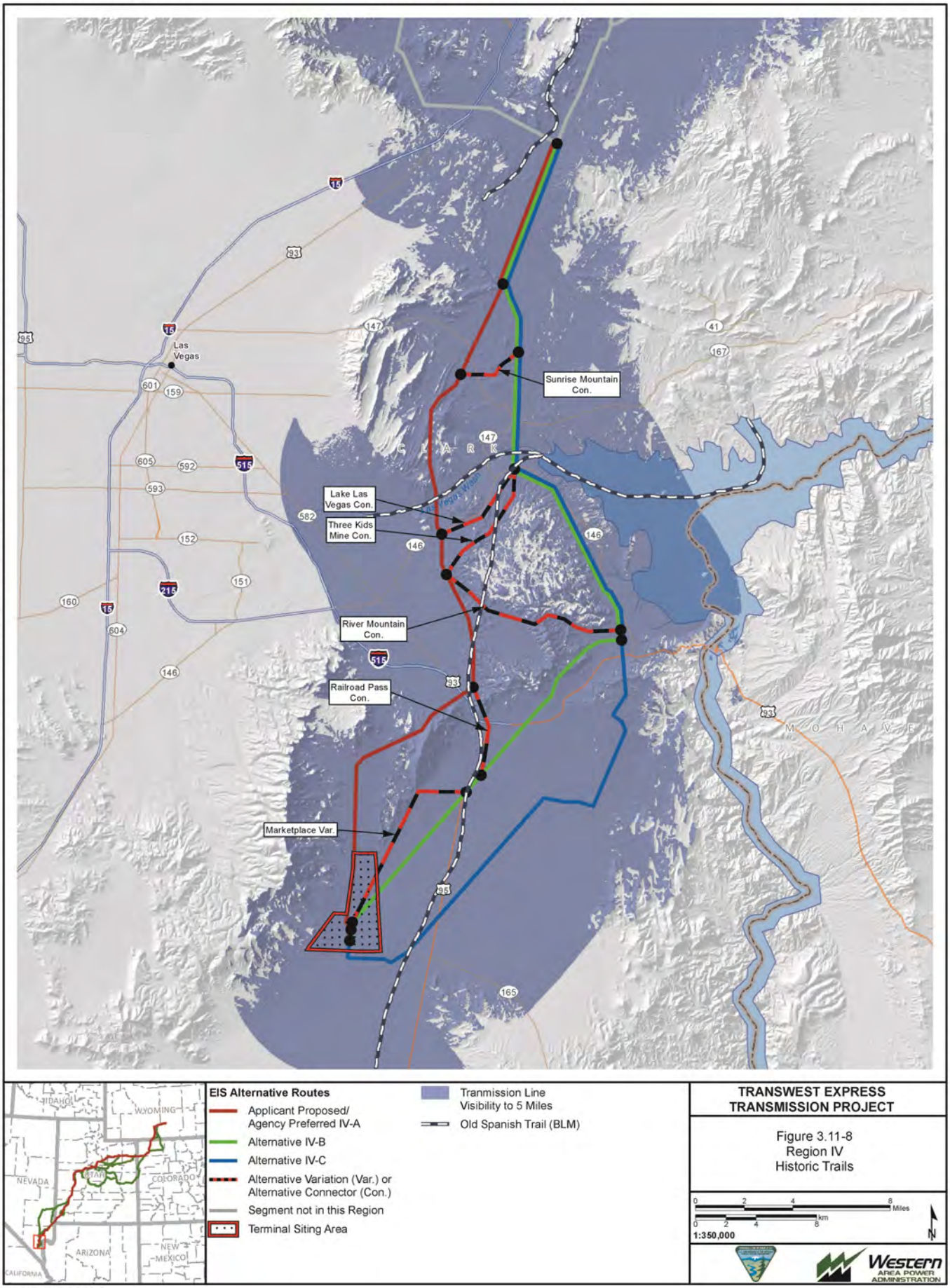
Alternative IV-C would cross the Old Spanish NHT Armijo route once and the Mojave route twice (**Figures 3.11-8** and **3.11-9**). The Armijo route crossing would be the same as under Alternative IV-B. The first Mohave route crossing would be the same as Alternative IV-B. The second Mohave route crossing would be on private lands just east of the Southern Terminal siting area and about 15 miles north of the Town of Searchlight. None of the segments were evaluated as part of the BLM's NHT inventory. Alternative IV-C would be visible from the trail for approximately 38 miles, none of which have been evaluated. The viewshed would include 5 miles of the Northern route, 20 miles of the Mojave route and 13 miles of the Armijo route. Visibility of the alternative from the historic trail is based on the 5-mile (either side of the 500-foot-wide APE) viewshed.

Region IV Conclusion

Alternative IV-A would have less acres of ground disturbance than Alternatives IV-B and IV-C. Decreased ground disturbance could decrease the potential for direct impacts to known and unknown historic properties compared to the other alternatives. Alternative IV-A has a larger number of previously recorded NRHP-listed sites, NRHP-eligible sites, and unevaluated sites than the other alternatives, with an average site density of 4.8 sites per 100 acres inventoried and inventory coverage of 48 percent.

All three alternatives would cross portions of the Old Spanish Trail and would have similar viewshed mileages, but Alternatives IV-B and IV-C would have one more crossing than Alternative IV-A.

Proposed mitigation **CUL-1, CUL-2, CUL-3**, and **CUL-4** would be applied to reduce impacts to historic properties in Region IV. Adverse effects would be minimized or mitigated as stipulated in the PA. Unanticipated discoveries would be handled as outlined in the PA.



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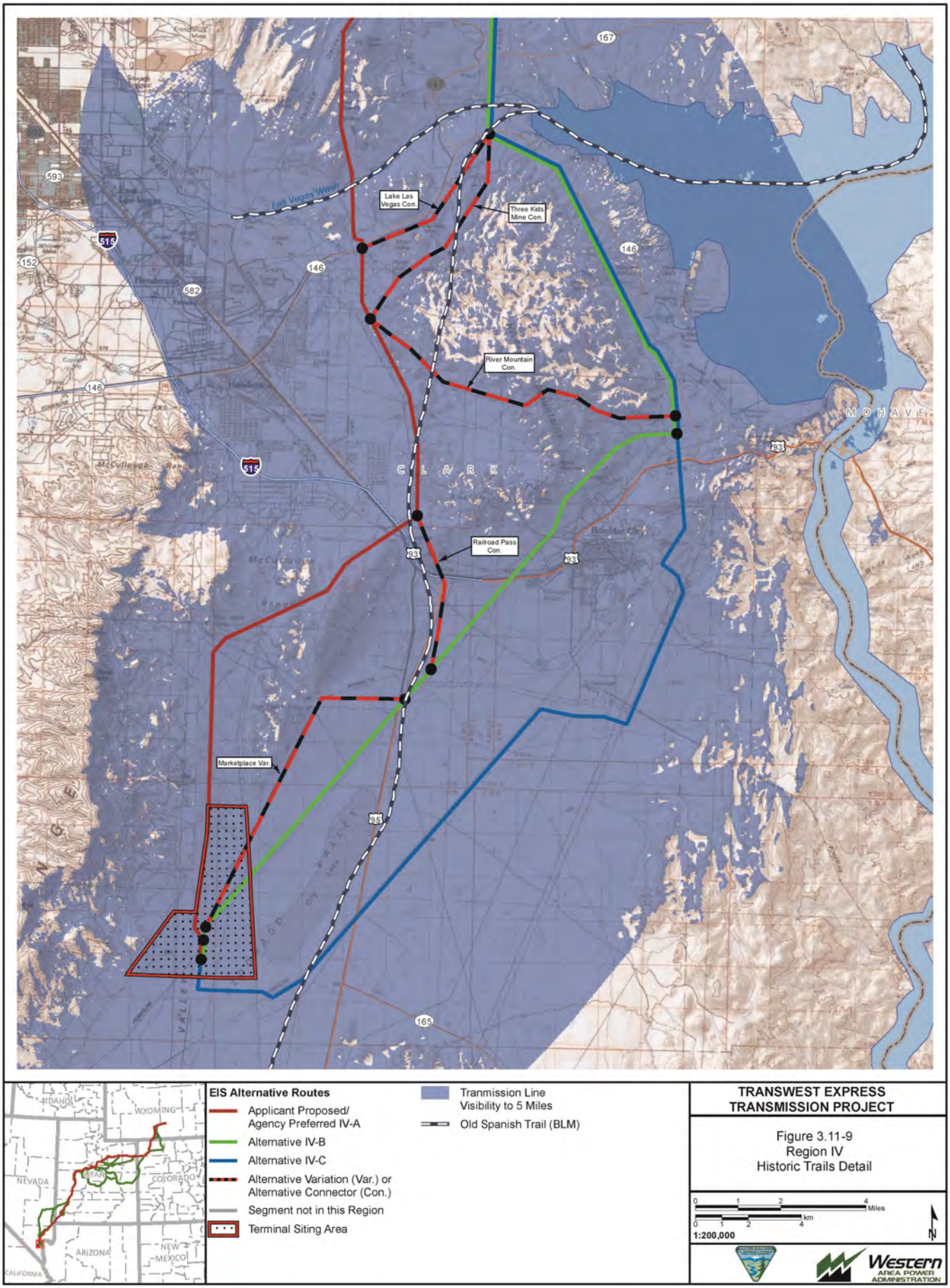

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Alternative Variations in Region IV

Table 3.11-14 provides a comparison of impacts associated with the alternative variations in Region IV.

Table 3.11-14 Summary of Region IV Alternative Variation Impacts

Alternative Variation	Analysis
Marketplace Alternative Variation	A total of 2 cultural resources have been previously recorded within the 500-foot-wide APE of this alternative variation, compared to one previously recorded cultural resources along the portion of Alternative IV-B that would be replaced by the variation. Of the two cultural resources previously recorded in the alternative variation, one is eligible for the NRHP and one is not eligible. The one cultural resource previously recorded in the alternative that would be replaced by the alternative variation is eligible for the NRHP. Based on the files search of the Marketplace Alternative Variation, the percentage of cultural resources inventory coverage is approximately 17 percent of the 500-foot-wide APE. Average site density is approximately 2.5 sites per 100 acres inventoried. In comparison, the percentage of inventory coverage is approximately 12 percent with average site density at 2 sites per 100 sites inventoried for the portion of Alternative IV-B would be replaced by the alternative variation. Ground disturbance associated with the Marketplace Alternative Variation would be 108 acres compared to 81 acres of initial disturbance associated with the portion of Alternative IV-B it would replace.

Sources: SWCA 2011d.

Alternative Connectors in Region IV

Table 3.11-15 summarizes the impacts associated with the alternative connectors in Region IV.

Table 3.11-15 Summary of Region IV Alternative Connector Impacts

Alternative Connectors	Analysis	Conclusion
Sunrise Mountain Alternative Connector	No cultural resources have been previously recorded within the alternative connector 500-foot-wide APE. Cultural resources inventory coverage is approximately 21 percent of the 500-foot-wide APE.	It is unknown at this time as to how many historic properties would be adversely affected by this alternative connector. Unavoidable adverse effects to historic properties would be minimized or mitigated as stipulated in the PA and through implementation of design features. Any previously unknown cultural resources (other than isolates) discovered during construction activities would be handled as detailed in the PA.
Lake Las Vegas Alternative Connector	A total of 5 cultural resources, including the Las Vegas Wash Archaeological District, have been previously recorded within the 500-foot-wide APE of this alternative connector. Three of the 5 resources are eligible for the NRHP. Cultural resources inventory coverage is approximately 33 percent.	Same conclusion as described above for the Sunrise Mountain Alternative Connector.
Three Kids Mine Alternative Connector	A total of 5 cultural resources, including the Las Vegas Wash Archaeological District, have been previously recorded within the 500-foot-wide APE of this alternative connector. One of the 5 resources is eligible for the NRHP. Cultural resources inventory coverage is approximately 20 percent.	Same conclusion as described above for the Sunrise Mountain Alternative Connector.
River Mountains Alternative Connector	A total of 2 cultural resources have been previously recorded within the 500-foot-wide APE. Both of the cultural resources are eligible for the NRHP. Cultural resources inventory coverage is approximately 10 percent.	Same conclusion as described above for the Sunrise Mountain Alternative Connector.

Table 3.11-15 Summary of Region IV Alternative Connector Impacts

Alternative Connectors	Analysis	Conclusion
Railroad Pass Alternative Connector	A total of 3 cultural resources have been previously recorded within the 500-foot-wide APE of this alternative connector. Of these, 1 is eligible for the NRHP. Cultural resources inventory coverage is approximately 32 percent.	Same conclusion as described above for the Sunrise Mountain Alternative Connector.

Sources: SWCA 2011d.

3.11.6.7 Residual Impacts

The proposed Project would result in the loss of cultural resources that are not eligible for the NRHP and located in the direct effects APE. Although these sites would be recorded to BLM standards and the information integrated into local and statewide archaeological databases, the sites ultimately would be destroyed by construction. It currently is unknown how many historic properties (including TCPs or other properties of tribal importance) would be affected by the proposed Project. Design features for cultural resources protection would be followed. Adverse effects to historic properties would be avoided or, if avoidance is not feasible, minimized or mitigated as stipulated in the PA and identified in proposed mitigation measures **CUL-1, CUL-2, CUL-3**, and **CUL-4**. Mitigation could include data recovery, the use of landscaping to minimize visual effects, development of interpretive materials, or other measures determined by the BLM in consultation with the SHPO and interested parties and Tribes. Some of the cultural value associated with these properties cannot be fully mitigated; therefore, it is anticipated that residual impacts to these properties would occur.

Accidental disturbance, vandalism, and illegal collecting of artifacts would be expected to increase as a result of increased access.

3.11.6.8 Irreversible and Irretrievable Commitment of Resources

Historic properties (including TCPs and other properties of tribal importance) could be irreversibly and irretrievably lost if inventory, avoidance, and/or mitigation efforts are not sufficient to identify and protect these properties.

3.11.6.9 Relationship between Local Short-term Uses and Long-term Productivity

The proposed Project would result in the loss of short-term use and long-term productivity of cultural resources not eligible for the NRHP and located in the direct effects APE. For historic properties (including TCPs and other properties of tribal importance) located in the direct effects APE, which cannot be avoided. mitigation of impacts to TCPs and other properties of tribal importance would be developed in consultation with interested Tribes. The scientific information obtained through data recovery would be preserved for the long term. However, the site itself ultimately would be lost. There would be a long-term loss of cultural resources due to illegal collecting and vandalism associated with increased human activity in and adjacent to the analysis area.

3.11.6.10 Impacts to Cultural Resources from the No Action Alternative

Under the No Action Alternative, the proposed facilities that would comprise the proposed Project would not be developed. No additional ground-disturbance would occur. Potential direct, indirect, and visual effects to historic properties, including TCPs and properties of traditional religious and cultural importance to Native Americans, located within the APE or within the viewshed of the proposed Project would not occur.