United States Department of the Interior
National Park Service • Bureau of Land Management

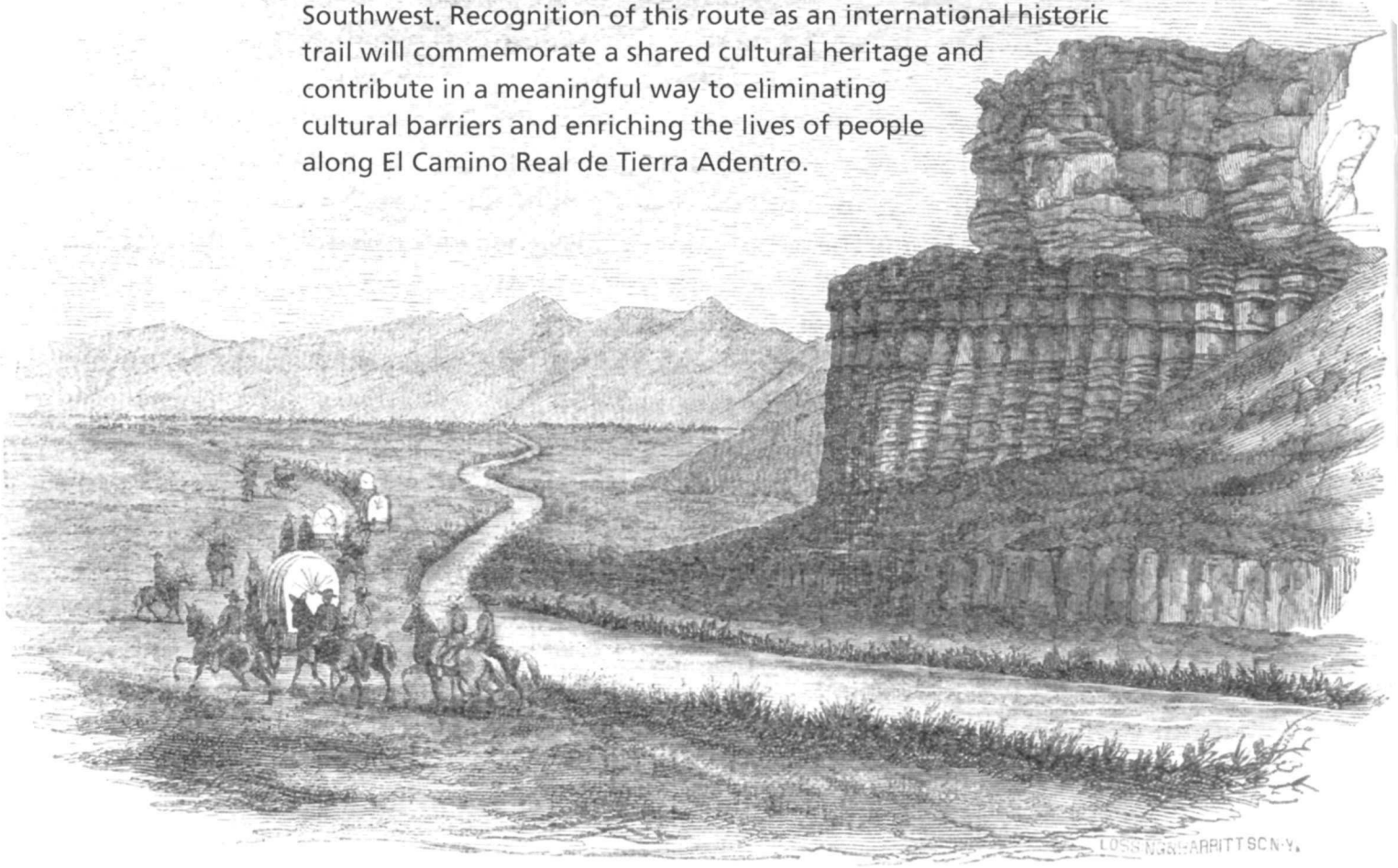
El Camino Real de Tierra Adentro National Historic Trail
Texas • New Mexico

El Camino Real de Tierra Adentro National Historic Trail

Draft Comprehensive Management Plan/ Environmental Impact Statement

VISION

El Camino Real de Tierra Adentro is recognized throughout the United States of America and Los Estados Unidos de México as a timeless route of trade and cultural exchange and interaction among Spaniards, other Europeans, American Indians, Mexicans, and Americans, that shaped individual lives and communities and affected settlement and development in the greater Southwest. Recognition of this route as an international historic trail will commemorate a shared cultural heritage and contribute in a meaningful way to eliminating cultural barriers and enriching the lives of people along El Camino Real de Tierra Adentro.



EL CAMINO REAL DE TIERRA ADENTRO NATIONAL HISTORIC TRAIL

Draft
Comprehensive Management Plan/
Environmental Impact Statement

Prepared by
Long Distance Trails Group — Santa Fe
National Park Service

New Mexico State Office
Bureau of Land Management

August 2002

National Park Service
Bureau of Land Management
U.S. Department of the Interior

El Camino Real de Tierra Adentro NHT
Draft Comprehensive Management Plan
and
Environmental Impact Statement

Draft (X) Final ( )

United States Department of the Interior, Bureau of Land Management (BLM) and National Park Service (NPS)

1. Type of Action: Administrative (X) Legislative ( )

2. This draft Comprehensive Management Plan/Environmental Impact Statement (CMP/EIS) describes alternative visions for managing the National Historic Trail between El Paso, Texas and San Juan Pueblo, New Mexico. Three alternatives have been analyzed in detail: Alternative A (no action); Alternative B, with a focus on protection and off-site interpretation; and Alternative C (preferred alternative), emphasizing resource protection and coordinated programming and activities to enhance the visitor experience. The impacts expected from implementing each of the alternatives are discussed in Chapter 4.

3. Comments have been requested from the individuals, groups, and agencies shown on the distribution list in Chapter 5. Comments will be accepted for 90 days following the date that the Environmental Protection Agency publishes the Notice of Filing of this draft CMP/EIS in the Federal Register.

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EXECUTIVE SUMMARY

Added to the National Trails System in October 2000, El Camino Real de Tierra Adentro (Royal Road of the Interior) National Historic Trail (NHT) recognizes the primary route between the colonial Spanish capital of Mexico City and the Spanish provincial capitals at San Juan de Los Caballeros (1598-1600); San Gabriel (1600-1609); and then Santa Fe (1610-1821). The NHT, as designated, extends 404 miles from El Paso, Texas, to San Juan Pueblo, New Mexico. Bureau of Land Management (BLM) and National Park Service (NPS) are charged with joint planning and administration of the trail.

The draft El Camino Real de Tierra Adentro National Historic Trail Comprehensive Management Plan/Environmental Impact Statement (CMP/EIS) responds to the trail's congressional designation and the requirements of the National Trail System Act. This document evaluates strategies to address identified issues and to meet determined goals.

ISSUES

Initial scoping for the plan identified issues, which are summarized in the following questions:

- How will the historic, scenic, and natural resources of the trail be preserved?
- How do people's activities and uses affect the trail?
- How will trail management be integrated with tribal and other government agency and community plans?
- What opportunities are available to provide visitor services, education, and/or recreation?
- How do we incorporate international interest in the trail?

GOALS

Goals describing future conditions were developed for:

- A high-quality visitor experience
- Coordinated interpretation and education
- Effective administration
- Active resource protection

ALTERNATIVES

The Preferred Alternative

The Preferred Alternative would implement the provisions of the National Trail Systems Act and it would also reflect the public's vision for the administration and management of the trail.

Under this alternative, an ambitious program of resource protection and visitor use would be implemented. Trail administration and partners would work cooperatively to provide coordinated programming and activities that integrate themes, resources, and landscapes at certified sites on private land or protected sites on public land. Resources that best illustrate the trail's significance would be identified and protected on both public and private land (high-potential historic sites and segments). Certification priorities would be placed upon sites and segments supporting interpretive and educational programming and protecting significant resources. An auto-tour route would be established. A bi-national approach with Mexico would promote activities such as interpretation, events, and signage. The BLM's Mimbres, White Sands, and Taos Resource Management Plans would be amended to protect important scenic values.

Alternative A

This is the no-action alternative, which serves as the baseline for evaluating the changes and impacts of the other action alternatives. Under Alternative A, federal agencies would continue to manage their lands (through which the trail passes) based upon their existing management plans. There would be no overall administration or coordination of the NHT. Coordination of the activities of an NHT association, private landowners, and federal, state, and local agencies and resource protection would be limited to efforts of the International Heritage Center and others, subject to funding. Current visitor and recreational activities commemorating or interpreting the trail would continue.

Alternative B

Collaborative efforts by trail administration and partners would be directed toward the protection of trail resources (historical, cultural, and natural) on both private and public land. Active stewardship and certification priorities would protect threatened trail resources. A coordinated visitor experience along El Camino Real de Tierra Adentro NHT would be provided and structured to promote public understanding and appreciation of NHT-related resources. Existing recreational opportunities that are not trail-related, but are provided by private landowners and various agencies and organizations, would continue. An auto-tour route would be established.

Actions common to All Alternatives:
Grandfathered and valid existing rights would be recognized on public lands. The International Heritage Center would serve as a focal point for interpretation and education.

Joint NPS/BLM administration of the trail would occur, involving budget, staffing, trail marking standards, and encouragement of volunteers, partnerships, and an advisory council. International relations would be established with Mexico to exchange trail information and research, to foster trail preservation, to foster educational programs, and to cooperate in the potential bi-national designation of El Camino Real de Tierra Adentro International Historic Trail. Cooperation with tribal organizations and entities would be encouraged.

COMPARISON OF ALTERNATIVES

Preferred Alternative	Alternative A	Alternative B
CONCEPT		
Visitors would understand the trail's significance and appreciate its history and cultural heritage through participation in coordinated programming and activities that integrate themes, resources, and landscapes at certified or protected components.	Current management would be maintained. Interpretive and recreational opportunities, and access to physical resources related to the trail would be limited to those developed by the International Heritage Center and others.	Trail resources (historical, cultural, natural, and viewsheds) would be protected through on-going stewardship efforts. Visitors would have the opportunity to experience trail resources in an off-site setting.
Resources that best illustrate the trail's significance would be identified and protected on both public and private land (high-potential historic sites and segments). Integrated interpretive and educational programming would be tied to on-the-ground trail resources. Information concerning trail-related interpretive/ educational programming and activities would be promoted and shared. Certification priorities would be placed upon sites and segments supporting interpretive/educational programming and protecting significant resources. A bi-national approach with Mexico would promote activities such as interpretation, events, and signage.	Management of federal lands would continue the present course of action. Certification of sites on non-federal lands would not occur. Sharing of interpretive and educational information would be limited to the International Heritage Center and others. There would be no directed strategy for preservation or visitor use/interpretation.	Trail resources (natural, cultural, historical, and viewsheds) would be identified and protected on federal land. Significant trail resources on private land would be protected through certification, and volunteer efforts at high potential sites and segments. Administration would be directed toward resource protection activities. Certification priorities would protect threatened trail resources.
The mission of the National Historic Trail and the Camino Real International Heritage Center are closely linked. The Heritage Center would serve as a focal point for education interpretation, information, and marketing along with others along the trail. The National Historic Trail and the International Heritage Center would have a close working relationship that complements each other's mission		The mission of the National Historic Trail and the Camino Real International Heritage Center are closely linked. The Heritage Center would serve as a focal point for education interpretation, information, and marketing along with others along the trail. The National Historic Trail and the International Heritage Center would have a close working relationship that complements each other's mission.
ADMINISTRATION		
1. Bureau of Land Management, Corps of Engineers, U.S. Fish and Wildlife Service and USDA Forest Service and certified site owners/managers would manage their lands along the trail corridor to protect trail resources, support visitor understanding, and provide a wide range of visitor use opportunities.	**1.** Bureau of Land Management, Corps of Engineers, U.S. Fish and Wildlife Service and USDA Forest Service would manage their respective publicly administered lands along the corridor based upon existing management plans.	**1.** Bureau of Land Management, Corps of Engineers, U.S. Fish and Wildlife Service, USDA Forest Service and certified site owners/managers would manage their lands along the trail corridor to protect trail resources.

COMPARISON OF ALTERNATIVES continued

Preferred Alternative	Alternative A	Alternative B
ADMINISTRATION continued		
2. Formal and informal partnerships would be developed and cooperative agreements would be negotiated with federal, state, tribal, international, and local agencies, museums, schools/universities/colleges, non-governmental organizations, neighborhood groups, historical societies, trail organizations, civic business organizations, and others to support trail-related interpretive/educational programing, visitor information, and provide a range of activities along the trail. Non-federal sites and segments would be certified to provide a wide range of learning activities.		**2.** Formal and informal partnerships would be developed with federal, state, tribal, international, and local agencies, museums; schools/universities/colleges; non-governmental organizations; neighborhood groups; historical societies; trail organizations; civic business organizations; and others to protect trail-related resources and for the identification/protection of trail-related resources. Certification of non-federal sites and segments would take place to protect resources.
3. A uniform system of signage would be provided for certified sites, segments, and federal protection components, and at developed interpretive/educational facilities.		**3.** A uniform system of signage would be provided for certified sites, segments, and federal protection components.
RESOURCE PROTECTION		
1. Archaeological and historic sites and visible trail route segments would be identified and protected. High potential historicsites & segments would be proactively managed by willing owners in partnership with trail administration. Protection on private lands would be voluntary and would be accomplished through a variety of means including but not limited to: certification, cooperative agreements, and acquisition or exchange by willing sellers where lands could be efficiently managed. A site steward program could provide for the active monitoring and patrolling of important sites and segments on BLM-administered lands and certi fied sites.	**1.** No special efforts would be made to identify archaeological and historic sites and visible trail route segments.	**1.** Archaeological and historic sites and visible trail route segments would be identified and protected. Protection on private lands would be accomplished through a variety of means including but not limited to: certification, cooperative agreements, and acquisition by willing sellers where lands could be efficiently managed. Provide for scheduled site monitoring of important sites on BLM-administered lands and certified sites by agency personnel.
2. Research Needs: Interdisciplinary research program would be coordinated to support visitor use and interpretive/ educational programming and activities.	**2.** Research Needs: There would be no directed strategy for research related to the trail.	**2.** Research Needs: There would be no directed strategy for research related to the trail.
3. Routes (areas) on BLM-administered lands where the physical integrity of high potential sites and segments and the surrounding visible landscape would be negatively	**3.** Use of off-highway vehicles (OHVs) on BLM-administered lands would continue under the present course of action.	**3.** Routes (areas) on BLM-administered lands where protected archaeological and historic sites and trail route segments would be negatively impacted would be closed to unauthorized vehicles.

COMPARISON OF ALTERNATIVES continued

Preferred Alternative	Alternative A	Alternative B
RESOURCE PROTECTION continued		
impacted would be closed to unauthorized vehicles.		
4. Those areas on BLM-administered lands that are visible within approximately 5 miles of high potential historic sites and segments and also in relatively undisturbed areas would be designated Visual Resource Management (VRM) Class II as shown in Maps 4A-C and 5. The area surrounding the International Heritage Center would remain VRM Class I & II.	**4.**Management of visual resources on BLM-administered lands would continue under the present course of action.	**4.** Management of visual resources on BLM-administered lands would continue under the present course of action.
VISITOR EXPERIENCE - RECREATION		
1. Activities with interpretive/educational components would be encouraged and supported; companion trails would be established; and recreational uses, through directional and interpretive signage and brochures, would be encouraged. Access to the trail route or viewpoints would be developed.	**1.** Coordinated recreational development of the trail would not occur.	**1.** Recreational development of the trail would not be encouraged.
2. An auto tour route as identified on Map 3A-G; accompanying interpretive materials designed to enhance education and visitor understanding would be provided.	**2.** An auto tour route would not be designated.	**2.** An auto tour route as identified on Map 3A-G; accompanying interpretive materials would be provided.
3. Special/cultural events directly tied to trail significance would be promoted and supported.	**3.** Special events would only be encouraged by the International Heritage Center and others, subject to funding.	**3.** Special/cultural events that focus on resource protection would be promoted.
VISITOR EXPERIENCE - INTERPRETATION AND EDUCATION		
1. New facilities such as visitor centers or museums developed by the private sector would be supported. New interpretive and educational programming would be encouraged; extant facilities and programming at high-potential historic sites and segments would be strengthened. Kiosks, trailheads, and trails to support recreation development would be encouraged.	**1.** Facilities and programs would only be encouraged by the International Heritage Center and others.	**1.** New facilities would not be encouraged. Existing facilities and a local/regional emphasis on content/history/culture would be improved. A broad protection and advocacy strategy through activities such as partnerships and media programs would be encouraged.
2. A range of media such as tapes, maps, and oral histories would be developed; media at high-potential sites and segments would be coor-	**2.** Interpretive media would only be encouraged by the International Heritage Center and others.	**2.** A range of interpretive media would be developed to enhance visitor understanding offsite.

COMPARISON OF ALTERNATIVES continued

Preferred Alternative	Alternative A	Alternative B
VISITOR EXPERIENCE - INTERPRETATION AND EDUCATION continued		
dinated and integrated. A bi-national approach to interpretation would be taken.		
3. Hands -on activities directly tied to trail-related resources at high-potential sites and segments would be emphasized and supported; responsible recreation on public lands and respect for private land ownership would be emphasized and supported. Educational packages that align with TX and NM standards would be developed. A website that centralizes educational resources around the trail would be developed. Opportunities to engage communities along El Camino Real in cultural education and interpretation would be encouraged such as the following: Habitat Chat among sister communities along NHT using interactive media, history, culture, science, and math with hands-on museum activities. The pursuit of grants to write and publish local history documents along the trail would be encouraged.	**3.** Educational programs would be encouraged by the International Heritage Center and others.	**3.** Resources, stewardship, and off-site interpretation would be emphasized. Visitors would be encouraged to visit off-trail facilities to lessen impact; such as auto, bus, or train tour programs. Use of a wide variety of media (including oral histories) would be encouraged.

ENVIRONMENTAL CONSEQUENCES

This draft environmental impact statement is programmatic, and addresses El Camino Real de Tierra Adentro NHT management. It considers impacts to the visitor experience along the trail; impacts to cultural resources associated with the trail, including landscapes and ethnography; impacts to natural resources and threatened and endangered species; and socioeconomic impacts in terms of landownership and visitor use. More detailed environmental analysis for specific trail projects will follow in appropriate environmental documents. The following table provides a summary of the impacts under each alternative.

COMPARISON OF IMPACTS

Impact Topic	Preferred Alternative	Alternative A	Alternative B
North American Indians	The impacts from both Alternatives B and the Preferred would have a neutral or positive impact upon the North American Indian tribes associated with El Camino Real. There would be no evident social or cultural impact upon the tribes. During implementation of the Preferred Alternative additional consultation with affected North American Indian tribes would likely lead to positive impacts by providing them with the opportunity to present their stories from the tribal point of view in exhibits and documents. North American Indian tribes that participate in the voluntary certification of sites and segments would be eligible for technical assistance and challenge cost-share monies for preservation, interpretive exhibits, and signage. Where developments take place (roadside pull-outs and interpretive wayside exhibits as proposed in the Preferred Alternative), a site-specific analysis would take place to ensure that historic resources are not disturbed, or if resources will be impacted, mitigation measures would take place in consultation with the tribes.	A continued lack of public awareness and appreciation could result in increased potential for inadvertent destruction of trail resources.	The impacts from both the Preferred and Alternatives B would have a neutral or positive impact upon the North American Indian tribes associated with El Camino Real. There would be no evident social or cultural impact upon the tribes. During implementation of the Preferred Alternative, additional consultation with affected North American Indian tribes would likely lead to positive impacts by providing them with the opportunity to present their stories from the tribal point of view in exhibits and documents. Tribes that participate in the voluntary certification of sites and segments would be eligible for technical assistance and challenge cost-share monies for preservation, interpretive exhibits, and signage.

COMPARISON OF IMPACTS continued

Impact Topic	Preferred Alternative	Alternative A	Alternative B
Archeological/ Historical Resources	Use of partnerships (site stewardship) and educational efforts would mitigate the potential for inadvertent destruction of trail resources. Proactive management of high-potential historic sites and segments would maintain the physical integrity of the resources.	A lack of public awareness and appreciation could result in increased potential for inadvertent destruction of trail resources.	Use of partnerships (site stewardship) and educational efforts, and would mitigate the potential for inadvertent destruction of trail resources. Proactive management of high-potential historic sites and segments would maintain the physical integrity of the resources.
Energy and Minerals	New leases within a designated Visual Resource Management (VRM) Class II area would include a stipulation requiring conformance to Class II objectives. Restrictions on lease development could result in an operator not drilling at the most geologically desirable location or during the most desirable time period. If the operator is not able or willing to conform to the restrictions, drilling could be precluded.	New leasing, lease development, and contracts would be subject to existing management plans and site-specific environmental assessments.	Same as Alternative A
	The issuance of new mineral material contracts would be at the discretion of the BLM, provided that the mining conformed to the management objectives of VRM Class II, or BLM could eliminate the visual intrusion entirely by reclaiming the site after the expiration of any outstanding contracts. Discontinuing the issuance of mineral material contracts could force those desiring to obtain the materials to go to another less desirable or more expensive source.	Mineral material contracts would continue to be managed under existing terms and conditions and management plans.	Same as Alternative A
	A VRM Class II designation would not affect the status of existing mining claims, approved plans, or notices for operations or prohibit future prospecting and mining claim location under the Mining Law. New surface-disturbing activities could be affected by the VRM Class II designation.	Prospecting and mining claim location would continue to be allowed in areas open under the Mining Law.	Same as Alternative A

COMPARISON OF IMPACTS continued

Impact Topic	Preferred Alternative	Alternative A	Alternative B
Livestock - grazing	New range improvements within the Jornada del Muerto section of the trail proposed for VRM Class II guidelines would have to meet the new classification standard. Large construction projects could be restricted, although no range improvement projects have been identified in these areas. Increasing visitor use of and publicity regarding the trail could lead to vandalism of rangeland improvements, and could lead to a greater number of visitors seeking assistance from ranchers for directions or search and rescue.	Livestock-grazing would continue to be administered under existing terms and conditions and management plans. Since visitor use associated with the trail is expected to slightly increase as a result of on-going initiatives, there could be increases in vandalism of rangeland improvements and the number of visitors seeking assistance from ranchers for directions or search and rescue.	Same as Alternative A Same as Alternative A
Land and Realty Uses	Additional visitors to the designated sites would increase traffic in the area and could cause some impacts to existing rights-of-way. Land -use prescriptions for visual resource protection could inhibit or restrict some rights-of-way actions.	Additional visitors to the designated sites would increase traffic in the area and could cause some impacts to existing rights-of-way.	Same as Alternative A
Recreation/Visitor Experience/ Interpretation	Visitors would benefit from this opportunity to follow the approximate trail route and to visit related resources and interpretive facilities. Visitor use on BLM-administered lands could increase in Jornada del Muerto from 900 to 5,500 visits annually and at the Teypama site from 200 to 400 visits annually. Additional opportunities to experience the trail corridor through recreation on BLM-managed lands would increase visitor enjoyment of the NHT. The ability to drive or hike in the trail corridor, to receive interpretive messages on site, and to see trail-related cultural, natural, and landscape resources would be beneficial and would result in memorable experiences.	Visitors would not be offered experiences on El Camino Real de Tierra Adentro NHT. Some visitors would continue to be confused about the location and availability of visits to trail-related resources and sites. Other visitors, particularly those from out of state or other countries, would not be provided with trail orientation, information, and interpretation. Visitor use in Jornada del Muerto would not be expected to exceed 1,500 annual visits under this alternative, and use at the Teypama site would probably not change from existing levels of use.	Development of a coordinated interpretive and educational program emphasizing resource protection on the NHT would benefit visitors, increasing their awareness of resource values and threats. Visitors may be disappointed by the lack of a comprehensive, trail-wide interpretive and education overview, or by the relative inability to have experiences in the trail corridor. Levels of recreation use would be expected to be similar to those expected under Alternative A.

COMPARISON OF IMPACTS continued

Impact Topic	Preferred Alternative	Alternative A	Alternative B
Recreation/Visitor Experience/ Interpretation continued	Certification of sites, segments, and interpretive facilities would benefit the visitor experience through the increased identification, interpretation, and use of trail-related resources. Standards of quality reaches through the certification process would contribute to the development of accurate and consistent media and programming, and would increase visitor enjoyment and understanding of the trail's history and significance. Developing, marking, and interpreting an auto-tour route would contribute to increased public awareness of the NHT. Visitors would benefit from this opportunity to follow the approximate trail route, and to visit related resources and interpretive facilities. Off-highway-vehicle opportunities on public lands could be restricted in the immediate vicinity of historic or cultural sites for resource protection. Development of an interpretive plan would assist Camino Real Administration and partners to present a cohesive, integrated interpretive and educational program, and would result in public understanding and appreciation for the trail.	Off-highway-vehicle opportunities on public lands could be restricted in the immediate vicinity of historic or cultural sites for resource protection Interpretive services and products would not be provided.	Certification of sites, segments, and interpretive facilities would benefit the visitor experience through the increased indentification, interpretation, and use of trail-related resources. Standards of quality reached through the-certification process would contribute to the development of accurate and consistent media and programming, and would increase visitor enjoyment and understanding of the trail's history and significance. Developing, marking, and interpreting an auto-tour route would contribute to increased public awareness of the NHT. Visitors would benefit from this opportunity to follow the approximate trail route, and to visit related resources and interpretive facilities. Off-highway-vehicle opportunities on public lands could be restricted in the immediate vicinity of historic or cultural sites for resource protection. Development of an interpretive plan would assist Camino Real Administration and partners in presenting a cohesive, integrated interpretive and educational program, and would result in increased public understanding and appreciation for the trail.
Scenery	The Mimbres and White Sands Resource Management Plans would be amended as follows to ensure that activities would be limited to those that would not attract attention, and the level of change to the characteristic landscape would be low in the Jornada del Muerto area: Amend 58,892 acres of existing VRM Class IV public land to VRM Class II along 7.6 miles of high-potential historic segments and near select high-potential historic sites; amend 7,533 acres	There would be no change in visual resource management classifications.	Same as Alternative A

COMPARISON OF IMPACTS continued

Impact Topic	Preferred Alternative	Alternative A	Alternative B
Scenery continued	of VRM Class III public lands along 0.6 mile of high-potential historic trail segments and high-potential historic sites to VRM Class II. The Taos Resource Management Plan would also be amended as follows in the Santa Fe river canyon area: Assign VRM Class II to 998 acres of previously unassigned public lands within the foreground/ middleground viewshed, including 0.3 mile of high-potential historic trail segments and extending through the Santa Fe River Canyon.		
Socioeconomics/Social Values/ Environmental Justice	Economic improvements and additional service and hospitality-industry jobs generated by increased visits would enhance the economic stability of adjacent communities, especially those with higher rates of unemployment. Other benefits would include improved governmental services resulting from increased tax revenues, and avoidance of future social costs that might otherwise result from continued economic problems. Low-moderate-income families and individuals, at-risk youth, and the Hispanic and North American Indian communities may be expected to find new employment in the service sector. Proportionately, the greatest improvements can be expected in the poorer counties of New Mexico, and to a lesser extent in El Paso County and the Mexican "gateway communities."	The current "baseline" socioeconomic effects and benefits to the local and regional economy would continue.	Additional visitation would improve the viability of individual interpretive sites along the trail, primarily on nonfederal lands. This would contribute to the economic activity of the surrounding communities through increased visitor expenditures, to a lesser extent than under the Preferred Alternative.
Vegetation/Soils/ Noxious Weeds/Water	Damage to soils and vegetation would be minimal, and mitigated by proper design of trails and pullouts. The change in visual classification is not expected to be a barrier to vegetation-management activities on public lands. Soils would be disturbed on approximately 0.4 acre where the pullout parking areas are constructed and interpretive	Continuing the existing situation should result in little change in the vegetation, soil erosion, or introduction of noxious weeds near the trail.	Same as Alternative A.

COMPARISON OF IMPACTS continued

Impact Topic	Preferred Alternative	Alternative A	Alternative B
Vegetation/Soils/ Noxious Weeds/Water continued	signs placed near the Upham Exit, the Paraje de San Diego, the Ojo de Perrillo/Point of Rocks, and the Yost Escarpment. An additional 0.5 acre would be disturbed if a companion trail were constructed. Due to the absence of potential habitat, there would be no impacts to threatened and endangered species.		
Wildlife	Disturbance to wildlife would be short-term during construction. Dispersed recreational activity within the planning area, such as camping, climbing, hiking, and biking, would result in site-specific, short-term negative impacts on the microbiological, small mammal, and avian components of the localized fauna. There would be no impacts to threatened and endangered species, since the project areas do not possess habitat required for listed species.	Continuation of the existing situation would not result in additional modification of wildlife habitat or disturbances to wildlife.	Same as Alternative A

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Chapter 1
PURPOSE/PROCESS/ISSUES

PURPOSE/NEED FOR ACTION

The purpose of the draft Comprehensive Management Plan/Environmental Impact Statement (CMP/EIS) is to establish the administrative objectives, policies, processes, and management actions needed to fulfill the preservation and public use goals for El Camino Real de Tierra Adentro National Historic Trail (NHT). El Camino Real de Tierra Adentro (The Royal Road of the Interior) was added to the National Trails System by P.L. 106-307 on October 13, 2000 (see Appendix A), pursuant to the National Trails System Act, P.L. 90-543, of October 2, 1968, as amended (see Map 1 and Appendix B).

The draft CMP/EIS will also provide a framework for managing and allocating uses of BLM-administered lands along the trail in New Mexico. The plan will be comprehensive in nature, and will describe future conditions, set goals, and address and resolve issues along El Camino Real de Tierra Adentro NHT that have been identified through agency, interagency, and public scoping efforts. The plan is needed in order to comply with the requirements of the National Trails System Act; and to address the management issues and concerns related to administration and management, resource protection, interpretation and visitor experience, uses of the NHT, and site development and marking.

National historic trails are set aside to identify and protect a historic route and its remnants for public use and enjoyment. These are extended trails that follow as closely as possible and practicable original routes of travel that are of national historical significance.

Existing trail segments already in federal ownership will become the initial components of El Camino de Tierra Adentro NHT. Other trail segments could be developed and protected through various means, such as cooperative and certification agreements and/or easements and actions by state and local government and private organizations. There would be little or no federal acquisition of private lands. Acquisition would be on a willing-seller basis.

This draft CMP/EIS identifies and explains the desired future conditions to be maintained or achieved, and administrative and management actions necessary to achieve objectives. Through these actions, El Camino Real de Tierra Adentro NHT will be administered and managed according to the intent of Congress as expressed in the establishing legislation and the National Trails System Act.

BACKGROUND/LOCATION

The NPS prepared a feasibility study in 1997 that subsequently led to the designation of the 404-mile El Camino Real de Tierra Adentro NHT from El Paso, Texas, to San Juan Pueblo, New Mexico (see Map 2). The study documented the international significance of the entire route from Mexico City to New Mexico's respective Spanish colonial capitals at San Juan Pueblo (1598-1600), San Gabriel (1600-1609), and Santa Fe (1609-1821). During that period, the road formed part of a network of royal roads throughout Mexico that ran from Spanish capital to Spanish capital. When Mexican independence was achieved, El Camino Real ceased to be a royal road, because the Spanish crown had been ousted. However, the route continued in use during the Mexican National Period, as Mexican and Indian travelers, traders, settlers, soldiers, clergymen, and Anglo-American merchants continued their activities along it. Significance has also been found for succeeding periods, including the Mexican National

Map 2

DSC/SEPT 2002/661/20001A

El Camino Real
United States and Mexico
El Camino Real de Tierra Adentro
National Historic Trail

United States Department of the Interior
National Park Service
Bureau of Land Management

Map 1

DSC/SEPT 2002/661/20000A

National Trails System

El Camino Real de Tierra Adentro National Historic Trail

United States Department of the Interior
National Park Service
Bureau of Land Management

Period (1821-1848), and part of the U.S. Territorial Period of New Mexico (1848-1882). San Juan Pueblo was the terminus of the trail because it was the first provincial capital of the northern province of New Spain.

The NHT passes through four BLM Field Office administrative areas with five existing RMPs. The following RMPs were reviewed for consistency with goals, objectives, and actions proposed under the various alternatives for the NHT: (1) Taos RMP, (2) Rio Puerco RMP, (3) Socorro RMP, (4) White Sands RMP, and (5) Mimbres RMP. The trail runs through 16.9 miles of public lands in the Taos Field Office; 14.2 miles of public lands in the Socorro Field Office; and 28.6 miles of public lands in the Las Cruces Field Office (mileages include duplicate, or variant, routes).

Approximately 33.3 miles of the NHT pass through the Sevilleta National Wildlife Refuge, and 56.8 miles pass through the Bosque del Apache National Wildlife Refuge—both of these administered by the U.S. Fish & Wildlife Service (FWS). Approximately 7.7 miles of the NHT pass through the Santa Fe National Forest, administered by the USDA Forest Service (USFS); and approximately 4.6 miles of trail cross lands administered by the U.S. Army Corps of Engineers. The remainder of the trail passes through 376.7 miles of private lands; 24.7 miles of state -administered lands; and 89.5 miles of North American Indian tribal lands.

RELATIONSHIP TO LEGISLATION/BUREAU OF LAND MANAGEMENT AND NATIONAL PARK SERVICE POLICIES, PLANS, AND PROGRAMS

Public Law 106-307, titled "A Bill to amend the National Trails System Act to designate El Camino Real de Tierra Adentro as a National Historic Trail," was signed into law on October 13, 2000. The legislation recognizes a 404-mile-long trail from the Río Grande near El Paso, Texas, to San Juan Pueblo, New Mexico, as generally depicted on the maps entitled "A United States Route: El Camino Real de Tierra Adentro," contained in the March 1997 *El Camino Real de Tierra Adentro National Historic Trail Feasibility Study and Environmental Assessment*. The Secretary of the Interior is directed to administer the trail, and land acquisition may only take place with the consent of willing sellers.

This draft CMP/EIS complies with applicable federal laws, regulations, and planning direction. This includes, but is not limited to, the establishing legislation; the National Trails System Act (NTSA); the National Environmental Policy Act (NEPA); the National Historic Preservation Act (NHPA); the Federal Land Policy and Management Act (FLPMA); the Native American Graves Protection and Repatriation Act (NAGPRA); the American Indian Religious Freedom Act (AIRFA) regarding affirmative consultation with North American Indian Tribes; Executive Order No. 12898 on Environmental Justice; Executive Order No. 13007 (Indian Sacred Sites), May 24, 1996, 61 FR 26771, 42 USC 1996; Executive Order No. 13175, Consultation and Coordination with Indian Tribal governments, November 6, 2000, 65 FR 67249, 25 USC 450; Executive Order 13195, Trails for America in the 21st Century; the Architectural Barriers Act of 1968, and the Rehabilitation Act of 1973; BLM Land Use Plan policy; and NPS Management Policies and Director's Orders. In accordance with NPS Director's Order 12, the environmental impact statement (EIS) is being prepared as a part of the plan.

This draft CMP/EIS will address and integrate, to the degree possible, management plans related to management of the lands in or adjacent to the NHT, including, but not limited to, fire management plans, livestock grazing allotment management plans, wildlife habitat management plans, and recreation management plans. It will also include guidance for natural and cultural resources, interpretation and education, trail marking, the certification process, financial and technical assistance, logo marker use and protection, relationships with other conservation programs, facilities management, research and

monitoring, lands and rights-of- way, event coordination, communication, and visitor management. On public lands, the document will address both potential RMP-level amendments and site-specific management actions.

Section 5(f) of the National Trails System Act provides that, within two complete fiscal years of the date of enactment (in this case, September 2003), the Secretary of the Interior shall submit the draft CMP/EIS for the management and use of El Camino de Tierra Adentro NHT to the U.S. Congress, House Resources Committee, and the Senate Committee on Energy and Natural Resources.

The National Trails System Act provides legal mandates, policy, and general guidance for the national system of recreation, scenic, and historic trails. The National Trails System was established to provide for the ever-increasing outdoor recreation needs of an expanding population, and to promote the preservation of, public access to, travel within, and enjoyment and appreciation of, the open air, outdoor areas and historic resources of the nation.

ADMINISTRATION/MANAGEMENT

Administration of national historic trails rests with the Secretary of Agriculture and the Secretary of the Interior. In a landmark decision on January 19, 2001, the Secretary of the Interior directed that administrative responsibility for El Camino Real de Tierra Adentro NHT be assigned jointly to the BLM and the NPS, based on the joint memorandum of the two agencies to the Secretary of January 9, 2001 (see Appendix C). Because the two agencies are the joint administrators, they will also cooperatively prepare the draft CMP/EIS. The joint administration of the trail will be referred to in this document as the Camino Real Administration.

A Memorandum of Understanding for the Administration and Management of National Historic and National Scenic Trails signed by the BLM, NPS, USFS, Federal Highways Administration, and National Endowment for the Arts on January 19, 2001, defines administration and management as follows:

- ***Administration*** - Each national trail, established by law, is assigned for administration to a specific federal agency by either the Secretary of the Interior or the Secretary of Agriculture, as designated by Congress. Subject to available funding, the administering agency exercises trail -wide responsibilities under the act for that specific trail. Such responsibilities include coordination among and between agencies and partnership organizations in planning, marking, certification, resource preservation and protection, interpretation, cooperative/interagency agreements, and financial assistance to other cooperating government agencies, landowners, interest groups, and individuals.

- ***Management*** - Various government and private entities own or manage lands along each national trail. Management responsibilities often include inventorying of resources; mapping, planning, and development of trail segments or sites; compliance; provision of appropriate public access; site interpretation; trail maintenance; marking; resource preservation and protection; viewshed protection; and management of visitor use.

Executive order 13195 dated January 18, 2001 - Trails for America in the 21st Century - provides direction for achieving a common goal of improving America's national system of trails.

This is the first time that a component of the National Trails System has been assigned to two agencies for joint administration. The Long Distance Trails Group Office of the NPS in Santa Fe, New Mexico, and the New Mexico State Office of the BLM are leads for preparation of the plan, and both are responsible for administering the trail as per agency agreement. They will coordinate with the public, various federal agencies, tribal offices, and local and state governments in the plan's development.

Consultation will be an important factor in the process, and should be an integral part of the planning team's efforts.

The joint BLM/NPS administration of El Camino Real de Tierra Adentro NHT must rely on the cooperative management efforts and support of state, local, and private interests, including landowners, to ensure the protection of trail-related resources, to provide outdoor recreational opportunities, and to accomplish the objectives of interpretive programs.

Section 5 (d) of the National Trails System Act calls for the establishment of an advisory council of not more than 35 members, chartered for 10 years. The advisory council will be informed and consulted at appropriate steps in the planning process for the NHT. The council will be an important part of the process, and will contribute valuable information to the plan. It will serve as an excellent source of communication with member publics and the public in general. Once the advisory council has been formed, the study team will work closely with that body. The charter and list of nominating organizations has been forwarded to the Secretary of the Interior.

MANAGEMENT GOALS

Visitor Experience

Visitor experience goals help define actions that should be taken to ensure that visitors would have the opportunity to have specific experiences while visiting El Camino Real de Tierra Adentro NHT. The term "visitor" is used very broadly, and includes people of local, national, and international origin. "Visitor" can also apply to people who visit the NHT through technologies such as the Internet, and it is recognized that visitors are individuals who have different needs and interests.

The visitor experience goals below define the collective range of opportunities that Camino Real Administration and its partners would provide for visitors along the NHT in the future.

Visitors would:

- Feel welcome, be aware of safety, and be satisfied with facilities, services, and recreational opportunities.
- Be able to visit historic and archeological sites, museums, and visitor centers offering interpretation and education.
- Understand and appreciate the trail's history and significance.
- Be able to use the trail corridor in ways that conserve significant values and resources. This includes opportunities to drive sections of the historic trail, and to walk, bike, and hike along portions of the trail and/or Rio Grande Valley.
- Have opportunities to participate in cultural activities associated with the trail.
- Be able to obtain scholarly research and interpretive materials to learn more about the trail's history and significance.
- Be able to participate in both formal and informal educational programs dealing with the trail.
- Be able to recognize place names and landscapes associated with the trail.
- Be able to access all trail-related facilities and programs, regardless of ability.
- Appreciate and respect the rights of landowners.
- Experience meeting people whose life ways were, and continue to be, influenced by the trail.
- Gain an appreciation for different perspectives about the trail's legacy.

Interpretation and Education

Camino Real Administration and partners along the NHT would develop a high-quality program of information, interpretation, and education for all visitors.

Camino Real Administration and partners would:

- Promote, develop, and support a variety of interpretive and educational materials appealing to visitors with diverse abilities, interests, and learning styles.
- Work together to ensure that interpretive and educational materials, programs, and media are accurate, consistent, and complimentary among the various sites and facilities along the NHT.
- Work cooperatively to provide training for interpreters and educators designed to set and meet high-quality standards.
- Provide trip-planning and other information about the trail to support visitation to trail-related sites and interpretive facilities.

Resource Protection

Camino Real Administration and its partners would:

- Encourage the identification, evaluation, and preservation of Camino Real resources.
- Identify research needs and coordinate research.
- Assist in the development of models for determining the impacts on historic resources from excessive visitor use (using concepts such as carrying capacity); natural processes (such as erosion); incompatible uses (such as mineral development); and others.
- Protect certified NHT segments and historic sites from over-use, inappropriate use, and vandalism.
- Protect scenic values related to historical resources.
- Identify and protect ethnographic resources (those cultural and natural resources of ongoing significance to contemporary peoples, especially North American Indians and Hispanics).
- Encourage uses of adjacent lands that complement the protection and interpretation of NHT resources.
- Encourage research to improve knowledge, understanding, and appreciation of the NHT and related resources, and their significance in history.

Administration

Camino Real Administration would:

- Implement the National Trails System Act in conjunction with other authorities through partnerships, whenever possible.
- Develop an efficient, professional, and effective organization to administer the NHT.
- Achieve the spirit of the interagency memorandum of understanding.
- Promote the management and development of the entire NHT as one integrated system.
- Certify trail segments and sites that meet the criteria described in this management plan, consistent with the purposes of the National Trails System Act as amended.
- Mark the NHT route and auto tour route with standardized and recognizable markers.

- Encourage a unified design theme for signs, exhibits, and public use facilities.

- Work with partners to provide access to trail resources through certification or other means such as easements.

ISSUES TO BE RESOLVED

A planning issue is a matter of controversy or dispute over resource management activities or land use that is well defined or topically discrete, and entails alternatives among which to choose. This definition suggests that one or more entities are interested in a resource on public land, that each entity may have different values for the resource, and that there are different ways (alternatives) in which to resolve the competition or demand.

Management concerns are topics or points of dispute that involve a resource management activity or land use. While some concerns overlap issues, a management concern is generally more important to an individual or a few individuals, as opposed to a planning issue that has a more widespread point of conflict. Addressing management concerns along the NHT helps to ensure a comprehensive examination of federal and state land use management.

Through phone calls, e-mails, letters, and several meetings conducted over the summer of 2001, issues and management concerns have been identified by BLM and NPS personnel; tribal members; local, state and other federal other agencies; and individuals and user groups. The major issue themes that are addressed in the draft CMP/EIS are listed below. Each issue theme, in turn, has a number of different planning questions and management concerns that address more specific uses and resources related to the issue theme.

How will the historic, scenic, and natural resources of the trail be preserved?

- Where are important cultural and historic resources located?

- What management actions are needed to protect and preserve the historic features of the trail while offering visitors a recreational opportunity?

- How will historic and scenic values be protected against impacts from authorized or unauthorized uses?

- Are changes in off-highway-vehicle designations necessary to protect historic resources?

- Will human activities result in the displacement of wildlife; changes to vegetation, including invasive species; or changes in water quality?

How do people's activities and uses affect the trail?

- How will interpretation be used as an education tool to increase the public's awareness and appreciation of the trail's cultural resources?

- What range of recreational opportunities should be provided?

- What methods will be used to determine appropriate levels of visitor use?

- What new uses, trends, or future use levels are anticipated?

- How will livestock management activities affect management of the trail?

- How will rights-of-way or land-tenure adjustments affect management of the trail?

- How will mineral-related activities affect management of the trail?

- Will plan proposals affect floodplains or wetlands?

- Will plan proposals affect threatened and endangered species?

How will trail management be integrated with tribal and other government agency and community plans?

- What agreements exist and/or need to be established to promote preservation and interpretation of the trail?
- What opportunities are available to provide visitor services, education, and/or recreation?
- What opportunities, partnerships, and facilities can be capitalized upon to efficiently provide services?
- How do we incorporate international interest in the trail?
- How can we tell the whole story of the trail, given that 1,200 miles of the trail lie within Mexico?
- From what historical perspective does Mexico view the trail?
- From what historical perspective does Spain view the trail?

How do we incorporate international interest in the trail?

- How can we tell the whole story of the trail, given that 1,200 miles of the trail lie within Mexico?
- From what historical perspective does Mexico view the trail?
- From what historical perspective does Spain view the trail?

An administrative issue was discussed by the planning team regarding the location of the Camino Real Administration Office. It was determined that locating the office in Santa Fe, New Mexico would be appropriate to take advantage of BLM and NPS staffing and resources and provide a "seamless" operation for the benefit of the public.

PLANNING CRITERIA

Both BLM planning regulations (43 CFR 1610) and NPS planning policies and guidance (Director's Order 2) require the preparation of planning criteria to guide development of all resource management plans or amendments. Planning criteria are the constraints or ground rules that guide and direct the development of the plan, and that determine how the planning team approaches the development of alternatives, and, ultimately, selection of a preferred alternative. They ensure that plans are tailored to the identified issues, and ensure that unnecessary data collection and analyses are avoided. Planning criteria are based on standards prescribed by applicable laws and regulations; agency guidance; the results of consultation and coordination with the public, other federal, state, and local agencies, and governmental entities, and North American Indian tribes; the analysis of information pertinent to the planning area; and professional judgment.

The following proposed criteria were developed internally and public review was requested during the scoping process:

- Although Spain developed and owned the Camino Real 1540 -1821, the historic period of significance for El Camino Real in the United States extends from 1598 to 1882.
- The draft CMP/EIS should be completed in compliance with Section 5(a) of the National Trails System Act and all other applicable laws. It will meet the requirements of Public Law 106-307 to protect the trail's natural and historic resources and recreation opportunities.
- The planning team should work cooperatively with the State of New Mexico; tribal governments; county and municipal governments; other federal agencies; and all other interested groups, agencies, and individuals. Public participation will be encouraged throughout the process.

- The planning process will include an EIS that will comply with NEPA and CEQ guidelines.

- The plan will emphasize the protection and enhancement of the historic values of the trail, while providing the public with opportunities for compatible recreation activities.

- Development and management of each segment of the National Trails System shall be designed to harmonize with and complement any established multiple-use plans for the specific area, in order to ensure continued maximum benefits from the land (Section 7 (a)(2)).

- The lifestyles and concerns of area residents, including the activities of grazing and hunting, will be recognized in the plan.

- Any lands or interests in lands located along the trail that are acquired by federal agencies from willing sellers to accomplish purposes for which the trail was designated will be managed consistent with the National Trails System Act.

- The planning process will involve tribal governments, and will provide strategies for the protection of recognized traditional uses.

- Decisions in the plan should strive to be compatible with the existing plans and policies of adjacent local, state, tribal, and federal agencies, as long as the decisions are in conformance with congressional direction and federal laws, regulations, and policies. The following BLM RMPs will be amended as necessary: (1) Taos RMP, (2) Socorro RMP, (3) White Sands RMP, and (4) Mimbres RMP.

- The location of the trail has been determined on the basis of historical information and actual field surveys, and will be further refined to meet the direction of the activation memo that Geographic Information Systems (GIS) will be used as an invaluable aid in administering the trail, and as a means by which the public can be provided with accurate trail mapping as quickly as possible.

- Private landowner rights will be respected. Land or interest in private land will only be acquired on a willing-seller basis.

- United States and Mexican public and non-governmental organizations and academic institutions will be consulted. In cooperation with the Secretary of State, consultation will take place with the government of Mexico and its political subdivisions, for the purpose of exchanging trail information and research, fostering trail preservation and education programs, providing technical assistance, and working to establish an international historic trail.

RELATIONSHIP TO OTHER PLANNING EFFORTS

There are several other planning efforts that have either just recently taken place or are in the stages of planning that are related to El Camino Real de Tierra Adentro NHT:

- ***Camino Real National Scenic Byway*** - A "Camino Real Scenic Byway Project Corridor Management Plan" was completed in September 1997. The New Mexico State Highway and Transportation Department administers the program, which highlights the cultural and natural experiences along the designated route. The corridor management plan describes those assets.

- ***El Camino Real Historic Corridor Management Plan for the Rio Abajo (May 2001)***- This plan is in conjunction with the Camino Real National Scenic Byway and is a component of El Camino Real International Heritage Center. This plan covers the route between Los Lunas and Las Cruces, New Mexico. The plan makes recommendations for preserving

and protecting the integrity and value of the trail's qualities. The plan provided a wealth of opportunities for cooperation between the NHT and the International Heritage Center to benefit communities along the corridor.

- ***El Camino Real International Heritage Center*** - A joint project between New Mexico State Monuments and the BLM, this center will house exhibits, information, and interactive programs related to the Camino Real. A variety of outreach activities are also planned. Facility and exhibit planning, as well as planning for the management of the center, is underway. The International Heritage Center and the NHT will closely cooperate to implement the individual and joint goals of each program. A Resource Management Plan Amendment/ Environmental Assessment for the center was completed in March 2001.

- ***Fort Selden State Monument*** - Fort Selden is an established park in the New Mexico State Monuments system. A general management plan is being developed. The Camino Real is associated with Fort Selden, and the planning will take the trail into consideration.

- ***Fort Craig*** - Fort Craig is a unit of the BLM Socorro Field Office. Planning is under way for additional interpretive exhibits and waysides. Fort Craig is associated with the Camino Real, and current efforts will take the trail into account.

- ***San Gabriel*** - San Gabriel is on San Juan Pueblo, and is the location of the first capitol in New Mexico. It is the first terminus of the Camino Real in New Mexico. Planning is under way to develop a "First Capitol" visitor center and possibly some associated facilities.

- ***El Camino Real River Connection, Santa Fe*** - Planning is under way between a number of public and private agencies and organizations to restore and preserve a portion of the Santa Fe River. The Camino Real is in close proximity to the River Connection project. They are planning trails and interpretive exhibits in conjunction with their work on the river.

- ***El Paso Rio Grande Riverpark*** - The city and county of El Paso, Texas, in conjunction with a number of public and private organizations, are in the process of planning a series of over 42 miles of trails along the Rio Grande, within the corridor of the Camino Real. The planning is taking into account the route, history, and traditions of the Camino Real.

- ***El Camino Real de Tierra Adentro Trail Association*** - The New Mexico Historical Society is sponsoring the formation of El Camino Real de Tierra Adentro Trail Association. A committee has been formed to organize the association. It is envisioned that the association will be open to any interested parties.

COORDINATION WITH MEXICO

Because 1,200 miles of the NHT lie within Mexico, the enabling legislation authorizes cooperation among United States and Mexican public and non-governmental organizations; academic institutions; and, in consultation with the Secretary of State, the government of Mexico and its political subdivisions. This cooperation is for the purpose of exchanging trail information and research; fostering trail preservation and educational programs; providing technical assistance; and working to establish an international historic trail with complementary preservation and education programs in each nation.

Since 1995, BLM and NPS have coordinated with the Instituto Nacional de Antropología e Historia (INAH) of the government of Mexico on Camino Real de Tierra Adentro projects. Although there is no legislation in Mexico comparable to the National Trails System Act, INAH

has been active in documenting and preserving sites related to El Camino Real de Tierra Adentro. BLM, NPS, and INAH have several bi-national agreements in place, and have developed a strategy for trail coordination.

The bi-national agreements include:

- Memorandum of understanding between the National Park Service of the Department of the Interior of the United States of America and the National Council for Culture and the Arts through the National Institute of Anthropology and History of the United Mexican States on cooperation in the identification, conservation, management, and research in cultural heritage sites (June 29, 1998).

- Letter of cooperation on the Camino Real de Tierra Adentro between the National Council for Culture and Arts through the National Institute of Anthropology and History of the Mexican United States, the National Park Service, and the Bureau of Land Management of the Department of Interior of the United States of America (July 11, 1998).

- Joint declaration of the Bureau of Land Management and the Culture and Arts Board for the United Mexican States though the Institute of Anthropology and History in order to realize common cooperative programs to improve the management, interpretation, and conservation of cultural patrimony (March 22, 2000).

Collaborative trail coordination among BLM, INAH, and NPS representatives will include:

- Communication with national and international representatives to ensure that all entities are up to date regarding El Camino Real de Tierra Adentro activities, issues, and concerns in both the U.S. and Mexico.

- Participation in quarterly and/or annual meetings to share information on El Camino Real activities, issues, and concerns in the respective countries.

- Coordination and participation in established international forums such as El Camino Real de Tierra Adentro Colloquium and the International Cultural Workshop on El Camino Real de Tierra Adentro.

- Designing and implementing joint international activities that enhance the development of strong partnerships between educational, federal, state, local, and private non-governmental entities in both countries.

- Developing and implementing opportunities for BLM, NPS, and INAH employees and partners that focus on cultural sensitivity, such as workshops, professional development, retreats, and international visits.

- Providing sufficient funding to support the various joint activities relative to El Camino Real de Tierra Adentro.

Chapter 2
ALTERNATIVES

INTRODUCTION

This chapter contains a description of the actions and prescriptions proposed to resolve issues and concerns under the three management alternatives for El Camino Real de Tierra Adentro National Historic Trail (hereafter referred to as "the NHT" and "the trail"). The Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act (NEPA) requires the identification of a preferred alternative.

PROCESS USED TO FORMULATE ALTERNATIVES

The public involvement process for this planning effort began with scoping meetings held in June, July, and August 2001 in several communities along the trail. The BLM and NPS gathered the wishes, concerns, and opportunities for the NHT that were expressed during formal and informal community and governmental meetings. Also collected were ideas that were mailed or sent electronically. A series of meetings was held in October 2001 to develop possibility statements (the desired future condition) and identify ways to achieve the desired conditions for the NHT. The meetings were well attended, and resulted in the formation of several community stakeholder groups. (See Appendix D for a summary of the community meetings.)

After reviewing all of the information collected at the community meetings, the planning team developed draft versions of the purpose and significance statements. Using the purpose and significance statements, issue summary and information gathered during the community, tribal, and governmental meetings, the team developed draft alternative strategies to achieve desired conditions, set goals, and resolve issues and concerns. A no action alternative is basically a continuation of the present course of action, and is a requirement of NEPA. The no action alternative, Alternative A, serves as a baseline for comparison with other alternatives. Alternative B would protect trail resources through a long - term stewardship program. This alternative would focus on protecting historic resources, with off- site interpretation but few opportunities for trail-based recreational activities. The Preferred Alternative would emphasize visitor understanding and appreciation of the trail's significance, protection of high-potential sites and segments, and opportunities for trail-based recreational activities.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

No additional alternatives were identified or considered by the public or study team.

CONTINUING MANAGEMENT GUIDANCE

Management of BLM-administered public lands is directed by federal laws, regulations, policy and guidelines, Executive orders, and planning documents developed with public involvement to focus on specific areas, resources, or uses. Land use allocation decisions are made at the Resource Management Plan level. Changes to land use allocations require a plan amendment. Components of the Preferred Alternative and Alternative B, as described below, relating to visual resource classifications, would amend the Taos, Mimbres and White Sands resource management plans. Grandfathered and valid existing rights would continue to be recognized on public lands.

High-potential historic sites and segments are referenced in the Preferred Alternative and Alternative B. Known high-potential historic sites are shown on Maps 3A-C, and listed in Appendix E. The historic sites were identified based upon the following definition derived from the National Trails System Act: "Those historic sites related to the route, or sites in close proximity thereto, which provide opportunity to interpret the historic significance of the trail during the period of its major use." Criteria for consideration as high-potential sites include historic significance, presence of visible historic remnants, scenic quality, and relative freedom from intrusion. Future research will identify and provide confirming information for possible additional high-potential sites. Known high-potential route segments are described in Appendix F. The segments were identified based upon the following definition from the National Trails System Act: "Those segments of a trail which would afford a high-quality recreation experience in a portion of the route having greater than average scenic values or affording an opportunity to vicariously share the experience of the original users of a historic route." See Table 3 for a summary of high-potential route mileage.

PREFERRED ALTERNATIVE: DESCRIPTION

The Preferred Alternative would implement the provisions of the National Trails System Act and it would also reflect the public's vision for the administration and management of the trail.

Camino Real Administration and its partners would undertake an ambitious program to enhance and balance resource preservation and visitor use. These actions would satisfy the dual purposes of the National Trails System Act "to provide for the outdoor recreation needs of an expanding population" and "to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air outdoor areas and historic resources of the nation."

In order to accomplish the desired degree of resource protection and enhanced public experience through education and direct retracing of trail segments, it is imperative for all agencies and entities associated with these trails to coordinate their work. Camino Real Administration would strive to achieve as high a level of cooperation among federal, state, and local agencies, trail associations, and private landowners as possible. Together, Camino Real Administration and its partners would establish a historic trails partnership to assist in implementing a comprehensive strategy for the administration of the NHT.

To ensure increased efficiency, closer communications, and more strategic resource protection, current federal programs would continue to be used in the administration of trail resources, but in a more formally coordinated and effective manner.

Visitors would understand the trail's significance and appreciate its history and cultural heritage through participation in coordinated programming and activities that integrate themes, resources, and landscapes at certified or protected components. Resources that best illustrate the trail's significance would be identified and protected on both public and private lands (high-potential historic sites and segments). Integrated interpretive and educational programming would be tied to on-the-ground trail resources. Information concerning trail-related interpretive/educational programming and activities would be promoted and shared. Certification priorities would be placed upon sites and segments supporting interpretive/educational programming and protecting significant resources. A bi-national approach with Mexico would promote activities such as interpretation, events, and signage.

The mission of the National Historic Trail and the Camino Real International Heritage Center are closely linked. The Heritage Center would serve as a focal point for education interpretation, information, and marketing along with others along the trail. The National Historic Trail and the International Heritage Center would have a close working relationship that complements each other's mission.

Preferred Alternative: Administration

Administration - As directed by the Secretary of the Interior, BLM and NPS would co-manage the NHT. Camino Real Administration of the trail would occur from a centralized office based in Santa Fe, NM, taking advantage of interdisciplinary subject-matter experts in the NPS's Long Distance Trails Group Office and the BLM's Division of Resource Planning, Use, and Protection. This would also allow for the equitable distribution of agency efforts along the 404 miles of the trail. The NPS Long Distance Trails Group Office would provide support services, and the BLM New Mexico State Office would provide communications (computer electronic mail, telephone services), office supplies, mail, photocopying, and graphics. Professional and support staff would encompass several disciplines, including resource management, interpretation, and design.

Information Repository - Camino Real Administration office would become the central repository for all information related to the administration of the trail. All the partners would be encouraged to submit copies of all pertinent documentation to this office, which would make these materials available upon request. When resource threats became known, information would be shared by all federal, state, and local partners, as well as by the trail associations.

Annual Operating Costs - The estimated annual operating costs for Camino Real Administration office to administer the trail would be $475,000, based on 2002 dollars. This amount would provide for co-administrators, administrative support, and interdisciplinary staff, including interpretation and resource management. This amount would be used for site certification, cooperative agreements, technical assistance, partner support, travel, Challenge Cost-Share projects and support, and special projects such as mapping and media production. Operational costs such as trail marking, brochure development and printing, newsletters, and other publications and interpretive media would also be covered. BLM and NPS would support efforts to enable a coordinated budget process for the NHT.

Funding - Funding for Camino Real Administration office would principally come from the base operation budget of NPS and BLM. Special funding sources would be sought for particular projects, such as technical assistance, resource preservation, and planning.

Coordination of Activities - Successful administration of the trail will require enhancing and more effectively coordinating the activities of a trail association; private landowners; and federal, state, and local agencies. Efficient cooperation would result in a historic trail partnership that would assist in implementing the comprehensive strategy for resource protection.

Federal-level Partners - Federal agencies would manage their lands for the protection and interpretation of trail-related resources. Use of trail-related resources would be restricted to necessary protection and monitoring activities. Interpretation and public appreciation of the resources would be encouraged through site displays, activities, and educational opportunities.

State-level Partners - State resource management agencies, including state historic preservation offices, would support ongoing trail preservation efforts by assisting with the various elements of the protection plan, particularly the identification of high-potential sites and segments, the inventory of trail resources, the identification of research needs and the coordination of research projects, the identification of management units, and opportunities for interpretation and visitor understanding. These management agencies would also help monitor commemorative events and develop action plans to address potential threats.

Local-level Partners - Initiatives at the local level could greatly enhance trail resource protection. These initiatives might include commenting on utility licensing, cell towers, surface and subsurface mineral extraction permits, cultural and natural resource preservation laws, ordinances, and related measures. Counties and cities would be encouraged to support resource protection by integrating nearby NHT designations in local land management and interpretive plans. For example, farmland at certain points

along the routes of the trails might meet the requirements for agricultural preservation zones established under state or county regulations. These preservation zones have been set up to keep prime farmland assessed at a low valuation or in active agricultural production, or to keep grazing land in continued use. Efforts by local governments and private parties to acquire land would be essential tools for preserving trail resources. These efforts would supplement land protection efforts by federal agencies.

Non-governmental Organization Partners - Land preservation groups would also be encouraged to work closely with state and federal agencies to preserve undeveloped areas while maintaining such areas under private ownership. Owners and communities could both benefit from potential tax advantages available through cooperative efforts to preserve open space. Lands would remain on the local tax rolls, but would be taxed at the lower undeveloped-parcel rate. Thus, landowners would not be forced by rising taxable property values to sell to developers or to subdivide and develop land that was suitable for farming or ranching. Working with land preservation groups, such as The Nature Conservancy, could provide a great opportunity to preserve trail resources. The acquisition of properties, purchases of conservation easements, or other arrangements could produce important results.

Trail Association - A trail association would be essential for the successful administration of the NHT. An association such as El Camino Real de Tierra Adentro Association would provide a powerful and effective constituency for trail resource preservation. Association support and involvement would be an essential element of the historic trails partnership. A trail association would be encouraged to assist Camino Real Administration by sharing information on historic routes, significant historic archeological resources, historic diaries, and other pertinent data. A trail association could further help land managers in the administration of the trail by creating cooperating associations, friends groups, or similar organizations to help protect and enhance lands under the jurisdiction of these federal agencies. This organization could also encourage volunteer activity to assist with trail corridor monitoring, and protection and interpretation, and they could help build greater public support for historic trail preservation and use, as well as persuading local landowners who own significant trail resources to participate in the trails' certification program. A trail association would also be encouraged to assist federal, state, and local parks and museums in acquiring important objects for their collections, such as journals, letters, and travelers' personal effects.

Recognition Programs - Such programs would also be an important tool for rewarding special partners, and would provide an incentive for others to join in the cooperative effort.

Trail Mapping - Currently, paper maps exist at varying scales ranging from 1:24,000 to 1:1,000,000. As part of this alternative, Geographic Information System (GIS) maps would continue to be generated at 1:100,000 scale, with protection sites and segments identified for each quadrangle. Even though the digitized routes and some of the site locations have not been field- tested, this effort constitutes the first attempt to bring together route information for this trail. Maps at this scale are limited in their locational accuracy for trail resources and their applicability for on-the-ground management, yet the mapping project demonstrates the need to systematize current information and to make it available to all the partners and other interested parties.

Effectively integrating GIS into the management of NHT resources requires long-term technical support, with additional funding and staffing. The database generated for this project can be effectively integrated with databases from other agencies and partners to provide easy access to one reliable source of information for all trail-related resources.

Camino Real Administration would require long-term technical support to develop a GIS database. Obtaining GIS information would be a priority. Professional support for the GIS database for the trails would be provided by Camino Real Administration staff, or by specialists under contract. This would not only require GIS professionals, but computer workstations equipped with appropriate software.

Memorandum of Understanding - Cooperative actions related to the Memorandum of Understanding (2001) among the NPS, BLM, USDA Forest Service, Federal Highways Administration, and National Endowment for the Artswould emphasize a concerted effort on the part of trail managers to effectively implement as many provisions as possible.

Cooperative Management Agreements - Camino Real Administration would develop memorandums of understanding, cooperative agreements, and interagency agreements. A cooperative agreement among the federal agencies would be developed and implemented that specifically related to the trail.(See sample agreement in Appendix I.)

Site Certification - Trail segments and trail - related historic sites on federal land are included as federal protection components of the NHT. Trail segments and trail - related sites on non - federal lands are officially included as part of a designated NHT if they are certified as protected segments. Certification would help ensure that historic sites or segments outside federal jurisdiction meet the basic preservation, interpretation, or recreation functions described in the National Trails System Act (Sec. 3(a)(3)) and any other prescribed criteria. The certification program is one of the most important ways in which federal administering agencies can foster partnerships with non -federal landowners throughout the trail corridor. (See sample certification agreement in Appendix I.)

Under this alternative, certification emphasis would be directed toward protection and interpretation. The proposed certification process for El Camino Real de Tierra Adentro NHT is as follows:

- Camino Real Administration would pursue early coordination with potential applicants to ensure that they fully understand site/segment certification procedures, and to aid in their application efforts.

- Applicants would be required to document their resources and interpretive programs. Environmental or other compliance procedures would have to be completed.

- Camino Real Administration would provide technical assistance on issues related to cultural or natural resource compliance.

- Camino Real Administration and the applicants would determine management objectives for the site/segment, and management responsibilities would be outlined. For smaller sites/segments, the application could replace more detailed management planning and formal cooperative agreements.

- In addition to historic sites and segments, extant interpretaive facilities would be certified as components of the NHT. Potential facilities include, but are not limited to, the Geronimo Springs Museum in Truth or Consequences, New Mexico; National Hispanic cultural Center in Albuquerque, New Mexico; New Mexico Farm and Ranch Heritage Museum in Las Cruces; and El Camino Real International Heritage Center south of Socorro, New Mexico.

On completion of official certification, the public would be informed through appropriate trail information programs that the site or segment was available for public use and enjoyment. Certification is not permanent; it can be renewed subject to satisfactory performance of the terms of the agreement. De-certification would result in the removal of a site or segment from trail information programs and the removal of trail logo markers. Other actions might be taken as well, depending on the terms of certification.

Challenge Cost-Share Programs - Challenge cost - share programs were developed to increase and strengthen partnerships in the preservation and improvement of cultural, natural, and recreational resources for which federal land- managing agencies are responsible. Each agency's program is slightly different. Camino Real Administration would provide federal cost -

sharing funds according to policy and regulation to expedite and complete mutually beneficial projects. The program requires the partner to provide matching share contributions, such as funds, equipment, supplies, and in-kind labor, from non-federal sources. Partners include non-federal entities such as individuals, educational institutions, private non-profit organizations, philanthropic organizations, charitable groups, or non-federal (i.e., state, local, or tribal) agencies or governments. The current maximum amount that can be awarded to a project in any given year is $30,000.

Public Awareness - Raising public awareness about trails, and building support for their continued protection would continue to be important goals of the trail partners. The higher level of cooperation between Camino Real Administration and its partners under this alternative would allow for new and better opportunities to achieve these goals.

Some of the following proposals and opportunities would go beyond those that could be achieved under current management conditions.

NHT Website - This Internet website would provide news and information on the Camino Real NHT, and it would be shared by the various trails organizations and any affected federal or state agencies that wished to participate. Specific items available to users of the website would include: information on certified sites and segments, auto tour routes, historic-trail and auto-tour, interpretive materials and programs, resource threats, and trail-related special events. This site would link to other Camino Real and appropriate tourism and visitor information websites.

Trail Promotion - Camino Real Administration would encourage the development of a promotion plan to foster public awareness of the trail and its resources. This action would be consistent with the intent of the National Trails System Act to "provide for the ever-increasing outdoor recreation needs of an expanding population" and "the enjoyment and appreciation of the open-air outdoors areas and historic resources of the Nation." Recreational opportunities for visitors would be coordinated in a trail promotional strategy with local, regional, and state tourism bureaus. Local chambers of commerce, convention and visitor bureaus, and other interested parties would be encouraged to work together in the development of a tourism plan.

If interest were strong, Camino Real Administration would encourage the establishment of an interstate trail-promotion task force. Its role would be to promote appropriate activities and events along the NHT to local and state communities, as well as to out-of-state and foreign visitors. If established, Camino Real Administration would negotiate an agreement with the task force to address how the agency and the task force could assist one another. Actions that might be undertaken by Camino Real Administration include the following:

- Coordinate interpretive efforts with the promotional activities of the task force.
- Provide assistance so that the task force would have accurate information for promotional efforts.
- Provide the task force with trail brochures or other materials.
- Inform task force members how to obtain permission to use the official trail marker symbol for appropriate purposes.

Actions that might be undertaken by the task force to assist Camino Real Administration include the following:

- Assist the land- managing entities to encourage visitor respect for the appropriate use of trail resources, especially those on private property
- Help control trail and site promotion to protect less developed or fragile resources from overuse and adverse impacts.
- Help protect and enhance visual quality along the trail.

The task force would work to promote the NHT as a single, integrated trail system. Within that overall system, the task force might also provide for a coordinated series of regionally oriented auto-tour- route brochures that provide visitors with more detailed information about activities and support services. A videotape or slide show could be produced to interpret the trails and related sites for use at travel shows, group meetings, schools, and other occasions.

In cooperation with local managers, Camino Real Administration might authorize the limited use of trail markers for select special events, if the event would help advance the objectives of the trails in a substantial way and if there were no liability consequences.

Camino Real Administration would encourage all NHT advocates to stress trail protection and conservation in their promotions. Local promotional efforts might involve state historic register plaques, plaques for local historic sites, walking or driving tours of state and local areas of interest, and special events fashioned around themes relating to the NHT.

Corporations might be encouraged to "adopt-a-site," contributing funding and volunteers to work on resource preservation, to develop sites, and to promote high-potential sites or segments. Such sponsors would be expected to adhere to all local management and NPS and BLM standards for development and interpretation, and to comply with federal resource preservation statutes.

Volunteers and Liability - Federal partners would develop a coordinated program to enhance the efficiency of volunteer activities. Volunteers would be of particular assistance in protecting NHT resources by entering data and updating information related to the trail's RMPs. They could also assist with NHT marking and with other activities associated with the administration and protection of trail resources. The Volunteers in the Parks and in the Forests Act of 1969 and the Volunteer Protection Act of 1997 would continue to provide a means for the federal government to protect cooperating landowners and other partners from liability claims.

Trail Marking / Signage - Camino Real Administration and its partners would cooperate to complete a sign plan for certified sites, segments, and federal protection components. This plan would enable NHT administration and partners to reduce the amount of existing sign clutter, and would ensure that new signs were placed in appropriate locations. The plan would also foster the use of consistent materials and designs (see Appendix G).

Research - A research-needs plan will be developed by Camino Real scholars to direct future historical, social, and routle location aspects of the NHT.

Preferred Alternative : Resource Protection

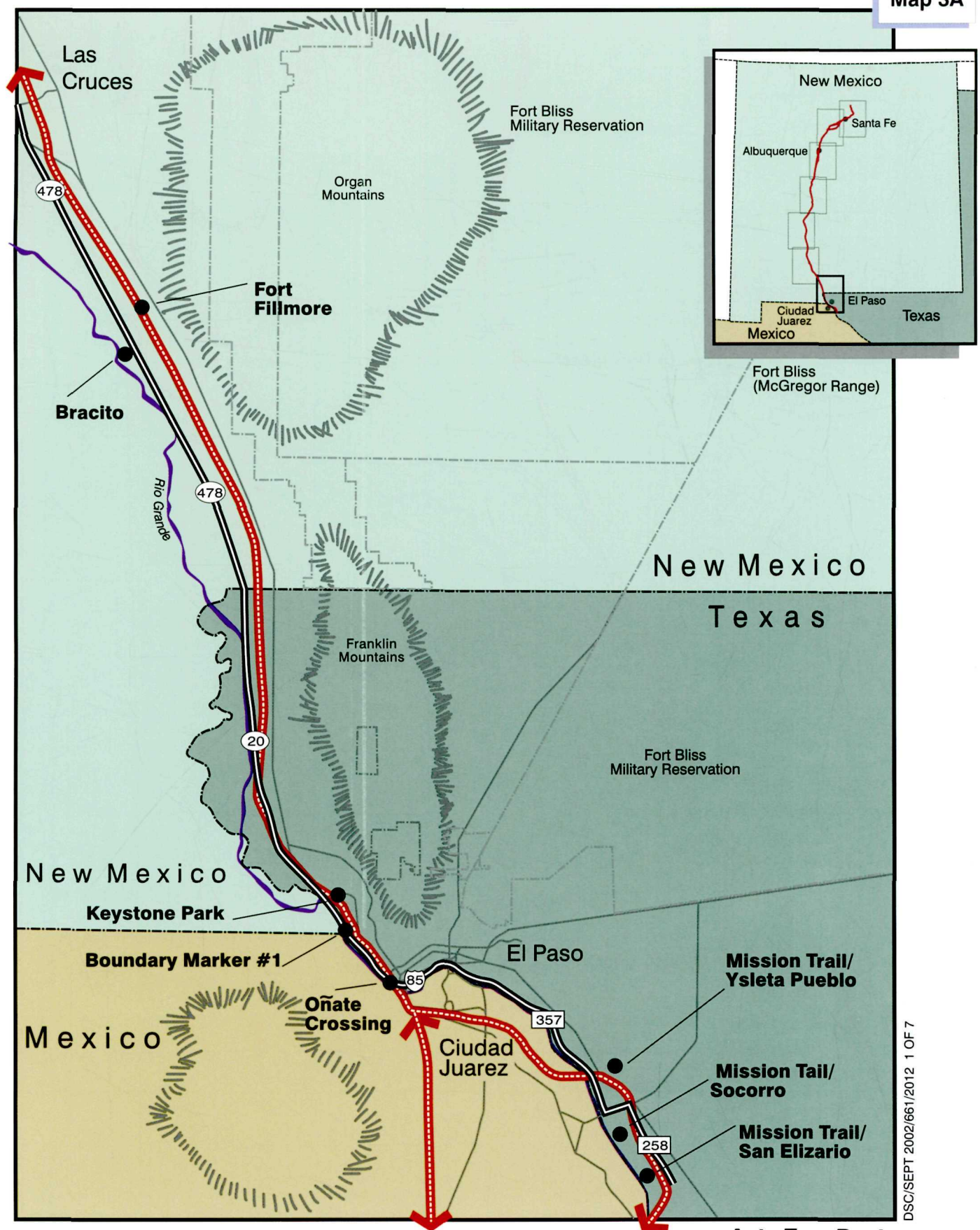
Section 5 of the National Trails System Act requires "a protection plan for any high-potential historic sites or high-potential route segments." Protection would be limited largely to the identification of sites and segments, with general recommendations for their administration. The following criteria, based on the National Register of Historic Places and the National Trails System Act, would be used to identify additional resources:

- Significance to the trail (based on documentation and/or archeological research)
- Integrity of the physical remains
- Integrity and quality of the setting
- Opportunity for high-quality recreation evoking the historic trail experience
- Opportunity to interpret the primary period of trail use

Camino Real Administration would gather new information on additional high-potential historic sites and segments, and would cooperate with other federal managers, trail associations, trail scholars, and state historic preservation offices in adding, deleting, or modifying the list of sites. The criteria used to identify the initial list of high-potential historic sites would also be

Petroglphs along Camino Real.

Map 3A



NORTH

0 5 10 miles

Auto Tour Route

High-Potential Historic Site

El Camino Real de Tierra Adentro National Historic Trail

Auto Tour Route
High-Potential Historic Sites
Section 1 of 7
El Camino Real de Tierra Adentro
National Historic Trail

United States Department of the Interior
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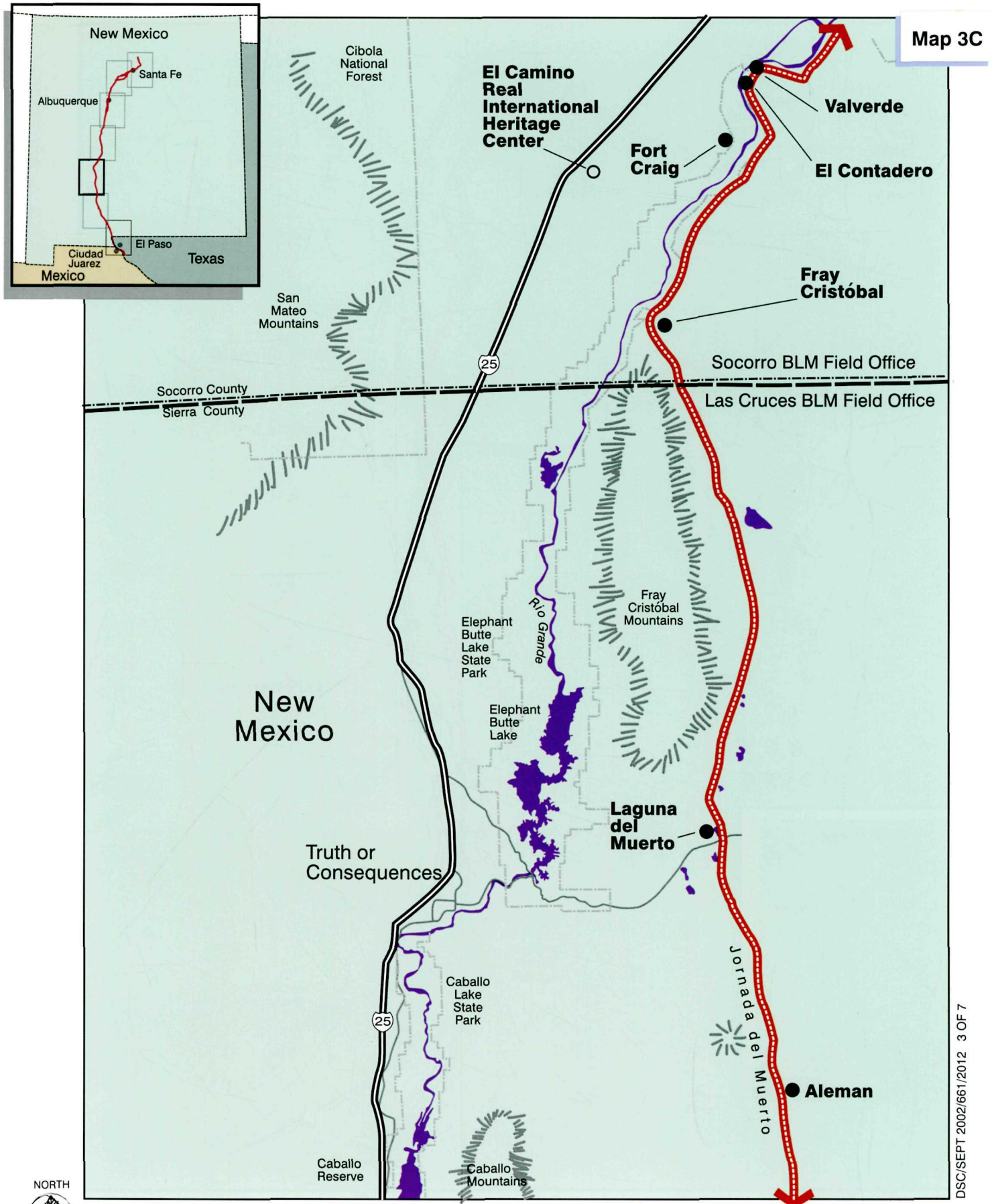
Auto Tour Route
High-Potential Historic Sites
Section 2 of 7
El Camino Real de Tierra Adentro
National Historic Trail

United States Department of the Interior
National Park Service
Bureau of Land Management


Map 3C
New Mexico
Santa Fe
Albuquerque
El Paso
Ciudad Juarez
Mexico
Texas
Cibola National Forest
El Camino Real International Heritage Center
Fort Craig
Valverde
El Contadero
Fray Cristóbal
San Mateo Mountains
25
Socorro BLM Field Office
Las Cruces BLM Field Office
Socorro County
Sierra County
Fray Cristóbal Mountains
Río Grande
Elephant Butte Lake State Park
Elephant Butte Lake
New Mexico
Laguna del Muerto
Truth or Consequences
Jornada del Muerto
Caballo Lake State Park
Aleman
Caballo Reserve
Caballo Mountains
NORTH
0
5
10 miles
Auto Tour Route
High-Potential Historic Site
El Camino Real de Tierra Adentro National Historic Trail
Auto Tour Route
High-Potential Historic Sites
Section 3 of 7
El Camino Real de Tierra Adentro National Historic Trail
United States Department of the Interior
National Park Service
Bureau of Land Management
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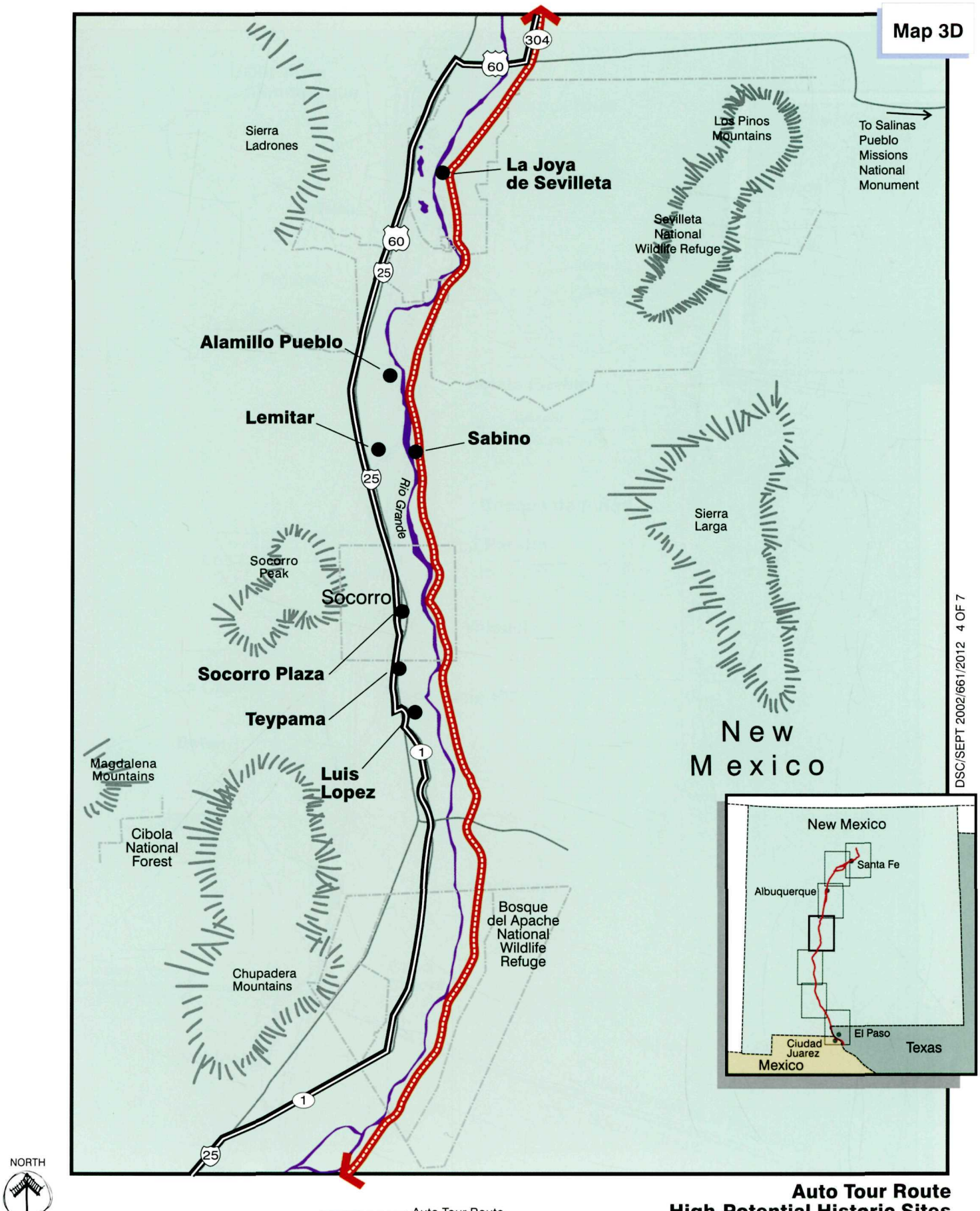

Auto Tour Route
High-Potential Historic Sites
Section 4 of 7
El Camino Real de Tierra Adentro
National Historic Trail

United States Department of the Interior
National Park Service
Bureau of Land Management

Auto Tour Route
High-Potential Historic Sites
Section 5 of 7

El Camino Real de Tierra Adentro
National Historic Trail

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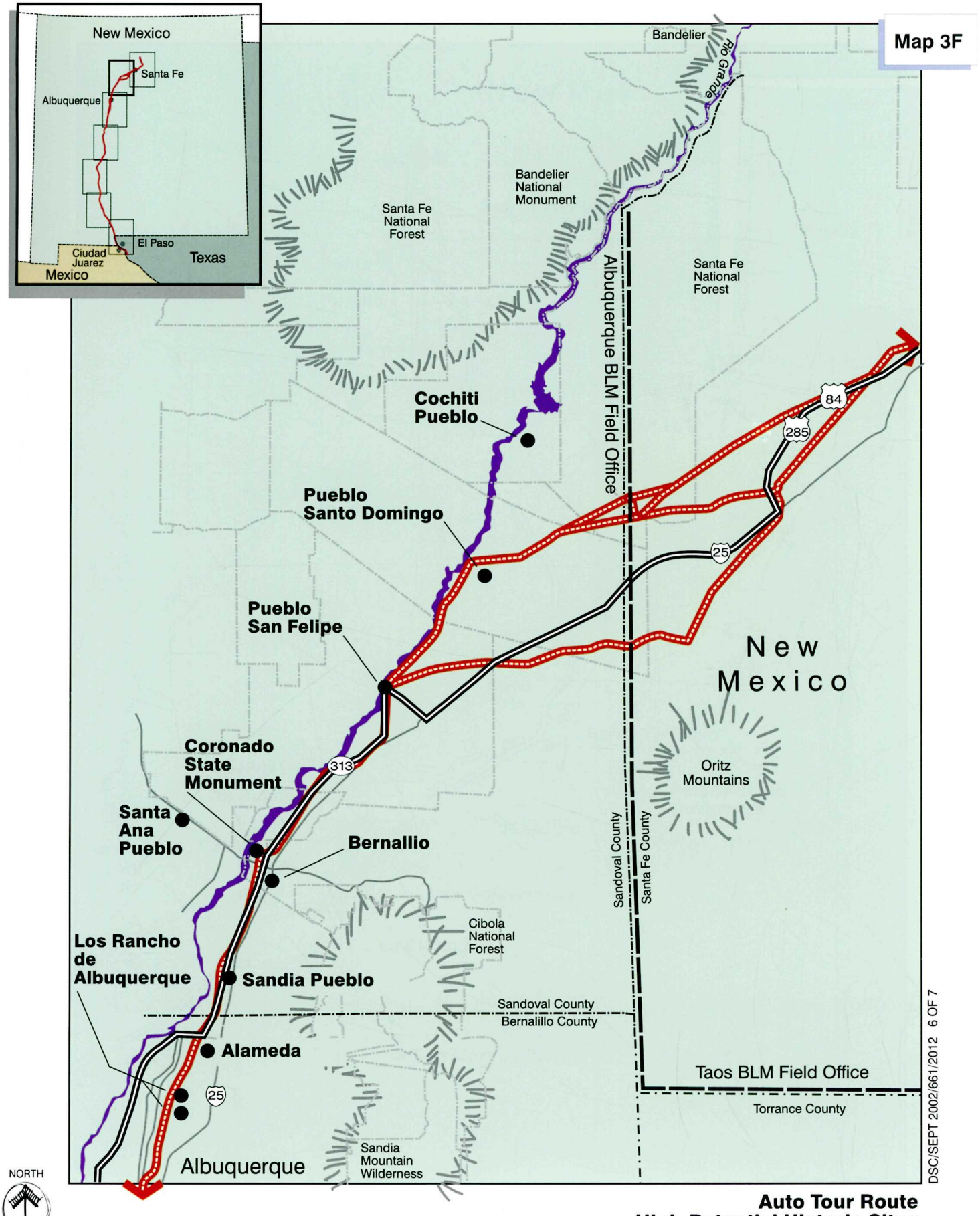
Map 3F
New Mexico
Santa Fe
Albuquerque
El Paso
Ciudad Juarez
Texas
Mexico
Bandelier
Rio Grande
Bandelier National Monument
Santa Fe National Forest
Santa Fe National Forest
Albuquerque BLM Field Office
Cochiti Pueblo
Pueblo Santo Domingo
Pueblo San Felipe
84
285
25
New Mexico
Coronado State Monument
313
Santa Ana Pueblo
Bernallio
Oritz Mountains
Sandoval County
Santa Fe County
Cibola National Forest
Los Rancho de Albuquerque
Sandia Pueblo
Sandoval County
Bernalillo County
Alameda
25
Taos BLM Field Office
Torrance County
Albuquerque
Sandia Mountain Wilderness
NORTH
0
5
10 miles
Auto Tour Route
High-Potential Historic Site
El Camino Real de Tierra Adentro National Historic Trail
Auto Tour Route
High-Potential Historic Sites
Section 6 of 7
El Camino Real de Tierra Adentro National Historic Trail
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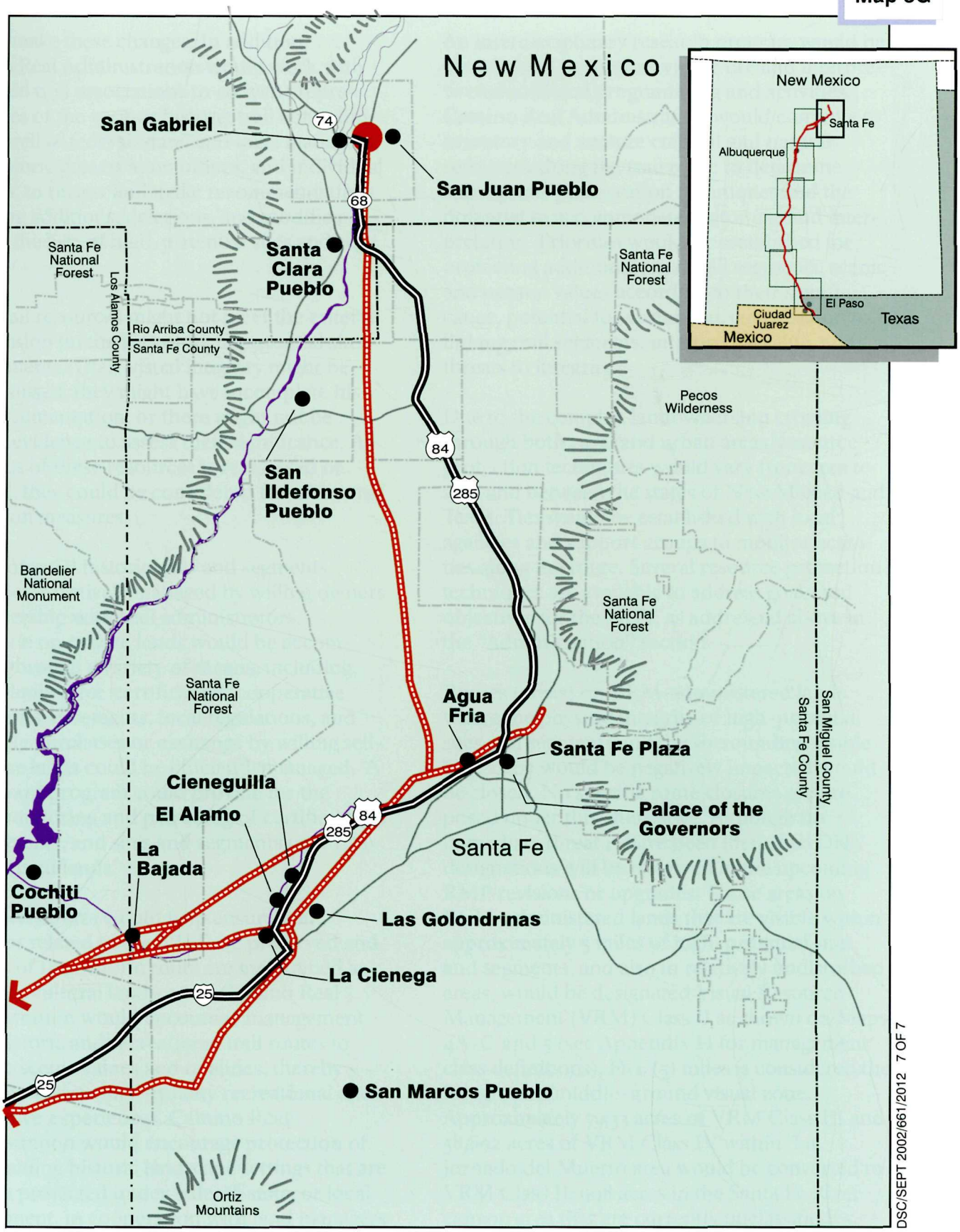
Map 3G



NORTH

0 5 10 miles

Auto Tour Route

High-Potential Historic Site

El Camino Real de Tierra Adentro National Historic Trail

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Auto Tour Route
High-Potential Historic Sites

Section 7 of 7

El Camino Real de Tierra Adentro National Historic Trail

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used to make these changes. In addition, Camino Real Administration would work with interested trail associations to convene representatives of the various historic trail communities, as well as federal, state, and local managers, state historic preservation offices, and individual scholars, to review and make recommendations regarding additions, deletions, and modifications to the lists of high-potential sites and segments.

Some trail resources might not meet the criteria for inclusion on the lists of high-potential sites and segments. Their visual integrity might be compromised, they might have incomplete historic documentation, or there might not be enough evidence to assess their significance. As the status of these resources is reassessed or clarified, they could be considered for additional protection measures.

High-potential historic sites and segments would be proactively managed by willing owners in partnership with trail administrators. Protection on private lands would be accomplished through a variety of means, including, but not limited to: certification, cooperative agreements, easements, local regulations, and fee simple purchases or exchange by willing sellers where lands could be efficiently managed. A site steward program could provide for the active monitoring and patrolling of certified sites and segments, and sites and segments on BLM-administered lands.

Protection efforts would help ensure that resources related to the NHT are preserved and sections of the historic route are maintained as natural or cultural landscapes. Camino Real Administration would encourage management of the historic and recreational trail routes to preserve scenic values and qualities, thereby helping to ensure high-quality recreational and interpretive experiences. Camino Real Administration would encourage protection of the remaining historic landscape settings that are not now protected under federal, state, or local management, in cooperation with land managers along the route and with the review of the state historic preservation offices.

An interdisciplinary research program would be coordinated to support visitor use and interpretive/educational programming and activities. Camino Real Administration would continue to inventory and analyze cultural and natural resources along the trail route to determine appropriate preservation techniques and the potential to accommodate visitor use and interpretation. Priorities would be established for protecting additional sites, trail segments, scenic and natural values according to their significance, potential for visitor use, contribution to linking trail segments, interpretive value, and threats to integrity.

Due to the complex landownership crossing through both rural and urban areas, resource protection techniques would vary from area to area and between the states of New Mexico and Texas. Ties would be established with local agencies and support groups to monitor activities along the route. Several resource protection techniques are available to address goals and objectives for the NHT, as addressed above in the "Administration" section.

Routes (areas) on BLM-administered lands where the physical integrity of high-potential sites and segments and the surrounding visible landscape would be negatively impacted would be closed. No specific route closures are proposed under this alternative. Although no immediate threat is have been identified OHV designations will be reviewed in the upcoming RMP revisions or upgrades. Those areas on BLM-administered lands that are visible within approximately 5 miles of high-potential sites and segments, and also in relatively undisturbed areas, would be designated Visual Resource Management (VRM) Class II as shown on Maps 4A-C and 5 (see Appendix H for management class definitions). Five (5) miles is considered the foreground/middle-ground visual zone. Approximately 7,533 acres of VRM Class III and 58,892 acres of VRM Class IV within La Jornado del Muerto area would be converted to VRM Class II; 998 acres in the Santa Fe River canyon area that are currently unclassified would be converted to VRM Class II (see Maps 4 and 5). These changes in VRM classes would amend the Taos and Mimbres, and White Sands

resource management plans. The area surrounding the International Heritage Center would continue to be managed under VRM Class I and II guidelines.

Preferred Alternative : Visitor Experience

There would be a unified effort by Camino Real Administration and partners to provide a developed, coordinated visitor experience along El Camino Real de Tierra Adentro NHT. The visitor experience would be comprised of activities and programming emphasizing the trail's significance, history, and natural and cultural heritage. Visitors would be able to participate in coordinated programming that brings themed interpretation/education together with trail resources and landscapes—on the ground along the NHT at federal protection components and certified sites, segments, and interpretive facilities. The availability and number of options for trail - related facilities, media, and interpretive/educational programming would increase through strong partnerships.

Recreation - Under this alternative, recreational activities with interpretive and/or educational components would be encouraged and supported on the NHT. Companion trails for hiking, biking, or horseback use would be established on appropriate trail segments. These would offer representative experiences of original trail travelers in settings similar to those once existing along the Camino Real.

Trail - related recreational uses would be encouraged through directional and interpretive signage and brochures. Kiosks, trailheads, and trails to support recreation development would be encouraged, and access to the trail route or viewpoints would be developed. Messages regarding responsible recreation on public lands and respect for private landownership would be emphasized and supported.

Proposed projects on BLM-administered lands in New Mexico include:

- ***Jornada del Muerto*** - Several sites along this desert passage would be developed for public use:

I -25 at Upham Exit - A small pullout parking area would be developed along the county road, and information would be provided about travel conditions to the north. Visitors would be alerted that travel on the county road is not recommended for trailers over 15 feet, motor homes, or low- clearance vehicles, and that no water or other services are available for 35 miles.

- ***San Diego*** - The Paraje de San Diego is the southernmost camping site in the Jornada del Muerto. The Cerro San Diego was a landmark on the trail. A pullout parking area with interpretive signs would be developed on a county road away from the site. A trail would be developed to a short segment of the Camino Real, just north of the Detroit Well site. Interpretation of San Diego could also be offered at the Interstate 25 rest stop.

- ***Ojo de Perrillo/Point of Rocks*** - The paraje of Perrillo got its name from a dog sighting during the Oñate expedition in May 1598. Its muddy feet indicated nearby water. A pullout parking area would be developed, with a short trail with interpretive signs to an overlook of the paraje area.

- ***Yost Escarpment*** - There are Camino Real trail ruts in this area. A pullout parking area would be developed. A short trail with interpretive signs would lead to an overlook of the ruts.

- ***Companion Trail*** - A 5- to 10-mile companion trail for hiking, biking, and horseback riding could be developed in the Jornada, parallel to the Camino Real along a county road. Safety and interpretive messages would be provided. This development would be demand-driven only.

- ***Teypama Site*** - A pullout parking area would be developed with interpretive signs near the pueblo ruin.

- ***La Cieneguilla*** - The BLM is currently working with community members and North American Indian Pueblos to plan for visitor use and resource protection at the site. No actions are proposed at this time in connection with the NHT.

- ***Auto Tour Route*** - An auto-tour route generally following the course of the Camino Real would be developed to encourage visitation and promote the trail, and to provide a "user- friendly" avenue for visitors to find trail-related resources. This activity would occur on all-weather roads for two-wheel-drive use year- round. Highway and road signs would identify the route, and maps would be provided for visitors. An array of accompanying interpretive materials would be provided, including tour- route guides identifying trail-related resources and interpretive facilities. Camino Real Administration would consult with the state departments of transportation in both New Mexico and Texas, and would coordinate the auto-tour route's development in partnership with tourism, historic preservation agencies and groups, chambers of commerce, and other civic organizations. Close coordination would also take place with New Mexico State Highway and Transportation Department and Texas Department of Transportation with respective scenic byway programs. The route would be identified subsequently on state and commercial highway maps.

- ***Special Events*** - Special and cultural events directly tied to trail significance would be promoted and supported. The NHT logo could be used on a request-permission basis in association with such events.

Interpretation/Education - Under this alternative, trail-related interpretation and education opportunities would emphasize the full range of interpretive themes. Development of new facilities such as visitor centers or museums by the private sector would be supported. Interpretive and education programs currently being provided along the trail would continue and be strengthened, and new interpretive and educational programming would be developed and provided on federal protection components, and at certified sites, segments, and interpretive facilities. New kiosks and trailheads along interpretive trails would be encouraged to support recreation development. Trail guides would identify and interpret Camino Real resources.

Interpretive Themes: The establishment of El Camino Real de Tierra Adentro NHT provides an opportunity to interpret and educate visitors to the rich history of New Mexico and western Texas in relation to the Camino Real. Historic sites and interpretive facilities along the trail can tell stories that illustrate the evolving relationship between landscape and cultures.

Themes are the key ideas for visitor understanding of the trail's history and significance. They serve as broad unifying concepts about the trail that form the foundation of interpretive and educational programs and media. They will apply regardless of the agency, organization, group, or individual responsible for developing interpretive and educational materials in association with the NHT.

The following themes are not a comprehensive listing of possible interpretive topics, and are not in any priority order. Under Alternative C, an overview of all the themes would be presented to visitors through a variety of educational programs and interpretive media and programs.

- For centuries, indigenous peoples used trails linking Pueblo and other tribal villages for trade, agriculture, and exchange of food; the Camino Real incorporated portions of these trails thus continuing patterns of human interaction.

- The Camino Real was the primary route for the settlement, trade, conquest, military operations, and supply of northern Mexico and the southwestern United States for more than 300 years; the people who traveled this lifeline between

Mexico City and northern New Mexico changed the course of North American history.

- The Pueblo peoples of the Rio Grande Valley were transformed through contact with European diseases, religion, warfare, material culture, and domestic crops and animals introduced via the Camino Real.

- The physical nature of the trail routing evolved with time due to weather and river movement, as well as with hanging conditions and the needs of north-south trade and traffic; today, remaining evidence of Camino Real routes reflects both past use and the on-going shifting of landscape.

- The Camino Real facilitated cultural exchange and change among North American Indians, Spaniards, Mexicans, and Anglos, and represents the shared patrimony of nations and cultures.

- Human activity, movement, and settlement along the Camino Real forever altered the physical environment of the Rio Grande Valley and uplands.

- Activities and personal interaction along the Camino Real (Interstate 25) continue to eliminate cultural barriers and enrich the lives of people on both sides of the American/Mexican border.

- Camino Real resources link the past with the present; tangible artifacts, structures, and landscapes, together with intangible aspects of cultural heritage, represent fragile connections that require vigilance and foresight to protect, preserve, and perpetuate for the generations to come.

In this alternative, all the themes would be emphasized and would be presented to visitors through a variety of educational programs and interpretive media and programs.

A bi-national approach (American, Mexican, and possibly Spanish) to interpretation would be taken. Multiple points of view and perspectives would be presented, and wherever possible, interpretive messages would be presented in both the Spanish and English languages.

Interpretive Media: Under this alternative interpretive media would be developed through coordinated, collaborative efforts (Camino Real Administration and partners) to interpret all of the trail's themes and promote visitor understanding of the trail's significance and resources. Media would be provided at federal protection components, as well as certified sites, segments, and interpretive facilities off the trail. Use of a wide range of media (including oral histories) would be encouraged to engage visitors and stimulate interest in the trail and its history:

- ***Audiovisual Media*** - Appropriate audiovisual productions would be used to orient visitors to the NHT and its resources. Camino Real Administration would lend assistance to partners proposing to develop new audiovisual programs to be presented on federal protection components, and at certified sites, segments, and interpretive facilities. These programs would present aspects of the trail's themes best conveyed by this media type.

- ***Indoor Exhibits*** - Museum and visitor center exhibits would assist with providing visitors with context and meanings associated with the Camino Real's significance and resources. Camino Real Administration would provide interpretive assistance for the development of any new or revised exhibits on federal protection components, and at certified sites, segments, and interpretive facilities. Exhibit text would provide an overall view of all the trail's themes.

- ***Wayside Exhibits*** - Under this alternative, Camino Real Administration would support an interpretive wayside exhibit system for use at appropriate places on the NHT. The use of a standardized exhibit design (following wayside exhibit guidelines and standards) would reflect

the flavor of the Camino Real, and would promote the integration of interpretive messages offered along the NHT. The Camino Real's name and logo would be used on all NHT-related wayside exhibits. Camino Real Administration would coordinate with private landowners and public land managers to promote the development of a consistent wayside exhibit system to blend with existing signs.

- ***Traveling Exhibits*** - Traveling exhibits would be developed to present various interpretive and educational materials off- site. Under this alternative, traveling exhibits would offer an overview of the trail's themes, and would reach many people beyond the bi-state area.

- ***Publications*** - Camino Real Administration and partners would develop brochures and other publications. An overview of all the trail's themes would be provided. An official map and guide would be developed to provide overall orientation and information about the significance and resources of the NHT.

- ***Websites*** - The development of new interpretive websites about the Camino Real would be encouraged, and all the trail's themes would be emphasized. New site development would be coordinated to prevent repetitive information; extant sites would remain on-line. A possibility exists for the development of a website that centralizes educational resources along the trail.

- ***Interpretive Facilities*** - Camino Real Administration would work with the supporters and staff of new interpretive facilities desiring to become official interpretive components of the NHT. Assistance with interpretive planning to provide quality visitor experiences and to ensure the consistency and accuracy of interpretive content would be provided. Camino Real Administration would not construct or operate facilities; however, BLM and the Museum of New Mexico State Monuments Division would continue to develop a new interpretive facility that is being constructed south of Socorro, New Mexico. El Camino Real International Heritage Center will offer interpretive media and educational programs about the trail. The heritage center is a separate project from the NHT but would serve as a focal point for trail-related interpretation and education along the southern portion of the trail.

- ***Programs*** - Support would be provided for developing new interpretive programs to bring together themes, resources, and landscapes for visitor understanding. The possibilities for theme-related programs to be available both on and off the trail are endless. Hands-on activities directly tied to trail-related resources on federal protection components, and at certified sites, segments, and interpretive facilities, would be emphasized and supported.

Community Involvement - Opportunities to engage community people along the Camino Real in cultural education and interpretation would include:

- Habitat Chat among sister communities along the NHT, using interactive media

- Study of history, culture, science, and math through hands-on museum activities

- Grant writing to obtain funding for writing and publishing local history documents along the trail

Interpretive Plan - Camino Real Administration and trail partners would prepare an interpretive plan for the length of El Camino Real de Tierra NHT. The plan would describe the desired visitor experiences, and set goals, articulate trail-long and regional themes and sub-themes, and ensure that programs at related

sites complemented each other. The interpretive plan would prescribe the appropriate interpretive services, including possibilities for non-personal services such as museum exhibits, traveling exhibits, audiovisual programs, wayside exhibits, and publications, as well as personal services such as guided interpretive walks and talks, and educational programs. A strategy for implementation would be developed.

Educational Programs - Camino Real Administration would support the development of new educational programs for the trail, and would encourage programs to meet state teaching standards in New Mexico and Texas.

Under this alternative, new education materials and packages would be based on all of the trail's themes, and would promote understanding of and appreciation for the trail's significance and history

Heritage Tourism - Heritage tourism would entail traveling to historic and cultural attractions to learn about the past in an enjoyable manner, but would not allow for the decline of the very resources that attracts visitors in the first place. Heritage tourism would be strongly encouraged as a new type of visitor use opportunity, as well as an excellent tool to assist in the promotion of historic trails. Heritage tourism would be sensitive to environmental issues, and would be designed to allow people to experience resources with an ecologically and culturally sensitive frame-of-mind and a leave-no-trace emphasis.

Camino Real Administration, in cooperation with state departments of tourism, would encourage and assist trail communities in becoming gradually involved in the National Trust for Historic Preservation's heritage tourism program. Camino Real Administration would also be available to facilitate and guide the development of local or regional tourism programs that followed the general principles of heritage tourism.

The National Trust for Historic Preservation has identified the following five principles to create a sustainable heritage tourism program. These principles follow closely the criteria set in the National Trails System Act:

- Focus on the authenticity and quality of the experience
- Preserve and protect resources
- Make sites come alive
- Find a fit between a community or region and tourism
- Cooperate

Interpretation Program Assistance - Camino Real Administration would develop, and would encourage and support others to develop, a range of media to appeal to different learning styles and levels of ability. The range of program assistance from Camino Real Administration would include:

- Interpretive planning
- Development of new publications (research, writing, illustrations)
- Planning and design of new media (exhibits, wayside exhibits, audiovisual, etc.)
- Review of draft interpretive text for an array of projects
- Development of web-based programs
- Workshop facilitation

ALTERNATIVE A: DESCRIPTION

Current management would be maintained. Interpretive and recreational opportunities and access to physical resources related to the trail would be limited. Management of federal lands would continue under the present course of action. Certification of sites on non-federal lands would not occur. Sharing of interpretive and educational information would not take place along the trail. There would be no directed strategy for preservation or visitor use/interpretation.

Alternative A: Administration

Land- managing federal agencies with NHT lands would continue to manage their lands based upon their existing management plans. There would be no overall administration or coordination of the NHT. Coordination of the activities of an NHT association; private landowners; and federal, state, and local agencies and resource protection would be limited to efforts of the International Heritage Center and others. No uniform system of signage would be designated for any components of the NHT.

Alternative A: Resource Protection

No special efforts would be made to identify archeological and historic sites and visible trail route segments. There would be no directed strategy for research related to the NHT. Use of off-highway vehicles (OHV) on BLM-administered lands would continue under the present course of action. Management of visual resources on BLM-administered lands would continue under the present course of action.

Alternative A: Visitor Experience

There would be no unified effort by Camino Real Administration to provide a developed, coordinated visitor experience along El Camino Real de Tierra Adentro NHT. Current activities commemorating or interpreting the trail would continue, but would remain limited in scope and would not be related to or recognized as part of the NHT. The general public would encounter markers, identification signs, or interpretive and educational programs through serendipity.

Recreation - Camino Real Administration would not encourage new recreational development on the NHT. Generally, existing recreational opportunities available along the trail would continue to be provided by the International Heritage Center, private landowners or various agencies and organizations. These opportunities would not be related to or recognized as part of the NHT.

An auto-tour route generally following the historic trail would not be designated. Visitors would continue to drive the existing scenic byway.

Special events related to the NHT would not be encouraged. Current trail-related activities and commemorative events provided by various agencies or organizations would continue, but would not be related to or recognized as part of the NHT.

Interpretation /Education - There would be no unified effort by Camino Real Administration to interpret the NHT along its length in any sort of coordinated way. Facilities and programs currently staffed and offered by the International Heritage Center and various agencies or organizations would continue.

Likewise, Camino Real Administration would not encourage the development of interpretive media and educational programs in relation to the NHT. Various media and programs currently offered to the general public by various agencies or organizations about the Camino Real would continue.

ALTERNATIVE B: DESCRIPTION

Trail resources (historical, cultural, natural, and viewshed) would be protected through ongoing stewardship efforts. Visitors would have the opportunity to experience trail resources in an off- site setting. Trail resources (natural, cultural, historical, and viewshed) would be identified and protected on federal land. Significant trail resources on private land would be protected through certification, and volunteer efforts at high-potential sites and segments. Administration would be directed toward resource protection activities. Certification priorities would protect threatened trail resources.

Alternative B: Administration

Administration: Camino Real Administration would occur as in the Preferred Alternative.

Certification - Under Alternative B, certification would be directed toward protection of sites rather than toward interpretation.

Alternative B: Resource Protection

Resource protection objectives and actions would include the following:

High-potential Historic Sites and Segments - Section 5 of the National Trails System Act requires "a protection plan for any high-potential historic sites or high-potential route segments." Protection would be limited largely to the identification of sites and segments, with general recommendations for their administration. The following criteria would be used to identify additional resources, based on the National Register of Historic Places and the National Trails System Act:

- Significance to the trail (based on documentation and/or archeological research)
- Integrity of the physical remains
- Integrity and quality of the setting
- Opportunity for high-quality recreation evoking the historic trail experience
- Opportunity to interpret the primary period of trail use

Camino Real Administration would gather new information on additional high-potential historic sites and segments, and would cooperate with federal, state, and local governments, trail associations, trail scholars, and state historic preservation offices in adding, deleting, or modifying the list of sites. The criteria used to identify the initial list of high-potential sites would also be used to make these changes. In addition, Camino Real Administration would work with interested trail associations to convene representatives of the various historic trail communities, as well as federal, state, and local managers, state historic preservation offices, and individual scholars, to review and make recommendations regarding additions, deletions, and modifications to the lists of high-potential historic sites and segments. Some trail resources might not meet the criteria for inclusion on the lists of high-potential sites and segments. Their visual integrity might be compromised, they might have incomplete historic documentation, or there might not be enough evidence to assess their significance. As the status of these resources is reassessed or clarified, they could be considered for additional protection measures.

Non-federal Lands - Protection on non-federal lands would be accomplished through a variety of means, including, but not limited to: certification, cooperative agreements, easements, local regulations, and fee simple purchases or exchange by willing sellers where lands could be efficiently managed. Protection efforts would help ensure that resources related to the trail are preserved and sections of the historic route are maintained as natural or cultural landscapes. Camino Real Administration would encourage management of the historic and recreational trail routes to preserve scenic values and qualities, thereby helping ensure high-quality recreational and interpretive experiences. Camino Real Administration would encourage protection of the remaining historic landscape settings that are not now protected under federal, state, or local management, in cooperation with land managers along the route and with the review of the state historic preservation office. Due to the complex landownership crossing through both rural and urban areas, resource protection techniques would vary from area to area and between the states of New Mexico and Texas. Ties would be established with local agencies and support groups to monitor activities along the route.

Public Lands - OHV routes on BLM-administered lands where protected archeological and historic sites and trail route segments would be negatively impacted would be closed. No specific route closures are proposed under this alternative. Although no immediate threats have been identified OHV designations will be reviewed in upcoming RMP revisions or updates. Management of visual resources on BLM-administered lands would continue under the present course of action.

Monitoring Sites - Under this alternative, there would be scheduled site monitoring of high-potential or other important sites on BLM-administered lands and certified sites by agency personnel.

Inventory and Research - A coordinated research program would be conducted to support preservation activities, and for media in support of off- site understanding (such as oral histories). Camino Real Administration would continue to inventory and analyze cultural and natural resources along the trail route to determine appropriate preservation techniques. Priorities would be established for protecting additional sites, trail segments, scenic and natural values according to their significance, contribution to linking trail segments, and threats to integrity. Camino Real Administration would work with appropriate technical staff to incorporate the databases generated during the course of the planning process into the GIS system used to map the routes and trail resources.

Carrying Capacity - The National Trails System Act requires that comprehensive management and use plans provide "an identified carrying capacity of the trail and a plan for its implementation." This provision of the legislation has not been implemented in individual plans. To do so would require an agreement among the partners about what constitutes a trail resource and about a methodology to assess carrying capacity, as well as a high level of coordination and cooperation among the managers of trail resources. In addition, due to the site - specific nature of visitor use along a NHT, it would not be feasible to prescribe a trail -wide carrying capacity. There are currently no plans to carry out this type of analysis.

Alternative B: Visitor Experience

As in the Preferred Alternative, there would be a unified effort by Camino Real Administration and partners to provide a developed, coordinated visitor experience along El Camino Real de Tierra Adentro NHT. The visitor experience would be structured to promote public understanding and appreciation of NHT-related resources. Awareness of resource protection needs and challenges would be a central tenet of all activities and interpretation/education programs related to the NHT.

Under this alternative, the majority of visitor activities would occur away from the trail-related resources. Occasional "hands-on" protection activities would be provided wherein visitors would actively engaged in resource protection, but visitors would be encouraged to learn about the trail through off- site facilities in order to lessen on-site impacts to resources. Visitors would also be provided with information needed to practice appropriate, safe, and minimum-impact use while on the NHT.

Current activities and interpretive and educational programs offered by various agencies, organizations, or institutions would continue to be provided. Additional opportunities would be offered at site, segments, and interpretive facilities becoming part of the NHT through the certification process.

Recreation - As in Alternative A, Camino Real Administration would not encourage recreational development on the NHT. Existing recreational opportunities provided by private landowners and various agencies and organizations that are not trail-related would continue.

- ***Auto Tour Route*** - As in the Preferred Alternative, an auto-tour route following the course of the Camino Real would be developed, signed, and interpreted.

- ***Special Events*** - Special or cultural events focusing on NHT-related resource protection would be promoted. As in the Preferred Alternative, the NHT logo could be used on a request-permission basis in association with such events.

Interpretation /Education - As in Alternative A, Camino Real Administration would not encourage development of new interpretive facilities along the NHT. However, coordinated, collaborative efforts would be made to improve existing facilities, with a local/regional content emphasis on Camino Real history and culture. A

broad resource protection and advocacy strategy through activities such as partnerships, interpretive media, and educational programs would be encouraged.

As in the Preferred Alternative, interpretive themes illustrating the significance and meaning of the Camino Real would serve as a foundation for developing coordinated interpretive and educational materials in association with the NHT.

An overview of all the themes would be presented to visitors through a variety of educational programs and interpretive media and programs; however, under this alternative, the resource stewardship theme would be emphasized.

Interpretive Media - As in the Preferred Alternative, a range of interpretive media would be developed through coordinated, collaborative efforts (Camino Real Administration and partners) to promote resource stewardship, and to support visitor understanding of preservation efforts. Under this alternative, only certified interpretive facilities, away from actual trail resources, would offer a wide variety of media (including oral histories) to engage visitors and stimulate interest in resource protection. The range of interpretive media includes:

- ***Audiovisual Media*** - Appropriate audiovisual programs would be used to orient visitors to the NHT and its resources. Under this alternative, Camino Real Administration would lend assistance to partners proposing to develop audiovisual programs supporting interpretive opportunities. Site-specific audiovisual programs could be developed for major (certified) trail sites.

- ***Outdoor Exhibits*** - Museum and visitor center exhibits would provide visitors with context and meanings associated with the Camino Real's significance and resources. Camino Real Administration would provide assistance for developing new or revised exhibits at federal protection components, and at certified interpretive facilities. Exhibit text would emphasize resource protection and preservation.

- ***Wayside Exhibits*** - This type of medium would not be a preferred choice under this alternative, because wayside exhibits are most effective when interpreting and tying messages directly to resources. Because the majority of visitor use would occur away from resources on the trail, other types of media, such as indoor exhibits, audiovisual programs, and publications would be more effective.

- ***Traveling Exhibits*** - Traveling exhibits would be developed to present various interpretive and educational materials off- site. Under this alternative, with its emphasis on off- site learning and use, traveling exhibits would be a preferred medium, and would reach many people throughout the trail corridor with protection and preservation messages.

- ***Publications*** - Camino Real Administration and partners would develop brochures and other publications to emphasize trail-related resource stewardship. An official map and guide would be developed to provide overall orientation and information about the significance and resources of the NHT. Resource stewardship messages would be included.

- ***Websites*** - Extant interpretive websites about the Camino Real would be enhanced through the addition of interpretive features regarding trail resource management.

- ***Interpretive Facilities*** - Under this alternative, the development of new interpretive facilities in connection with the NHT would not be supported. BLM and the Museum of New Mexico State Monuments Division are developing a new interpretive facility to be built south of Socorro, New Mexico. El Camino Real International Heritage Center

would offer interpretive media and educational programs relating to the trail. Even though this project was started before the national designation and was not specifically linked in the NHT legislation, the new facility would serve as a focal point for trail-related interpretation and education.

- ***Programs*** - As in the Preferred Alternative, Camino Real Administration would provide assistance for federal protection components, and certified interpretive facilities or landowners of certified properties wishing to develop new trail-related interpretive programs. Emphasis would be placed on programs emphasizing resource protection.

- ***Interpretive Plan*** - As in the Preferred Alternative, Camino Real Administration and trail partners would prepare an interpretive plan for the length of the NHT.

- ***Educational Programs*** - As in the Preferred Alternative, Camino Real Administration would support the development of new educational programs for the NHT, and would encourage programs to meet state teaching standards in New Mexico and Texas. Under this alternative, the development of new education materials and activities promoting trail resource protection and stewardship would be emphasized. The development of "hands-on" programs for active resource protection would be encouraged.

- ***Heritage Tourism*** - Heritage tourism under this alternative would be oriented toward learning about the past in an enjoyable manner, but would not allow for decline of the very heritage that attracts visitors in the first place. Heritage tourism would be strongly encouraged as a new type of visitor use opportunity, as well as an excellent tool to assist in the promotion of historic trails. Heritage tourism would be sensitive to environmental issues, and would be designed to allow people to experience resources with an ecologically and culturally sensitive frame of mind and a leave-no-trace emphasis.

Cross of Cristo Rey near Sunland Park, New Mexico.

Chapter 3
EXISTING ENVIRONMENT

OVERVIEW

Natural landmarks are the geographic features that have played an important role in guiding travelers and traders who lived and worked along the trail. The Río Grande Valley is the predominant natural feature associated with El Camino Real in Texas and New Mexico. The Río Grande Valley is defined by imposing mountain ranges. Among the most prominent are the Franklin, Organ, San Andres, Caballo, San Mateo, Magdalena, Ladron, Manzano, Sandia, Ortiz, Jemez, and Sangre de Cristo mountains.

In addition to the mountains along the Río Grande Valley, there are several other interesting physiographic features along El Camino Real: Jornada del Muerto, Tomé Hill, Mesa Contadero, Fray Cristóbal, and the Santa Fe River Canyon. Jornada del Muerto, stretching for almost 80 miles, is a segment of El Camino Real. It is framed by the San Andres Mountains to the east and the Caballo Mountains to the west. The mountains frame a mostly undeveloped landscape—an excellent example of the Chihuahuan desert landscape that contains abundant evidence of its use throughout the period of significance. It retains a substantial amount of integrity in some stretches, which are evocative of the scenery travelers experienced centuries ago. The most significant intrusions on the landscape are periodic glimpses of an interstate highway. Noise and the visual intrusion from the highway and the Santa Fe Railway railroad tracks disrupt the solitude and the feeling that the sweeping views produce. The present lack of shelter and water highlight the remoteness of the area and recall the anxiety that many travelers experienced when they were getting ready to cross Jornada del Muerto.

Along this stretch of the trail, shallow ruts are often visible amidst the typical Chihuahuan desert vegetation: mesquite, yucca, creosote bush, four- wing saltbush, and snakeweed. Basins with no outlet drain into shallow playas. Dust devils hover over these playas during the hot summer months. Sand dunes are common. In a few locations are small beds and isolated buttes of black lava. After the July–October torrential summer rains, the sparse brown and ocher vegetation experiences a dramatic change, when yellow, pink, red, and white flowers in full bloom appear almost overnight, and bright green grasses invade the normally bare soil. The usually dry arroyos fill with rainwater run-off. In some areas of Jornada del Muerto, reddish soils highlight the greenness of the desert vegetation and the darkness of the lava outcroppings.

Tomé Hill *(Cerro de Tomé)* is in a transition zone between the Chihuahuan desert and the New Mexico plateau. This distinctive site, 5 miles north of Belen, rises about 350 feet from the valley floor. The vegetation includes mostly four-wing saltbush and scattered mesquite, as well as desert shrubs. It is much sparser than in the southern stretches of the Chihuahuan desert; in many areas, it is found principally along the road. The gray-brownish sandy soils that predominate in this landscape highlight even more the greenness of the lush vegetation that grows along the *acequias* (irrigation ditches) and the Río Grande.

The original route of El Camino Real followed by Oñate in 1598 passed around the east base of the hill, which subsequently became a significant landmark for travelers on the road. For North American Indians, the hill itself is a sacred feature, as evidenced by petroglyphs. The hill has since become a Catholic shrine, and remains a pilgrimage site, with several crosses on its crest. Petroglyphs in this area are similar to those found elsewhere along the Río Grande. Scattered adobe ruins and an occasional old homestead lend a picturesque character to the area.

The Santa Fe River Canyon segment (formerly called *Cañon de las Bocas*), a stretch of El Camino Real along the Santa Fe River near the state capital of New Mexico, possesses highly attractive visual qualities. This area, mostly in public ownership, crosses a region that typifies the New Mexico plateau. The most salient features of this landscape are the tablelands, having moderate to sizable relief. The area also contains large basalt blocks that were cleared from a bench surface and placed in two parallel lines adjacent to the road. The canyon is fairly narrow and not particularly deep. Along the stream that flows year- round are a few sizable cottonwoods and the riparian vegetation typically found in permanent streams in this ecoregion. Grasses seldom cover the ground completely; many areas remain bare. Sagebrush, rabbit brush, four- wing saltbush, snakeweed, cholla, and prickly pear are prevalent in the flats and in disturbed areas. The ground is blanketed with blooming flowers during the rainy summer season. One species of juniper covers the north -facing hillsides.

There are pueblo ruins here, too—near the southern end of the canyon. The most impressive feature of the site is the steepness of the canyon, which early trail users had to negotiate. The imposing entrance to the canyon can be seen from miles away to the south.

LANDOWNERSHIP/LAND USE

The route from San Juan Pueblo, New Mexico, to El Paso, Texas, is approximately 404 miles long, although the mileage of trail including the duplicate routes includes over 654 miles. About 55% of this route is privately owned; the rest is divided among federal and state land managing agencies and North American Indian lands or reservations. Ownership of land through which the trail passes (in New Mexico and Texas) is detailed in **Table 1** below.

Table 1: Landownership

Ownership/Management	Total Mileage (% of total)	Total Mileage, Including Duplicate Routes % of total)*
Private	222 (55)	376.7 (57)
State	24 (6)	24.7 (4)
Federal/BLM	57 (14)	59.7 (9)
Federal / USDA Forest Service	11 (3)	9.2 (2)
Federal/USFWS	28 (7)	90.1 (14)
North American Indian Reservation	62 (15)	89.5 (14)
U.S. Army Corps of Engineers	—	4.6 (1)
Total	404	654.5

Segments of the trail pass through or near to the cities of Santa Fe, Albuquerque, Socorro, Las Cruces, and El Paso. The trail also passes through the North American Indian communities of San Juan, Santa Clara, San Ildefonso, Cochiti, Santo Domingo, San Felipe, Santa Ana, Sandia, Isleta, and Ysleta del Sur. The urban areas total approximately 14% (58 miles) of the total length of the trail from San Juan Pueblo to El Paso (see **Table 2** below). Approximately 16% (60 miles) of this distance is in rural development and/or farm areas. Most of the trail (about 77%) is in a less developed condition, with most of this land being in private ownership.

Table 2: Land Uses

Land Use/Cover	Total Mileage	% of Trail
Urban Areas	65	16
Agriculture	45	12
Rangeland	212	52
Forestland	69	17
Water/Wetlands	13	3
Total	404	100

Table 3 illustrates the mileage of trail by federal administrative jurisdiction and the mileage of trail meeting the high-potential route segment definition:

Table 3: Trail Mileage on Federal Components*

Administrative Jurisdiction	Mileage w/Route Variants	Mileage of High-potential Routes
BLM – Las Cruces Field Office	28.6	9.3
BLM – Socorro Field Office	14.2	0.0
BLM – Taos Field Office	16.9	0.3
USFS – Santa Fe National Forest	7.7	4.6
USFWS – Sevilleta NWR	33.3	0.0
USFWS – Bosque del Apache NWR	56.8	4.8
U.S. Army Corps of Engineers	4.6	0.8
Total	163.6	19.8

*GIS calculations based upon data collected at the 1:24,000 scale

HUMAN USES AND VALUES

The proposed project could potentially affect eight counties in New Mexico, one county in Texas, and the Mexican State of Chihuahua. These counties and the Mexican state comprise an economic study area (ESA), and form the basis for the socioeconomic profile for the area of the proposed project. The socioeconomic setting for each U.S. county and the Mexican state is described below in north-to-south order.

The following section summarizes the socioeconomic conditions in the study area for the latest available year that data are available. In most cases, the data are for the year 2000. In certain cases as noted, 1999, 1997, and 1990 data are used as the most recent available sources.

Río Arriba County, New Mexico

The county seat of Río Arriba County is Tierra Amarilla. Río Arriba County's year 2000 population was 41,190, which represents an overall increase of 64.8% from the 1950 population of 24,997, or an annual average growth rate of 1.3%. Most of this growth took place during the period 1970 -2000, when population grew from 25,308 to its current level. Of the 2000 population, a total of 30,025, or 72.9%, were Hispanic or Latino.

From 1970 to 1999, net income grew, with the fastest component of personal income, in real terms, being Non-Labor sources such as investments and transfer payments including age-related sources (retirement, disability, insurance, and Medicare) and welfare. Non-Labor income rose from $73 million in 1970 to $244 million in 2000, an increase of 234%. The second fastest growing component of personal income was Services and Professional. Average earnings per job, in real terms, dropped from $23,500 in 1970 to $19,140 in 1999. Persons below the poverty level were 22.5% of the population, based on the latest available 1997 estimates.

From 1970 to 1999, a total of 7,946 new jobs were created, with Services and Professional accounting for 5,529 of the new jobs and Government accounting for 1,155 new jobs. These sectors are the largest and second largest employers, respectively. Construction is the third largest employment sector. The unemployment rate in 1970 was 13.5%, dropping to 6.9% by 2000. Of the total 1990 population (latest available data), persons 25 years of age or over who were college graduates totaled 6.0% of the total population, and high school graduates were 38.3% of the total population.

The county had 18,016 housing units in 2000, with an occupancy rate of 83.5%. The rental vacancy rate was 8.0%, and the home ownership rate was 81.6%. Median gross rent (1990 data) was $285.

Santa Fe County, New Mexico

The county seat of Santa Fe County is Santa Fe, which is also the state capitol. Santa Fe County's 2000 population was 129,292, which represents an overall increase of 238.9% from the 1950 population of 38,153, or an annual average growth rate of 4.8%. Most of this growth took place during the period 1970 -2000, when population grew from 55,026 to its current level. Of the 2000 population, a total of 65,887, or 49.0%, were Hispanic or Latino.

From 1970 to 1999, net income grew, with the fastest component of personal income, in real terms, being Non-Labor sources. Non-Labor income rose from $238 million in 1970 to $1,333 million in 2000, an increase of 460%. The second fastest growing component of personal income was Services and Professional. The growth curves for Non-Labor and Services and Professional sectors are almost identical. Growth in the Government, Manufacturing, Construction, Mining, and Farm and Agricultural Services sectors was much smaller. Average earnings per job, in real terms, rose from $25,535 in 1970 to $26,471 in 1999. Persons below the poverty level were 11.9% of the population, based on the latest available 1997 estimates.

From 1970 to 1999, a total of 58,718 new jobs were created, with Services and Professional accounting for 42,545 of the new jobs and Government accounting for 8,059 new jobs. These sectors are the largest and second largest employers, respectively. Construction is the third largest employment sector. The unemployment rate in 1970 was 3.3%, dropping to 2.7% by 2000. Of the total 1990 population (latest available data), persons 25 years of age or over who were college graduates totaled 21.2% of the total population, and high school graduates were 54.3% of the total population.

The county had 57,701 housing units in 2000, with an occupancy rate of 91.0%. The rental vacancy rate was 5.6%, and the home ownership rate was 68.6%. Median gross rent (1990 data) was $489.

Sandoval County, New Mexico

The county seat of Sandoval County is Bernalillo. Sandoval County's 2000 population was 89,908, which represents an overall increase of 622.8% from the 1950 population of 12,438, or an annual average growth rate of 12.5%. Most of this growth took place during the period 1970 - 2000, when population grew from 17,703 to its current level. Of the 2000 population, a total of 26,437, or 29.4%, were Hispanic or Latino.

From 1970 to 1999 net income grew, with the fastest component of personal income, in real terms, being Non - Labor sources. Non - Labor income rose from $47 million in 1970 to $540 million in 2000, an increase of 1,049%. The second fastest growing component of personal income was Government. Average earnings per job, in real terms, rose from $25,080 in 1970 to $28,639 in 1999. Persons below the poverty level were 12.9% of the population, based on the latest available 1997 estimates.

From 1970 to 1999 a total of 28,035 new jobs were created, with Government accounting for 3,042 of the new jobs and Construction accounting for 1,638 new jobs. Services and Professional, and Manufacturing, are the largest and second largest employers, respectively. Government is the third largest employment sector. The unemployment rate in 1970 was 5.5%, dropping to 3.3% by 2000. Of the total 1990 population (latest available data), persons 25 years of age or over who were college graduates totaled 11.6% of the total population, and high school graduates were 48.1% of the total population.

The county had 34,866 housing units in 2000, with an occupancy rate of 90.1%. The rental vacancy rate was 11.4%, and the home ownership rate was 83.6%. Median gross rent (1990 data) was $468.

Bernalillo County, New Mexico

The county seat of Bernalillo County is Albuquerque. Bernalillo County's 2000 population was 556,678, which represents an overall increase of 282.1% from the 1950 population of 145,673, or an annual average growth rate of 5.6%. The growth curve was fairly even over this entire period. Of the 2000 population, a total of 233,565, or 42.0%, were Hispanic or Latino.

From 1970 to 1999 net income grew, with the fastest component of personal income, in real terms, being Non - Labor sources. Services and Professional income rose from $2,330 million in 1970 to $7,282 million in 2000, an increase of 213%. The second fastest growing component of personal income was Non - Labor sources. Average 1999 earnings per job, in real terms, were $29,675, changing very little between 1970 and 1999. Persons below the poverty level were 14.6% of the population, based on the latest available 1997 estimates.

From 1970 to 1999, a total of 248,880 new jobs were created, with Services and Professional accounting for 188,912 of the new jobs and Government accounting for 28,779 new jobs. Services and Professional, and Government, are the largest and second largest employers, respectively. Manufacturing is the third largest employment sector. The unemployment rate in 1970 was 5.4%, dropping to 3.2% by 2000. Of the total 1990 population (latest available data), persons 25 years of age or over who were college

graduates totaled 17% of the total population, and high school graduates were 52.3% of the total population.

The county had 239,074 housing units in 2000, with an occupancy rate of 92.4%. The rental vacancy rate was 11.5%, and the home ownership rate was 63.7%. Median gross rent (1990 data) was $402.

Valencia County, New Mexico

The county seat of Valencia County is Los Lunas. Valencia County's 2000 population was 66,152, which represents an overall increase of 194.2% from the 1950 population of 22,481, or an annual average growth rate of 3.9%. Growth during the period 1970 -2000, when population grew from 40,821 to its current level, was irregular, with the population declining steeply (about 50%) between 1980 and 1982, and then rebounding over the next 18 years. Of the 2000 population, a total of 36,371, or 55.0%, were Hispanic or Latino.

From 1970 to 1999 net income grew, with the fastest component of personal income, in real terms, being Non-Labor sources. Non-Labor income rose from $81 million in 1970 to $359 million in 2000, an increase of 343%. The second fastest growing component of personal income was Government. Average earnings per job, in real terms, declined from $25,037 in 1970 to $220,643 in 1999. Persons below the poverty level were 18.3% of the population, based on the latest available 1997 estimates.

From 1970 to 1999, a total of 9,479 new jobs were created, with Services and Professional accounting for 5,677 of the new jobs and Government accounting for 2,224 new jobs. Services and Professional, and Government, are the largest and second largest employers, respectively. Mining is the third largest employment sector. The unemployment rate in 1970 was 6.3%, dropping to 4.0% by 2000. Of the total 1990 population (latest available data), persons 25 years of age or over who were college graduates totaled 7.4% of the total population, and high school graduates were 44.9% of the total population.

The county had 24,643 housing units in 2000, with an occupancy rate of 92.0%. The rental vacancy rate was 11.8%, and the home ownership rate was 83.9%. Median gross rent (1990 data) was $344.

Socorro County, New Mexico

The county seat of Socorro County is Socorro. Socorro County's 2000 population was 18,078, which represents an overall increase of 86.9% from the 1950 population of 9,670, or an annual average growth rate of 1.7%. Most of this growth took place during the period 1970 -2000, when population grew from 9,775 to its current level. Of the 2000 population, a total of 8,810, or 48.7%, were Hispanic or Latino.

From 1970 to 1999, net income grew, with the fastest component of personal income, in real terms, being Non-Labor sources. Non-Labor income rose from $29 million in 1970 to $107 million in 2000, an increase of 269%. The second fastest growing component of personal income was Government. Average earnings per job, in real terms, dropped from $23,182 in 1970 to $21,398 in 1999. Persons below the poverty level were 31.4% of the population, based on the latest available 1997 estimates.

From 1970 to 1999 a total of 3,759 new jobs were created, with Government accounting for 1,110 of the new jobs and Construction accounting for 102 new jobs. Government, and Services and Professional, are the largest and second largest employers, respectively. Farm and Agricultural Services is the third largest employment sector. The unemployment rate in 1970 was 7.4%, dropping to 5.5% by 2000. Of the total 1990 population (latest available data), persons 25 years of age or over who were college graduates totaled 10.0% of the total population, and high school graduates were 39.2% of the total population.

The county had 7,808 housing units in 2000, with an occupancy rate of 85.5%. The rental vacancy rate was 11.8%, and the home ownership rate was 71.1%. Median gross rent (1990 data) was $305.

Sierra County, New Mexico

The county seat of Sierra County is Truth or Consequences. Sierra County's 2000 population was 13,270, which represents an overall increase of 84.7% from the 1950 population of 7,186, or an annual average growth rate of 1.7%. Most of this growth took place during the period 1970 -2000 when population grew from 7,215 to its current level. Of the 2000 population, a total of 3,488, or 26.3%, were Hispanic or Latino.

From 1970 to 1999, net income grew, with the fastest component of personal income, in real terms, being Non - Labor sources. Non - Labor income rose from $36 million in 1970 to $128 million in 2000, an increase of 256%. The second fastest growing component of personal income was Government. Average earnings per job, in real terms, dropped from $21,400 in 1970 to $19,859 in 1999. Persons below the poverty level were 23.4% of the population, based on the latest available 1997 estimates.

From 1970 to 1999, a total of 2,191 new jobs were created, with Government accounting for 1,323 of the new jobs and Construction accounting for 127 new jobs. Services and Professional, and Government, are the largest and second largest employers, respectively. Farm and Agricultural Services is the third largest employment sector. The unemployment rate in 1970 was 4.2%, dropping to 2.9% by 2000. Of the total 1990 population (latest available data), persons 25 years of age or over who were college graduates totaled 6.4% of the total population, and high school graduates were 48.1% of the total population.

The county had 8,727 housing units in 2000, with an occupancy rate of 70.0%. The rental vacancy rate was 17.4%, and the home ownership rate was 74.9%. Median gross rent (1990 data) was $226.

Doña Ana County, New Mexico

The county seat of Doña Ana County is Las Cruces. Doña Ana County's 2000 population was 174,682, which represents an overall increase of 341.6% from the 1950 population of 39,557, or an annual average growth rate of 6.8%. Most of this growth took place during the period 1970 - 2000, when population grew from 70,254 to its current level. Of the 2000 population, a total of 110,665, or 63.4%, were Hispanic or Latino.

From 1970 to 1999, net income grew, with the fastest component of personal income, in real terms, being Non - Labor sources. Non - Labor income rose from $172 million in 1970 to $1,068 million in 2000, an increase of 521%. The second fastest growing component of personal income was Services and Professional. Average earnings per job, in real terms, dropped from $28,313 in 1970 to $24,889 in 1999. Persons below the poverty level were 26.6% of the population, based on the latest available 1997 estimates.

From 1970 to 1999, a total of 46,300 new jobs were created, with Services and Professional accounting for 29,717 of the new jobs and Government accounting for 8,413 new jobs. Services and Professional, and Government, are the largest and second largest employers, respectively. Farm and Agricultural is the third largest employment sector. The unemployment rate in 1970 was 7.8%, dropping to 6.5% by 1999. Of the total 1990 population (latest available data), persons 25 years of age or over who were college graduates totaled 12.2% of the total population, and high school graduates were 39.2% of the total population.

The county had 65,210 housing units in 2000, with an occupancy rate of 91.3%. The rental vacancy rate was 10.3%, and the home ownership rate was 67.5%. Median gross rent (1990 data) was $347.

El Paso County, Texas

The county seat of El Paso County is El Paso. El Paso County's 2000 population was 679,622, which represents an overall increase of 248.6% from the 1950 population of 194,968, or an annual average growth rate of 5.0%. Most of this growth took place during the period 1970 -2000, when population grew from 359,291 to its current level. Of the 2000 population, a total of 531,654, or 78.2%, were Hispanic or Latino.

From 1970 to 1999, net income grew, with the fastest component of personal income, in real terms, being Non-Labor sources. Non-Labor income rose from $855 million in 1970 to $4,062 million in 2000, an increase of 465%. The second fastest growing component of personal income was Services and Professional. Total earnings of persons employed in El Paso increased from $5.212 million in 1989 to $8.893 million in 1999, a growth rate of 5.5%. Per capita income in 1999 was $17,216 million, ranking El Paso County 212th in the State of Texas. By comparison, per capita income in 1989 was $11,687, which ranked it 203rd in the state. Persons below the poverty level were 27.8% of the population, based on the latest available 1997 estimates. Government, and Services and Professional, are the largest and second largest employers, respectively. Manufacturing is the third largest employment sector. The unemployment rate in 1990 was 11.6%, dropping to 9.4% by 1999. Of the total 1990 population (latest available data), persons 25 years of age or over who were college graduates totaled 8.4% of the total population, and high school graduates were 35.3% of the total population.

The county had 224,447 housing units in 2000, with an occupancy rate of 93.6%. The rental vacancy rate was 7.8%, and the home ownership rate was 67.5%. Median gross rent (1990 data) was $347.

North American Indian Reservations

Table 4 summarizes information on the North American Indian reservations located wholly or partially within the ESA.

Table 4: Socioeconomic Data Summary
North American Indian Reservations*

Pueblo	County (ESA area)	Trust Acreage	Reservation Population	Principal Revenue Source
Acoma	Socorro, NM	364,439	4.616	Tourism, gaming, wood products, farming, ranching
Cochiti	Sandoval, Santa Fe, NM	50,681	1,189	ACOE lease, fishing permits, other leases
Isleta	Bernalillo, NM	211,037	4,296	Recreation, Forest products, gaming
Jemez	Sandoval, NM	89,618	2,996	Forest products, farming, recreation
San Felipe	Sandoval, NM	48,859	3,131	Farming and ranching, crafts, gaming
Sandia	Sandoval, NM	22,876	471	Gaming, farming, leases and permits
Santa Ana	Sandoval, NM	61,379	698	Leasing, farming and ranching, crafts, gaming
Santo Domingo	Sandoval, Santa Fe, NM	69,401	4,324	Farming and ranching, crafts, gaming, permits, crafts
Ysleta	El Paso, TX	188	804	crafts, leasing, gaming
Zia	Sandoval, NM	119,538	900	Farming and ranching, leasing

*Socioeconomic data for the other American Indian Reservations within the ESA was not available.

State of Chihuahua, Mexico

The Mexican State of Chihuahua lies immediately to the south of New Mexico and Texas. The socioeconomic conditions in Chihuahua are briefly described in this document because Chihuahua may be affected most directly from the proposed project and from related National Park Service management programs. El Camino Real de Tierra Adentro extends through the other Mexican states of Durango, Zacatecas, Aguascalientes, San Luis Potosí, Guanajuato, Querétaro, and Mexico, D.F., as well, but detailed socioeconomic data are not provided, because impacts for these areas are less well defined than for the border states. The effects of other ongoing efforts (such as Sister Cities, Habitat Chat, and cultural tourism workshops) are described in the Environmental Consequences and Mitigation section of this report.

Chihuahua receives approximately 9.4 inches of rainfall per year. The current (year 2000) population of Chihuahua is estimated to be 3,047,867 individuals (XII Censo General De Poblacion Y Vivienda, Resultados Preliminares). This represents an increase of 606,000 persons compared to 1990 (a 25% increase). Also between 1990 and 2000, the population of Mexico grew by about 20%. The population of Chihuahua is evenly split between males and females. In 1998, there were 79,336 births and 15,753 deaths in the state. **Table 5** shows selected statistics for Chihuahua and the largest several towns or cities within the state.

Table 5: Comparison of Selected Economic Indicators - State of Chihuahua

State or City	Population2000 (a)	Total Employment 1998 (b)	Individuals per House 2000 (a)	Number of Business 1998 (b)
State of Chihuahua	3,047,867	744,450	4.0	88,803
Ciudad Juárez	1,217,818	393,867	4.1	32,068
Chihuahua	670,208	194,783	3.9	23,276
Cuauhtemoc	124,279	22,327	3.9	4,465
Delicias	116,132	29,778	3.9	5,219
Hidalgo	100,881	21,902	4.1	4,928
Nueva Casas Grandes	54,226	13,100	3.9	2,300
Guadalupe	48,226	630	5.3	122

Sources:
(a) Preliminary data are for year 2000 (XII Censo General De Poblacion Y Vivienda, Resultados Preliminares).
(b) Data are for 1998 (Aspectos Economicas de Chihuahua).

Summary of ESA Growth Characteristics

Figure 1 below summarizes the population growth in United States counties from 1950 to 2000. It can be seen from the table that overall growth curve in the U.S. jurisdictions has been fairly steady over the past 50 years. This growth pattern can be expected to continue in the future.

Table 6 below provides additional details on county-by-county growth, along with their respective rates of increase.

For comparative purposes, the Mexican State of Chihuahua is also included.

Figure 1
Population Growth, U.S. Counties 1950-2000

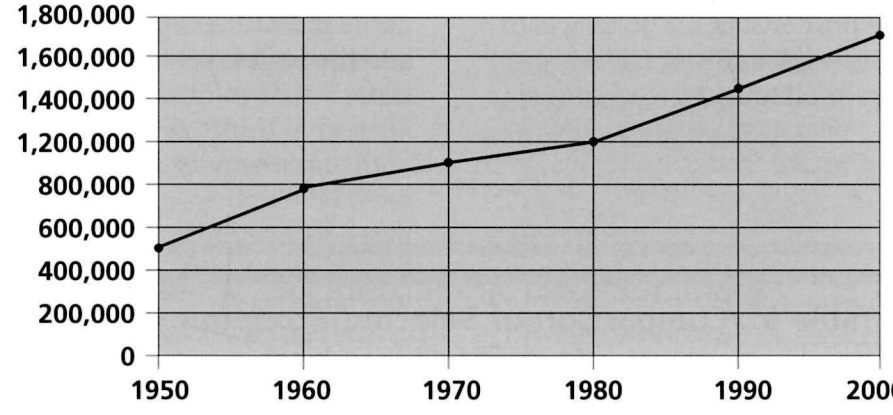


Table 6: Comparison of Population Growth in El Camino Real de Tierra Adentro NHT ESA

County	1950	1960	1970	1980	1990	2000	Rate
Río Arriba	24,997	24,193	25,170	29,282	34,365	41,190	64.8%
Santa Fe	38,153	44,970	53,756	75,360	98,928	129,292	238.9%
Sandoval	12,438	14,201	17,492	34,799	63,319	89,908	622.8%
Bernalillo	145,673	262,199	315,774	419,700	480,577	556,678	282.1%
Valencia	22,481	39,085	40,539	61,115	45,235	66,152	194.2%
Socorro	9,670	10,168	9,763	12,566	14,764	18,078	86.9%
Sierra	7,186	6,409	7,189	8,454	9,912	13,270	84.7%
Dona Ana	39,557	59,948	69,773	96,340	135,510	174,682	341.6%
El Paso	194,968	314,070	479,899	479,899	591,610	679,622	248.6%
Total U.S. Counties	495,123	775,243	898,747	1,217,515	1,474,202	1,702,720	243.9%
Chihuahua	NA	NA	NA	NA	NA	3,047,867	NA
Grand Total	NA	NA	NA	NA	NA	4,750,587	NA

The data indicate that the largest amount of growth in New Mexico, both in terms of absolute numbers and percentage of increase, has occurred in the central part of the state, roughly from Santa Fe to Albuquerque. A secondary growth node has been at Doña Ana County. The more rural counties of both northern and south-central New Mexico have lagged in growth and economic development. Growth in El Paso kept pace with the total growth of the United States counties. While data are not available for a comparable period for Chihuahua, growth in the single decade 1990-2000 was 26%, suggesting that growth over the longer period was quite rapid in the Mexican state.

RESOURCE VALUES

Cultural Environment

The cultural environment affected by the use of El Camino Real was overwhelmingly complex and staggering in its scope. Cutting through north-central Mexico up through the Río Grande Valley to an area near Santa Fe, El Camino Real brought armies of Spanish explorers, and later a flood of settlers, into contact (and often into conflict) with existing populations of distinct indigenous North American Indian tribes, bands, and sub-bands numbering in the hundreds. The resulting acculturation pressure resulted in the cultural extinction of many of these groups. The legacy of this contact and acculturation exists today in the unique mixed cultural heritage of vast areas that extend well beyond the borders of New Mexico.

This brief overview of the historic cultural environment of El Camino Real provides background material to accomplish three major objectives. First, the overview provides an outline of those indigenous North American Indian groups present on the landscape when the trail was first used by Spanish explorers and settlers. Second, a brief ethnohistoric description provides the reader with limited insight into the cultural complexity of the region impacted by the road's use. And, third, the report provides background for the tribal consultation work required of any project proposals that affect extant North American Indian tribes. The overall goal of this effort is to aid in consultation with existing tribes to determine their views regarding the affects El Camino Real has had on their history, and what impacts, if any, the present plan's proposal may have on existing ethnographic resources on or off of federal lands.

Ethnographic Resources

Cultural or historic resources, such as archeological sites or historic buildings, are determined to be significant by legislation, or by the collective judgment of a scientific or academic discipline. Ethnographic resources, on the other hand, are assigned their significance by members of the living human community associated with them. A physical resource could be a specific animal or plant species, mineral, specific man-made or natural object, place, creek, spring, river, lake, any physiological feature on the landscape, or perhaps an entire landscape. Loosely defined, an ethnographic resource is any cultural or natural resource ascribed value by an existing ethnic community. The values associated with these resources come from the community itself—not from some external entity—and are associated with the cultural or ethnic identity of the community.

The Road North—Southern End - In the 16th century Spanish oficials wasted little time in setting about the tasks of discovery, control, and economic development. Between 1527 and the 1590s, a number of official and unauthorized parties set out from the central and eastern coastal areas of "New Spain" to investigate lands, minerals, and other resources for economic purposes. There can be little doubt that these explorers, who usually employed indigenous guides, were well aware of the local North American Indian populations they encountered on their travels. Early Spanish routes throughout present-day Mexico, and to areas of the southwestern United States, were largely established by following existing Indian trails that had been used for travel and trade for centuries before the Spaniards arrived. The entire length of El Camino Real de Tierra Adentro within New

Mexico was traveled in 1598 by Don Juan de Oñate, and was a patchwork of Indian trails over mountain passes and river crossings that facilitated passage through a complex range of Indian territories and societies.

The Spanish colonial desire to provide a more direct link the promising hinterlands of the north to established provinces in "New Spain" essentially gave birth to El Camino Real. But this "new" route north from the region of Santa Barbara in Present Chihuahua passed through a host of indigenous tribal territories. However, Juan de Oñate was not the first to encounter or deal with these indigenous groups. Decades before his arrival, incursions into the area by government sanctioned military operations, mining exploration and development, and missionary work literally and figuratively paved the way for Oñate's expedition in 1598.

From the standpoint of broad tribal groupings, north of Querétaro to present Chihuahua El Camino Real cut through, from south to north, the territories of the Chichimeca- Pame-Jonaz; Guamar; Zacatic; Cuachichil; Languero; Toboso; Cacaxte; Concho; Suma- Jumano; and Jano-Jocome. The Indian peoples who inhabited this large area were typically nomadic hunters and gatherers. Some may have practiced limited horticulture to raise corn, beans, and squash. Most were organized into small bands that were tied to one another by kinship and marriage, common or related languages, or generally common cultural traditions. Most of these groups, with the exception of the large permanent villages at La Junta, lived in small, mobile camps of 20 to 50 individuals. Groups of this size are normally referred as "bands," rather than tribes. These bands may have come together for economic, social, or military purposes, but these instances were probably temporary in character. The smaller band organization was most likely the largest permanent autonomous political unit that made decisions concerning the control of people and use of resources. Band territory seems to have been well defined, and if strangers entered with proper introduction, warfare was a likely result.

Individual bands occupying adjacent areas, exploiting similar resources, and speaking similar languages formed natural clusters during specific seasons of the year. The larger tribal territories and the clustering of bands into "tribes" may to a large extent have been the result of Spanish contact and administration record- keeping, and may not reflect the social reality of band cultural identity or individual band social organization at the time.

The response of these tribes to Spanish colonial incursions into north-central Mexico was hostile raiding. Spanish attempts to control land and resources, and to exploit the labor of these small indigenous bands, led to increased military action during the 16th century. As the century progressed, traditional warfare shifted to some extent by focusing less on intertribal conflict and more on the raiding of emigrant settlements and missions. The acceptance of the horse by native groups sometimes led to a clustering of more distant bands for the purpose of carrying out raids. This warfare, or raiding, was not for purposes of conquest. The Spanish incursions into native territory brought forced labor and physical displacement of populations. The introduction of diseases to native populations had profound demographic impacts. Perhaps of equal importance, the introduction of alien domesticated livestock by Spanish settlements resulted in a shift in local plant ecology and a reduction in wildlife habitat—a plant and wildlife habitat necessary to support the traditional subsistence livelihood of indigenous groups. Raiding was a reaction to these intrusions, and an adaptive means of surviving.

This brief description of the ethnographic context of El Camino Real de Tierra Adentro may be viewed as somewhat irrelevant to a discussion of the context of the road and its impact on North American Indian populations north of the present-day United States-Mexico border. This may especially be true when one considers that in the 20th century, all of the original Indian groups in this region of Mexico—with the exception of areas that became refuges on the area's fringes, such as the Tarahumara to the west—are culturally extinct. However, the methods of Spanish colonization are consistent north and south of the border. North American Indian reactions to Spanish control in what is now the United States—although the various

tribes differed in many ways in terms of culture, language, and subsistence lifestyle—were similar to their cousin's reactions to the south.

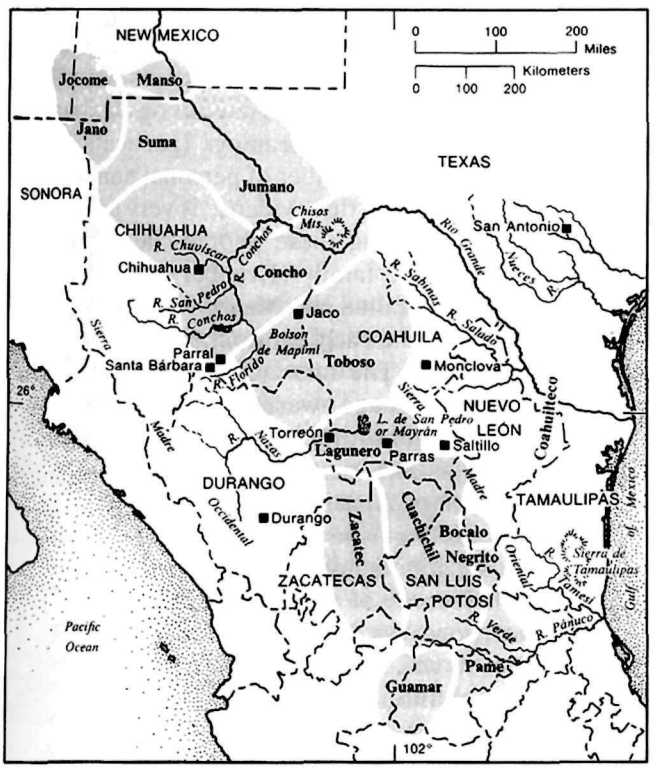


Figure 2: Historic tribal territories of north-central México (from Griffen 1983:329).

El Camino Real should be seen as playing a significant role in the northern movement of Spanish control in "New Spain," especially regarding the impact on New Mexico as far north as Santa Fe. But it should also be noted that by 1598, the road itself was the result of important actions prior to Juan de Oñate's expedition. Oñate's own father was a wealthy silver baron who derived his wealth from the mines of Zacateca. Many profound impacts on Indian populations preceded the common use of this route. But long before Juan de Oñate traversed El Camino Real to the hinterlands, earlier 16th -century incursions into Indian territory with the introduction of the horse for transportation, the exploitation of whole Indian populations for labor, and the displacement of plant and wildlife species by Spanish administrative and religious settlements all brought profound changes to Indian culture, society, and livelihood. The web of prior colonial policies, actions, and events essentially paved the way for the southern portion of the road. The road itself might best be viewed as the historical and technological result of these prior events. For indigenous populations in the south, Don Juan de Oñate's journey north might be viewed as somewhat anticlimactic to the governmental policies and practices that preceded him.

The Road North—Northern End

Apachean Cultures: In 1598, Juan de Oñate, the son of a silver baron who had made his fortune in the mines of Zacateca, received royal authorization in 1598 to invest in the colonization of New Mexico. His attempts at colonization and his travels up El Camino Real from central Mexico brought him into contact with a number of North American Indian tribes. In northern Mexico and southern New Mexico, these tribes were part of a larger group of southern Athapaskan-speaking tribes whose territories reached from eastern Arizona through most of New Mexico, portions of southern Colorado, western Kansas, Oklahoma, and western and central Texas. Bands of these Apachean-speakers were also found in northern Mexico near the southern borders of New Mexico and Arizona, and the western border of Texas. Generally, there are seven recognized Southern Athapaskan- or Apachean-speaking tribes. These include the Chiricahua, Jicarilla, Kiowa-Apache, Lipan, Mescalero, Navajo, and Western Apache.

Anthropologists and linguists generally agree that the Athapaskan-speaking Apachean groups that populated the Southwest at the time of Spanish exploration had migrated into that area from regions in the north and east. Generally speaking, the various Apachean groups in New Mexico and Arizona were originally part of a larger movement of these peoples from the southern Great Plains to the Southwest. They were primarily hunters and gatherers who were subsisting by following the movement of the vast buffalo herds of the Great Plains area. It is difficult to determine exactly when the various Apache groups differentiated, but it has been surmised that in some cases the material cultural differences between these groups may be due to their

proximity and social interaction with the more sedentary tribes of New Mexico. For the purposes of this report, the Apachean tribes most directly impacted (due to their location) by El Camino Real were the Chiricahua and the Mescalero.

Juan de Oñate's travels north through southern New Mexico followed the Río Grande route, and he passed directly through the traditional territories of the Chiricahua and the Mescalero Apache. The Chiricahua Apache occupied lands throughout southwestern New Mexico, the southeastern corner of Arizona, and areas straddling what are today the States of Sonora and Chihuahua in Mexico. The larger tribal entity is named after the mountains in southern Arizona of the same name. Although various authors group the various bands of Chiricahua differently, there are three major named bands of the larger group. The Apache designation for the eastern band is "red-paint people" *(cihéne)*. This band occupied most of the Apache territory west of the Río Grande in New Mexico. Their immediate Apache neighbors to the east were the Mescalero. The red-paint people were divided into subgroups, or sub-bands, and were named after geographic landmarks within their respective territories. Some of these names included Mimbreños, Coppermine, Warm Springs, and Mogollon Apache.

The central band of the Chiricahua resided to the west of the red-paint people. An English equivalent is not mentioned for the Apache name for this band—*co-kanén*. The range of this band included present-day Willcox, Duncan, Elgin, and Benson, Arizona, and included the Chiricahua, Dragoon, Mule, and Huachuca mountains.

The southernmost band of the Chiricahua occupied the region just south of the United States-Mexico border (eastern Arizona and western New Mexico). In their own language they refer to themselves as "enemy people" *(ⁿdé'Iⁿda-í)*, with the implication that they were feared by their enemies. Sharing this southern region were tribes referred to in the historic literature as the Jocome and the Jano. Various Spanish records make reference to these latter tribes as Apache, and there is disagreement over the exact identity of these groups. It is suggested that these groups were distinct bands of the Chiricahua, but were nonetheless Apache, while other argue that they were not Apache.

The Mescalero Apache occupied a region directly east of the eastern band of the Chiricahua—the Río Grande forming the boundary between the two Apachean tribes. The lands of the Mescalero were fairly extensive, and while they considered the area of eastern New Mexico and northern Mexico their core territory, they also ventured farther east for selected commodities—particularly buffalo. They were also known to travel farther north for short periods to trade.

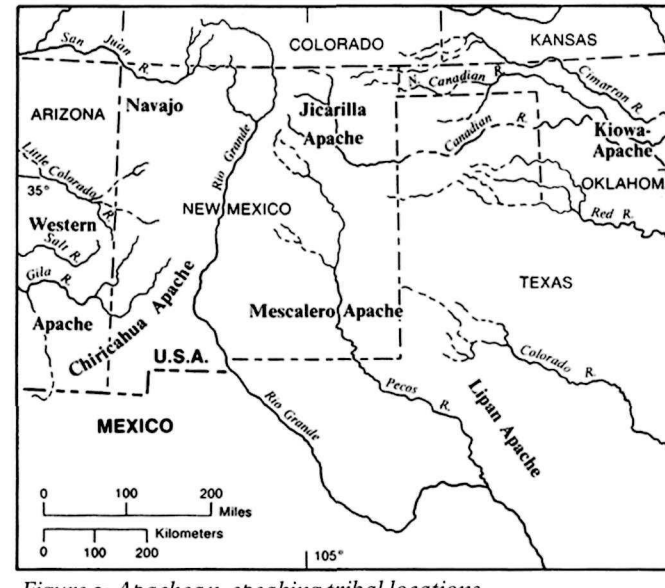


Figure 3: Apachean-speaking tribal locations (from Young 1983:394).

The third Apachean group considered here is the Jicarilla Apache Tribe. The Jicarilla occupied much of the area of New Mexico north of Santa Fe, as well as a portion of southern Colorado. As is the case with other tribal "home" territories, especially those relying on a hunting and gathering economy, traditional lands were also used by other tribes who shared a similar lifestyle. In historic times, the traditional lands of the Jicarilla described here were also used by various bands of Utes, as well as by other tribes who passed through the

area. Increasing pressures from non-Indian settlers from the east and the movement of tribal groups from the Rocky Mountain area brought incursions of additional tribal groups into the area, such as the Comanche.

The Jicarilla practiced a mixed economy, but still relied primarily on hunting and gathering. With the tribal homeland in close proximity to the Great Plains, the Jicarilla hunted the buffalo and were in contact with other Great Plains tribes who passed through the mountain passes to trade and hunt. Agriculture complemented the Jicarilla hunting practices, and when the Spanish arrived in the area, the Jicarilla were described as living in flat-roofed houses or

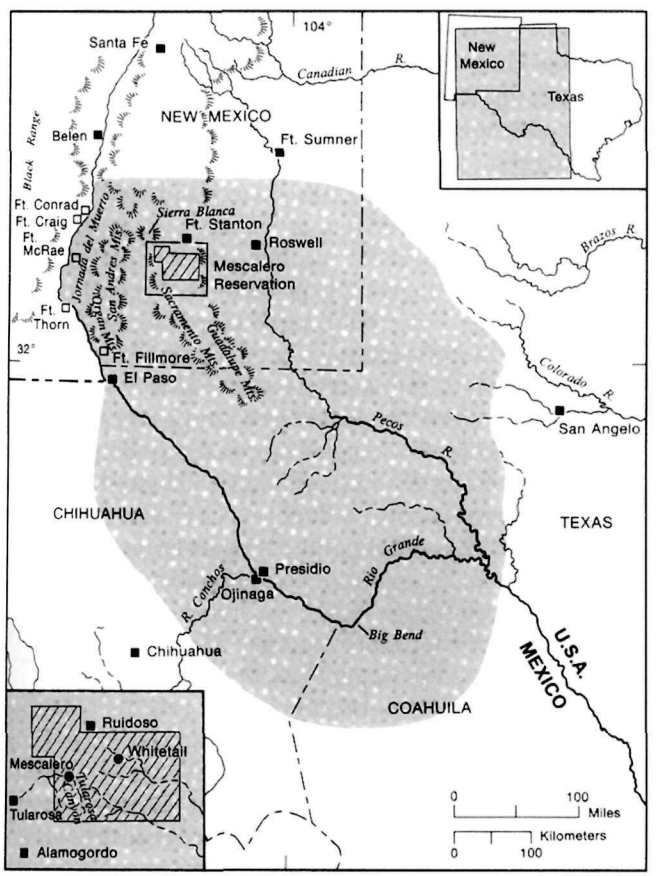


Figure 4: Mescalero tribal territory about 1830 (after Opler 1983:419).

rancherías.
Since all the Athapaskan-speaking Apache were recent émigrés to the region, they naturally came to settle on or near lands already occupied or used by others. This, and the fact that the Apachean groups relied partly on predatory raiding for a portion of their livelihood, often brought groups into conflict. But from another perspective, the relationship between the semi-nomadic Apachean groups and other tribes, such as the Puebloans of northern New Mexico, can be viewed as symbiotic in character. The sedentary, horticultural Puebloan peoples and the hunting and gathering Apache (including Navajo) developed an economic relationship of benefit to both. Inter-tribal trade brought tribes with different resources together to trade. When such relationships exist between different cultural groups, it is common for more than subsistence resources to be shared. It was this relationship, rather than just the individual tribes, that was severely impacted by the arrival of the Spanish in the 16th century—and the Americans in the 19th century. El Camino Real from the south (as other important trails) no doubt played a large role in facilitating these impacts.

Apache Social and Economic Organization: What are referred to here as the three bands were themselves composed of local extended family groups. Each group consisted of 10 to 30 families, and these groups were closely tied to a specific territory. These groups were organized around individuals who were referred to as "chiefs." However, these positions were earned and maintained by individuals who exhibited specific skills or traits such as bravery, eloquence, or generosity. In short, leadership positions in the groups were fluid, depending on the need and the abilities exhibited by individual group members. The role of a band leader was to lead through influence rather than through any institutional authority or power. Such a leader may have served as a spokesperson in dealing with other groups, but one of the most important roles of such a person was to intervene in and/or help prevent disharmony within the group.

Bands were largely independent of one another and did not come together to form any larger social entity. However, the bands operated under a rule common to all bands: freedom of access to resources. This common rule was not enforced by any institutional authority, but it

did constitute a principle of organization followed by most, if not all, bands. In this way, the band, if not a political entity, can be viewed as a corporate entity that was operated with public goals related to appropriate subsistence activity. Patterns of reciprocity related to the sharing of subsistence resources within the band provided the basis of these public goals.

Figure 5: Agave (Century Plant: Agave arizonica: USDA)

The band itself was organized around kinship. Kinsmen of the leader would form the basis of a group nucleus that was relatively persistent. But kinship was not necessarily a defining character of band membership. Close kinsmen of the leader were free to choose membership in another band, making the band composition somewhat fluid.

Subsistence: The band economy relied primarily on the hunting and gathering of resources within the group's territory. Men hunted. Deer was a primary wild game source of food, but hunters also targeted rats, squirrels, cottontail rabbits, and opossums. In the later historic period, surplus horses or mules were also used as food sources, as were cattle captured in raids on nearby settlements.

Women were responsible for the gathering of plant foods. Due to the fact that desirable plants grew at differing elevations or in different locations at differing times of the year, the extended family group moved frequently to take advantage of plant availability. Of all plant food sources, agave (century plant) *(Agave parryi)* was perhaps the most prized. Agave was gathered, the plant shoots were roasted, and the crown was dug up and backed in underground ovens. Baked agave—mescal—was dried and stored, and provided a food source for many months throughout the year. Other wild plant foods included mesquite beans, yucca, juniper berries, locust blossoms, onions, potatoes, sunflower seeds, many grasses, acorns, piñon nuts, cactus fruit, and chokecherries, to mention only a few. The Chiricahua engaged in some horticultural practices in areas where suitable tillable lands were available. Corn and melons were initially cultivated. Additional cultigens were added later (chilies, beans, pumpkins, squash, potatoes).

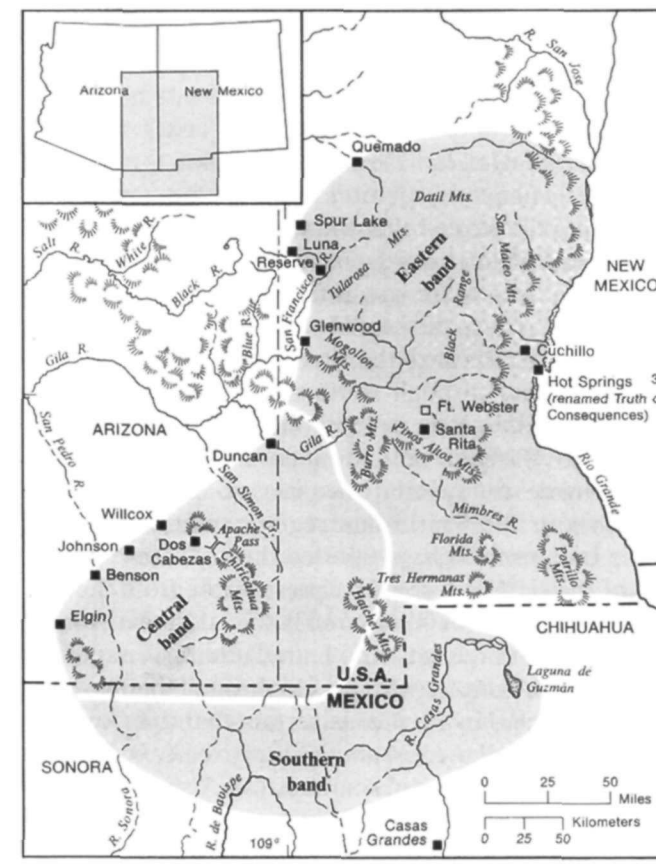


Figure 6: Mid-19th century map of Chiricahua Apache band territories (from Opler 1983:402).

Apache Territory: As subsistence hunters and gatherers, the Apache identified with a larger geographic area, within which

freedom of movement was highly prized. Bands exercised no control over specific lands, but they did identify with large, named geographic regions in which they moved seasonally for hunting and gathering purposes. Some regions, such as those occupied by the Mescalero and the Chiricahua, were marked by high, rugged peaks and generally dry plains—neither conducive to agricultural settlement. Winters in mountain ranges were severe; the flats were dry and hot in summer. While there may have been favored camping sites by bands, movement was primarily determined by the seasonal availability of resources in a given area. The local ecology required such movement over large areas, and limited the size of tribal populations.

With the arrival of newcomers to the region, such as the Spanish explorers and settlers, and later American émigrés, Apache subsistence territory was heavily impacted. The introduction of ranching, irrigation systems, permanent settlement along rivers or streams, or near springs, brought pressure on native wildlife habitat and native plant communities—in many ways the basis of Apache hunting and gathering economies. This was especially true in areas heavily impacted by the introduction of cattle and other domestic livestock that favored plants near water sources normally relied upon by the indigenous population for subsistence gathering. This pattern of environmental disruption was repeated throughout the West, and brought about serious negative impacts on Indian lifeways and survival.

Apachean Worldview and Religion:

El Camino Real not only provided a means by which Spanish colonizers moved men and material into New Mexico. The road also provided a means by which the Spanish government could implement one of its major goals: conversion of the indigenous populations to the Roman Catholic faith. Religious conversion of the North American Indian, an adjunct to the colonization of lands and resources, was a major goal of the Spanish Crown, as well as of the local colony administrators. Because of this, it is important to briefly describe the indigenous religious views of North American Indian populations in New Mexico, because these views were one of the immediate targets of colonizers, administrators, and religious officials. In short, El Camino Real North provided the means not only to gain physical control of local populations and lands, but also the means by which control could be gained over the worldviews and religious beliefs of North American Indians. Control over these beliefs may have had the most profound and lasting effects on Indian peoples of the region.

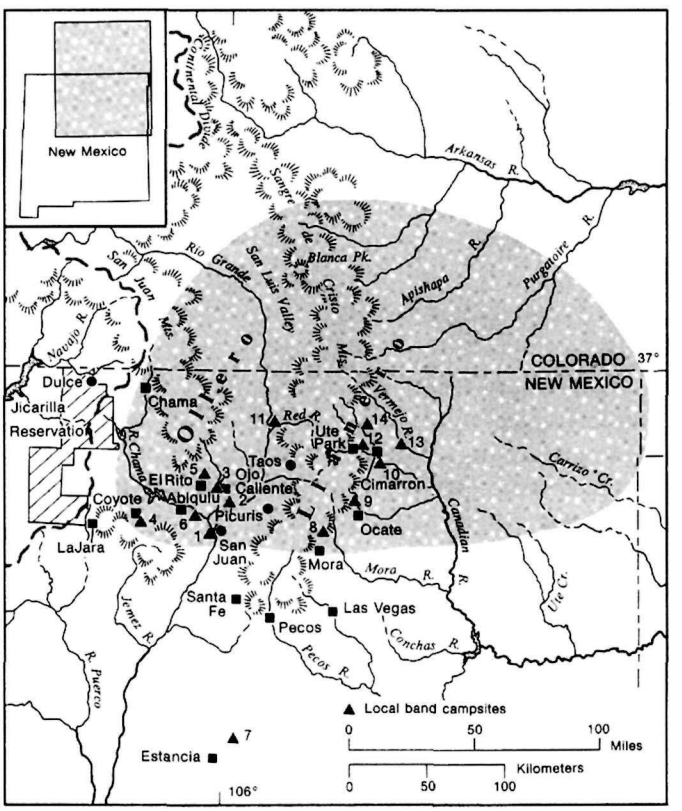


Figure 7: Jicarilla territory with band locations circa 1850 (after Opler in Tiller 1983: 441)

It is difficult to provide a generalized description of tribal religious beliefs and practices for Indian communities. First of all, in traditional tribal societies, there may be a core set of beliefs and religious practices, but they are often personal, not communal; and, while there may be individuals recognized as having traditional religious knowledge, there may be no recognizably distinct social institution such as an organized church. Second, traditional religious beliefs and practices are often so closely intertwined with all other aspects of

tribal social life that it may be difficult to classify any one element as religious, and any other secular. But this fact alone magnifies the impacts to Indian life, because Christian missionary attempts to change religious orientation reverberated through almost every element of Indian social and cultural life.

The Apache bands generally held that there is a giver of life. Prayers might be addressed to this life-giver, but he/she may not have been involved in the ceremonial rounds of the band and its members. Ceremonies were more likely centered on individual ability to acquire supernatural power that pervades the universe. Conducted after consulting with, or being aided by, a traditional religious practitioner, a ceremony might last for few days during which an individual might engage in ritual smoking, singing, or the administration of medicinal herbs or special foods. Ceremonies were conducted to address a wide range of needs—everything from curing or diagnosing illness to finding the power to defeat enemies, provide luck in hunting, or help locate a mate. Animals and plants—even celestial bodies—could be used as channels of supernatural power. Geography also played an important part in religious life and worldview. Among the Chiricahua, a group of deities were referred to as mountain spirits who lived in the highlands that surrounded tribal territory to protect the tribes from disease and enemies. Often religious legends and stories focused on tribal identity and origins, culture heroes who performed feats of courage, or activities that helped explain the differences between tribal groups. It is important to note that Indian religious beliefs encompassed the entire world that surrounded them. Animals, plants, minerals, mountains, streams, springs-the entire physical world around them was seen as possessing a diffuse power or force. The object of ceremony, or of following a seasonal round of ritual, was to allow the individual to tap into this power and manipulate it to meet specific needs. This diffuse power was pervasive; it existed in all things and, if controlled, could be used for good or bad purposes. Rituals and prayer to ensure general success marked all stages of life.

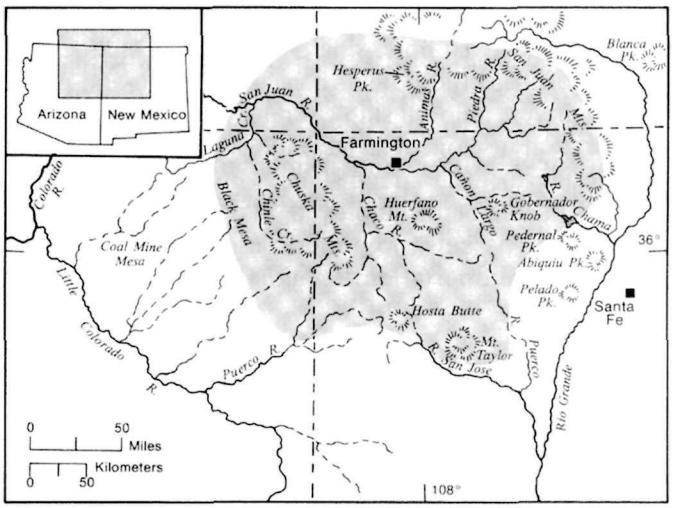


Figure 8: Approximate Navajo settlement area bout 1600 (from Brugge 1983: 490)

Religious belief and ritual was pervasive, in the sense that there were few aspects of the traditional life that were independent of, or not affected by, the supernatural power found in all things. Consequently, supernatural power and religious ceremony touched every aspect of life, and formed the very way individuals viewed the world around them. With this in mind, it is clear that attempts to convert Indian people to new religious views profoundly affected every aspect of traditional life. Recruitment to a new religion was also a wholesale recruitment to a new worldview. Inasmuch as El Camino Real provided the pathway for Spanish missionaries, and a route along which missions were established, it was a significant instrument in fundamental cultural change for indigenous peoples of New Mexico.

The Navajo: When Juan de Oñate traveled up El Camino Real, the Puebloan peoples were virtually surrounded by Athapaskan-speaking peoples. The largest group of Athapaskans in the Southwest at the time of Spanish arrival was the Navajo (*Apaches de Nabajó*). At that time, the Navajo were a semi-sedentary people who practiced a mixed economy (hunting and gathering mixed with limited agriculture) in an area to the west of the Río Grande, extending to today's Four Corners region of New Mexico, Colorado, Arizona, and Utah. Part of this economy included trade with their

immediate neighbors, who were the various Puebloan communities in Northern New Mexico and Arizona.

Anthropologists believe that the Navajo were part of the larger migration of Athapaskan-speaking peoples into the Southwest from more northern regions. There is some debate over the timing and sequence of this migration and differentiation of the various Athapaskan groups (various Apachean groups and the Navajo). The earliest arrival into the Four Corners region may have been around the year 1000. Over time, the Navajo and their Puebloan neighbors developed a symbiotic relationship: The Navajo traded goods resulting from their hunting and gathering economy for agricultural goods from the more sedentary Puebloan peoples. This symbiotic relationship resulted in the sharing of cultural traits.

As was the case with other tribes of the region, Navajo relations with Puebloan neighbors and the Spanish ranged from friendly to hostile, although the Spanish aided the Puebloans during the revolt of 1680. Their alliance with the Puebloans during the revolt and after the return of the Spanish had important consequences for the Navajo. Soon divided after the successful revolt, Puebloan peoples were eventually once again brought under Spanish control. As the Spanish military returned to retake control of the region, many Puebloan people sought refuge with the Navajo. In certain regions, this mixing of cultures brought about changes in Navajo culture, which persist to this day. Although the Navajo generally seemed to reject the highly structured nature of Puebloan societies, they adopted aspects of Puebloan religion. The traits compatible with traditional Apachean values were accepted, while others that were not compatible were rejected. A widely dispersed lifestyle based on animal husbandry; hunting, and manufacture emerged and became a defining character of the Navajo people.

Sheep herding has emerged as a major focus of Navajo life and identity. Residence groups in traditional Navajo communities are organized around the sheep herd. Sheep are central to cooperative aspects of Navajo life, because almost all family members have an interest in the welfare of the herd. Children are taught early on to care for sheep, and soon learn that caring for and tending the herd are cooperative family activities that reflect upon the well-being and character of the family group.

As in other Apachean groups, the Navajo residence group was traditionally the major element of social and political organization. Beyond the local matrilineal-based family group level, there was no clearly defined political organization. Loosely defined larger groups were organized around a local headman, but this larger group was usually mobilized only to deal with outsiders—other Navajos, other Indian tribes, or non-Indians. Some authors have written that Navajo social organization was highly flexible—communal and individualistic at the same time—a characteristic that may account for differing interpretations of Navajo social organization by different writers. Flexibility allows adaptation to rapid change and communal action when necessary, or an emphasis upon the importance of individual choice and action.

As is the case with other tribal groups, Navajo life relies heavily on traditional religious concepts and ceremonialism. Efforts by the Spanish (and later by American missionaries) to convert Indian people in the Southwest to Christianity were only partially successful, because traditional religious beliefs and ceremonies are well integrated into contemporary Navajo life. Navajo religious life is more accurately described as a ceremonial system that recognizes the links between all things and generally seeks to restore harmony to all aspects of Navajo life. Navajo views of their origins and the sacred nature of all things around them, as well as of the importance of place, have important implications regarding identifying and determining any impacts to ethnographic resources resulting from projects proposed by outsiders.

The Navajo today reside on a 16-million-acre reservation-the largest Indian reservation in the United States. The reservation surrounds

the present Hopi Indian Reservation. A tribal President and a tribal council govern the Navajo Reservation. The reservation is broken up into administrative districts called chapters. When working with the Navajo Nation on project work, and in consultation, it is important to contact not only the tribal office, but also the appropriate chapter offices.

Puebloan Cultures: Initial Spanish contact with the Puebloan peoples of northern Arizona and New Mexico took place more than a half-century before Juan de Oñate's march up El Camino Real de Tierra Adentro in 1598 along the Río Grande corridor. Oñate followed the earlier contacts made by Francisco Vázquez de Coronado (1540), Francisco Sánchez Chamuscado (1581), Antonio de Espejo (1582), and Gaspar Castaño de Sosa (1590). These expeditions, or *entradas*, gathered considerable information about the locations and conditions of the Puebloan communities they encountered in the upper Río Grande Valley. It is difficult to assess any complete picture of all the Puebloan communities in the earliest historic period, because each explorer reported only on his own experience. However, it is safe to say that the early Spanish travelers along the Río Grande corridor encountered an extraordinarily complex and sophisticated social environment, consisting of a relatively large and diverse Indian population that was the product of a number cultural cross-currents—cultural cross-currents still debated by researchers.

The Puebloan groups of northern New Mexico form a unit that is quite distinctive from other Indian groups. Unlike the tribes surrounding them, the Puebloan peoples belonged to language groups distinct from the Apachean tribes, lived in permanent settlements, and engaged in sophisticated agricultural practices that were the center of their subsistence activities. Agricultural practices likely found their way to the upper Río Grande from the south, and when adopted by Puebloan ancestors. The introduction of cultivars such as corn, beans, squash, and cotton, which required a secure water source, led to a more sedentary life than those of their neighbors who relied heavily on hunting in wide-ranging territories. The pueblos, or villages, themselves differed markedly from the temporary encampments of hunting and gathering groups, because they were built as permanent, multi-storied compact stone-and-adobe structures exhibiting central plazas.

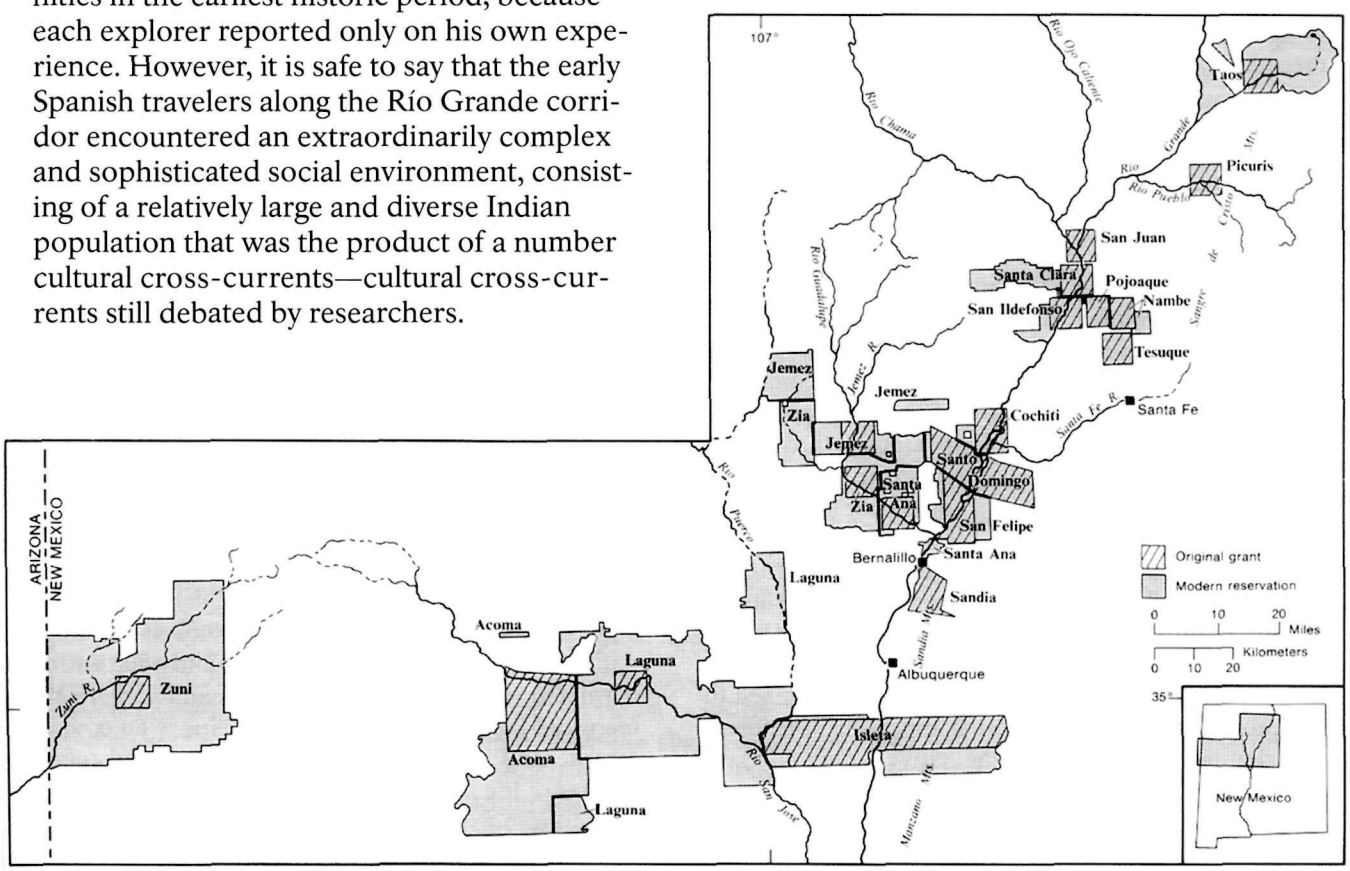


Figure 9: Original royal land grants and modern reservations. Hopi is not shown since there was not a Hopi grant. (From Simmons 1979).

Linguists and anthropologists have divided the various Puebloan communities into two major groups: the eastern pueblos of the Río Grande Valley, and the western pueblos residing the mesa-and-canyon country. The Keresan pueblos, found in the center and to the west of the eastern pueblos, are often classified as a third grouping. This division is based largely on social and cultural differences between the pueblos. Linguistically, the pueblos can be arranged into four major groups. These linguistic differences are important since they suggest different origins for the various Puebloan villages. The Uto-Aztecan language family is found in the Hopi villages (with variations)—it is a language closely related to the Numic languages of the Great Basin region. The Zuni, closely related culturally to the Hopi, speak a language that is perhaps distantly related to California Penutian. The Kiowa-Tanoan language family is spoken in the Puebloan villages of the Río Grande Valley—with three linguistic subgroups: Tiwa in the northern and southernmost Puebloan villages; and Tewa and Towa in the center. As the name suggests, the Tanoans speak a language related to a Great Plains tribe—the Kiowa. The Keresans linguistically stand alone, and do not have known linguistic affiliations. These groupings are most useful in making more recent historical comparisons.

The number of occupied Puebloan communities has changed over time. Pressures of colonization, droughts and famine, conflict with the Spanish administration, inter-tribal or inter-Puebloan conflict, as well as subsequent American control, have all taken their toll on the cluster of Puebloan communities along the path of El Camino Real. After centuries of turmoil and acculturation, the following Puebloan communities are now found in New Mexico and Arizona: Taos, Picuris, San Juan, Santa Clara, San Ildefonso, Nambe, Pojoaque, Tesuque, Sandia, Isleta, Cochiti, Santo Domingo, San Felipe, Santa Ana, Zia, Jemez, Laguna, Acoma, Zuni, Hopi, and Tewa Village. However, there were Puebloan communities originally observed by early Spanish explorers and administrators that were abandoned for a variety of reasons, and the inhabitants of these Puebloan villages found refuge among other Puebloan communities.

Tribes to the North—the Ute: Any description of the cultural environment of El Camino Real must address, even if only in a cursory manner, the tribal groups that found their way into central and northern New Mexico to trade or raid. Beyond the northern end of the road are found the various bands of Ute Indians. Although the primary territory of the Ute bands were the mountains of western Colorado and eastern Utah, they also had a significant presence in Northern New Mexico during the historic period. The Ute were allies or enemies of the Navajo, depending on what was going on at the time. They frequently raided the Apache and Puebloan communities in the upper Río Grande—the historic record reflects nearly 100 reports of such raids. Variable relations also existed with the Great Plains Indian tribes to the east. Relations with the newly arrived Spanish also experienced some shifts. However, with the Spanish, the Ute found a partner in the trade for slaves obtained in raids from other tribes. With the introduction of the horse and increased pressure from the Spanish for slaves, raids by Ute tribesmen on Shoshone and Paiute bands increased.

Various Ute bands were associated with specific territories. However, the Ute were highly mobile, and movement through the various sections of the traditional territory was common. During the early historic period, various authors reported between 10 and 12 Ute bands. These included the Weeminuche, Capote and Muache, on the southern border of Colorado; the Uncompahgre (*Taviwach*), White River (*Parusanuch and Yampa*), in central and northern Colorado; and the Uintah, Pahvant, Timpanogots, Sanpits, and Moanunts of east-central and northeastern Utah.

The eastern Ute bands were in contact with the Spanish not long after they arrived in the area in the early 17th century. During this period, and up to the middle of the 18th century, Ute bands raided the settlements of northern New Mexico to steal horses from the Spanish

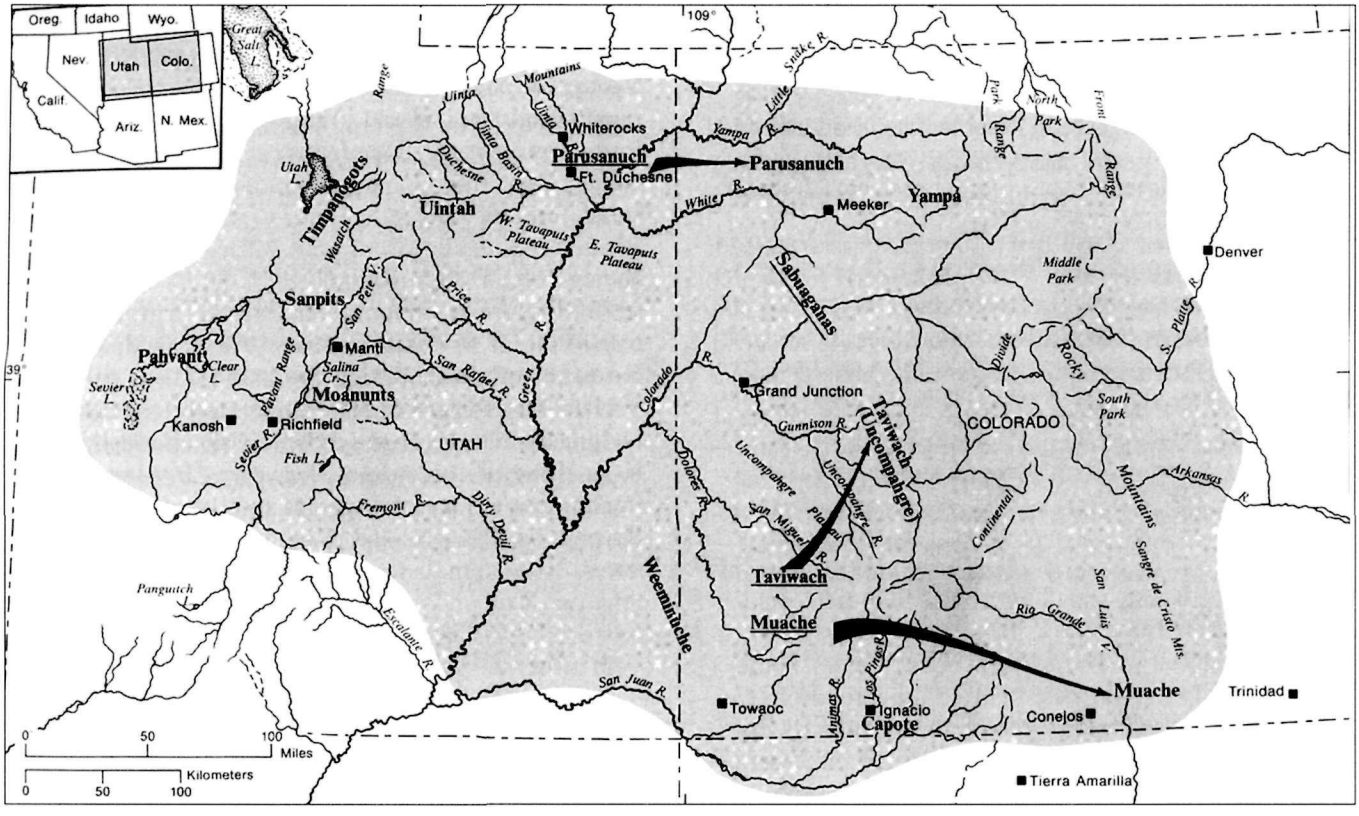


Figure 10: Early 19th century territory of Ute bands in Colorado, Utah, and New Mexico. Underlined band names indicate approximate 18th century locations; those not underlined are pre-reservation 19th century locations. (from Callaway, et al 1986)

and other goods from the Puebloans. As other tribes to the east acquired the horse, there was increasing encroachment on Ute territory from Great Plains groups such as the Arapaho, Sioux, Cheyenne, and Comanche. From the early 1600s until the mid- 1800s, conflict with the Spanish was periodic; with the advent of the American period, an 1855 treaty was signed with the governor of New Mexico Territory confining the Ute to Colorado.

Ute influence extended throughout the Rocky Mountain region in Colorado and the eastern basin and range provinces of Utah. The arrival of the Spanish and the establishment of Spanish settlements not only affected tribes in New Mexico and Arizona- the effects were also strongly felt by tribes that rarely came into contact with the newcomers. To some extent, the Ute were a conduit of these impacts for other tribes. After the arrival of the Spanish, the Ute bands took advantage of the Spanish slave market and raided tribes to the west and north for women and children to meet the Spanish need for herders, ranch hands, and general hacienda labor. The memory of such raids, made in concert with Navajo allies in the 18th and 19th centuries, is still strong among the Southern Paiute peoples in southern Utah and northern Arizona.

With the beginning of the American historic period in the mid- 19th century, the Ute bands found themselves under pressure from all directions. The Mormon settlers in valleys of central Utah displaced Ute bands from their traditional lands in that territory. By the 1870s, members of various western Ute bands were removed from their traditional homes and confined to the Uintah Reservation in northeast Utah. At the same time, increasing pressures from mining interests and settlers from the east forced the constriction of the Ute territory in Colorado. By the end of the 19th century, Ute territory in Colorado had been reduced from 56 million acres to the present reservations (Southern Ute and Ute Mountain Ute) of approximately 850,000 acres.

Although Spanish laws protected Indian land rights, Oñate, and Spanish settlers to follow, established an administrative system that

extracted tribute and forced labor from the Puebloan communities. Selected administrators were expected to exercise trusteeship over specific Puebloan communities—to protect Indian rights, provide military protection, and aid in efforts to Christianize the population. From the outset of their arrival, Spanish administrators and colonists required laborers on the growing number of farms, ranches, and haciendas established in the area. In response to this need, a system of forced labor *(repartimiento)* was established to provide needed labor. Food, at first freely given to the arriving Spanish, was now extracted as a tax on each Puebloan community to support colonial administrator. In time, the colonial systems established by Spanish administrators and the Roman Catholic Church led to severe abuses. At the same time, church officials feuded with colonial administrators over the control of the Puebloans and their resources. These internal conflicts among the newcomers led to confusion and frustration among the Indian people. Finally, these abuses and the growing frustration only added to the huge impacts already visited on Indian populations—perhaps the most significant being the devastating and depopulating diseases introduced to by the colonists—an event not confined to the experience of contact in the Southwest. The response to such pressures and abuses was a general Puebloan revolt. In August 1680, after lengthy preparations by prominent Puebloan leaders, representatives from various Puebloan communities ordered the Spanish to leave or be killed. The resulting conflict saw the death of over 400 Spanish settlers and a departure of the Spanish from the Río Grande Valley for the next 12 years.

The Great Plains Tribes: Historic records indicate that Great Plains Indian tribes visited, raided, or traded with the Puebloan communities, especially those on the eastern periphery of the Río Grande Valley. Great Plains tribes, like the Apachean groups, were primarily hunters and gatherers who often moved across the landscape to follow hunting opportunities. They may have taken the opportunity to raid the more sedentary Puebloans, but there are ample instances of trade between Great Plains tribes and Puebloans. Great Plains tribes offered buffalo hides, deerskins, meat and tallow, and salt. In exchange, Puebloans provided cotton goods, pottery, corn, and turquoise. Visitors from Great Plains groups included various Apache bands from the east, as well as the Jumano, Kiowa, Comanche, and Pawnee, who have traditions of living in or traveling through the Southwest. Depending on the time period, and the ecological and political circumstances, these groups moved in and out of the area, providing opportunities for intermarriage and periodic raiding, as well as cultural exchange, with the sedentary Puebloans.

The periodic movements of the Great Plains Indian groups in and out of the area surrounding El Camino Real are complex, and require a description not only of shifting ecological circumstances, but also of the ever-changing political environment. Spanish alliances with Great Plains groups, such as the Comanche, as well as with the Ute to the north, depended on existing hostilities with the Puebloans and various Apache bands, and even on pressures from the French, who sought Indian allies against the Spanish. But the important point to make is that Great Plains tribes were certainly in contact with Puebloan communities along the Río Grande (and farther west) when the Spanish first arrived. Regardless of how they are characterized by various authors, the relationships among these groups were certainly affected by the introduction of a large contingent of Spanish military, administrators, priests, and colonizers. El Camino Real was a major factor in the introduction of these individuals and institutions to the region.

Archeological and Historic Resources

Significant cultural resources associated with El Camino Real de Tierra Adentro are archeological and historic sites, cultural landscapes, ethnographic resources, and sites with high-potential for public benefit that have been identified in accordance with the National Trails System Act, sections 12(1) and 12(2). Many of the archeological sites and historic structures along El Camino

Real have a direct thematic relation to the trail. The sites listed in this section are those that have a significant, direct connection to El Camino Real. Many sites that are well beyond the Río Grande Valley and are not directly related to the route have not been included in this discussion. The sites and segments described are those along El Camino Real from El Paso, Texas, to San Juan Pueblo, New Mexico. The development of El Camino Real is closely tied to the many prehistoric and historic North American Indian groups who lived along the corridor and who used it for centuries. Because of the magnitude of the potential sites, only those with strong relationships with the trail have been included.

Archeological Resources - El Camino Real has been described as the longest and most extensive archeological site complex in New Mexico. It is a major archeological resource that provides new light into significant periods of the history of New Mexico and the United States. The artifacts, campsites, and structures that investigators have identified along the trail provide a unique view into New Mexico history and the lives of those who made it.

Although the general route of El Camino Real de Tierra Adentro is clear and a number of specific locations associated with the trail have been documented, in many other areas the precise location of the trail is not known. Historic activities and natural processes of erosion and deposition have undoubtedly destroyed or obscured many trail segments. In other areas actual physical traces of the trail are likely, but historical and archeological documentation is incomplete.

This investigation, which focused on 67 miles (108 kilometers) of the trail, uncovered information to document 39 sites and identified 127 road segments. Most of this work was concentrated on three geographic areas: Jornada del Muerto, Bosque del Apache, and the regions of La Bajada and Santa Fe. Marshall's (1991) investigation revealed evidence of early colonial use. One of the earliest sites associated with the colonial period is Las Bocas encampment, where Glaze E Pecos Polychrome has been found in Jornada del Muerto near Paraje de San Diego and Rincon Arroyo. Several other projects have considered specific segments of the trail, mostly in the Santa Fe area.

La Majada North road is another area where scattered artifacts document the prehistoric, colonial, Mexican, and territorial use of El Camino Real. (Note: La Majada North road is named for La Majada Grant in Sandoval and Santa Fe counties. The grant includes La Bajada ["the descent"], which is the mesa and cliff of volcanic basalt. La Bajada is the dividing point between the Spanish provinces of Río Arriba ["upper river"] and Río Abajo ["lower river"].) Prehistoric early Glaze period ceramics were found over the mesa, an area that apparently was farmed during this time. Three ceramics clusters from the colonial period have also been identified: Two Tewa Polychrome from ca. 1650 to 1725, and a plain red soup bowl. A variety of Territorial period artifacts have also been found along the road: Hole-in-cap cans, sardine cans, bottle glass, stonewares, porcelain, and other earthenwares, and potsherds of ironstone.

One important archeological site is the Paraje de San Diego near the southern end of Jornada del Muerto. It was an important campsite where northbound travelers prepared for the journey and southbound travelers rested. A New Mexico State University field school sponsored by the BLM recovered a wide range of Colonial period ceramics from this site (Fournier 1996; Staski 1996).

Scurlock, et al. (1995), have documented archeological resources on Tomé Hill, a topographic feature that had special significance to the prehistoric pueblos of the area. The site includes a multi-room-block village site, two probable shrines, and a number of petroglyphs.

The Archeological Conservancy, a nonprofit preservation organization based in Albuquerque, has acquired several sites that are important to the history of El Camino Real. San Jose de las Huertas is considered to be the best-preserved Spanish colonial village in New Mexico. This 28-acre site north of Albuquerque, in the vicinity of Placitas, was occupied from 1764 to 1823. The walled village contains as many as 10 undisturbed house mounds.

The Archeological Conservancy also owns the remains of a Spanish colonial ranch, one of numerous sites known to date from the Colonial period. The site, with four rooms and a *torreon* (circular tower) feature, was built just south of Santa Fe along the Santa Fe River between 1610 and 1680.

Historical Resources -

Prehistory: Long before the coming of Europeans, North American Indian trails and pathways crisscrossed many areas of the Western Hemisphere. Over thousands of years, North American Indians learned the best routes or corridors for travel. By the coming of Europeans, they had identified river crossings, valleys, canyons, passes through mountain ranges, and watered areas for travel in their respective areas of use. In the deserts and forests of North America, in particular, Indian people established trade and hunting routes. In their way and in their time, they communicated with other people in other lands. Their trails established the practical routes that crossed large regions in which they lived. In effect, they influenced the pattern of colonial roads, and, to a great degree, modern highways that would later be developed by Europeans.

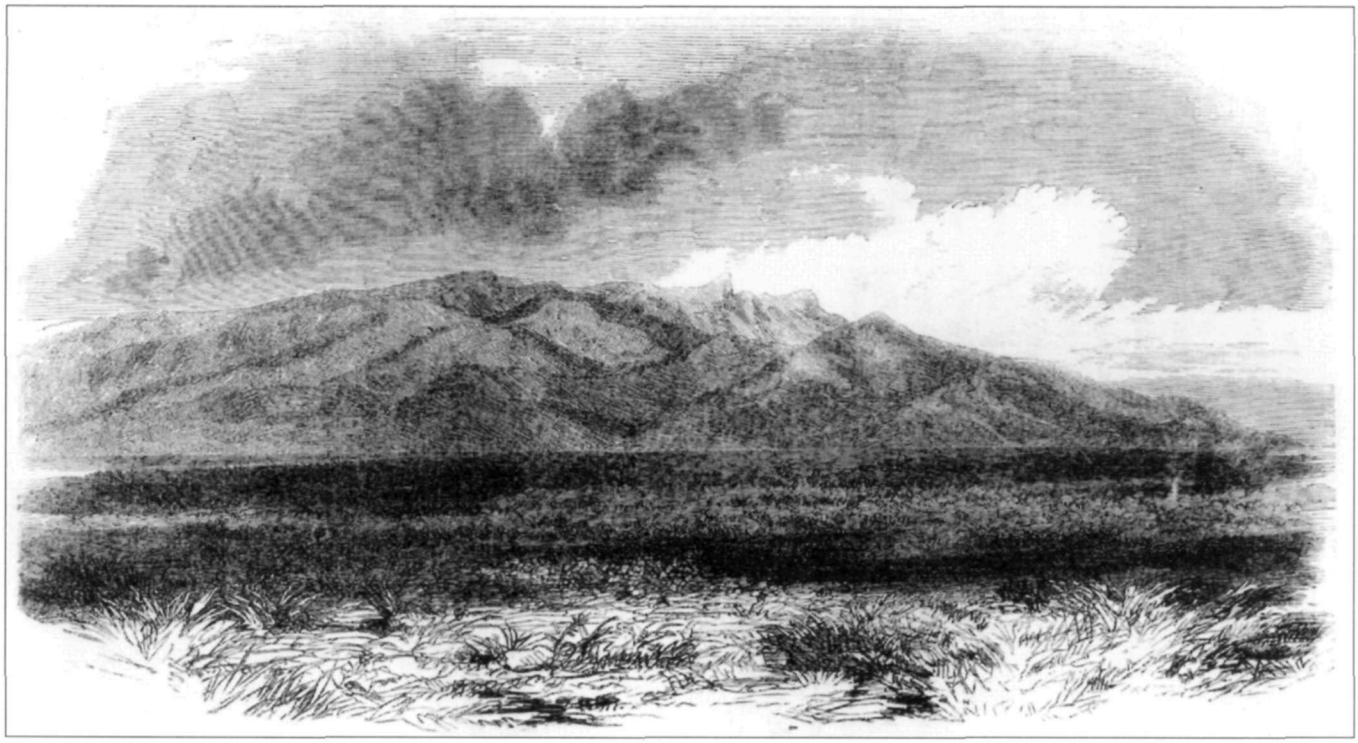
Spanish Exploration: The first explorers and settlers who developed El Camino Real generally followed indigenous routes that traversed present-day Mexico and what is now the southwestern part of the United States. For example, one route used by Aztec and other native traders originated in the Central Valley of Mexico, and ran northward through the *meseta central*—the central corridor between the Sierra Madre Occidental and the Sierra Madre Oriental. It led north to major Indian centers such as Paquimé (Casas Grandes), which may have traded with the New Mexico Indian Pueblos along the Río Grande. Numerous archeological sites along the trail document the presence of Indian groups who lived, traveled, and traded along the trail corridor. Later, El Camino Real de Tierra Adentro followed the same corridor.

Soon after Hernán Cortés conquered central Mexico, Spaniards began to use the route that would become El Camino Real de Tierra Adentro. In the early years, the trail facilitated the development of the northern mining frontier, particularly as silver was discovered north of Mexico City in the 1540s. The establishment of Zacatecas by 1546 represented an important step in the development of the trail. As Spanish settlers pushed northward in the discovery of other silver mines, the first part of El Camino Real became known as *El Camino de la Plata* (the silver road).

With expansion came the demand for services, protection, and pacification of frontier areas. Cattle drovers moved herds hundreds of miles to mining areas. Merchants, bakers, butchers, tailors, and other small entrepreneurs established themselves within mining camps to sell their wares. In response to the demand for protection against warring tribes by investors, the Spanish Crown sent missionaries, soldiers, and settlers northward to establish religious and military institutions, as well as communities, along the route. Movement to the north continued, and by 1575, the frontier line had moved to the Santa Bárbara- Parral mining area in the province of Nueva Vizcaya (present-day Chihuahua).

Spanish Settlement: Leading settlers to New Mexico in 1598, Juan de Oñate blazed a new segment of El Camino Real directly north from Santa Bárbara to the crossing of the Río Grande at a place that came to be known as El Paso. From there, Oñate and his settlers closely followed indigenous routes along the Río Grande, thus establishing the general location of the trail, as it would be used for almost three centuries.

After reaching within sight of the Organ Mountains near present-day Las Cruces, Oñate and 60 horsemen departed the slow-moving *carreta* (horse-drawn cart) caravan and moved northward in advance to select a settlement site. Along the way, Oñate and his men noted the distinctive natural landmarks that highlight the corridor of El Camino Real. Following the Río Grande, they passed the



Fray Cristobal Mountain, 1852.

Fray Cristobal Mountains (which the soldiers derisively named after spotting a silhouette on the serrated ridge that looked like one of the priests on the expedition). They continued north, visiting Indian pueblos along the Río Grande, until they reached San Juan Pueblo.

Meanwhile, the *carreta* caravan found a flatter route of travel on the east side of the Organ Mountains. That route of El Camino Real came to be known as Jornada del Muerto—"dead man's journey." Nearly 80 miles long, Jornada terminated near present San Marcial, where the caravan rejoined the river. Short of food, the settlers reached Teypama, where native people gave them corn. In remembrance of their kindness, the settlers remarked that they named the place *Socorro* (relief), "because the people there furnished us with much maize." Beyond Socorro, the caravan followed the river past Isleta, the valley of present-day Albuquerque, and northward beyond San Felipe, Santo Domingo, and San Ildefonso pueblos before reaching their destination at San Juan.

At the confluence of the Río Grande and the Río Chama, at the small pueblo called Caypa, which they renamed San Juan de los Caballeros, the settlers worked hard to establish living quarters and set up their planting fields while the summer growing season lasted. (Note: The Oñate "Itinerary" refers to this site as "Caypa"; other sources identify it as 'Ohke"). Oñate intended to build the capital of the province next to the pueblo, but the plan was abandoned. Although some remained at San Juan de los Caballeros, Oñate ordered the settlers to move to a new site a short distance down river during the winter of 1599-1600. This site, which would be the province's capital for a decade, was named San Gabriel, or San Gabriel del Yungue.

Greater changes affected the colony. After nine years of strife between Oñate and some settlers, he was exiled from New Mexico by Spanish officials. The Crown continued to support the colonizing efforts and in 1610 appointed Pedro de Peralta governor of the province. In accordance royal instructions, Peralta established Santa Fe as the capital. Throughout the 17th century, it was the only incorporated Spanish town north of Chihuahua. Soon after its establishment, Santa Fe became the terminus for El Camino Real. Trade caravans from Mexico City reached Santa Fe, while the mission supply caravan

reached Santo Domingo, the ecclesiastical capital of New Mexico.

Caravans reached New Mexico every one to three years. Although few details about the caravans have survived, a composite description can be reconstructed. The 17th -century mission supply train likely consisted of 32 wagons, escorted by a company of soldiers. The trail was further enlarged by herds of cattle, goats, sheep, and draft animals, as well as small farm animals, cats, and dogs. The wagons were heavy, and when fully laden, they required a team of oxen. Each wagon had two teams, and alternated between them. Caravans bound north from Mexico City carried not only friars and mission supplies, but also settlers, newly appointed officials, baggage, royal decrees, mail, and even private merchandise. Southbound caravans from Santa Fe carried outgoing officials and friars, traders, and the produce of the province, much of which was sold in the mining communities to the south along El Camino Real.

Throughout this early period, there was constant development along El Camino Real from Mexico City to Santa Fe, including mining, ranching, and farming. One of the central activities was milling. By the beginning of the 17th century, mills, animal -driven or water-powered, characterized the agricultural and mining haciendas. Mills were built along El Camino Real, and because of their economic importance they became associated with place names along the route. In time, haciendas, with their mills, were associated with extensive landholding patterns characterized by large fortified houses. So impressive were certain haciendas that they became towns on El Camino Real where travelers could find shelter and protection. Spanish frontiersmen depended on a line of presidios to defend their properties.

As the 17th century neared its end, the Pueblo Revolt of 1680 exploded. Pueblo Indians, united with Utes and Apaches, sent New Mexico settlers reeling south to El Paso, where they remained for 12 years. The revolt resulted from Indian resentment against Spanish colonial occupation. The Pueblo Revolt is part of the history of El Camino Real, for the trail was the route used by the Hispanic refugees as they fled southward from Santa Fe, past the pueblos of the Río Abajo, through the Jornada del Muerto, and beyond to El Paso. From El Paso, Spanish officials led sorties northward along El Camino Real to assess the extent of the revolt, with the hope of reconquering New Mexico. In 1692, the reconquest began. Led by Diego de Vargas, the Spanish army moved northward along El Camino Real and succeeded in gaining a foothold in Santa Fe. Although there was intermittent resistance from the Pueblo Indians for several years, settlers and Puebloan peoples learned to live in harmony.

Spanish Military and Commercial Activities: The Pueblo Revolt and encroachment by French traders who explored westward from their Louisiana settlements along the Mississippi River awakened concerns over the security of New Spain's frontiers. During the course of the 18th century, military installations were established along El Camino Real to bolster defenses against both European rivals and resisting Indian groups, who posed more immediate problems to Spanish settlers. Periodic inspections by Spanish military officials led to changes in frontier defenses, and also provided descriptions of the frontier in their reports, travel accounts, and maps of El Camino Real and its environs.

After settlers and missionaries resettled New Mexico in 1692, increased numbers of caravans headed north. Two important new settlements were founded early in the century: Albuquerque in 1706, and Ciudad Chihuahua in 1709. The establishment of these towns resulted in larger- scale trade activities and new names for that segment of the trail, which became *El Camino de Chihuahua*, running south from New Mexico, and *El Camino de Nuevo Mexico*, running north from Chihuahua. Aside from commercial use of El Camino Real, renewed migration also resulted from the development of trade centers in communities with colonial roads that connected with El Camino Real.

During the 18th century, New Mexicans traded at a variety of local fairs. Off of El Camino Real, fairs at Taos, Pecos, and Galisteo attracted many merchants. New Mexican traders met with Comanches, Apaches, Utes, Navajos, and others who brought buffalo hides, deerskins, blankets, and captives to be sold or exchanged as slaves. They bartered horses, knives, guns, ammunition, blankets, *aguardiente* (alcohol), and small trinkets. In the fall, large New Mexico caravans moved south along El Camino Real to attend fairs at Ciudad Chihuahua.

Spanish law restricted trade and immigration from outside the empire, but local officials were often less strict. In the early 19th century, Taos drew French, English, and Anglo-American traders and trappers who initiated immigration from and trade with the United States. The 1807 capture of an American military party led by Lieutenant Zebulon Montgomery Pike in Spanish territory north of Santa Fe symbolized intrusion by the new country to the east. Just over a decade later, Anglo-American, French, and British traders increasingly moved along El Camino Real, taking advantage of the inability or unwillingness on the part of local authorities to control their activities.

The Mexican Period: After Mexico gained its independence from Spain in 1821, El Camino Real de Tierra Adentro, now a *camino nacional* (national road) of Mexico, expanded in importance as a trade route. Almost overnight, the *camino nacional* became linked with United States markets via the Santa Fe Trail from Missouri. In time, the trail from Missouri came to be known as the Santa Fe-Chihuahua Trail. Accordingly, much of the merchandise hauled across the plains did not remain in New Mexico; it was carried into the interior of Mexico along the *camino nacional.*

New Mexico merchants made important contributions to the growth and geographical expansion of trade along the former El Camino Real. They developed their own commercial networks, and by 1835 they were the majority of the people traveling into the Mexican territory, owned a substantial portion of all the merchandise freighted south, and specialized in hauling domestic goods. After 1829, they expanded trade along what came to be called the Old Spanish Trail, which linked Santa Fe, New Mexico, present-day Arizona, Utah, and California. Throughout the 19th century, they continued to trade along the former El Camino Real, and they maintained close economic ties with their Mexican counterparts for decades after the Mexican-American War.

The Mexican War: In 1846, the former El Camino Real became an invasion route into Mexico. During the Mexican-American War, Stephen Watts Kearny, commander of the United States Army of the West, led his men over the Santa Fe Trail. Moving south from Las Vegas, he captured Santa Fe. Kearny then proceeded on to California. Meanwhile, Colonel Alexander Doniphan was appointed to command the U.S. troops stationed in New Mexico, and he moved south along the Chihuahua Trail. Near Las Cruces, at Brazito, a *paraje* (stopping place) on El Camino Real during both Spanish and Mexican periods, U.S. forces clashed with Mexican troops. Doniphan's victory at the Battle of Brazito led to the U.S. occupation of El Paso. Two months later, Doniphan captured Ciudad Chihuahua.

The Mexican-American War produced major political changes along the former El Camino Real, but commercial activities on the trail and across the new border between the United States and Mexico continued. Equally important, the cultural interaction and communication among the people who lived and worked along the trail never ceased.

United States Territorial Period: In the early Territorial Period of New Mexico, international commerce continued along the route from Santa Fe to Ciudad Chihuahua. During that time, the former El Camino Real continued to serve as a conduit for trade and immigration. To control the route, forts and garrisons were established along El Camino Real in the area between Mesilla and Socorro.

In 1862 the Civil War reached New Mexico, when Confederate forces under Major Henry H. Sibley came up the Río Grande from El Paso to Valverde, an old *paraje* of El Camino Real, on the banks of the river. Colonel Edward R. S. Canby, the commander of the Union forces in New Mexico, marched his troops from nearby Fort Craig to attack Sibley's forces. After a bloody encounter, the Confederate forces claimed victory. Soon after the battle of Valverde, Albuquerque and Santa Fe fell to the Confederate army. Sibley had succeeded in capturing strategic point along El Camino Real, but his plans came to naught. His objectives to seize the Colorado gold fields and establish a route to the Pacific Ocean came to a sudden stop in February 1862, when he was defeated at the battle of Glorieta Pass, southeast of Santa Fe. As the Confederates retreated south of Albuquerque, the final battle in New Mexico took place at Peralta, on the former El Camino Real.

In the years after the Civil War, the nature of the commercial activities along the trail from New Mexico changed again. With the growing presence of military forces in the West, supplying U.S. Army forts became one of the major sources of income for New Mexicans. The merchants associated with the former El Camino Real depended on federal government expenditures to supply army installations and the various Indian tribes. Most New Mexicans did not have the resources to continue the type of mercantile activity required by the evolving trade—the margin of profit had become so small that they were unable to make a profit. In 1880, the railroad reached Santa Fe, eclipsing the use of the Santa Fe Trail. Two years later, the railroad line had reached El Paso from Albuquerque, effectively leading to the decline of the road-based transportation on the former El Camino Real.

Significance: Roads are a necessary and significant function of the historical process of nation states. Historic trails throughout the Americas are indigenous in character and purpose. Factors regarding their development before European intrusions influenced the location of many colonial roads, particularly El Camino Real de Tierra Adentro, which were established between 1521 and 1821. The origin of almost all colonial roads in Mexico and the United States are therefore obscure. They began in an unspecified time when prehistoric Indian peoples blazed networking trails north from the Valley of Mexico, ultimately joining those along the Río Grande in New Mexico and Texas.

Prehistoric Trails: Prehistoric tribes along the Río Grande established routes for trade and communications long before the arrival of the Europeans. Pre-Hispanic archeological sites from central Mexico to northern New Mexico document the varied Indian cultures who lived along variant trails that later formed the 1,600-mile (404 miles of which lie in the U.S.). Spanish colonial route for transportation and communication. Travelers along these prehistoric routes disseminated new ideas and technologies that influenced Indian tribes, principally the Río Grande Pueblos. Although pre-Columbian roads leading to the New Mexico Pueblos were not well developed beyond the central highlands, routes from the Central Valley to places lying within the edges of the Aztec domain were, on the other hand, better defined for travel. Unlike later roads developed by Europeans for wagons and beasts of burden, indigenous trails were, in contrast, primitive foot trails.

Historic Roads and Trails: The 16th-century Spanish colonial roads combined ancient trails with trails newly constructed, some of them with bridges, to areas with economic potential. Historically, the east-west and south-north pathways from Mexico City followed the pattern of Spanish expansion. Early colonial roads connected Spanish ports, towns, fortifications, mines, and Catholic missions, thus forming a new network of trunk roads known as *caminos reales*. One such road was El Camino Real de Tierra Adentro, which ran from Mexico City to Santa Fe in New Mexico. The northern part of El Camino Real was established by Juan de Oñate in 1598, almost a decade before the first English colonists landed at Jamestown, Virginia. The trail, 1,600-

miles (404 miles which lie in the U.S.) in length, provided the major link between the province of New Mexico far in the northernmost reaches of Spain's vast empire in North America, and Mexico City, the capital of the viceroyalty of New Spain.

Notwithstanding the contributing influence of indigenous routes, the historical period of significance for the portion of El Camino Real in the United States extends from 1598 to 1882. In Mexico, the route of El Camino Real began in the early 1540s. Throughout that period, traders and travelers along El Camino Real contributed to the cultural interaction among all people, European and Native alike, who lived along it. In its historical development, it followed the paths of miners, ranchers, settlers, soldiers, missionaries, and native peoples and European emigrants who settled places along the way. Narrative accounts of the route describe its variants throughout the 16th, 17th, 18th, and 19th centuries. These written records contain a wealth of information about daily life, settlements, and topography, as well as place names, along the trail.

El Camino Real de Tierra Adentro fostered cultural exchanges between Europeans and Indian peoples. Along it were transmitted elements of western European civilization ranging from language to Christianity, science, medicine, literature, architecture, folklore, music, technology, irrigation systems, and Spanish law. Among legal concepts currently used in the American legal system that made their way along El Camino Real are community property laws; the concept of first use-first priority in water rights; mining claims; and the idea of sovereignty, especially as applied to North American Indian land claims.

Similarly, Spanish frontiersmen learned new ways—Indian ways—of surviving in the remote wilderness of North America. Food exchanges, medicinal practices, lore, craft industries, and other cultural amenities crossed from indigenous hands to those of Europeans. Interestingly, chile peppers, grown by natives in the Valley of Mexico, were introduced by Spanish settlers to the Río Grande Pueblos. While there were many benefits from the exchange of Spanish and indigenous cultures, many native ways were lost because of the influence of Spanish culture, and later, because of the overpowering exclusivity of Anglo-American culture.

Commerce has always been an integral component of the history of El Camino Real, but the nature and the extent of the commercial activities evolved with time. In the early years, the mission caravan from Mexico City was an important source for trade in New Mexico. Throughout the 17th century, other itinerant traders made their way into New Mexico for trade. Trading activities, moreover, also included trade fairs at particular pueblos that attracted local Spanish settlers.

El Camino Real and the Santa Fe Trail Connection: The history of El Camino Real de Tierra Adentro is shared by two nations—Mexico and the United States. After Mexican independence in 1821 and the opening of the Santa Fe Trail from Missouri to Santa Fe, Mexico legalized trade with the United States. By the mid- 19th century, El Camino Real, now a *camino nacional* of Mexico, had become an integral part of an international network of commerce. By the end of the 19th century, trade within the commercial network had resulted in the transportation and exchange of millions of dollars worth of merchandise between Europe, the United States, New Mexico, and other provinces of the Mexican republic.

The geographical boundaries of the commercial network developed around a portion of the old El Camino Real, known as *El Camino de Chihuahua* (the Chihuahua Road). Indeed, the connection of the Santa Fe Trail with *El Camino de Chihuahua* became known as the Santa Fe-Chihuahua Trail. Effectively, it connected commercial interests between Mexico and the United States at Santa Fe. This extensive pattern of economic relations involved Europe and North America.

Trail activities had a major effect on the landscape along El Camino Real corridor. In addi-

tion to introducing new foods into New Mexico, traders and settlers affected biotic communities and promoted horticultural diffusion. The introduction of livestock from Mexico, along with commercial plants such as apples, apricots, cherries, grapes, garden varieties of smaller plants, and exotic flora, changed the landscape and its uses on and along the route of El Camino Real. Other enterprises, such as mining and large-scale commercial enterprises, contributed to the dramatic alteration of the landscape associated with the trail.

El Camino Real has been associated with notable historic figures of both the American and Hispanic frontiers and pivotal events in the history of the western United States. The first important individual associated with the segment of El Camino Real in the present-day United States was Juan de Oñate. He was the son of one of the founders of Zacatecas and Guadalajara. In 1598, Oñate established the northern end of El Camino Real, and founded the first Spanish capital of New Mexico at San Juan de los Caballeros. As a result of Oñate's colonizing efforts, Pedro de Peralta established Santa Fe, destined to be the enduring capital of New Mexico. Another important Spanish colonial figure, Governor Diego de Vargas, reestablished New Mexico in 1692 after the Pueblo Revolt of 1680 had forced Spanish settlers to flee south on El Camino Real to El Paso.

El Camino Real in Historical Travel Literature: Much has been written about El Camino Real by travelers who rode along it. One of the earliest histories of life on El Camino Real was published in 1610 by Gaspar Pérez de Villagra and entitled *Historia de la Nueva Mexico, 1610*. Over a century later, in 1726-1727, Brigadier Pedro de Rivera inspected fortifications in New Mexico and wrote an extensive report on conditions in the province. Fifty years later, in 1777, Father Juan Agustín Morfi wrote another report describing problems in frontier New Mexico. His report became an important and enriching literary endeavor of the Spanish colonial period, and has been printed several times in the 20th century. Other military reports, principally those by the Marqués de Rubí (1766) and Juan Bautista de Anza (1779), also describe conditions in New Mexico during the 18th century.

In the 19th century, accounts by Anglo-American travelers and traders piqued the imaginations of Americans. For example, the adventurous accounts by Zebulon Montgomery Pike and Josiah Gregg, both of whom spent an appreciable time along the route of El Camino Real in New Mexico and Chihuahua, stimulated U.S. expansion into the area. Such accounts featuring El Camino Real tended to highlight the impact the trail has had on the history of a large part of the present United States.

The Legacy of El Camino Real: The last years of El Camino Real demonstrated the diversity of its legacy. New Mexico merchants of the 19th century, whose ancestors had come with Oñate or other colonizing groups in the 17th century, carried on commercial activities along the ancient trail. Among them, José Felipe Chávez, from Belen, who became a successful entrepreneur known as *El Millionario* (the millionaire), was easily one of the richest men in New Mexico Territory. His skillful management of personal resources, local products, and business connections, coupled with hard work and determination, allowed him to strengthen his economic standing and gain considerable influence. His career was exceptional, but not unique. Other New Mexican merchants rivaled him in wealth, influence, and skills. Miguel Antonio Otero, New Mexican delegate to Congress before the Civil War, had been deeply involved in trading before his political career and continued to pursue this activity after the end of his congressional term.

Once the Santa Fe Trail extended its route to Chihuahua, Anglo-Americans joined the tradition. As many of the Anglo-American traders along El Camino Real, Josiah Gregg first went to New Mexico with a caravan from Missouri. Eventually, he traveled throughout Mexico, writing an account of his observations. Another historical figure closely linked

to the trail was territorial governor Henry Connelly, who had been an influential Santa Fe Trail merchant along El Camino Real.

Military figures of the 19th century also participated in the historical pageantry that marched along the ancient route. Aside from General Stephen Watts Kearney, who led his Army of the West into Santa Fe during the Mexican War, his colleague, Colonel Alexander Doniphan, similarly deserves mention. Not only did he defeat Mexican forces at Brazito, a *paraje* along El Camino Real, in 1846, but he also later captured Ciudad Chihuahua. During the Civil War, three notable leaders appeared on the scene who would stand out in the history of El Camino Real. One was Confederate Major Henry H. Sibley, who marched his troops north along El Camino Real to capture Albuquerque and Santa Fe. Another, Colonel Edward R. S. Canby, the commander of the Union forces in New Mexico, attempted to stop Sibley at Valverde. The third was Manuel Chávez, a New Mexican whose family hailed from Atrisco, on El Camino Real in Albuquerque's South Valley. Chávez played an important role in Sibley's defeat at the battles of Glorieta Pass and Apache Canyon in 1862, and was immortalized in Willa Cather's novel, *Death Comes for the Archbishop* (1999). Cather promoted a romantic view of Santa Fe and New Mexico.

With the completion of the Atchison, Topeka and Santa Fe Railroad line between Albuquerque and El Paso in 1882, the use of the trail on the U.S. side of the border began to decline. However, it continued to be important because it provided an essential link between New Mexican merchants and their counterparts in Mexico. Equally important, the railroad line on the U.S. side paralleled the route of El Camino Real between Albuquerque and Socorro. The close cultural and economic ties that have characterized the history of El Camino Real continued into the 20th century. It is no longer used as a trail, having been supplanted first by the railroads, and later by highways—particularly portions of U.S. Highway 66, U.S. Highway 85 and Interstate 25—but the route of El Camino Real can still be traced through the development of the towns it served. In that way, it has maintained its significance. El Camino Real has become a symbol of the cultural interaction between Mexico and the United States, and of the commercial exchange that made possible the development and growth of the greater Southwest of the United States.

Geology

The entire length of El Camino Real in New Mexico lies within the Basin and Range Physiographic Province. The province occupies the southwestern and central parts of the state, extending northward to Taos County. The Province is over 200 miles wide in the south, narrowing northward to several miles wide in Taos County. It includes fault block mountains and plateaus; volcanoes and lava flows; and broad, flat alluvial plains. The Río Grande rift, a series of north-south parallel faults, occupies the western part of the province. The Río Grande Valley is the surface expression of the rift. The province is bound by the Colorado Plateau on the west, the Great Plains on the east, and the Southern Rocky Mountains on the north.

Rocks of the earliest geologic age (Precambrian) to the present (Quaternary) occupy the Basin and Range Physiographic Province. Some of the mountain ranges have Precambrian granites and associated igneous rocks exposed in their uplifted cores. Overlying the Precambrian rocks are mostly sedimentary rocks (limestone, sandstones, and shales) of Paleozoic and Mesozoic age, exposed in uplifted fault block mountains and along mesa and plateau escarpments and canyon walls. Overlying these are sedimentary and volcanic rocks of Cenozoic age. Quaternary alluvium (sand, gravel, silt, and clay) fills the valleys, including the Río Grande Valley, through which most of El Camino Real passes.

Scenery

Scenery is the aggregate of features that give character to the landscape. El Camino Real de

Looking south from the top of La Bajada. Camino Real is in center of the photo.

Tierra Adentro National Historic Trail route traverses a range of natural and cultural landscapes in the Basin and Range and the Southern Rocky Mountains physiographic provinces. The Basin and Range province is characterized by landforms that include rugged and steep fault-block mountain ranges; broad basins, such as Jornada del Muerto; and volcanic uplands. Contrasting with the mountain ranges in this province are broad valleys. The national historic trail traverses lands within and along one of these valleys—the Río Grande—as travelers moved north and south along this trail in the United States. Draining into the Río Grande are numerous arroyos and drainages cutting through terraces. On the northern end of the trail, travelers encountered landscape features typical to the Southern Rocky Mountain province. Typical landform features in the Southern Rocky Mountain province include mountain systems, intermountain valleys, hogbacks, mesas, plains, and plateaus.

Cultural influences within the foreground/middle-ground corridor along the national historic trail have altered the natural landscapes of seen areas in many locales. The most prominent cultural features include various transportation and utility corridors, communication towers, cities and communities, farming and ranching activities, and flood control and diversion dams. Vegetation along segments of the trail has also been altered from what the original travelers experienced in moving back and forth along the trail.

Of the 404 miles of the national historic trail, 60 miles of definite, probable, and speculative trail segments cross BLM-administered lands within the boundaries of three BLM field offices. The BLM uses a Visual Resource Management (VRM) system to identify and manage scenic values on federal lands administered by the agency. The VRM system includes a visual resource inventory, which classifies visual resources on BLM land into one of four categories (Class I, II, III, or IV), and sets management objectives through a Resource Management Plan process. The manner in which the classifications are determined is explained in BLM Handbook H-8410-1, Visual Resource Inventory. In addition to inventory data, the VRM classes can reflect management considerations. Each VRM class describes a different degree of modification allowed in the basic elements (form, line, color, and texture) found in the predominant natural features of the landscape. Classes I and II contain the most valued visual resources. Class I, the most highly valued and visually sensitive to modification, is assigned to those areas in which decisions have been made to maintain a natural landscape. Classes II, III, and IV are assigned based on a combination of scenic quality; sensitivity level; distance zones; and, where necessary, management considerations. Class III contains those with moderate values. And Class IV contains the least valued visual resources. Appendix H provides a more detailed description of these classes and their management objectives. Other non-BLM lands crossed by the national historic trail are not managed by the VRM classification system.

In the Las Cruces Field Office, VRM classes were assigned in the 1993 Mimbres RMP and the 1985 White Sands RMP. In the Socorro Field Office, VRM classes were assigned through the 1989 Socorro RMP. The area of concern within the Taos Field Office has not been classified for visual resources through the Resource Management Plan. The approximate mileage of trail running through the different VRM classifications on public lands managed by the BLM is shown in **Table 7** on the next page.

Soils/Vegetation/Noxious Weeds

Approximately one-half of the United States portion of El Camino Real passed through the Río Grande Valley. Today much of the vegetation of the Río Grande Valley has been converted to irrigated farmland, or is in housing development. Along the banks of the Río Grande, portions of the *bosque* (riverside forest) have been protected from farming and housing development. However, even in the protected areas, there have been extensive invasions by Russian olive and salt-cedar plants. Both of these species are considered to be Class C noxious weeds on the New Mexico Noxious Weed list, published September 20, 1999.

Table 7:
Visual Resource Management Calssifications
For BLM-Administered Lands (in Miles)*

VRM Class	Taos Field Office	Socorro Field Office	Las Cruces Field Office
I	-	-	-
II	-	1.1	1.1 (1.1)
III	-	12.5	3.6 (0.6)
IV	-	0.6	23.9 (7.6)
No Assignment	16.9 (0.3)	-	-
Total	16.9 (0.3)	14.2 (0.0)	28.6 (9.3)

*Numbers in parenthesis represent miles of high-potential segments

Most of the valley soils are classified as irrigated soils, moderately deep to deep soils, including light, medium, and fine-textured soils mostly on smooth topography and generally high in inherent fertility, except nitrogen.

The upland portions of El Camino Real north of La Bajada pass through short-grass rolling hills with patches of piñon and juniper trees. Based on observations of current age classes for the trees, the trees appear to be increasing in density. The grasses are dominated by species that are typical of the short-grass region, such as blue grama, galleta, Indian ricegrass, and hairy grama. Shrubs include four- wing saltbush, cholla, and rabbitbrush.

The upland portions of the national historic trail south of La Bajada pass through a semi-desert grassland, which covers about 26 million acres in Arizona, New Mexico, Texas, and northern Mexico. The region contains a complex of vegetation types ranging from nearly pure stands of grasses, through savanna types with grass interspersed by shrubs or trees, to nearly pure stands of shrubs. On the Jornada plain, the major grass species on sandy soils are black grama, mesa dropseed, and red threeawn. Shrubs or shrub-like plants on sandy soils include honey mesquite, four- wing saltbush, soaptree yucca, and broom snakeweed. Extensive dunes have developed where mesquite has invades sandy soils. Low-lying areas with heavier soils, which receive water from surface runoff, are dominated by tobosa and burrograss. Tarbush is a frequent invader of these heavy soils. Slopes with gravelly soils near the mountains are typically dominated by creosote-bush. In years with favorable winter and spring moisture, many annual grasses and forbs are also abundant across soil types.

Within the mountains, shrub types are mixed. Major dominants include honey mesquite, creosote-bush, sotol, ocotillo, and whitethorn. Some areas of scrub woodland are dominated by red-berry juniper and piñon pine.

The increase in brush on the Jornada plain is well documented. A land survey made in 1858 included notes on soils and vegetation. From these notes, the relative abundance of brush types in 1858 was reconstructed. Extent of brush types was also determined from vegetative surveys make on the Jornada plain in 1915, 1928, and 1963 (see http://jornada-www.nmsu.edu)

Mesquite is the primary invader on sandy soils. Tarbush has increased on the heavier soils, and creosote-bush occupies shallow and gravelly soils. Collectively, the spread of brush has been ubiquitous and rapid. As a result, livestock grazing capacities have been lowered. Periodic droughts, past unmanaged livestock grazing, and brush seed dispersal by humans, livestock, and rodents, have all contributed to the spread of the shrubs. Brush has increased in permanent livestock enclosures erected during the 1930s, demonstrating that brush invades grasslands even in the absence of livestock grazing. Once established, brush effectively monopolizes soil moisture and nutrients, and grass reestablish-

ment is generally very limited, without selective control of brush species.

Visitor Experience/Information and Education

New Mexico and west Texas have long been destinations for visitors. The region has attracted people drawn to a rich history, blending of cultures, and awe-inspiring scenery. Today, however, opportunities for visitors to learn about and travel along El Camino Real are limited. Local residents who know of the existence of El Camino Real have more opportunities to participate in related activities and celebrations than do visitors from other parts of the country or the world.

Existing El Camino Real activities are limited to driving a designated byway, participating in a few local celebrations, touring a historic site, or visiting an interpretive facility/museum. Related orientation/information and interpretation/education are limited to the Internet and a few museums/interpretive facilities at a few historic sites. Regional recognition of El Camino Real has occurred, and continues to occur, through place names, public art, and other programs. The legacy of El Camino Real is also reflected in road architecture and place names.

Orientation/Information: Orientation to and information about El Camino Real are available in a variety of formats for local residents and out-of- state visitors:

- Chambers of commerce and tourism organizations in communities along El Camino Real provide informational and orientation brochures. Examples include El Camino Real—***A National Scenic & Historic Byway***, by the New Mexico Department of Tourism; ***El Camino Real—The Royal Road***, by El Camino Real Economic Alliance; and ***The Official Visitors Guide of Las Cruces, New Mexico, 2001-2002***, by the Las Cruces Convention and Visitor Bureau.

- The New Mexico Department of Tourism hosts an Internet website with general information about El Camino Real. The site has a map and brief narrative history, and lists the trail as a "scenic attraction" for a day trip (see www.newmexico.org/ScenicAttractions/camino.html).

- Camino Real Administration contracted with the Public Lands Interpretive Association to produce a website on the Internet about El Camino Real de Tierra Adentro National Historic Trail. The site contains historic maps, interpretive text, and will be expanded in the future with additional features (see www.elcaminoreal.org).

- The BLM has an agreement in place with the University of Texas at El Paso to develop an Internet website about the historic El Camino Real and the national historic trail . This site is expected to be on the World Wide Web in the fall of 2002.

Interpretation/Education: There are a few interpretive and educational materials available, if local residents and out-of state visitors ask and search for them.

- El Camino Real Project, Inc., a private, non-profit corporation, developed an exhibit, "El Camino Real: Un Sendero Histórico," which was displayed throughout the state in 1990-1991. The exhibit is still available for showing at institutions or facilities for a fee. A companion booklet entitled "El Camino Real" was developed for the exhibit.

- The Museum of New Mexico developed a traveling exhibit on El Camino Real, which began touring in 2002. The exhibit consists of a three-dimensional *carreta* filled with bundles of supplies and goods.

- The BLM and New Mexico State Monuments produced audiotapes and

compact discs for use by travelers as they drive along El Camino Real. The tapes were made available in summer 2002.

- The San Elizario Genealogy and Historical Society of San Elizario, Texas, developed a self-guided walking tour of the San Elizario Historic District. An accompanying booklet interprets historic sites and the route of El Camino Real through the community.

- The BLM worked with Statistical Research, an archeology/environmental education firm in Arizona, to develop educational materials about El Camino Real. Curriculum materials are written for middle school students. The materials will be available in fall 2002 on the Internet.

- Since 1995, professionals of various disciplines from Mexico and the United States have collaborated and undertaken projects focusing on the central theme of El Camino Real de Tierra Adentro. Both the NPS and BLM have cooperative agreements in place with the Instituto Nacional de Antropolgia e Historia (National Institute of Anthropology and History or INAH) in Mexico, and participate in a research, conservation, and dissemination program concerned with the cultural values associated with El Camino Real. "Dissemination" projects have included book fairs, artifact and photography exhibitions, and two volumes of recorded music (on CD-ROM) of "Músicos del Camino Real de Tierra Adentro."

- Another aspect of the joint international effort to disseminate research about El Camino Real involves a series of colloquia held each year since 1995. Supported by the NPS, BLM, INAH, and Ciudad Juárez Universidad, the colloquia occur in different cities along El Camino Real in Mexico and the United States. Mexican and American researchers present papers on topics related to El Camino Real. Research results from several coloquia are available in print, or on CD-ROM (see www.nmsu.edu/~nps/ and www.unm.edu/~camino/, with text in Spanish).

- Additionally, the BLM has published two volumes of research on El Camino Real as part of on-going cultural resource documentation (Palmer, et al., 1993; Palmer, et al., 1999).

- The Museum of New Mexico has posted a lesson plan and activities about El Camino Real on its website. The lesson asks the question "What was El Camino Real, and how did it impact how people lived in Nuevo Mexico?" and addresses New Mexico history, United States history, and multi-cultural studies. The lesson is most relevant for students in grades four and seven who are studying these areas. Students learn about life in Spanish colonial New Mexico through research, visual arts, and role-playing activities. A bibliography and other on-line resources are provided (see www.museumeducation.org/curricula_activity_camino.html).

- Other Camino Real lessons can be found on the Internet at a site developed by the Regional Educational Technology Assistance (RETA) program. RETA serves the professional development needs of New Mexico's K-12 teachers, and brings technology curriculum integration to school sites around the state. El Camino Real lessons and projects are for students in grades 6 through 10, and address travel on El Camino Real, artistic traditions and culture, natural environment, agriculture, a timeline, and actions to preserve cultures and environmental along El Camino Real. Teacher guides will be forthcoming. This extensive project was a collaboration among the Museum of New Mexico; KNME public television; Department of Agricultural Communications of New Mexico State University; Camino Real Project, Inc.; New Mexico Farm and Ranch Heritage

Museum; Río Grande Historical Collections; NPS; INAH; and the New Mexico State Department of Education (see reta.nmsu.edu:16080/camino/main.html).

Interpretive and educational programs and media are also offered at the representative historic sites, parks, and cultural facilities as described below.

Historic Sites/Parks/Cultural Facilities
(from south to north)

El Paso Missions and Mission Trail, El Paso, Texas - The road from Ysleta to San Elizario is the designated Mission Trail driving route connecting the communities of San Elizario, Socorro, and Ysleta. This route represents the historic connection of Socorro and Ysleta Missions with the San Elizario Presidio on El Camino Real.

San Elizario Presidio Chapel and Plaza: San Elizario was established as a presidio in 1789 to protect settlements in the lower Río Grande Valley downstream from El Paso, Texas. The chapel was originally built in 1853 as part of the fort compound. The village plaza, jail, and other historic adobe structures that reflect Spanish colonial settlement enhance the present chapel, built in 1877. A self-guided walking tour is available, with an accompanying booklet.

Socorro Mission and Ysleta del Sur Mission: The missions were established in the 1680s as a result of the Pueblo Revolt. Franciscan monks established Mission Socorro and Mission Ysleta to provide refuge for Piro and Tigua Indians and Spanish settlers who had retreated from the north. Because of changes in the Río Grande channel, flooding, and fire, the missions have been relocated and reconstructed several times.

Chamizal National Memorial, El Paso, Texas - Administered by the NPS, the memorial commemorates the peaceful settlement of a century-old boundary dispute between the United States and Mexico. The Chamizal Treaty was a milestone in diplomatic relations between Mexico and the United States in 1963. Cultural activities at the memorial are dedicated to furthering the spirit of understanding and goodwill between two nations that share one border.

New Mexico Farm and Ranch Heritage Museum, Las Cruces, New Mexico - The New Mexico Farm and Ranch Heritage Museum features exhibit galleries and livestock to highlight the history of farming and ranching in New Mexico. The main gallery displays tools used years ago to cultivate New Mexico's farmlands. A permanent exhibit uses the biographies of 33 New Mexicans to tell the story of 3,000 years of agricultural history in the state. There is an extensive display of barbed wire. Temporary exhibits are also displayed. Milking demonstrations are held twice daily at the dairy barn. Visitors can also see longhorn cattle, churro sheep, goats, and Jerusalem donkeys. A wildflower garden, apple orchard, and crops are on the site.

La Mesilla, New Mexico - La Mesilla includes a historic plaza and surrounding buildings that have been restored to their 19th-century appearance. During the 1800s, the area was a camping and foraging spot for both Spaniards and Mexicans. The first permanent settlers came to La Mesilla after the Treaty of Guadalupe Hidalgo in 1848. By 1850, there was an established colony; later, La Mesilla became a main supply center for garrisoned troops. The Mexican-American War and the Treaty of Guadalupe Hidalgo left La Mesilla in a "no man's land"—a strip of land claimed by both the United States and Mexico. The Gadsden Purchase in 1854 established that La Mesilla was officially part of the United States.

People can see 19th-century businesses on the plaza, and 19th-century residences within a four- block area of the plaza. The town is surrounded by farmland and ditches used since 1850. Visitors can walk around the plaza, see a historic church, and visit the privately owned Gadsden Museum.

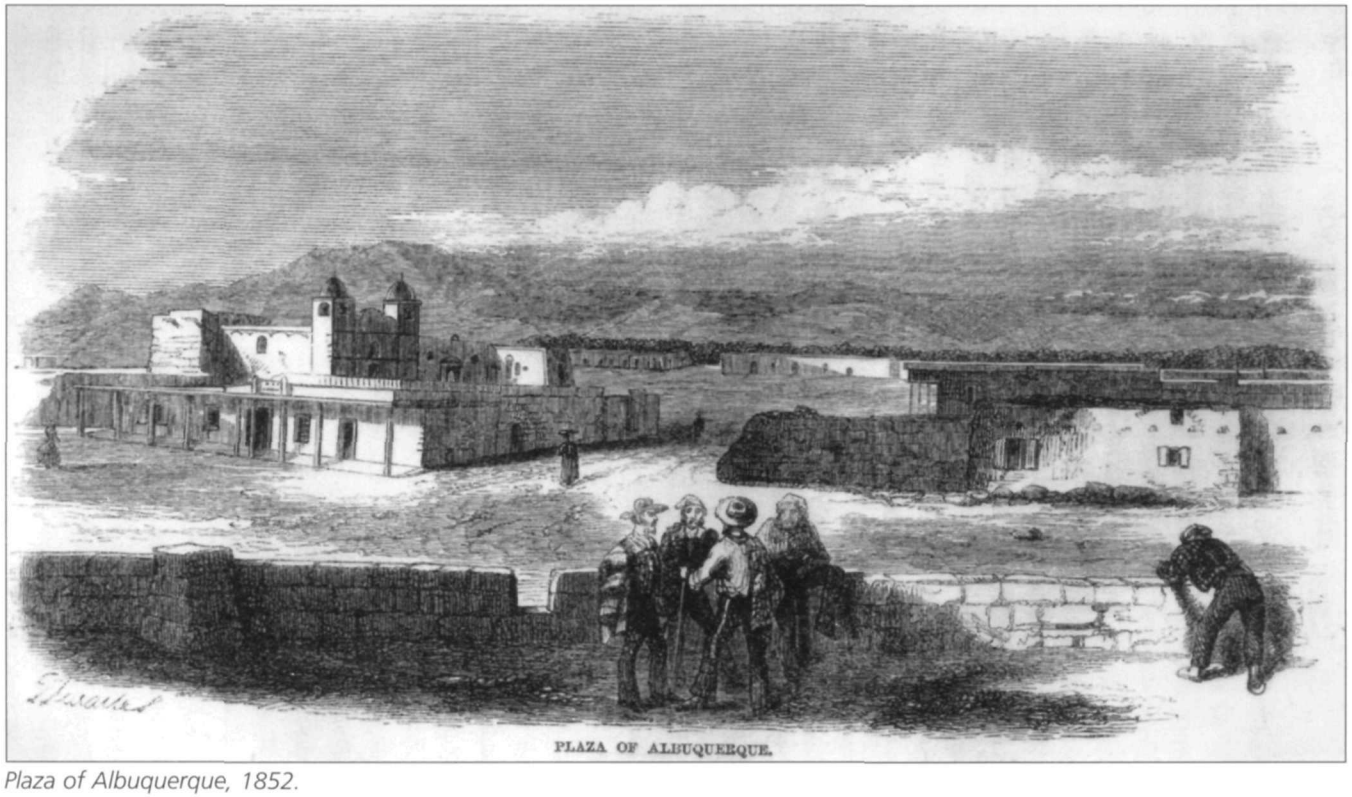
Fort Selden State Monument, Radium Springs, New Mexico - Fort Selden was built near the town of Las Cruces in 1865, and housed troops for 25 years. The fort housed one company of infantry and cavalry, including units of black troops known as "Buffalo Soldiers." By 1890, Apache raiding parties and outlaws were not considered threats; in 1891, the federal government decommissioned Fort Selden.
A visitor center at the monument offers exhibits on frontier military life during the fort's heyday. Living history demonstrations of 19th-century military life highlight most weekends during the summer. Self-guided walking tours through the adobe ruins are available.

Geronimo Springs Museum, Truth or Consequences, New Mexico - The Geronimo Springs Museum features displays of North American Indian artifacts; prehistoric Mimbres pottery; ranching and mining items; paleontological and geological finds; a reconstructed log cabin; Southwest art; and mementos of Ralph Edwards, originator of the "Truth or Consequences" radio show. A Geronimo Days celebration, featuring Apache dancers, music, storytelling, crafts, and wine tasting, is held Columbus Day weekend.

Fort Craig Historic Site, Socorro County, New Mexico - Managed by the BLM as a special management area within the Socorro Resource Area, Fort Craig lies at the northern end of Jornada del Muerto. Established in 1854, the fort was built to establish a military presence in the region, to control Apache and Navajo raiding, and to protect settlers and travelers along El Camino Real. In 1862, troops from the fort participated in the Civil War Battle of Valverde. The adobe fort has been reduced to low mounds through erosion and vandalism. Visitors to the site can take self-guided walking tours of the ruins.

Tomé Plaza and Tomé Hill, Tomé, New Mexico - Tomé was settled as early as 1650, but it was abandoned after the Pueblo Revolt of 1680 and remained uninhabited until the Tomé land grant was established in 1739. Historic Tomé Plaza includes the Immaculate Conception Church and a museum, a jail, and several other adobe structures.

The prominent Tomé Hill was a significant landmark for travelers along El Camino Real. Tomé Hill Park is open to the public and has hiking trails, interpretive signs, and a brochure. A piece



Plaza of Albuquerque, 1852.

of sculpture at the hill, "La Puerta del Sol," commemorates El Camino Real.

Indian Pueblo Cultural Center, Albuquerque, New Mexico - The Indian Pueblo Cultural Center is owned and operated by the 19 Indian pueblos of New Mexico. The center provides a historical and contemporary look at the Southwest's first inhabitants. Facilities include museum displays, cafe, gift shops, smoke shop, and the Institute for Pueblo Indian Studies.

National Hispanic Cultural Center, Albuquerque, New Mexico - The center offers displays highlighting historic and contemporary Hispanic arts, humanities, and achievements from the past 400 years. Visitors can enjoy art exhibits, dance, music, and theater. Facilities include a genealogy center, gift shop, and restaurant.

Petroglyph National Monument, Albuquerque, New Mexico - Administered by the NPS, the monument protects hundreds of archeological sites and an estimated 25,000 rock images carved and painted by native peoples and early Spanish settlers. These images, and associated archeological sites in the Albuquerque area, provide glimpses into a 12,000-year-long story of human life in this area. The monument stretches 17 miles along Albuquerque's West Mesa, a volcanic basalt escarpment that dominates the city's western horizon.

Coronado State Monument, Bernalillo, New Mexico - In 1540, Francisco Vásquez de Coronado arrived in the Río Grande Valley with armed soldiers, Indian allies from New Spain, and a moveable food source of pigs, chickens, and cattle. Searching for fabled cities of gold, the expedition found thriving agricultural villages inhabited by Pueblo peoples. One of Coronado's campsites was near the Tiwa pueblo of *Kuaua* (evergreen).

Prominent Southwest architect John Gaw Meem designed the visitor center, which contains exhibits on the prehistory and history of the Río Grande Valley. Murals on display in the visitor center were some of those removed from a *kiva* (ceremonial chamber) at the site, and are among the finest examples of mural art in North America dating from pre-European contact. The *kiva* has been rebuilt and is open to visitors, with reproductions of the original murals adorning its walls.

El Rancho de las Golondrinas, La Cienega, New Mexico - Las Golondrinas was a historic *paraje* (stopping place) along El Camino Real. *El Rancho de las Golondrinas* (ranch of the swallows) is a historic *rancho* dating from the early 1700s, which is now being used as a living history museum. Historic buildings at the *rancho* have been restored, imported, or reconstructed, and archeological sites are on the grounds. Costumed interpreters present programs about life in early New Mexico. Special festivals and theme weekends offer visitors an in-depth look at celebrations, music, dance, and other aspects of life. Educational materials, games, and other publications are available.

Palace of the Governors, Santa Fe, New Mexico - The Palace of the Governors is the oldest continuously used public building in the United States. The building now serves as the History Museum of the Museum of New Mexico. The artifact collection consists of over 15,000 catalogued objects, and focuses on the history and culture of New Mexico and the Southwest spanning 300 years. El Camino Real artifacts are included in the collection. Visitors can tour the museum and see permanent and changing exhibits. Educational programs are provided for school groups.

Oñate Monument and Visitor Center, Alcalde, New Mexico - This facility offers a variety of services for the local community, including Internet access, current weather conditions, *acequia* and land grant information, and a GIS center with mapping capabilities. Temporary, revolving displays and interpretive materials are offered on the history of northern New Mexico, the Oñate Expedition, and El Camino Real. Exhibitions of art are also displayed. Facilities include a kitchen, restrooms, and a gift shop with local materials.

U.S.-Mexico Boundary Marker #1, Sunland Park, New Mexcico

Scenic Byway/Millennium Legacy Trail/Highway Markers

The historic El Camino Real corridor has both state scenic and historic byway and national scenic byway designations. The national designation, conferred on June 9, 1998, by the U.S. Department of Transportation, Federal Highway Administration, denotes that El Camino Real National Scenic Byway has scenic, natural, historic, and cultural qualities.

Visitors wishing to follow the scenic byway can obtain a map, route descriptions, and other information from the National Scenic Byways Program website at www.byways.org on the Internet. Road signs identifying the byway through New Mexico are in place along the byway route.

The New Mexico Department of Tourism released a CD-ROM on El Camino Real in 2001. Entitled "Centuries Along Scenic Byways," the disc contains general information about El Camino Real, Santa Fe, and Route 66 scenic byways (See www.newmexico.org).

In 2000, a partnership between the White House Millennium Council, U.S. Department of Transportation, and Rails-to-Trails Conservancy and other agencies and organizations sponsored the Millennium Trails program. Governors of the states and territories nominated trails for this program, and El Camino Real de Tierra Adentro was chosen and designated a Millennium Legacy Trail. The designation brought national recognition to the trail. Even though there are signs or markers denoting the trail in place along the corridor, a commemorative plaque denoting the designation will be displayed in the proposed El Camino Real International Heritage Center.

El Camino Real Project, Inc., a private, non-profit corporation, worked with the New Mexico State Highway and Transportation Department to develop and install 33 historical highway markers in New Mexico and 13 in Chihuahua, Mexico.

Public Art and Activities

Both the cities of Santa Fe and Albuquerque have public art plans. In 2002, the Santa Fe Arts Commission chose a winning public art entry commemorating El Camino Real. Two interrelated artworks will be installed at Frenchy's Field on Agua Fria Street and at De Vargas Park on Guadalupe Street. The works address the significance of El Camino Real in Santa Fe's development, and the importance of exchanges between Santa Fe and Mexico City. The Albuquerque art plan is entitled "El Camino Real: the Road of Life."

The New Mexico Arts, a division of the Office of Cultural Affairs, has begun projects to present public art demonstrations funded through the Intermodal Surface Transportation and Enhancement Act (ISTEA). Pilot projects are in Las Cruces and Belen. An enhancement grant provided the first El Camino Real public artwork, "La Puerta del Sol," at Tomé Hill.

In 2002, Magnífico, a private, non-profit organization, and New Mexico Arts sponsored an art project, "El Camino Real Billboard Art." Artists were solicited to submit artwork commemorating El Camino Real Millennium Legacy Trail, which was displayed on billboards in Albuquerque and along Interstate 25.

Names given to present-day roadside architecture, even if not on the actual El Camino Real, reflect the trail's enduring presence on the landscape. For example, visitors can dine at El Camino Dining Room and stay at El Camino Motor Hotel in Albuquerque. In Socorro, they can visit El Camino Restaurant and Lounge; and in Las Cruces, they can visit El Camino Real Restaurante.

Although roadside architecture may seem a whimsical way to remember El Camino Real, permanent place names relate directly to the trail. As visitors drive along Interstate 25 and navigate with area maps, they will see evidence of the trail in names such as El Paso del Norte, La Cruz de Robledo, Fray Cristóbal, Socorro, Ojo del Perrillo, and Jornada del Muerto.

Another avenue for present-day commemoration of the trail is the holding of events and festivals that are related contextually to El Camino Real in New Mexico and Texas communities. Representative events and festivals include:

- "Frontier Days"–Fort Selden, New Mexico
- "Juan de Oñate First Thanksgiving Festival–El Paso, Texas
- "Juan de Oñate Reenactment–Truth or Consequences, New Mexico
- "Indian Market"–Santa Fe, New Mexico
- "Spanish Market"–Santa Fe, New Mexico
- "Spring Festival," "Summer Festival & Frontier Market, " and "Harvest Festival"–El Rancho de las Golondrinas, Santa Fe, New Mexico

Water/Air Quality

The goals of this program are to protect, maintain, and enhance, wherever possible, the water and air resources of El Camino Real de Tierra Adentro Management Plan Area for the benefit of humans, and the wide variety of plant and animal ecosystems. Reduction of non-point-source pollution through control of soil erosion and sediment production from public lands remains a high priority management goal. Best management practices will be applied to reduce the impacts of surface-disturbing activities.

Prevention and reduction of impacts to air quality from activities on public lands is accomplished by mitigation measures developed on a case-by-case basis through the environmental analysis process.

Throughout the planning area, the BLM and NPS will coordinate riparian/wetland habitat management with other programs and activities, including watershed, rangeland resources, wildlife, recreation, and lands. Riparian habitat values will be addressed for all surface and vegetation-disturbing actions.

Location and construction of trail tread- ways will take into consideration—and avoid, if possible—conflicts with private waters, private lands, sensitive wildlife and plant habitats, and sensitive cultural resource sites. As individual trails are sited for development and where further National Environmental Policy Act (NEPA) compliance is necessary, all required site-specific studies and clearances will be done and determination will be made concerning the environmental consequences of the proposal.

Wildlife/Fishery

BLM's wildlife program is directed to the management of habitat for all forms of aquatic and terrestrial wildlife on public lands, including habitat for special status animals and plants. The BLM works closely with the New Mexico Department of Game & Fish, which is responsible for the management of resident wildlife.

The objectives of BLM's wildlife program are to improve and protect aquatic and terrestrial wildlife habitat by coordinating the management of other resources and uses on public land. This coordination is designed to maintain habitat diversity, sustain ecosystem integrity, enhance esthetic values, preserve the natural environ-

ment, and provide old-growth habitat for wildlife. These two objectives are accomplished to some extent through habitat manipulation, and to a great extent through mitigation under the National Environmental Policy Act.

In the lower elevations along the trail (near 4,000 feet), pronghorn antelope and mule deer are the most widely distributed large game animals, but they are rare along the corridor. The common white-tailed deer is present in Texas. Scaled quail and Gambel's quail are present in most of the area. Black-tailed jackrabbit, desert cottontail, kangaroo rat, wood rat, and numerous smaller rodents compete with domestic and wild herbivores for available forage and are preyed upon by coyote, bobcat, mountain lion, golden eagle, great horned owl, red- tailed hawk, and ferruginous hawk.

The major mammals in New Mexico Plateau ecoregion (5,000 to 7,000 feet in elevation) include mule deer, mountain lion, coyote, and bobcat. Elk are locally important. Pronghorn antelope are the primary large mammal in the semi-arid desert grasslands. Smaller species include wood rat, white -footed mouse, cliff chipmunk, jackrabbit, cottontail, rock squirrel, porcupine, and gray fox. The ring-tailed cat and spotted skunk occur rarely.

The most abundant birds are plain titmouse, scrub jay, red- tailed hawk, golden eagle, red-shafted flicker, piñon jay, and rock wren. Summer residents include chipping sparrow, night hawk, black-throated gray warbler, Northern cliff swallow, lark sparrow, and mourning dove. Common winter residents are pink-sided junco, dark-eyed junco, white-breasted nuthatch, mountain bluebird, robin, and Steller's jay. Turkey is locally abundant during the winter. Reptiles in this ecoregion include the horned lizard, collared lizard, and rattlesnake.

RESOURCE USES

Energy/Minerals

The area has not been extensively drilled for oil and gas deposits. Of the 51 exploratory oil and gas wells drilled within the corridor, 10 had shows of oil and/or gas. There are no producing wells within the corridor, which has mostly a low potential for the discovery of economic oil and gas deposits. However, an area along the western part of the corridor from south of Santa Fe to the Valencia-Socorro County line includes geologic structures and stratigraphy that indicate a moderate potential for oil and gas discoveries.

Faulting and deep magmatic activity associated with the Río Grand rift along the southern half of the corridor has heated subsurface water to above normal levels, resulting in the formation of hot springs around Truth or Consequences, Socorro, and Radium Springs. The corridor from the Caballo Reservoir south to the Mexico border has a high to moderate potential for the discovery of economic geothermal resources; the remainder of the corridor has a moderate to low potential. Twenty-five geothermal (25) wells have been drilled within the corridor between Radium Springs and Las Cruces. These wells include temperature gradient holes, observation wells, and exploratory wells. Three wells Southwest of Tortugas Mountain produce low-temperature geothermal waters (less than 190(F) for greenhouses operated by New Mexico State University. To date, no high-temperature resources capable of generating electricity have been identified within the corridor.

The corridor includes portions of several small, economically insignificant coal fields. They are the Engle Field, northeast of the Caballo Mountains; the Carthage Field, southeast of Socorro; an unnamed field, east of San Acacia (north of Socorro); and the Tijeras, Hagen, and Cerrillos Fields, between Albuquerque and Santa Fe.

Potential economic deposits of sand and gravel, cinder, scoria, and stone occur throughout the corridor. Mining of a particular deposit depends

Table 8: Areas with Moderate Potential for Discovery/Development	
Area	**Commodity**
Tortugas Mountain, east of Las Cruces	Fluorspar
Tonuco Mountain, north of Radium Springs	Fluorspar
Red Hill, southwest of Socorro	Manganese
Socorro Peak, west of Socorro	Silver, Lead
Ortiz Mountains, Santa Fe County	Gold, Silver
Cerrillo Hills, Santa Fe County	Gold, Silver, Lead, Copper, Zinc, Turquoise
Santa Fe River Canyon near La Bajada	Uranium

upon its proximity to a viable market, usually an urban area or a highway construction project. Forty-eight (48) deposits are presently being mined and processed along the corridor, mostly between El Paso and Las Cruces, and between Belen and Santa Fe.

Other active mineral operations include gypsum mines east of Anthony (north of El Paso) and near Rosario (south of La Bajada); a perlite mine and mill south of Socorro; and a pumice mine west of Española. In addition, there are eight active plants processing various mineral commodities trucked in from mines outside of the corridor. Seven are between Albuquerque and Española, and one is near Belen.

There is no active mining of hardrock (metallic) and related minerals within the corridor. Several areas, listed below, have been mined or prospected in the past, and are considered to have a moderate potential for future discoveries or development. The potential for future discoveries of hardrock and related minerals outside these areas is considered low.

Legal Disposition of Mineral Resources

The entire spectrum of mineral estate ownership is included within El Camino Real corridor; that is, federal, state, Indian, and private. Privately owned minerals may be leased by the private mineral owner at his or her discretion. State-owned minerals may be leased at the discretion of the state. Indian-owned minerals are leased by the U. S. Bureau of Indian Affairs with the consent of the Indian mineral owner and/or Pueblo government. Federal minerals, because they are a publicly owned resource, are generally available for development, unless specifically prohibited by federal law or other legal authority.

The Bureau of Land Management is responsible for administering all federal minerals, including federal minerals where the surface is managed by another federal agency or is in non-federal ownership. The authorities under which federal minerals are disposed of include the Mineral Leasing Act of 1920 (oil/gas and coal); the Materials Act of 1947 (sand and gravel, cinders, scoria, stone, and other mineral materials); the Acquired Lands Leasing Act of 1947 (acquired minerals); the Geothermal Steam Act of 1970 (geothermal); and the Mining Law of 1872 (metallic or hardrock minerals and certain non-metallic minerals).

Federal leases are issued by the BLM after consultation with the surface management agency subject to any constraints imposed by the agency. Mineral materials are sold at the discretion of the surface management agency, subject to any management constraints. Government agencies and municipalities may obtain free use of mineral materials from BLM land. Generally, federal land that is managed for multiple use (most BLM and USDA Forest Service land) is open to entry (prospecting and mining claim location) under the Mining Law. Land managed for a specific use or project is usually withdrawn from entry under the Mining Law, but may or may not be open to leasing. If open, leasing is allowed if the specific use or project is protect-

ed. Spanish Land Grants, several of which are included within the corridor, include a royalty reservation for certain metallic minerals (gold, silver and quicksilver) to the U.S. Because the surface owner can only develop such minerals, they are, for all practical purposes, private minerals. All minerals on Federal acquired land are leasable, subject to the consent of the acquired land agency. Surface disturbance caused by any Federal mineral development is usually regulated by the surface management agency. Where the agency has no applicable regulations or the surface is in non-Federal ownership, the BLM regulates the activity. The BLM "Surface Management under the Mining Law" regulations are contained in 43 CFR 3809. In addition, hardrock mining activity on all land, except Indian, is regulated by the State under the New Mexico Mining Act.

Table 9: Federal Mineral Estate

Land Unit	Surface Agency	Legal Status under the Mining Law
BLM	BLM	Open
National Forest	USFS	Open
Sandia Mountain Wilderness	USFS	Closed
Sevilleta NWR	USFWS	Closed
Bosque del Apache NWR	USFWS	Closed
Little San Pascual Wilderness	USFWS	Closed
Chupadera Wilderness	USFWS	Closed
Jornada Experimental Range	USDA	Open to "Metalliferous minerals"
Animal Science Ranch	NMSU	Closed
U.S. Bureau of Reclamation	USBOR	"First form" withdrawals Closed "Second form" withdrawals Open
Tortugas Mountain	NASA	Closed
U.S. Army Corps of Engineers	COE	Closed
International Boundary and Water Commission	IBWC	Closed

Table 10: Federal Mineral Resource Activities (by county)		
Activity	**Number**	**Acres**
Doña Ana and Sierra Counties		
Mining Claims	66	1,320
Mining Notices and Plans	4	16
Mineral Material Areas	15	543
Oil and Gas Wells (dry and abandoned)	4	-
Geothermal Leases	3	2,080
Geothermal Wells	4	-
Total Acres		**3,959**
Socorro County		
Mining Claims	2	40
Mineral Material Areas	12	270
Oil and Gas Wells (dry and abandoned)	4	-
Oil and Gas Leases	3	258
Total Acres		**568**
Río Arriba, Santa fe and Sandova Counties		
Mining Claims	84	1,680
Mining Notices and Plans	2	14
Mineral Material Areas	14	2,470
Oil and Gas Leases	2	3,072
Oil and Gas Wells (dry and abandoned)	2	-
Total Acres		**7,236**

The following is the status of federal mineral estate under the Mining Law within the corridor. All land units, except designated wilderness, are open to leasing under the Mineral Leasing Act and for mineral material sales; however, leasing and sales are at the discretion of the surface management agency.
Federal Mineral Resource Activities within El Camino Real Corridor are listed below.

Livestock-grazing

Privately owned livestock graze on the BLM managed public lands. The livestock graze under the 43 Code of Federal Regulations 4100. Consistent with the direction of the Taylor Grazing Act of 1934, the preference to graze livestock is attached to base waters owned or controlled by ranchers. The base waters provide water to the livestock when they graze on the public land. Livestock grazing permits issued by BLM authorize a specific number and type of livestock. The season of use for grazing is also established in the permit.

Rangeland Improvements that are needed to manage and support the livestock operations are authorized through Section 4 permits and/or Cooperative Agreements for Range Improvements. Examples of range improvements include wells and pumps, fences, roads and corrals.

Ranches along the trail are typical for New Mexico. The ranches are composed of private, state, and public lands. The ranches generally are yearlong cow-calf operations. They are extensive operations that generally are not a highly developed with range improvements. Often, but

not always, the rancher or rancher manager lives on the ranch. The ranches are generally remote and provide a degree of isolation to the ranch families and their staff. On average, New Mexico ranches are accessed about 400 times per year by recreationists, hunters and hikers. (Jemison, 2000; Fowler, n.d.). Livestock Management in the American Southwest Ecology, Society, and Economics Edited by R. Jemison, C. Raish; Historic range livestock industry in New Mexico (Fowler, n.d.).

Lands/Realty

The portion of the trail from El Paso north through the Mesilla Valley and Las Cruces is one of the areas with the most public land within the trail boundary and the most heavily used area of the trail for rights-of- way; Recreation and Public Purposes (R&PP) leases and patents; and other land use activities, particularly in the Las Cruces/El Paso corridor. Because of the densely populated Mesilla Valley and the cities of Las Cruces and El Paso, numerous pipelines, electric lines, highways, fiber-optic lines, and roads crisscross the trail. Interstate 25 and the Burlington Northern/Santa Fe railroad line follow the direction of the historic trail. The fast - growing City of Las Cruces is putting increased demands upon the public lands in the Las Cruces area. New rights-of- way, requests for R&PP leases and patents, and the desire for more land in private ownership and for open space have fueled a frenzy of lands activity along the trail in this segment. The larger rights-of-way are confined to well-established corridors. These corridors run east and west from Las Cruces to Deming and Lordsburg, and north along I-25. Overlapping rights-of- way are issued whenever possible. Interstate 25 and Interstate 10 provide corridors for major rights-of- way. The recent increase in fiber-optic and cellular industries has resulted in the filing of several rights-of- way for fiber-optic lines within this corridor.

Approximately 45 R&PP leases and patents have been issued to Doña Ana County, the City of Las Cruces, smaller communities in the area, and the local school boards. An existing memorandum of understanding with both the City of Las Cruces and Las Cruces School District No. 2 has resulted in the establishment of "set asides" for future public purposes and school sites.

Exchanges between the BLM and the New Mexico State Land Office (NMSLO) have resulted in the state acquisition of a large block of land on the east mesa of Las Cruces. This land will be developed in the future by the SLO. The state uses a master plan for development of their large land holdings.

Several large withdrawals are located in the Las Cruces area, and are either crossed by the trail or within five miles of the trail. These withdrawals include College Ranch, Jornada Experimental Range, and National Aeronautics and Space Administration (NASA). The NASA withdrawal contains 2,800 acres, including Tortugas Mountain and the surrounding area. This withdrawal was for the protection of a NASA communication site. The College Ranch is withdrawn for use by New Mexico State University. The Jornada Experimental Range is withdrawn to the United States Department of Agriculture for use as an experimental station. In the Truth of Consequence area, the withdrawal for the Caballo and Elephant Butte Dams and Reservoirs are also located within the trail viewshed. Because the jurisdiction of the land has been transferred to another agency, the BLM does not always have the final say on ongoing land uses. The large White Sands Missile Range withdrawal including the area for Fort Bliss is located approximately 10 miles east of the trail area. All land uses on this withdrawal are controlled and restricted by the military.

Immediately north of the College Ranch withdrawal, in the area where the trail leaves the Río Grande and starts its long journey across Jornada del Muerto, a site known as San Diego is located on public land. This site has the potential for an interpretive pull-off from I-25. A county road leaves I-25 at the Upham Exit and provides access along the railroad tracks to Engle across the Jornada del Muerto. This road in some areas parallels the trail route. This area includes the most visible remains of the trail. At two areas adjacent to the road and the railroad,

the actual trail is visible. Both of these sites, Ojo de Perillo/Point of Rocks, and the Yost Escarpment have planned interpretive pull-offs. The Yost Escarpment site is located south of State land and because of the actual visual location of the trail on State land immediately north of the Yost Escarpment planned pull-off, there may be an opportunity for an agreement with the State Land Office or an exchange could be completed between the State of New Mexico and the BLM to bring the trail location into Federal ownership. Major north/south rights-of- way cross the trail location within the Jornada del Muerto. These include an El Paso Electric Company 345 KV power line, a Tri-State Generation Association 115 KV power line, and a right-of- way for buried telephone cable and two ORS sites held by Qwest Corporation. The power line rights-of- way were issued in 1967 and 1941 respectively. The Qwest right-of-way was issued in 1985. Maintenance of these rights-of- way is ongoing. In the late 1990s, public and state lands in the Engle area were being look at as a possible location for a spaceport. At the present time, New Mexico has not been awarded any contracts for this use.

Public land within the trail corridor between the Jornada del Muerto and Albuquerque is located primarily in the Socorro area. Interstate 25 follows the route of the trail, for the most part, through this area. U.S. Highways 60 and 280 provide east/west transportation corridors through the area. New Mexico State Highway 1 parallels I-25 from Truth or Consequences to Socorro and provides a close-up view of the area traversed by the trail. The Burlington Northern/Santa Fe Railroad traverses the area north to south. The trail crosses the Sevilleta and Bosque del Apache Wildlife Refuges. A major north/south power line follows I-25 in this area. Several relay and cell towers are visible from I-25. These are located mostly on private land. The R&PP patent issued to the State of New Mexico for El Camino Real International Heritage Center is located north of T or C, east of I -25.

The portion of the trail between Albuquerque and La Bajada Mesa crosses public land in an area know locally, as the Ball Ranch. This public land appears to be crossed by the southern trail extension around La Bajada Mesa. The Albuquerque Field Office has been working for the last three years with the Pueblos of San Felipe and Santo Domingo to transfer these public lands to the Pueblos through exchange. The San Felipe exchange was completed in December 2001 and the Santo Domingo was completed in May 2002. With the completion of these two exchanges are completed, the only remaining public land in this area will be within the Ball Ranch Area of Critical Environmental Concern (ACEC). A smaller amount of public land is located adjacent to the community of Placitas, just north of Albuquerque. Because of the growth of the Placitas area, this public land is in demand for school sites, sand and gravel operations, community uses, and is crossed by major pipelines and power lines. The Equilon Pipeline Company LLC's proposed renovation and extension of the New Mexico Products Pipeline Project connecting Odessa, Texas and Bloomfield, New Mexico affects the Placitas area of the trail. Equilon proposes to reverse the flow of the pipeline to transport refined petroleum products from Odessa to Bloomfield. Previously the pipeline had transported crude oil from the Four Corners area south to Jal, New Mexico. The existing Placitas Pressure Control Station is located south of the trail location within the five-mile corridor. Several scattered tracts of public land in the Galisteo Basin south of Santa Fe are also impacted by the trail. Interstate -25 follows the route of the trail through this area. Interstate -40, which intersects I -25 at Albuquerque, provides the major east/west transportation corridor in this portion of the trail.

From La Bajada Mesa north, the trail corridor enters Santa Fe along the Santa Fe River through La Cienega and then north to Española and San Juan Pueblo. Much like the El Paso/Las Cruces portion of the trail, the Santa Fe/Española area has been subject to heavy growth in the last 10 years. The demand for services, including waste disposal sites, power lines, pipelines, recreation facilities, and other public purpose uses, has had an effect on the public land within this area. Most of the existing public land, with the exception of the large tract of public land adjacent to the Caja del Río in the area of La

Cienega and La Cieneguilla on the west side of Santa Fe has been exchanged for high resource value lands or has been leased or sold to the City and County of Santa Fe under the R&PP Act for various uses. Four major rights-of- way cross the public land in the La Cieneguilla area. One is a major 345 KV Public Service of New Mexico (PNM) power line providing power to the Albuquerque area from northern New Mexico. A natural gas pipeline also crosses this land. Three Land and Water Conservation Fund (LWCF) acquisitions have occurred along the Santa Fe River Corridor in the La Cienega area. These LWCF acquisitions have added land to the corridor and ensured the protection of a portion of the trail. Recent completion of the Santo Domingo private exchange has added an additional 470 acres of land located adjacent to the La Cienega ACEC.

Between Santa Fe and Española, the major block of public land is located northwest of Santa Fe in the Buckman area. Because of the recent development of the Las Campanas subdivision, the public land is under increased pressure for use for rights-of- way and recreation. The City of Santa Fe has well sites in the area near the Río Grande and two pipelines transport the water to Santa Fe. The well sites were authorized in the early 1970s. The Las Campanas subdivision, the City of Santa Fe, and Santa Fe County are currently working on rights-of- way that will take water from the Río Grande, at Buckman, and, after purification, transport this water to the subdivision and Santa Fe. The water pipeline rights-of- way would follow Buckman Road or existing rights-of- way, which may be the original route of the Trail through this area. Seven major rights-of- way, issued beginning in the early 1970s, follow the right-of- way corridor from Buckman to Santa Fe. The PNM right-of-way mentioned above also crosses this area. The public lands in the Buckman area have been recommended by the public for inclusion in an ACEC.

Recreation Use

There are many recreational uses occurring along the length of El Camino Real on public land, either federal or state. Some of this use can be tied directly to the trail, such as visitation related to historic sites or museums, while other uses occur without visitors knowing or learning about the trail. A brief description of representative recreational uses and locations follows:

National Forests

The USDA Forest Service manages public land adjacent to El Camino Real corridor.

Cibola National Forest, Sandia Ranger District - Just east of Albuquerque are the Sandia Mountains, the most visited mountains in New Mexico. Millions of people visit these mountains each year to ride the Sandia Peak Tram, drive the Sandia Crest National Scenic Byway, and to enjoy other recreational opportunities. The Four Seasons Visitor Center offers year- round interpretive exhibits and seasonal programs, while the scenic byway has picnic grounds with shelters.

The Sandia mountain range was a landmark on El Camino Real, and today the mountains provide premier open space to a population of over 700,000 people in the extended Albuquerque area. Recreation sites within this district offer hiking trails and picnicking. Downhill skiing is available at the Sandia Peak Ski Area, located on the east side of the mountains.

Santa Fe National Forest, Española Ranger District - Recreational facilities and opportunities in the Santa Fe National Forest are extensive, and include skiing, picnicking, hiking, fishing, camping, cross-country skiing, and wildlife viewing. El Camino Real corridor passes through a section of the Jemez Division of this national forest. Visitors can hike along the Santa Fe River Canyon, and up and down the La Bajada Mesa. Visitors can also drive and walk along Camino Real ruts on top of the mesa.

National Wildlife Refuges

The U.S. Fish & Wildlife Service manages two refuges within the trail corridor:

Bosque del Apache National Wildlife Refuge, Socorro County, New Mexico - Bosque del Apache National Wildlife Refuge is located at the northern edge of the Chihuahuan desert, and straddles the Río Grande approximately 20 miles south of Socorro. Tens of thousands of birds—including sandhill cranes, arctic geese, and many kinds of ducks—winter at the refuge. The heart of the refuge encompasses about 12,900 acres of moist bottomlands, providing habitat and protection for migratory birds and endangered species, as well as providing the visiting public with a high-quality wildlife and educational experience.

Bosque del Apache was inhabited for over 700 years by the Piro Indians, pueblo-dwellers who farmed, raised turkeys, gathered wild fruit, and hunted wildlife. Subsequent Spanish explorers and colonists on their way north from Mexico used El Camino Real as a vital trade avenue between Mexico and Santa Fe for almost 300 years. Remnants of El Camino Real roadbed and the Piro occupation are protected within the refuge.

Orientation is provided at the visitor center, with current information and wildlife sightings, displays, videos, and a bookstore. A 15-mile auto tour loop allows visitors to enjoy wildlife viewing and photography. The Seasonal Tour Road is open April through September, and is an excellent place to observe shorebirds and waders. During the winter, the area is reserved as a roost area for eagles and cranes. Refuge trails are easy hikes, with benches and observation points along the way. Hiking and nature observation also occur at the refuge's three wilderness areas. A picnic area is available. Primitive camping is available on a reservation basis to educational and volunteer groups only.

Sevilleta National Wildlife Refuge, Socorro County, New Mexico - Located in the Chihuahuan desert 20 miles north of Socorro, New Mexico, Sevilleta National Wildlife Refuge provides habitat for desert bighorn sheep, pronghorn, mule deer, mountain lion, and bear. Bird species include bald eagle, peregrine falcon, northern shoveler, northern pintail, American coot, wood duck, canvasback,

Sandhill Crane at Bosque del Apache, 1846.

redhead, great blue heron, black-crowned night heron, sandhill crane, killdeer, long-billed dowitcher, red- tailed hawk, kestrel, and burrowing owl. There is also a variety of insects, and also of reptiles, including the endangered horned lizard.

Sevilleta NWR is managed primarily as a research area, and is closed to most recreational

uses. However, limited hunting of waterfowl and dove is available, and special tours may be arranged. A visitor center, which opened in 2001, features changing wildlife exhibits. There is a hiking trail into the San Lorenzo Canyon. Open-house events occur yearly, with field trips to research sites, bird and plant identification field trips, and more.

Public Domain Lands

A wide range of recreational activities occurs on BLM-managed land within the corridor.

Las Cruces Field Office - Both developed and dispersed recreation opportunities are available in this area, located near Las Cruces. Principal users are from Las Cruces, Truth or Consequences and Alamagordo, New Mexico,

and El Paso, Texas. Dispersed recreation use in the resource area includes hunting, hiking, camping, picnicking, rockhounding, fishing, birdwatching, and vehicle recreation. Hunting is the most widespread use. Developed recreational sites are limited to the Organ Mountains Special Recreation Management Area and include the Aguirre Spring Recreation Area, La Cueva Picnic Area, and Dripping Springs Natural Area. Camping, picnicking, and hiking on developed trails take place in these areas. The Doña Ana Mountains Special Recreation Management Area was designated in the early 1990s, but no management for recreation is in place. There is only one developed recreation area, the Three Rivers Petroglyph and Picnic Area, but this area is outside the trail corridor.

Socorro Field Office - Residents of Albuquerque and Socorro and Catron counties are the primary users of recreational opportunities in the area administered by Socorro Field Office. The majority of recreation use is dispersed in nature, and includes, hunting, camping, picnicking, backpacking, horseback riding, climbing, caving, hang gliding, motorcycling, four wheel driving, observing nature, rockhounding and photography. The area has high elevation forested areas to the west, and low elevation semiarid regions to the east. There is only one developed campground, at Datil Well, which is outside the trail corridor. The field office contains several areas of local and national significance for recreation, including one within the trail corridor, Fort Craig Historic Site.

Albuquerque Field Office - This field office provides recreational opportunities for residents of Santa Fe and Albuquerque, the two largest metropolitan areas in New Mexico. Most of the recreation use is dispersed, and includes hunting, camping, picnicking, backpacking, horseback riding, climbing, caving, hang gliding, motorcycling, four wheel driving observing nature, rockhounding and photography. These activities take place in a low elevation semi-arid landscape in undeveloped areas.

Taos Field Office - Recreational opportunities near the trail corridor in the Santa Fe area include primarily dispersed activities, including hiking, horseback riding, picnicking and observing nature and cultural resources. There are no developed facilities in this area.

State Game Refuge

The state operates a game refuge within El Camino Real corridor, the Bernardo Waterfowl Wildlife Management Area. Hunting is allowed with the area, and visitors can follow a wildlife trail with watching and photographic towers. There are no other recreation sites in the area.

State Monuments

There are two state historical sites within El Camino Real corridor:

Fort Selden State Monument, Radium Springs, New Mexico - The historic fort was built in 1865 to protect Camino Real travelers. Visitors can visit a museum and walk on trails throughout the fort site.

Coronado State Monument, Bernalillo, New Mexico - The Tiwa pueblo of Kuaua once stood here on the banks of the Río Grande near the site where the expedition of Spanish conquistador Francisco Vásquez de Coronado camped in 1540. Visitors can visit a museum and walk on trails.

State Parks

The State of New Mexico provides facilities and resources for a range of recreational use. Three parks are within the trail corridor:

Leasburg Dam State Park, Radium Springs, New Mexico - Built in 1908, the Leasburg Dam is one of the oldest diversion dams in the state, channeling water from the Río Grande into the Mesilla Valley for irrigation. Recreation activities are an extra benefit, with camping, picnicking, fishing, and hiking occurring within the park. Fort Selden State Monument is nearby.

Elephant Butte State Park, Elephant Butte,

New Mexico - While not within the trail corridor, this reservoir, created by a dam built across the Río Grande in 1916, provides 200 miles of shoreline and is the largest and most visited lake in the state. Numerous park facilities support an array of activities including camping, picnicking, water- skiing, fishing, boating, sailing, trails, and wildlife viewing. A visitor center offers interpretive exhibits on the region.

Río Grande Nature Center State Park, Albuquerque, New Mexico - This state park is on the central Río Grande flyway and is a winter home for Canada geese, sandhill cranes, ducks, and other waterfowl. Facilities include a nature/visitor center and group shelter, and people can enjoy hiking on trails through a bosque, wildlife viewing and nature study.

The State of Texas manages two parks within El Camino Real corridor:

Magoffin Home State Historic Site, El Paso, Texas - Built in 1875 by Joseph Magoffin, this 19-room adobe home is a prime example of Southwest territorial style architecture. Three generations of the Magoffin Family lived in the house. Magoffin was an El Paso booster, active in a range of civic and political affairs, and served as mayor for four terms. His father, James Wiley Magoffin, was a trader on the Santa Fe and Chihuahua trails, and accompanied Stephen Watts Kearny from Missouri to Santa Fe in 1846. Visitors to the home enjoy docent-led tours; several annual events are held as well.

Franklin Mountains State Park, El Paso, Texas - Opened to the public in 1987, this urban park is the largest in the nation, covering some 37 square miles within the El Paso city limits. The Franklin Mountains overlook the Río Grande, and evidence of their North American Indian habitation can be seen in remaining pictographs and mortar pits in rock outcrops. People through time used a gap through the mountains, known as Paso del Norte, as a passageway both north and south. Activities at the park include camping, trail hiking, rock climbing, mountain biking and picnicking.

North American Indian Pueblos

Several North American Indian pueblos in New Mexico and Texas on El Camino Real provide facilities and resources for a range of recreational uses. These include:

Ysleta del Sur Pueblo, El Paso, Texas - The pueblo was established in 1681 after the Pueblo Revolt in New Mexico. The Tigua people own and operate a cultural center with a museum, gift shop, and café. Indian social dancing occurs at the center.

Pueblo of Isleta, Isleta Pueblo, New Mexico - The pueblo operates several business enterprises offering recreational opportunities, including the 45,000 square feet Isleta Gaming Palace, the championship Isleta Eagle Golf Course, and the Isleta Lakes Recreational Complex.

Pueblo of Sandia, Bernalillo, New Mexico - The pueblo owns and operates Sandia Casino, with 200,000 sq. ft. of gaming and food services. The Sandia Lakes Recreation Area is a tribally-run facility with stocked fishing, shaded picnicking, nature trail, playground, group shelters and a bait and tackle shop. Sandia Trails offers horseback rides among Río Grande cottonwood trees.

Pueblo of Santa Ana, Bernalillo, New Mexico - The pueblo offers a variety of recreational facilities, including the 27-hole Santa Ana Golf Course, 22 soccer fields with parking and concessions, a 7,000-person capacity stadium, and the Santa Ana Star Casino.

Pueblo of San Felipe, San Felipe Pueblo, New Mexico - San Felipe operates the Casino Hollywood, and opened a multi-use race track in 2002. The pueblo holds ceremonial dances and an annual arts and crafts show each October.

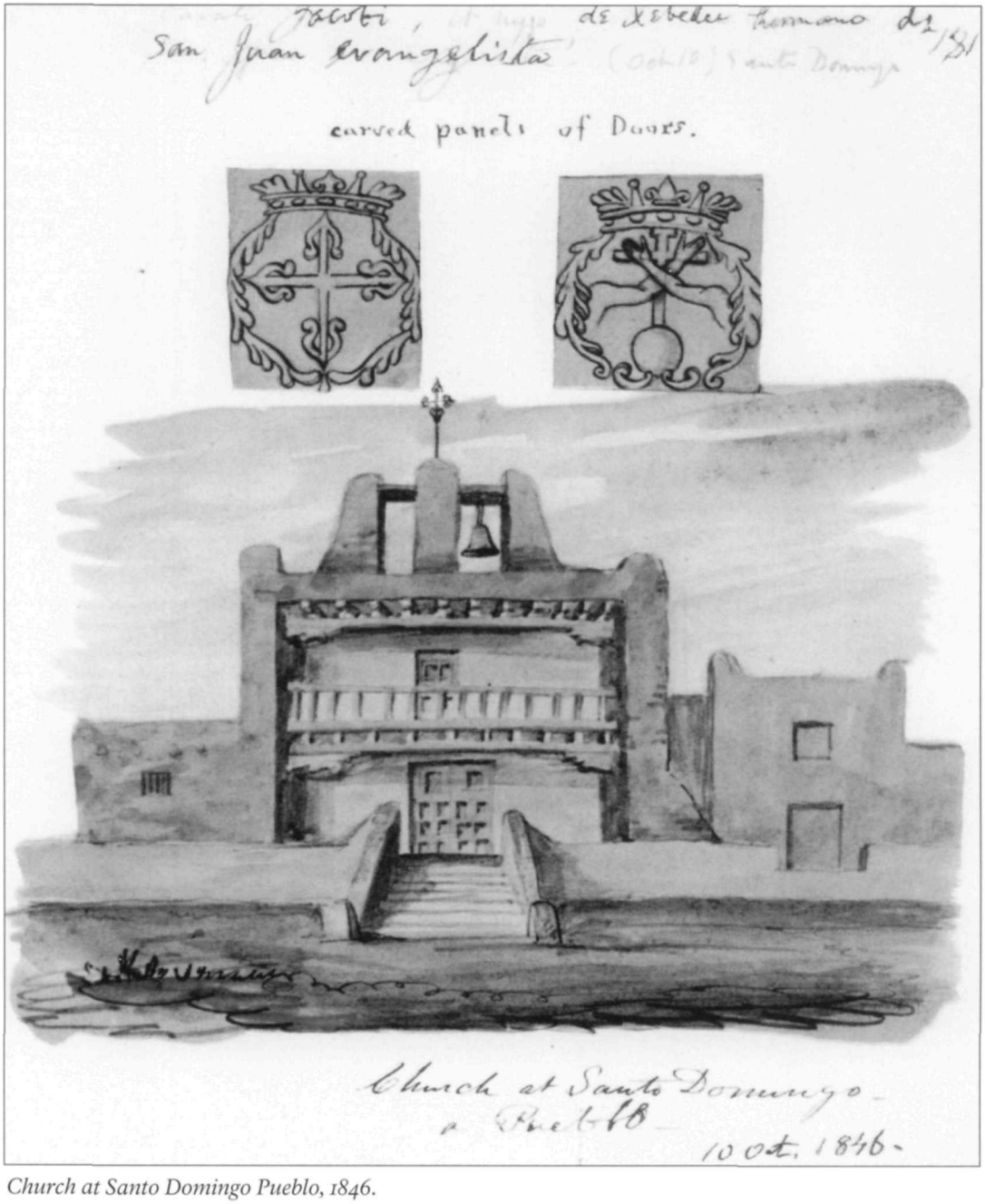
Pueblo of Santo Domingo, Santo Domingo Pueblo, New Mexico - The pueblo hosts an annual art and crafts show each Labor Day to showcase their craftsmanship and jewelry making.

Pueblo of Cochiti, Cochiti Pueblo, New Mexico - The pueblo operates the 18-hole championship Pueblo de Cochiti Golf Course, and the Cochiti Lake Marina and Recreational Center. The lake provides opportunities for numerous water-based recreational activities.

Pueblo of San Ildefonso, Santa Fe, New Mexico - The pueblo offers the San Ildefonso Fishing Lake for recreation, along with the San Ildefonso Pueblo Museum.

Pueblo of Santa Clara, Española, New Mexico - The pueblo provides recreation at its Santa Clara Recreational Area. Visitors can tour the Santa Clara Puye Cliff Dwellings, and enjoy the annual Christmas Bazaar for arts and crafts.

Pueblo of San Juan, San Juan Pueblo, New Mexico - The pueblo offers recreation at its San Juan Lakes, Bison Park, and RV park and travel center. Visitors can take guided tours of the First Capital Site, and enjoy gaming at the pueblo's Ohkay Casino and Best Western Casino and Resort.



Church at Santo Domingo Pueblo, 1846.

Camino Real at La Bajada Mesa.

Chapter 4
ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

Background

This chapter contains analyses of the physical, biological, cultural, and economic impacts of implementing any of the three alternatives of El Camino Real de Tierra Adentro NHT Comprehensive Management Plan (CMP). Both adverse and beneficial consequences resulting from the alternatives are considered. Mitigating measures designed to avoid or reduce environmental consequences have been incorporated into the alternatives.

Several types of impacts resulting from continuing management guidance, as well as planned actions, have been considered in this chapter. Direct impacts occur at the same time and place as the actions. *Indirect* impacts may occur later in time or farther in distance from the proposed actions. *Irreversible and Irretrievable Commitment of Resources/Impairment* must be considered for actions that either deplete a nonrenewable resource or disturb another resource to the point that it cannot be renewed within 100 years. *The Relationship between Short-Term and Long- Term Productivity* analyzes: (1) short-term day-to-day, or even year- to-year, activities such as hunting, fishing, hiking, and photography. Short-term actions include management activities designed to permit, encourage, or discourage certain activities; (2) long-term productivity referring to the land's continuing ability to produce commodities, such as wildlife and plant products, as well as amenities such as scenery and recreation opportunities, for future generations. This ability depends on management practices and uses that do not impair resources to the extent that they are no longer capable of providing the resource commodities or opportunities. *Cumulative* Impacts are additive impacts to a particular resource, regardless of landownership, from the past, present, and reasonably foreseeable future.

Only the major impacts that would vary by issue or resource use are analyzed. Impacts that would not occur or would be negligible are not discussed. The following critical elements would not be affected: floodplains, prime and unique farmlands, hazardous and solid waste, wilderness, and wild and scenic rivers. Air quality would be minimally affected over the short-term and is therefore not included. Impacts on the fire management program are not addressed; due to generally sparse and low-growing vegetation near the trail and the nature of the actions proposed by any of the alternatives, this program would not be affected.

Assumptions for Analysis

In this document, impacts referred to as long-term are those that would occur over a 5- to 20-year period; while short-term impacts are those that would occur within a 5-year period following plan implementation. The life of the CMP is expected to be 20 years; the plan would be periodically reviewed to determine if goals and objectives are being met.

Analysis of the alternatives is based on the assumption that adequate finances and personnel would be available to implement plan decisions.

The unavoidable impacts would be monitored and continually evaluated during the life of this plan. Based on the monitoring and evaluation, actions would be adjusted to minimize impacts.

There would be increases in visitor use on BLM-administered lands and other federal or state-managed lands, and at private facilities along the trail, regardless of any actions taken as a result of this planning effort, due to ongoing

state, local, and private tourism promotion efforts.

Off-highway-vehicle designations on BLM-administered lands associated with the trail would be revisited according to the following planning schedule:

1. Las Cruces Field Office - RMP revision, beginning in 2004.
2. Socorro Field Office - RMP revision, initiated in 2002.
3. Taos Field Office - La Cienega/Buckman area plan amendments and route designations, beginning in 2003.

Site-specific impacts associated with the development or improvement of facilities will not be addressed in detail in this document. Prior to their implementation, these activities will require site-specific analysis and a detailed summary of the potential effects.

Threatened and Endangered (T&E) Species: Under all alternatives, other than placement of interpretive or directional signing along roads, there are no surface-disturbing actions proposed in Rio Arriba, Santa Fe, Bernalillo, and Valencia counties in New Mexico and El Paso County in Texas. As a result, there would be no impact to Threatened and Endangered species in these counties.

Actions will not be allowed to occur where they will adversely affect T&E or other special-status species or their habitats. To help protect special-status species, a National Environmental Policy Act (NEPA) document will be prepared prior to any site-specific action being permitted. The NEPA process will include identifying any such species in or near the area of activity; adjusting the project design, size, or location; applying appropriate stipulations (e.g., timing); or not authorizing the action.

In the event of any site-specific development associated with this plan, the Bureau of Land Management, the National Park Service, or other local managers would contact the U.S. Fish and Wildlife Service to initiate Section 7 consultation under the Endangered Species Act of 1973 if a "May Affect" determination on a species has been made. Potential adverse effects on listed and proposed species would be eliminated or reduced in compliance with the provisions of the act. Mitigation of adverse impacts might include relocating or redesigning sites and monitoring the effects of trail use. If necessary, trail use could be limited seasonally, the number of users could be restricted, a reservation system could be established for very popular sites, or other strategies could be developed to limit negative impacts.

PREFERRED ALTERNATIVE

North American Indians

The impacts from both Alternatives B and the Preferred would have a neutral or positive impact upon the North American Indian tribes associated with El Camino Real. There would be no evident social or cultural impact upon the tribes.

During implementation of the Preferred Alternative, additional consultation with affected tribes would likely lead to positive impacts by providing them with the opportunity to present their stories from the tribal point of view in exhibits and documents. Tribes that participate in the voluntary certification of sites and segments would be eligible for technical assistance and challenge cost-share monies for preservation, interpretive exhibits, and signage.

Where developments take place (roadside pull-outs and interpretive wayside exhibits as proposed in the Preferred Alternative, a site-specific analysis would take place to ensure that resources are not disturbed, or if resources would be impacted mitigation measures would take place in consultation with the tribes.

Petroglyph on El Camino Real.

Cultural Resources (Archeological/Historical)

The Preferred Alternative places a stronger emphasis on interpretation and education, and includes on-site interpretation at several locations. Awareness and appreciation of archeological and historical resources related to El Camino Real would be maximized under this alternative. There would be a concerted effort to collect new information about the trail, and to generate more detailed and accurate inventories and maps of trail segments and archeological sites associated with the trail. Although, under this alternative, visitor use could increase in the Jornada del Muerto from 900 to 5,500 visits annually, and at the Teypama site from 200 to 400 visits annually, the educational efforts should dramatically reduce potential for inadvertent destruction of trail-related resources. High-potential sites and segments on public lands would receive proactive management, including closure of areas where their physical integrity is threatened. Protection would be extended to sites on non-federal lands through active, voluntary partnerships.

Increased public awareness inevitably increases potential for illegal collection of artifacts along portions of the trail that are publicly accessible. This would be partially offset by a site stewardship program, which provides for increased monitoring and patrolling of high-potential sites and segments. The Preferred Alternative also would include on-site interpretation at nine specific locations along El Camino Real de Tierra Adentro. On-site interpretation brings increased potential for physical damage to trail segments and loss of artifacts through illegal collection. Specific measures to mitigate these potential effects would be incorporated into project planning for these on-site interpretive facilities, and would be subject to further compliance with the National Historic Preservation Act.

Energy and Minerals

Areas with no change in VRM class: Existing mineral leases and mineral material contracts would continue to be managed under existing terms and conditions and management plans. New leasing and lease development and new contracts from BLM mineral material sites would be subject to existing management plans and site-specific environmental assessments. Prospecting and mining claim location would continue to be allowed in areas open to the Mining Law and closed in withdrawn areas. Existing and new surface disturbance under the Mining Law would continue to be regulated by the BLM's surface management regulations (43 CFR 3809) and/or the New Mexico Mining Act rules. Use and Occupancy under the Mining Law regulations (43 CFR 3715) would be enforced to prevent mining or other activities conducted under the pretense of the Mining Law, that are not authorized under the Mining Law.

Areas designated VRM Class II: Existing mineral leases that fall within areas designated VRM Class II would continue to be managed under the lease terms and conditions and management plans that existed at the time of issuance. Existing standard lease terms may be sufficient to achieve the VRM Class II objective, with allowances for the relocation of a proposed drilling location of up to 200 meters and the prohibition of drilling activities for up to 60 days in any lease year.

New leases within a designated VRM Class II area would include a stipulation requiring that lease operations be designed to conform to the

VRM Class II objectives, allowing restrictions on lease development beyond the standard lease terms. Restrictions on lease development could result in an operator not drilling at the most geologically desirable location or during the most desirable time period. If the operator is not able or willing to conform to the restrictions, drilling could be precluded. The areas affected by VRM Class II guidelines are considered to have low potential for the discovery of economic oil and gas deposits.

Existing mineral material contracts that fall within areas designated VRM Class II would continue to be managed under the contract lease terms and conditions and management plans that existed at the time of issuance. The issuance of new contracts would be at the discretion of the BLM, provided that the mining conformed to the management objectives of VRM Class II or BLM could eliminate the visual intrusion entirely by reclaiming the site after the expiration of any outstanding contracts. Discontinuing the issuance of mineral material contracts could force those desiring to obtain the materials to go to another less desirable or more expensive source.

A VRM Class II designation would not affect the status of existing mining claims or prohibit future prospecting and mining claim location under the Mining Law. An existing approved plan or notice for operations under the Mining Law (43 CFR 3809) would not be affected by the new VRM Class. However, any new surface-disturbance activities could be affected by the VRM Class II designation. BLM could require operators, under 43 CFR 3809, to conduct operations to meet the VRM Class II management objective. It is possible that an operator could not meet the VRM Class II management objective. However, failure to meet the objective could not be used to prohibit operations under the Mining Law. Imposition of the additional requirements to meet (or attempt to meet) the VRM Class II management objective could add additional costs to a mining operation. Use and Occupancy under the Mining Law regulations (43 CFR 3715) would be enforced to prevent mining or other activities conducted under the pretense of the Mining Law, that are not authorized under the Mining Law.

Federal Mineral Authorizations and Activities Near BLM-Proposed Projects - The following existing federal mineral resource activities exist

Activity/Authorization	Location	Relative to Proposed Development
Mineral Material Site	T19S R2W S4	3 miles W of I-25 Upham pull-off
Mineral Material Site	T18S R2W S3	2 miles SW of Paraje del Perrillo pull-off
Mining Claims	T17S R2W S23, 24, 25, 26	Adjacent to Paraje del Perrillo pull-off
Mineral Material Site	T16S R2W S12	Adjacent to Yost Escarpment pull-off

The inactive Tonuco Mountain fluorite mine is two miles south of the San Diego pull-off site (T19S R1 W Section 19).

The following occur along the County road segment from Pueblito (east of Socorro) to Highway 380 (east of San Antonio).

Activity/Authorization	Location	Relative to Proposed Development
Mineral Material Site	T2S R1E S21	2 miles E of Pueblito
Mining Claims	T3S R1E S27	1.5 miles E of County Road
Mineral Material Site	T4S R1E S27 34	E side of Co. Road, 1 mile N of Hwy 380

There are no existing federal mineral activities within the Santa Fe River canyon area proposed for management under VRM Class II guidelines. The inactive, reclaimed La Bajada uranium mine lies within the canyon at T15N R7E Section 9.

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within the proposed VRM Class II area in Jornada del Muerto (T13S to T19S):

Livestock-grazing

Under the Preferred Alternative, the existing livestock-grazing operations on public lands would continue with no reductions and limited additional restrictions. The greatest impacts would occur in Jornada del Muerto area of the Las Cruces Field Office. New range improvements proposed on portions of the Las Cruces Field Office section of the trail would have to meet VRM Class II guidelines. Any new range improvement/construction projects in this area would need to be mitigated to meet visual guidelines, although no range improvement projects have been identified for these areas.

The Preferred Alternative would provide for increased interpretation and information near Jornada del Muerto section of the trail. The additional interpretation is expected to stimulate additional interest in visiting the public lands on Jornada del Muerto section. The increased recreational use of the public lands would provide the greatest impact to the livestock-grazing operations. The occasional public- land visitor seeking assistance from the rancher would continue to increase due to the increased publicity about the trail. Additionally, damage to rangeland improvements from vandalism would continue to occur from time to time, but at an increased level due to the increased visitor use. The actual impact from the increased visitor use is not expected to affect the viability of the ranching operations, but it could provide an additional nuisance factor.

Land and Realty Uses

Changes in VRM class from Class III and IV to Class II in those areas of the trail that are designated as high-potential sites and segments would impact land uses in those areas. For the sites within Jornada del Muerto and Santa Fe River canyon areas, new rights-of- way and lands uses would be allowed only if they did not deviate from the basic elements of the predominant landscape. Uses would not be silhouetted against the skyline, and new power line or pipeline rights-of- way may need to be buried. Communication towers and buildings may need to be painted with approved colors in these areas. Maintenance of existing rights-of- way would need prior approval of the field office. An exchange with the State of New Mexico may enhance protection of the trail north of the Yost Escarpment site. The BLM and the State Land Office have completed several exchanges in the last few years and have some ongoing exchanges. Therefore, a state exchange in this area could proceed relatively quickly if both parties agreed. Additional visitors to the designated sites would increase traffic in the area and could cause some impacts to existing rights-of- way. More people in the area may cause damage to existing facilities. Auto-tour routes could result in increased deterioration of local streets and roads. Acquisition of private land within the Santa Fe River corridor would be a priority.

Recreation

Developing, marking, and interpreting an auto-tour route would contribute to increased public awareness of the NHT. Visitors would benefit from this opportunity to follow the approximate trail route, and to visit related resources and interpretive facilities. Visitor use on BLM-administered lands could increase in Jornada del Muerto from 900 to 5,500 visits annually, and at the Teypama site from 200 to 400 visits annually. Visitor use at privately developed sites or facilities would be expected to increase in response to educational efforts and increased publicity for the trail.

Additional opportunities to experience the trail corridor through recreation on BLM-managed lands would increase visitor enjoyment of the NHT. The ability to drive or hike in the trail corridor, to receive interpretive messages on-site, and to see trail-related cultural, natural, and landscape resources would be beneficial and would result in memorable experiences.

Although no immediate threats have been identified or closures recommended at this time,

future off-highway-vehicle opportunities on public lands could be restricted in the immediate vicinity of historic or cultural sites for resource protection.

Visitor Experience/Information and Education

A coordinated, collaborative program of trail-related interpretive and educational programs, media, and activities, along with trail promotion, would increase visitor use along the NHT, and would foster visitor appreciation of trail history and significance. Visitors would be offered a range of ways to experience the trail-meeting their level of interest and learning styles.

Certification of sites, segments, and interpretive facilities would benefit the visitor experience through the increased identification, interpretation, and use of trail-related resources. Standards of quality reached through the certification process would contribute to the development of accurate and consistent media and programming, and would increase visitor enjoyment and understanding of the trail's history and significance.

Development of an interpretive plan would assist Camino Real Administration and partners to present a cohesive, integrated interpretive and educational program, and would result in public understanding and appreciation for the trail.

Scenery

This alternative would focus on protecting on-the-ground trail resources that best illustrate the trail's significance (high-potential historicsites and segments) and trail-related interpretive/educational programming and activities. To protect and prevent inappropriate visual intrusions, restrictive visual resource management objectives would be assigned to public lands within the critical foreground/middle-ground viewshed or landscape component along trail segments and around sites. With more restrictive visual resource management objectives, activities would be limited to those that would not attract attention and the level of change to the characteristic landscape would be low. This would result in amendments of the Mimbres and White Sands RMPs for 58,892 acres of existing VRM Class IV public land in Jornada del Muerto to a more restrictive VRM Class II along 7.6 miles of high-potential historic segments and around high-potential historic sites within the Las Cruces Field Office. It would also result in the amendment of 7,533 acres of VRM Class III public lands along 0.6 mile of high-potential historic trail segments and around high-potential historic sites to the more restrictive VRM Class II in the Las Cruces Field Office.

The Taos Resource Management Plan would be amended by assigning VRM Class II to 998 acres of previously unassigned public lands within the foreground/middle-ground viewshed along 0.3 mile of high-potential historic trail segments and extending through the Santa Fe River canyon. Assignment of Class II VRM management objectives would assist in preserving the scenery along high-potential historic trail segments and near high-potential historic sites through objectives that are set to retain the existing characteristic landscape and prevent inappropriate visual intrusions.

Socioeconomics/Social Values/ Environmental Justice

The Preferred Alternative would provide for the protection of trail resources and existing recreational and interpretive facilities through new and on-going activities. Trail resources on federal land would be protected; those on private land would be certified. In addition, resources on federal lands would be identified and interpreted by displays and activities or educational opportunities. Resources on state or private lands would be encouraged to also provide interpretation and educational facilities. This alternative would encourage resource preservation through tax agreements (taxing land preserved as open space at a lower rate) and would provide for challenge cost-share programs of up to 50% federal cost sharing for project implementation. The alternative also includes a num-

ber of other features to promote public awareness and interest.

El Camino Real NHT yearly budget under this alternative would be $475,000 for administration and related activities, including challenge cost-share funding. In addition, the state/local challenge cost-share program 50% match would result in another $60,000 yearly in government expenditures, for at total of $535,000 expended yearly by all levels of government for identified administration and implementation activities. This expenditure can be expected to generate a net benefit of $1,190,000 in combined sales, 36 new jobs, and approximately $92,820 in increased tax revenues in the ESA per year. Note that this estimate of benefits is conservative and incomplete for the reasons discussed below.

Implementation of the Preferred Alternative can be expected to generate some additional recreational travel and heritage tourism visits along the route. After a lengthy period of growth, visitation rates for the ESA have been essentially flat for the past several years, and this situation is expected to continue for the foreseeable future. Any new visits that would be generated from implementation of would generate two beneficial effects: They would improve the visitation and continuing viability of the individual trail sites; and they would contribute to the economic activity of the surrounding communities through increased visitor expenditures.

Currently, the best-documented expenditure rate for tourist travel in New Mexico is $96.45 per day per person. At this point, it is not possible to quantify the number of additional visitors or visitor days that might be generated by implementation of the Preferred Alternative. Two important points are stressed:

1. Visitor forecasts to existing and future facilities, such as El Camino Real International Heritage Center and others located on federal, state, and local lands, and on private property, are predicated in part on implementation of an NHT action alternative.

2. It has been the common experience of other designated national historic tails (such as Lewis & Clark, Oregon, Mormon Pioneer, California, and Santa Fe) that increases in visitation are directly related to the quality of the public awareness and promotional programs that are conducted for them. Special events, in particular, greatly improve visitation rates. Therefore, for this analysis, it is too speculative to assume a figure for increased visitation resulting directly from the implementation of the Preferred Alternative, but it is recognized that such an increase would occur, and generate additional, but presently unquantified, economic benefits beyond those resulting from direct government expenditures. These benefits are expected to begin immediately upon plan implementation, and continue for the indefinite future.

Implementation of the Preferred Alternative would result in unquantified social benefits in the ESA. The economic improvements and additional service and hospitality-industry jobs generated by increased visits would enhance the economic stability of communities in the ESA, especially those with higher rates of unemployment. Other benefits would include improved governmental services resulting from increased tax revenues, and avoidance of future social costs that might otherwise result from continued economic problems. Low-moderate-income families and individuals, at-risk youth, and the Hispanic and North American Indian communities may be expected to find new employment in the service sector. Proportionately, the greatest improvements can be expected in the poorer counties of New Mexico, and to a lesser extent in El Paso County and the Mexican "gateway communities." This alternative would not directly impact North American Indian reservation lands, but North American Indians could generally benefit from induced economic activity from increased visitation.

Finally, the Preferred Alternative would add to the effectiveness of ongoing BLM and NPS international outreach efforts, such as Habitat Chat, Sister Communities, and the ongoing cooperative agreements between the NPS, BLM, and INAH. This would help these programs to achieve objectives of the enhancement and sus-

tainable management of natural resources, maximum efficiency in use of fiscal resources, and coordination of cross-border activities, along with improved information sharing and relationship development.

Implementation of the Preferred Alternative may result in unquantified adverse impacts to state and local tax revenues. These would occur if private lands are purchased as part of the plan and thus removed from the tax rolls, or if agreements are made with private landowners to preserve sites by reducing taxes to open-space values. This marginal loss of revenue could negatively impact delivery of government services to an unknown degree. However, this loss may be more than offset by gains in tax revenues associated with increased economic activity stimulated by the alternative. The magnitude of such gain or loss is unknown at this time.

Vegetation/Noxious Weeds/Soils/Water

Although visitor use under the Preferred Alternative could increase in Jornada del Muerto from 900 to 5,500 visits annually and at the Teypama site from 200 to 400 visits annually, damage to soils and vegetation is expected to be minimal, and be mitigated by proper design of trails and pullouts. The change in visual classification is not expected to be a barrier to vegetation management activities on public lands. Soils would be disturbed on approximately 0.4 acres where the pullout parking areas are constructed and interpretive signs placed near the Upham Exit, the Paraje de San Diego, the Ojo de Perrillo/Point of Rocks, and the Yost Escarpment. An additional 0.5 acres would be disturbed if a companion trail were constructed in this area. Efforts to rehabilitate vegetation and control vehicle traffic and parking at the Teypama site near Socorro would result in improved conditions on 0.2 acres of public land. Given the small area of disturbance and the mandatory application of site-specific best-management practices to protect water quality, there would be no net impact to surface-water or ground-water resources as a result of implementing the Preferred Alternative.

A biological evaluation was prepared, and it noted that there was no potential habitat in the project area for federally listed threatened and endangered plants. There is potential habitat in this area for four special-status plant species: *Peniocereus greggii var. greggii; Escoberia duncanii; Penstemon ramosus; and Toumeya papyracantha*. Site-specific inventory and environmental assessment would be conducted prior to any construction activity to ensure protection of these species.

Wildlife

Under this alternative, a few sites along Jornada del Muerto desert passage would be developed for public use. Disturbance to wildlife would be short term during construction, with most wildlife species expected to reoccupy nearby habitat after construction activities are completed. Miscellaneous dispersed recreational activity within the planning area, such as camping, climbing, hiking, and biking would result in site-specific short-term negative impacts on the microbiological, small mammal, and avian components of the localized fauna. Proposed projects under this alternative that would cause short-term negative impacts to wildlife are those projects that propose the development of pullout parking areas; development of trail segments; development of a companion trail; and development of an auto-tour route. Approximately 0.9 acres would potentially be disturbed in Jornada del Muerto area. There would be no adverse impacts to federally listed threatened and endangered or special-status wildlife species in the areas proposed for recreational development; a biological evaluation was prepared, and it noted that the locations of the proposed project sites did not possess the habitat required for the listed species.

Future potential habitat-improvement projects in Jornada del Muerto and Santa Fe River canyon areas would be evaluated to determine whether they conform with VRM Class II objectives. VRM Class II management guidelines for an additional 66,425 acres within Jornada del Muerto and 998 acres in the Santa Fe River canyon could restrict placement or design of

habitat improvement projects; however, no habitat improvement projects have been identified for these areas. There is potential for restoration of natural water features and native vegetation within the affected portion of the Santa Fe River canyon, which would improve habitat and scenic values over the long term.

Cumulative Impacts

Implementation of the Preferred Alternative is integral to the cumulative visits and economic activity of all trail resource sites along the route. Improvements at any single site or combination of sites would likewise affect activity elsewhere along the trail. Already mentioned is the nearly completed International Heritage Center, which would add cumulatively to the benefits of the trail along its route. Other certified sites would add to the trail's overall socioeconomic viability.

The benefits of implementing the Preferred Alternative to the local and regional economy would include improvements in both permanent and temporary employment opportunities and revenues as the planned maintenance and improvement of existing facilities and programs are implemented. The more active and intense development program under the Preferred Alternative, with its associated higher expenditure and visitation levels, would yield greater benefits than under Alternatives A and B. These benefits would be both local and regional in nature, and would also be international, with enhanced employment opportunities along the Mexican border and southward in the Mexican State of Chihuahua.

As a result of increased and sustained public visitation to cultural resources, which were previously relatively unknown, certain impacts can be anticipated. At each of the historical and archeological properties opened for public visitation, public educational materials in brochures and signage would emphasize the need to leave any observed surficial artifacts in place. Programs designed to mitigate the adverse effects of public visitation would be carried out before the properties are opened and promoted for visitation. Such mitigation measures would include programs of mapping, surface collection and analysis of a sample of surface artifacts, and sampling and dating of features. Despite planned educational programs with a conservation message, it is anticipated that the surface assemblage of artifacts would eventually be lost at publicly interpreted sites. Certainly, any attractive artifacts, such as polychrome ceramics, would disappear. However, the sampling of the sites would result in the analysis and curation of a representative sample of this surface collection.

The presence of public visitors at historical and archeological sites at periodic, irregular intervals discourages illegal vandalism and digging. Although the surface artifacts may eventually disappear, illegal excavations all but cease at publicly interpreted sites. One benefit from the Preferred Alternative, therefore, would be the preservation of the subsurface components of those nine specific locations along the trail.

With the enhanced programs of outreach and education associated with the Preferred Alternative, interest in the trail and its related sites would be stimulated in the local communities. The number of volunteers joining local chapters of the New Mexico Site Steward program is expected to increase significantly. As a result, the number of trail-related sites that would benefit from regular monitoring and patrolling would increase from the inspection of 111 properties now within the Las Cruces and Socorro field offices of the BLM to 300 within 5 years of implementation of the plan.

ALTERNATIVE A

North American Indians

There would be no impacts to North American Indians under this alternative.

Cultural Resources (Archeological/Historical)

Under Alternative A, public awareness and appreciation of archeological and historical

resources related to El Camino Real would remain low. In the absence of a directed program of research, it is likely that some important trail segments and trail-related archeological sites would remain undiscovered. These circumstances increase the probability of inadvertent damage. However, visitor-related impacts such as collection of artifacts and physical damage to trail segments would be lowest under this alternative. Protection of trail segments and trail-related archeological properties would occur primarily through the National Historic Preservation Act, and other laws that protect cultural resources on federally owned lands. As federally funded or approved projects are proposed, their potential impacts to cultural resources, including El Camino Real, would be considered. Protection would extend to non-federal lands only if federal funds or approval are required.

Energy and Minerals

Existing mineral leases and mineral material contracts would continue to be managed under existing terms and conditions and management plans. New leasing, lease development, and contracts would be subject to existing management plans and site-specific environmental assessments. Prospecting and mining claim location would continue to be allowed in areas open to the Mining Law and closed in withdrawn areas. Existing and new surface disturbance under the Mining Law would continue to be regulated by the surface management regulations (43 CFR 3809) and/or New Mexico Mining Act rules. Use and Occupancy under the Mining Law regulations (43 CFR 3715) would be enforced to prevent mining or other activities conducted under the pretense of the Mining Law that are not authorized under the Mining Law.

Livestock-grazing

Under Alternative A, the existing livestock-grazing operations on public lands would continue, with no reductions or additional restrictions. The occasional public-land visitor seeking assistance from the rancher would continue to increase due to the increased publicity about the trail. Additionally, damage to range-land improvements from vandalism would continue to occur from time to time, but at an increased level to due increased visitor use.

Land and Realty Uses

Under Alternative A, there would be no change in VRM guidelines, and present users of the land would see very little effect on their ongoing operations. Additional visitors to the designated sites would increase traffic in the area and could cause some impacts to existing rights-of-way. Requests for new rights-of-way and land uses would continue to be allowed on a case-by-case basis. New rights-of-way and land uses would be subject to existing management plans and site-specific environmental assessments. Sale and exchange of public land would occur only where designated in existing land use plans. Some private and state land could be acquired based on existing plans. Maintenance of existing rights-of-way would continue as necessary. Existing roads would continue to be used without restrictions. Applications for new rights-of-way and land uses in the vicinity of the International Heritage Center would be allowed only in conformance with the Socorro Resource Management Plan Amendment for the Heritage Center (2001).

Recreation

Visitors would not be offered recreational experiences on the NHT. Current recreational opportunities would continue to be provided, but visitors would not have the opportunity to engage in activities related to the trail. Visitor use would depend on the level of publicity generated by off-site, private entities and activities. Visitor use in Jornada del Muerto would not be expected to exceed 1,500 annual visits under this alternative, and use at the Teypama site would probably not change from existing levels of use.

Visitor Experience/Information and Education

Visitors would not be offered experiences on El Camino Real de Tierra Adentro NHT. Visitors would continue to learn about and experience the trail, but through diffused and uncoordinated methods. Some visitors would continue to be confused about the location and availability of visits to trail-related resources and sites. Other visitors, particularly those from out of state or other countries, would be adversely impacted by the relative lack of trail orientation, information, and interpretation. Visitor understanding of trail-related resources and sites may be diminished by the loss of resources to neglect or vandalism.

Scenery

This alternative would allow the continuation of scenery management practices as established in the current resource management plans along trail segments and around sites associated with the national historic trail. Scenery would continue to be managed under the various assigned VRM class objectives. There would be no change in classifications. Scenic values within the corridor along 24.5 miles of trail on public lands assigned VRM Class IV would be subject to major modification of the character of the landscape from activities that could dominate the landscape and attract attention of the observer or person wanting to experience the setting that early travelers experienced. VRM Class III has been assigned to public lands along 16.1 miles of trail. In Class III lands, which have moderately valued scenic resources, the landscape character would be partially retained through management objectives prescribed for these lands. On the 2.2 miles of trail within existing VRM Class II lands, scenic values would be retained through the management objectives prescribed for lands within this class. On the remaining 16.9 miles of trail on public lands within the boundaries of the Taos Field Office, no VRM classification has been assigned. Here, scenic values would be considered on a case-by-case basis.

Socioeconomics/Social Values/ Environmental Justice

Under Alternative A, the no action alternative, current management activities of the various federal, state, and local agencies, private landowners, and other entities would continue. Since the no-action alternative would provide for a continuation of existing conditions along the route of the NHT, it is expected that the current "baseline" socioeconomic effects and benefits to the local and regional economy would continue. There would be no planned change in direct government employment or in related private-sector employment serving visitors or other service sectors. In addition, there would be no additional revenue generated from increased visitor spending beyond that already anticipated in the baseline. No additional social or economic benefits to area residents would be realized.

Under Alternative A, there would continue to be very limited opportunities for coordination or enhanced interpretation or recreational opportunities. Existing activities and operations would continue, and visitors would continue to travel the current routes and visit existing sites. New related developments, such as El Camino Real International Heritage Center, would be completed as planned. Implementation of the Sister Communities Program, Habitat Chat, and the ongoing cooperative agreements between the NPS, BLM, and INAH would continue. The socioeconomic benefits resulting from these already-planned projects have been accounted for in the baseline.

Vegetation/Noxious Weeds/Soils/Water

Alternative A is a continuation of the existing situation and should provide for little change in the vegetation of the trail zone. However, with the increase in visibility of the trail and opportunities for vehicle travel down the trail with 4x4s, 4-wheelers, and motorcycles, damage to soils and vegetation may occur at some locations. There would be no measurable impacts to surface-water or ground-water resources.

Wildlife

Modification of wildlife habitat is not proposed under this alternative; therefore, there would be no impacts to wildlife.

Cumulative Impacts

Implementation of Alternative A would result in no change from the current situation along El Camino Real. The existing situation of uncoordinated recreational, interpretive, and access improvements would continue, with minor improvements in temporary employment opportunities and revenues as the currently planned development of El Camino Real visitor-serving facilities takes place.

ALTERNATIVE B

North American Indians

The impacts from both Alternatives B and the Preferred would have a neutral or positive impact upon the North American Indian tribes associated with El Camino Real. There would be no evident social or cultural impact upon the tribes.

During implementation of the Preferred Alternative, additional consultation with affected tribes would likely lead to positive impacts by providing them with the opportunity to present their stories from the tribal point of view in exhibits and documents. Tribes that participate in the voluntary certification of sites and segments would be eligible for technical assistance and challenge cost-share monies for preservation, interpretive exhibits, and signage.

Where developments take place (roadside pull-outs and interpretive wayside exhibits as proposed in the Preferred Alternative), a site-specific analysis would take place to ensure that resources are not disturbed, or if resources would be impacted, mitigation measures would take place in consultation with the tribes.

Cultural Resources (Archeological/Historical)

Alternative B emphasizes off- site interpretation of El Camino Real de Tierra Adentro. Under this alternative, public awareness and appreciation of archeological and historical resources related to El Camino Real would increase, and there would be a concerted effort to collect new information about the trail and to generate increasingly accurate and detailed inventories and maps of trail segments and archeological sites associated with the trail. These measures would reduce potential for inadvertent destruction of trail segments and sites related to the trail. Alternative B emphasizes protection of trail resources. In addition to the consideration given to all cultural resources under current federal laws, regulations, and policies, high-potential historic sites and segments would receive particular emphasis and would be subject to more proactive protective measures, such as closure to off- road vehicles where threats to the integrity of the resource develop, and monitoring. Protection would be extended to sites on non-federal lands through active, voluntary partnerships.

Increased public awareness inevitably increases potential for illegal collection of artifacts along portions of the trail that are publicly accessible. Under Alternative B, this would be partially offset by increased monitoring.

Energy and Minerals

Existing mineral leases and mineral material contracts would continue to be managed under existing terms and conditions and management plans. New leasing, lease development, and new contracts would be subject to existing management plans and site-specific environmental assessments. Prospecting and mining claim location would continue to be allowed in areas open to the Mining Law and closed in withdrawn areas. Existing and new surface disturbance under the Mining Law would continue to be regulated by the surface management regulations (43 CFR 3809) and/or the New Mexico Mining Act rules. Use and Occupancy under the Mining Law regulations (43 CFR 3715) would be

enforced to prevent mining or other activities conducted under the pretense of the Mining Law that are not authorized under the Mining Law.

Livestock-grazing

Under Alternative B, the existing livestock-grazing operations on public lands would continue, with no reductions or additional restrictions. The occasional public- land visitor seeking assistance from the rancher would continue to increase due to the increased publicity about the trail. Additionally, damage to range-land improvements from vandalism would continue to occur from time to time but at an increased level to due increased visitor use.

Land and Realty Uses

Effects on Land and Realty Uses under Alternative B would be similar to Alternative A. However, the identification and protection of trail resources on public land would increase pressure on other land uses. In areas designated as auto -tour routes, increased traffic on city, county, and state streets and roads could potentially increase road maintenance requirements. Requests for new rights-of- way and land uses would be allowed only in areas that did not conflict with identified trail resources, and special stipulations might be necessary to protect trail resources.

Recreation

Developing, marking, and interpreting an auto -tour route would contribute to increased public awareness of the NHT. Visitors would benefit from this opportunity to follow the approximate trail route, and to visit related resources and interpretive facilities. Visitor use in Jornada del Muerto would not be expected to exceed 1,500 annual visits under this alternative, and use at the Teypama site would probably not change from existing levels of use.

Although no immediate threats have been identified or closures recommended at this time, future off-highway -vehicle opportunities on public lands could be restricted in the immediate vicinity of historic or cultural sites for resource protection.

Visitor Experience/Information and Education

The development of a coordinated interpretive and educational program emphasizing resource protection on the NHT would benefit visitors, increasing their awareness of resource values and threats. Visitors would understand how their individual actions contribute to resource protection. In some cases, visitors may be disappointed by the lack of a comprehensive, trail -wide interpretive and education overview, or by the relative inability to have experiences in the trail corridor.

Certification of sites, segments, and interpretive facilities would benefit the visitor experience through the increased identification, interpretation, and use of trail-related resources. Standards of quality reached through the certification process would contribute to the development of accurate and consistent media and programming, and would increase visitor enjoyment and understanding of the trail's history and significance.

Development of an interpretive plan would assist Camino Real Administration and partners in presenting a cohesive, integrated interpretive and educational program, and would result in increased public understanding and appreciation for the trail.

Scenery

As in Alternative A, there would be no change in VRM classifications. Scenic values within the vicinity of the trail would continue to be managed under the objectives of the various assigned VRM classes within the Socorro and Las Cruces field offices. Impacts to scenic values on public lands within the Taos Field Office would continue to be assessed on a case-by-case basis, because no VRM classes have been assigned through a resource management plan for those

lands within the vicinity of the trail. Continued development and human activities on public lands along trail segments and around sites within the three field offices may lead to the loss of historic landscape characteristics and scenery.

Socioeconomics/Social Values/ Environmental Justice

Alternative B would provide for the protection of trail resources and existing recreational and interpretive facilities through new and on-going activities. Trail resources on federal land would be protected; those on private land would be certified. In addition, resources on federal lands would be identified and interpreted by displays and activities or educational opportunities. Resources on state or private lands would also be encouraged to provide interpretation and educational facilities. This alternative would encourage resource preservation through tax agreements (taxing land preserved as open space at a lower rate) and would provide for challenge cost-share programs of up to 50% federal cost sharing for project implementation. The alternative also includes a number of other features to promote public awareness and interest.

The NHT's yearly budget under Alternative B is anticipated to be $475,000 for administration and related activities, including challenge cost-share program projects. In addition, the state/local challenge cost-share program 50% match would result in another $60,000 yearly in government expenditures, for a total of $535,000 expended yearly by all levels of government for identified administration and implementation activities. This expenditure can be expected to generate a net benefit of $1,190,000 in combined sales, 36 new jobs, and approximately $92,820 in increased tax revenues in the ESA per year. Note that this estimate of benefits is very conservative and incomplete for the reasons discussed below.

Implementation of Alternative B can be expected to generate some additional recreational travel and heritage tourism visits along the route. After a lengthy period of growth, visitation rates for the ESA have been essentially flat for the past several years, and this situation is expected to continue for the foreseeable future. Any new visits created by implementation of Alternative B would generate two beneficial effects: They would improve the visitation and continuing viability of the individual trail sites; and they would contribute to the economic activity of the surrounding communities through increased visitor expenditures.

Currently, the best-documented expenditure rate for tourist travel in New Mexico is $96.45 per day per person. At this point, it is not possible to quantify the number of additional visitors or visitor days that might be generated by implementation of Alternative B. Two important points are stressed:

1. Visitor forecasts to existing and future facilities, such as El Camino Real International Heritage Center and others located on federal, state, and local lands, and on private property, are predicated in part on implementation of an NHT action alternative.

2. It has been the common experience of other designated national historic trails (such as Lewis & Clark, Oregon, Mormon Pioneer, California, and Santa Fe) that increases in visitation are directly related to the quality of the public awareness and promotional programs that are conducted for them. Special events, in particular, greatly improve visitation rates. Therefore, for this analysis, it is too speculative to assume a figure for increased visitation resulting directly from the implementation of Alternative B, but it is recognized that such an increase would occur, and generate additional, but presently unquantified, economic benefits beyond those resulting from direct government expenditures. These benefits are expected to begin immediately upon plan implementation and continue for the indefinite future.

Implementation of Alternative B would result in unquantified social benefits in the ESA. The economic improvements and additional service and hospitality-industry jobs generated by increased visits would enhance the economic stability of communities in the ESA, especially those with higher rates of unemployment. Other benefits would include improved governmental services resulting from increased tax revenues,

and avoidance of future social costs that might otherwise result from continued economic problems. Low-moderate-income families and individuals, at-risk youth, Hispanic residents, and North American Indians (both on reservations and in the larger community) may be expected to find new employment in the service sector. Proportionately, the greatest improvements can be expected in the poorer counties of New Mexico, and to a lesser extent in El Paso County and the Mexican "gateway communities." This alternative would not impact tribal lands directly; North American Indians would generally benefit from induced economic activity from increased visitation.

Alternative B would add to the effectiveness on ongoing NPS and BLM international outreach efforts, such as Habitat Chat, Sister Communities, and the ongoing cooperative agreements between NPS, BLM, and INAH. This would help these programs to achieve objectives of enhancement and sustainable management of natural resources, maximum efficiency in use of fiscal resources, and coordination of cross-border activities, along with improved information sharing and relationship development.

Implementation of Alternative B may result in unquantified adverse impacts to state and local tax revenues. These would occur if private lands are purchased as part of the plan and thus removed from the tax rolls, or if agreements are made with private landowners to preserve sites by reducing taxes to open-space values. This marginal loss of revenue could negatively impact delivery of government services to an unknown degree. This loss may be more than offset by gains in tax revenues associated with increased economic activity stimulated by the alternative. The magnitude of such gain or loss is unknown at this time.

Vegetation/Noxious Weeds/Soils/Water

Impacts under Alternative B would be similar to Alternative A. With augmented visibility for the trail and the lack of interpretation along the trail, increased visitor use may lead to additional damage to soils and vegetation at some locations. There would be no measurable impacts to surface water or ground water resources.

Wildlife

Modification of wildlife habitat is not proposed under this alternative; therefore, there would be no impacts to wildlife.

Cumulative Impacts

Implementation of Alternative B is integral to the cumulative visits and economic activity of all trail resource sites along the route. Improvements at any single site or combination of sites would likewise affect activity elsewhere along the trail. Already mentioned is the nearly completed International Heritage Center, which would add cumulatively to the benefits of the trail along its route. Other certified sites would add to the trail's overall socioeconomic viability.

The benefits of implementing Alternative B to the local and regional economy would include improvements in both permanent and temporary employment opportunities and revenues as the planned maintenance and improvement of existing facilities and programs are implemented. These benefits would be both local and regional in nature, and would also be international ,with enhanced employment opportunities along the Mexican border and southward in the Mexican State of Chihuahua.

Because Alternative B emphasizes off- site interpretation of El Camino Real de Tierra Adentro, cumulative impacts resulting from public visitation at high -value interpretive sites would not occur. These sites would never be opened for public visitation and recreational use as part of heritage tourism.

Increased interest (both legitimate and illegitimate) in the trail would result from public awareness and outreach programs, mostly based out of El Camino Real International Heritage Center. Increased public awareness should result in a growing population of volunteers partici-

pating in local chapters of the statewide site stewardship program. Based on the numbers of sites the Farmington chapter of the site stewards can actively patrol, it is estimated that site stewards in the Rio Abajo region would be able to monitor approximately 300 properties annually. This active patrolling should result in improved site protection and should nullify any increase in looting or "pot-hunting" at El Camino Real - related sites.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Under Alternative A, there would no change from the current expenditures, because there would be no change from the current management program. Current federal land- management activities would continue, and there would be no certification of private lands or special efforts made to identify trail resources or coordinate recreation and interpretive activities. Therefore, there would be no new irreversible and irretrievable commitment of resources created with this alternative.

Under both Alternatives B and the Preferred, there would be irreversible and irretrievable commitments of resources in terms of funds expended for action plan implementation. This amount is estimated at $535,000 per year in combined federal funds and local challenge cost-share program match under each alternative. Other unquantified commitments of resources would be created if state and local agencies, trail associations, and the private sector commit them in coordination with the federal government in implementation of either Alternative B or the Preferred Alternative.

RELATIONSHIP BETWEEN THE LOCAL SHORT-TERM USE OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Current federal land management, and state, local, and private-sector recreation and interpretation activities under Alternative A would continue, and thus would marginally improve the long-term productivity of the socioeconomic environment over both the short and long - term.

Under Alternatives B and the Preferred, enhancement and coordination programs would result in both short-term benefits resulting from construction and long-term benefits from the enhanced operations. The Preferred Alternative would be expected to have the most favorable overall net socioeconomic benefits from increased visitation and economic activity.

UNAVOIDABLE ADVERSE IMPACTS

There would be no unavoidable adverse socioeconomic impacts under Alternative A. The only unavoidable adverse impact under Alternatives B and the Preferred would be the potential loss in local tax revenues from either government purchases of private lands or tax agreements resulting in lowered tax rates.

There is potential under the Preferred Alternative for new surface disturbances totaling 0.9 acres of land in Jornada del Muerto area for recreational development adjacent to areas that have already been subject to human disturbances for many years—primarily roads. Given the relatively small size of these disturbances spread out over five recreation sites (pull-outs) and a short trail, impacts to other resources would be minimal and difficult to measure.

Chapter 5
CONSULTATION/COORDINATION

INTRODUCTION

This chapter describes the consultation and coordination efforts that Camino Real Administration has carried out during preparation of this draft CMP/EIS for El Camino Real de Tierra Adentro National Historic Trail. Work on this draft document began in 2001, following the directive from the Department of the Interior for BLM and NPS to jointly complete a management plan.

Consultation and coordination with federal, state, local, and tribal governments, and interested organizations and individuals, has occurred through formal and informal efforts. Although this public involvement is required by the National Environmental Policy Act of 1969, the Federal Land Policy and Management Act of 1976, and the NPS act of August 25, 1916, both agencies have been placing increasing emphasis on involving communities in planning for the future of the national historic trail.

Consultation and coordination with federal, state, and local governments and non-government organizations in Mexico has occurred informally. A strategy to coordinate with Mexico has been developed jointly by the BLM and NPS, and will be implemented in cooperation with and through Mexico's Instituto Nacional de Antropología e Historia (INAH). INAH is the federal agency in Mexico responsible for cultural resource protection, and it has recognized the significance of the national historic trail in the U.S. and the importance of cooperating with the BLM and NPS. Meetings are planned with the state directors of INAH who have responsibility along El Camino Real de Tierra Adentro Trail in Mexico to discuss the strategy and coordination with Mexico. The BLM, NPS, and INAH have existing agreements that provide the three agencies with the authority to collaborate on this project. The act designating El Camino Real as a national historic trail states that the managing U.S. federal agency(s) will coordinate with Mexico.

FORMAL CONSULTATION

A biological evaluation was completed for this plan that made a "no effect" determination for listed threatened and endangered species. Consultation with the U.S. Fish and Wildlife Service (FWS) under Section 7 of the Endangered Species Act of 1973 is required before the BLM or NPS undertake an action that may affect, and is likely to adversely affect, any federal special-status wildlife or plant species or its designated habitat.

CONSISTENCY WITH OTHER PLANS

BLM planning regulations require that Resource Management Plans (RMPs) be ". . . consistent with officially approved or adopted resource-related plans, and the policies and procedures contained therein, of other Federal agencies, North American Indian tribes, and State and local governments, so long as the guidance and management plans are also consistent with the purposes, policies and programs of Federal laws and regulations applicable to public lands. . . ." (43 CFR 1610.3-2). NPS Management Policies (2001) for Park Planning call for cooperative regional planning and ecosystem planning whenever possible. To ensure such consistency, Camino Real Administration has sent letters to the federal, state, and tribal governments and local agencies listed in Table 11.

No inconsistencies are known to exist between the plan and officially approved and adopted resource plans of these other entities. Camino Real Administration will continue coordination and consultation with federal, state, and local agencies and tribal governments.

Table 11: STAKEHOLDERS/DOCUMENT RECIPIENTS

Partial List
Stakeholders/Document Recipients

FEDERAL GOVERNMENT

International Boundary and Water Commission
National Aeronautics and Space Administration
U.S. Bureau of Indian Affairs
U.S. Bureau of Reclamation
U.S. Congressional Delegation
- Senator Jeff Bingaman, (D) NM
- Senator Pete V. Domenici, (R) NM
- Senator Phil Gramm, (R) TX
- Senator Kay Bailey Hutchison, (R) TX
- Representative Joe Skeen, (R) 1, NM
- Representative Tom Udall, (D) 3, NM
- Representative Heather Wilson, (R) 2, NM
- Representative Silvestre Reyes, (D) 16, TX

U.S. Department of Agriculture
- Agriculture Experimental Station
- USDA Forest Service
- Natural Resources Conservation Service

U.S. Department of the Army
U.S. Army Corps of Engineers
U.S. Department of Defense
- White Sands Missile Range

U.S. Department of Transportation
- Federal Highway Administration

U.S. Department of Energy
- Los Alamos National Laboratory

U.S. Department of the Interior
- Environmental Policy and Compliance

U.S. Environmental Protection Agency
- Regional Project Manager

U.S. Fish & Wildlife Service

STATE GOVERNMENTS

New Mexico
- Department of Agriculture
- Department of Economic Development
- Department of Game & Fish
- Department of Parks & Recreation
- Department of Tourism
- Environment Department
- Museum of New Mexico
- Office of Cultural Affairs
- Office of Indian Affairs
- Secretary of State
- State Energy & Resources Department
- State Highway & Transportation Department
- State Historic Preservation Officer
- State Land Commissioner
- State Records Center and Archives

Texas
- Department of Parks and Wildlife
- Department of Transportation
- Historical Commission
- State Historic Preservation Officer

New Mexico and Texas State Congressional Delegations
New Mexico and Texas State Governors' Offices

TRIBAL GOVERNMENTS

Acoma
All Indian Pueblo Council
Cochiti
Eight Northern Pueblo Indian Council
Five Sandoval Indian Pueblos
Fort Sill Apache
Hopi
Isleta
Jicarilla Apache
Laguna
Mescalero Apache
Nambe
Navajo Nation
(Ramah, Tohajiilee, and Alamo Chapters)
Picuris
Piro-Manso-Tiwa
Pojoaque
San Felipe
San Ildefonso
San Juan
Sandia
Santa Ana
Santa Clara
Santo Domingo
Southern Ute
Taos
Tesuque
Tortugas
Ute Mountain Ute
Ysleta del Sur
Zia
Zuni

LOCAL GOVERNMENTS

City Governments
City of Albuquerque, New Mexico
City of El Paso, Texas
City of Española, New Mexico
City of Santa Fe, New Mexico
City of Socorro, New Mexico
City of Truth or Consequences, New Mexico

County Commissioners/ Managers/Planning Offices

Doña Ana County, New Mexico
El Paso County, Texas
Rio Arriba County, New Mexico
Sandoval County, New Mexico
Santa Fe County, New Mexico
Sierra County, New Mexico
Socorro County, New Mexico
Valencia County, New Mexico

EDUCATIONAL INSTITUTIONS

El Paso Community College
New Mexico Institute of Mining and Technology – Socorro
New Mexico State University
Northern New Mexico Community College
Northwestern University – Evanston, Illinois
Santa Fe Community College
Southern Methodist University – Taos
University of California – San Diego
University of New Mexico – Albuquerque
University of Texas – El Paso
Center for Inter-American and Border Studies

MEXICO

El Camino Real de Tierra Adentro Association
Federal, state, local, and non-government organizations
Municipalities
San Francisco del Oro
Santa Bárbara
Valle de Allende
Ciudad Chihuahua
State of Chihuahua
Congreso de Chihuahua (State Legislature)
Governor of Chihuahua
External Affairs Director
Minister of Education
Outreach Director
University Autonoma of Chihuahua
Instituto Nacional de Antropología e Historia (INAH)
University of Chihuahua

PUBLIC PARTICIPATION

Public participation in this planning effort is a continual process that occurs throughout the development of the plan, and beyond. In addition to formal public participation, informal contacts occur frequently with public land users and interested persons through meetings, field trips, telephone calls, and letters. All applicable public participation is currently documented, analyzed, and kept on file at the NPS Long Distance Trails Group Office in Santa Fe.

Camino real Administration published a notice in the *Federal Register* on May 18, 2001 (Vol. 66, No. 97, pp. 27682 -4), announcing the formal start of this planning process.

The agencies held several meetings to determine the scope of the planning effort, develop planning issues, and review planning criteria (see Table 12). Prior to these meetings, a letter was sent to numerous individuals and groups, inviting them to participate by attending the meetings and/or providing written comments. Summaries of the scoping meetings were mailed to all individuals and organizations on the mailing list in October 2001. An update, *El Camino Real News*, was printed and mailed in January 2002.

Table 12: Public Meetings

Meeting/Group(s)	Location	Date
Scoping	Las Cruces, NM	June 13, 2001
Scoping	El Paso, TX	June 14, 2001
Scoping	Truth or Consequences, NM	June 18, 2001
Scoping	Socorro, NM	June 19, 2001
Scoping	Albuquerque, NM	June 22, 2001
Scoping	Alcalde, NM	June 25, 2001
Scoping	Santa Fe, NM	June 28, 2001
Community Design Session	Albuquerque, NM	August 22, 2001
Community Design Session	Espñola, NM	August 23, 2001
Community Design Session	El Paso, TM	September 19, 2001
Appreciative Inquiry Session	Sunland, NM	October 15, 2001
Appreciative Inquiry Session	Socorro, NM	October 16, 2001
Appreciative Inquiry Session	Albuquerque, NM	October 17, 2001
Appreciative Inquiry Session	Española, NM	October 20, 2001

NORTH AMERICAN INDIAN CONSULTATION

Letters were sent to all of the North American Indian groups listed in Table 11 on May 18, 2001, asking them to meet with El Camino Real planning team and participate in the NHT planning process. Faxes were sent to all North American Indian groups in June 2001 to also invite them to the public scoping meetings. Letters were also sent in October 2001 inviting participation in the Appreciative Inquiry Sessions. Table 13 lists meetings with North American Indians that have occurred to date.

Table 13: North American Indian Meetings

Meeting/Group(s)	Location	Date
Ysleta del Sur Pueblo	Ysleta del sur Pueblo, TX	July 24, 2001
San Juan Pueblo	San Juan Pueblo, NM	August 15, 2001
Santa Domingo Pueblo	Santa Domingo Pueblo, NM	October 17, 2001
Pueblo of Sandia	Pueblo of Sandia, NM	October 23, 2001
Santa Clara Pueblo	Santa Clara Pueblo, NM	October 25, 2001

PREPARERS OF THE PLAN

This document was prepared by an interdisciplinary team of resource specialists from NPS and BLM. Table 14 lists the names and qualifications of the planning team members.

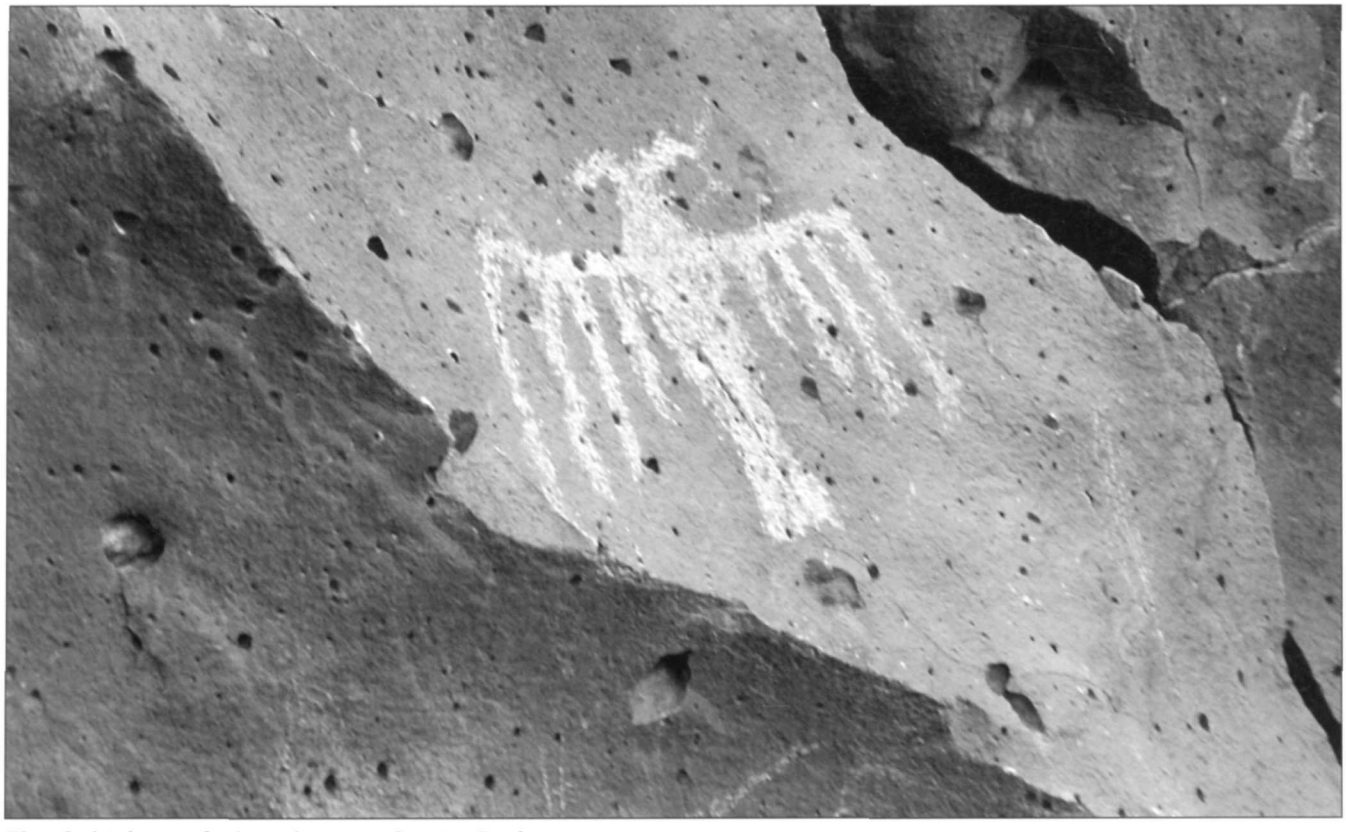
Table 14: List of Preparers

Name	Assignment	Education	Related Experience*
Robert Alexander	Vegetation/Weeds/Grazing (BLM-Santa Fe)	B.S., Range Science	BLM – 33 years
John Bristol	Visual Resources (BLM-Albuquerque)	B.S., Landscape Architecture	BLM/USFS – 30 years
Sharon A. Brown	Planning/Visitor Experience/Recreation (NPS-Santa Fe)	Ph.D., American Studies	NPS – 25 years
Charles Carroll	Planning/Environmental Planner	B.A., Anthropology	Environmental Science Private Industry – 8 years BLM – 21 years
Kevin Carson	Visual/Recreation Resources (BLM-Socorro)	B.S., Park Administration	BLM/NPS – 24 years
Bill Dalness	Energy/Minerals (BLM-Santa Fe)	M.S., Geology	BLM – 30 years
Joyce Fierro	International Grants and Partnerships coordinator, BLM, NMSO	International, Grants, Partnerships	BLM – 26 years
Oswaldo Gomez	Recreation/Visual Resources (BLM-Las Cruces)	B.S., Biology	BLM/NPS – 20 years
Jane Harvey	Writer-Editor (NPS-Santa Fe)	B.A., Anthropology	NPS – 24 years
Pamela Herrera Olivas	Wildlife/T&E (BLM-Santa Fe	M.S., Environmental Science	BLM – 6 years
Clarence Hougland	Lands and Realty (BLM-Santa Fe)	B.S., Recreation/ Land Management	BLM – 30 years
Terry A. Humphrey	Joint Team Leader (BLM-Santa Fe)	B.S., Recreation Management, Foresty	BLM/NPS/USFS – 22 years
Patricio R. Martinez	Geographic Information (BLM-Santa Fe)	GIS Specialist	BLM – 12 years
Harry Myers	Joint Team Leader (NPS-Santa Fe)	B.S., Recreation and Park Administration	NPS – 28 years
Ed Natay	American Indian Trust Responsibilities (NPS-Denver/Santa Fe, Intermountain Regional Office Staff)	American Indians Programs Administration/ Coordination	NPS – 30 years Indian Assistance/Tribal Liaison
Ramón R. Olivas	International Coordination (NPS-Las Cruces)	M.S., Wildlife Management	NPS – 18 years
John Roney	Cultural Resources (BLM-Albuquerque)	M.A., Anthrolopogy	BLM – 24 years
Dave Ruppert	Ethnography (NSP-Denver)	Ph.D., Cultural Anthrolopogy	BLM/OFI/NPS – 20 years
Joseph P. Sánchez	Spanish Colonial Research Center (NPS-Albuquerque)	Ph.D., History	University professor of history – 12 years NPS – 24 years

Table 14: List of Preparers continued			
Name	**Assignment**	**Education**	**Related Experience***
Pam Smith	Cultural Resources (BLM-Las Cruces)	B.S., Anthropology	BLM/USFS – 21 years
J. W. Whitney	Advisor (BLM-Santa Fe)	B.S., Botany	BLM – 34 years
Len Brooks	Advisor (BLM-Las Cruces)		
John Conoboy	Advisor (NPS-Santa Fe)		
Sam DesGeorges	Advisor (BLM-Taos)		
Lynn Engdahl	North American Indian Coordination (BLM-Washington		
Stephen Fosberg	Advisor (BLM-Santa Fe)		
Jon Hertz	Advisor (BLM-Socorro)		
Linda Ray	Visual Information Specialist (NPS-Denver)		
Angela West	Advisor (BLM-Washington)		

Note: Acronyms are as follows:
BLM – Bureau of Land Management
NPS – National Park Service
OFI – Office of the Federal Inspector
USFS – USDA Forest Service

APPENDIXES/GLOSSARY/BIBLIOGRAPHY



Thunderbird petroglyph on the upper Camino Real.

Appendix A:
EL CAMINO REAL DE TIERRA ADENTRO NATIONAL HISTORIC TRAIL ESTABLISHMENT ACT (P.L. 106-307)

EL CAMINO REAL DE TIERRA ADENTRO NATIONAL HISTORIC TRAIL ACT

Public Law 106–307
106th Congress

An Act

Oct. 13, 2000
[S. 366]

To amend the National Trails System Act to designate El Camino Real de Tierra Adentro as a National Historic Trail.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

El Camino Real de Tierra Adentro National Historic Trail Act.
New Mexico.
Texas.
16 USC 1241 note.

SECTION 1. SHORT TITLE.

This Act may be cited as the "El Camino Real de Tierra Adentro National Historic Trail Act".

SEC. 2. FINDINGS.

The Congress finds the following:

(1) El Camino Real de Tierra Adentro (the Royal Road of the Interior), served as the primary route between the colonial Spanish capital of Mexico City and the Spanish provincial capitals at San Juan de Los Caballeros (1598–1600), San Gabriel (1600–1609) and then Santa Fe (1610–1821).

(2) The portion of El Camino Real de Tierra Adentro that resided in what is now the United States extended between El Paso, Texas and present San Juan Pueblo, New Mexico, a distance of 404 miles;

(3) El Camino Real is a symbol of the cultural interaction between nations and ethnic groups and of the commercial exchange that made possible the development and growth of the borderland;

(4) American Indian groups, especially the Pueblo Indians of the Rio Grande, developed trails for trade long before Europeans arrived;

(5) In 1598, Juan de Onate led a Spanish military expedition along those trails to establish the northern portion of El Camino Real;

(6) During the Mexican National Period and part of the United States Territorial Period, El Camino Real de Tierra Adentro facilitated the emigration of people to New Mexico and other areas that would become the United States;

(7) The exploration, conquest, colonization, settlement, religious conversion, and military occupation of a large area of the borderlands was made possible by this route, whose historical period extended from 1598 to 1882;

(8) American Indians, European emigrants, miners, ranchers, soldiers, and missionaries used El Camino Real during the historic development of the borderlands. These travelers promoted cultural interaction among Spaniards, other Europeans, American Indians, Mexicans, and Americans;

(9) El Camino Real fostered the spread of Catholicism, mining, an extensive network of commerce, and ethnic and cultural traditions including music, folklore, medicine, foods, architecture, language, place names, irrigation systems, and Spanish law.

SEC. 3. AUTHORIZATION AND ADMINISTRATION.

Section 5(a) of the National Trails System Act (16 U.S.C. 1244(a)) is amended—

(1) by designating the paragraphs relating to the California National Historic Trail, the Pony Express National Historic Trail, and the Selma to Montgomery National Historic Trail as paragraphs (18), (19), and (20), respectively; and

(2) by adding at the end the following:

"(21) EL CAMINO REAL DE TIERRA ADENTRO.—

"(A) El Camino Real de Tierra Adentro (the Royal Road of the Interior) National Historic Trail, a 404 mile long trail from the Rio Grande near El Paso, Texas to San Juan Pueblo, New Mexico, as generally depicted on the maps entitled 'United States Route: El Camino Real de Tierra Adentro', contained in the report prepared pursuant to subsection (b) entitled 'National Historic Trail Feasibility Study and Environmental Assessment: El Camino Real de Tierra Adentro, Texas-New Mexico', dated March 1997.

"(B) MAP.—A map generally depicting the trail shall be on file and available for public inspection in the Office of the National Park Service, Department of the Interior.

"(C) ADMINISTRATION.—The Trail shall be administered by the Secretary of the Interior.

"(D) LAND ACQUISITION.—No lands or interests therein outside the exterior boundaries of any federally administered area may be acquired by the Federal Government for El Camino Real de Tierra Adentro except with the consent of the owner thereof.

"(E) VOLUNTEER GROUPS; CONSULTATION.—The Secretary of the Interior shall—

"(i) encourage volunteer trail groups to participate in the development and maintenance of the trail; and

"(ii) consult with other affected Federal, State, local governmental, and tribal agencies in the administration of the trail.

"(F) COORDINATION OF ACTIVITIES.—The Secretary of the Interior may coordinate with United States and Mexican public and non-governmental organizations, academic institutions, and, in consultation with the Secretary of State, the government of Mexico and its political subdivisions, for the purpose of exchanging trail information and research, fostering trail preservation and educational programs, providing technical assistance, and working to establish an international historic trail with complementary preservation and education programs in each nation.".

Approved October 13, 2000.

LEGISLATIVE HISTORY—S. 366:

SENATE REPORTS: No. 106–22 (Comm. on Energy and Natural Resources).
CONGRESSIONAL RECORD:
Vol. 145 (1999): Nov. 19, considered and passed Senate.
Vol. 146 (2000): Oct. 3, considered and passed House.

○

Appendix B
NATIONAL TRAILS SYSTEM ACT (P.L. 90-543), AS AMENDED

THE NATIONAL TRAILS SYSTEM ACT
(P.L. 90-543)
(16 U.S.C. 1241-1251)
as amended through P.L. 106-509, November 13, 2000

AN ACT

To establish a national trails system, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SHORT TITLE

SECTION 1. This Act may be cited as the "National Trails System Act".

STATEMENT OF POLICY

SEC. 2. [16USC1241]
(a) In order to provide for the ever- increasing outdoor recreation needs of an expanding population and in order to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open- air, outdoor areas and historic resources of the Nation, trails should be established (I) primarily, near the urban areas of the Nation, and (ii) secondarily, within scenic areas and along historic travel routes of the Nation which are often more remotely located.

(b) The purpose of this Act is to provide the means for attaining these objectives by instituting a national system of recreation, scenic and historic trails, by designating the Appalachian Trail and the Pacific Crest Trail as the initial components of that system, and by prescribing the methods by which, and standards according to which, additional components may be added to the system.

(c) The Congress recognizes the valuable contributions that volunteers and private, nonprofit trail groups have made to the development and maintenance of the Nation's trails. In recognition of these contributions, it is further the purpose of this Act to encourage and assist volunteer citizen involvement in the planning, development, maintenance, and management, where appropriate, of trails.

NATIONAL TRAILS SYSTEM

SEC. 3. [16USC1242] (a) The national system of trails shall be composed of the following:

(1) National recreation trails, established as provided in section 4 of this Act, which will provide a variety of outdoor recreation uses in or reasonably accessible to urban areas.

(2) National scenic trails, established as provided in section 5 of this Act, which will be extended trails so located as to provide for maximum outdoor recreation potential and for the

conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which such trails may pass. National scenic trails may be located so as to represent desert, marsh, grassland, mountain, canyon, river, forest, and other areas, as well as landforms which exhibit significant characteristics of the physiographic regions of the Nation.

(3) National historic trails, established as provided in section 5 of this Act, which will be extended trails which follow as closely as possible and practicable the original trails or routes of travel of national historic significance. Designation of such trails or routes shall be continuous, but the established or developed trail, and the acquisition thereof, need not be continuous onsite. National historic trails shall have as their purpose the identification and protection of the historic route and its historic remnants and artifacts for public use and enjoyment. Only those selected land and water based components of a historic trail which are on federally owned lands and which meet the national historic trail criteria established in this Act are included as Federal protection components of a national historic trail. The appropriate Secretary may certify other lands as protected segments of an historic trail upon application from State or local governmental agencies or private interests involved if such segments meet the national historic trail criteria established in this Act and such criteria supplementary thereto as the appropriate Secretary may prescribe, and are administered by such agencies or interests without expense to the United States.

(4) Connecting or side trails, established as provided in section 6 of this Act, which will provide additional points of public access to national recreation, national scenic or national historic trails or which will provide connections between such trails.

The Secretary of the Interior and the Secretary of Agriculture, in consultation with appropriate governmental agencies and public and private organizations, shall establish a uniform marker for the national trails system.

(b) For purposes of this section, the term 'extended trails' means trails or trail segments which total at least one hundred miles in length, except that historic trails of less than one hundred miles may be designated as extended trails. While it is desirable that extended trails be continuous, studies of such trails may conclude that it is feasible to propose one or more trail segments which, in the aggregate, constitute at least one hundred miles in length.

NATIONAL RECREATION TRAILS

SEC. 4. [16USC1243]

(a) The Secretary of the Interior, or the Secretary of Agriculture where lands administered by him are involved, may establish and designate national recreation trails, with the consent of the Federal agency, State, or political subdivision having jurisdiction over the lands involved, upon finding that —

(I) such trails are reasonably accessible to urban areas, and, or

(ii) such trails meet the criteria established in this Act and such supplementary criteria as he may prescribe.

(b) As provided in this section, trails within park, forest, and other recreation areas administered by the Secretary of the Interior or the Secretary of Agriculture or in other federally administered areas may be established and designated as "National Recreation Trails" by the appropriate Secretary and, when no Federal land acquisition is involved —

(i) trails in or reasonably accessible to urban areas may be designated as "National Recreation Trails" by the appropriate Secretary with the consent of the States, their political subdivisions, or other appropriate administering agencies;

(ii) trails within park, forest, and other recreation areas owned or administered by States may be designated as "National Recreation Trails" by the appropriate Secretary with the consent of the State; and

(iii) trails on privately owned lands may be designated 'National Recreation Trails' by the appropriate Secretary with the written consent of the owner of the property involved.

NATIONAL SCENIC AND NATIONAL HISTORIC TRAILS

SEC. 5. [16USC1244] (a) National scenic and national historic trails shall be authorized and designated only by Act of Congress. There are hereby established the following National Scenic and National Historic Trails:

(21) El Camino Real de tierra adentro —

(A) El Camino Real de Tierra Adentro (the Royal Road of the Interior) National Historic Trail, a 404 mile long trail from Rio Grande near El Paso, Texas to San Juan Pueblo, New Mexico, as generally depicted on the maps entitled 'United States Route: El Camino Real de Tierra Adentro,' contained in the report prepared pursuant to subsection (b) entitled 'National Historic Trail Feasibility Study and Environmental Assessment: El Camino Real de Tierra Adentro, Texas-New Mexico,' dated March 1997.

(B) MAP - A map generally depicting the trail shall be on file and available for public inspection in the Office of the National Park Service, Department of the Interior.

(C) ADMINISTRATION - The Trail shall be administered by the Secretary of the Interior.

(D) LAND ACQUISTION - No lands or interests therein outside the exterior boundaries of any federally administered area may be acquired by the Federal Goverment for El Camino Real de Tierra Adentro except with the consent of the owner thereof.

(E) VOLUNTEER GROUPS; CONSULTATION - The Secretary of the Interior shall —

(i) encourage volunteer groups to participate in the development and maintenance of the trail; and

(ii) consult with other affected Federal, State, local governmental, and tribal agencies in the administration of the trail.

(F) COORDINATION OF ACTIVITIES -The Secretary of the Interior may coordinate with United States and Mexican public and non-governmental organizations, academic institutions, and in sonsultation with the Secretray of State, the government of Mexico and its political subdivisions, for

the purpose of exchanging trail information and research, fostering trail preservation and education programs, providing technical assistance, and working to establish an international historic trail with complementary preservation and educatioin programs in each nation.

(b) The Secretary of the Interior, through the agency most likely to administer such trail, and the Secretary of Agriculture where lands administered by him are involved, shall make such additional studies as are herein or may hereafter be authorized by the Congress for the purpose of determining the feasibility and desirability of designating other trails as national scenic or national historic trails. Such studies shall be made in consultation with the heads of other Federal agencies administering lands through which such additional proposed trails would pass and in cooperation with interested interstate, State, and local governmental agencies, public and private organizations, and landowners and land users concerned. The feasibility of designating a trail shall be determined on the basis of an evaluation of whether or not it is physically possible to develop a trail along a route being studied, and whether the development of a trail would be financially feasible. The studies listed in subsection (c) of this section shall be completed and submitted to the Congress, with recommendations as to the suitability of trail designation, not later than three complete fiscal years from the date of enactment of their addition to this subsection, or from the date of enactment of this sentence, whichever is later. Such studies, when submitted, shall be printed as a House or Senate document, and shall include, but not be limited to:

(1) the proposed route of such trail (including maps and illustrations);

(2) the areas adjacent to such trails, to be utilized for scenic, historic, natural, cultural, or developmental purposes;

3) the characteristics which, in the judgment of the appropriate Secretary, make the proposed trail worthy of designation as a national scenic or national historic trail; and in the case of national historic trails the report shall include the recommendation of the Secretary of the Interior's National Park System Advisory Board as to the national historic significance based on the criteria developed under the Historic Sites Act of 1935 (40 Stat. 666; 16 U.S.C. 461);

(4) the current status of land ownership and current and potential use along the designated route;

(5) the estimated cost of acquisition of lands or interest in lands, if any;

(6) the plans for developing and maintaining the trail and the cost thereof;

(7) the proposed Federal administering agency (which, in the case of a national scenic trail wholly or substantially within a national forest, shall be the Department of Agriculture);

(8) the extent to which a State or its political subdivisions and public and private organizations might reasonably be expected to participate in acquiring the necessary lands and in the administration thereof;

(9) the relative uses of the lands involved, including: the number of anticipated visitor- days for the entire length of, as well as for segments of, such trail; the number

of months which such trail, or segments thereof, will be open for recreation purposes; the economic and social benefits which might accrue from alternate land uses; and the estimated man- years of civilian employment and expenditures expected for the purposes of maintenance, supervision, and regulation of such trail;

(10) the anticipated impact of public outdoor recreation use on the preservation of a proposed national historic trail and its related historic and archeological features and settings, including the measures proposed to ensure evaluation and preservation of the values that contribute to their national historic significance; and

(11) To qualify for designation as a national historic trail, a trail must meet all three of the following criteria:

(A) It must be a trail or route established by historic use and must be historically significant as a result of that use. The route need not currently exist as a discernible trail to qualify, but its location must be sufficiently known to permit evaluation of public recreation and historical interest potential. A designated trail should generally accurately follow the historic route, but may deviate somewhat on occasion of necessity to avoid difficult routing through subsequent development, or to provide some route variations offering a more pleasurable recreational experience. Such deviations shall be so noted on site. Trail segments no longer possible to travel by trail due to subsequent development as motorized transportation routes may be designated and marked onsite as segments which link to the historic trail.

(B) It must be of national significance with respect to any of several broad facets of American history, such as trade and commerce, exploration, migration and settlement, or military campaigns. To qualify as nationally significant, historic use of the trail must have had a far reaching effect on broad patterns of American culture. Trails significant in the history of native Americans may be included.

(C) It must have significant potential for public recreational use or historical interest based on historic interpretation and appreciation. The potential for such use is generally greater along roadless segments developed as historic trails and at historic sites associated with the trail. The presence of recreation potential not related to historic appreciation is not sufficient justification for designation under this category.

(c) The following routes shall be studied in accordance with the objectives outlined in subsection (b) of this section.

(1)

(36) (A) El Camino Real de Tierra Adentro, the approximately 1,800 mile route extending from Mexico City, Mexico, across the international border at El Paso, Texas, to Santa Fe, New Mexico.

(B) The study shall (i) examine changing routes within the general corridor; (ii) examine major connecting branch routes; and (iii) give due consideration to alternative name designations.

(C) The Secretary of the Interior is authorized to work in cooperation with the Government of Mexico (including, but not limited to providing technical assistance) to determine the suitability and feasibility of establishing an international historic route along the El Camino Real de Tierra Adentro.

(d) The Secretary charged with the administration of each respective trail shall, within one year of the date of the addition of any national scenic or national historic trail to the system, and within sixty days of the enactment of this sentence for the Appalachian and Pacific Crest National Scenic Trails, establish an advisory council for each such trail, each of which councils shall expire ten years from the date of its establishment, except that the Advisory Council established for the Iditarod Historic Trail shall expire twenty years from the date of its establishment. If the appropriate Secretary is unable to establish such an advisory council because of the lack of adequate public interest, the Secretary shall so advise the appropriate committees of the Congress. The appropriate Secretary shall consult with such council from time to time with respect to matters relating to the trail, including the selection of rights-of-way, standards for the erection and maintenance of markers along the trail, and the administration of the trail. The members of each advisory council, which shall not exceed thirty-five in number, shall serve for a term of two years and without compensation as such, but the Secretary may pay, upon vouchers signed by the chairman of the council, the expenses reasonably incurred by the council and its members in carrying out their responsibilities under this section. Members of each council shall be appointed by the appropriate Secretary as follows:

(1) the head of each Federal department or independent agency administering lands through which the trail route passes, or his designee;

(2) a member appointed to represent each State through which the trail passes, and such appointments shall be made from recommendations of the Governors of such States;

(3) one or more members appointed to represent private organizations, including corporate and individual landowners and land users, which in the opinion of the Secretary, have an established and recognized interest in the trail, and such appointments shall be made from recommendations of the heads of such organizations: Provided, That the Appalachian Trail Conference shall be represented by a sufficient number of persons to represent the various sections of the country through which the Appalachian Trail passes; and

(4) the Secretary shall designate one member to be chairman and shall fill vacancies in the same manner as the original appointment.

(e) Within two complete fiscal years of the date of enactment of legislation designating a national scenic trail, except for the Continental Divide National Scenic Trail and the North Country National Scenic Trail, as part of the system, and within two complete fiscal years of the date of enactment of this subsection for the Pacific Crest and Appalachian Trails, the responsible Secretary shall, after full consultation with affected Federal land managing agencies, the Governors of the affected States, the relevant advisory council established pursuant to section 5(d), and the Appalachian Trail Conference in the case of the Appalachian Trail, submit to the Committee on Interior and Insular Affairs of the House of Representatives and the Committee on Energy and Natural Resources of the Senate, a comprehensive plan for the acquisition, management, development, and use of the trail, including but not limited to, the following items:

(1) specific objectives and practices to be observed in the management of the trail, including the identification of all significant natural, historical, and cultural resources to be preserved (along with high potential historic sites and high potential route segments in the case of national historic trails), details of any anticipated

cooperative agreements to be consummated with other entities, and an identified carrying capacity of the trail and a plan for its implementation;

(2) an acquisition or protection plan, by fiscal year for all lands to be acquired by fee title or lesser interest, along with detailed explanation of anticipated necessary cooperative agreements for any lands not to be acquired; and

(3) general and site- specific development plans including anticipated costs.

(f) Within two complete fiscal years of the date of enactment of legislation designating a national historic trail or the Continental Divide National Scenic Trail or the North Country National Scenic Trail as part of the system, the responsible Secretary shall, after full consultation with affected Federal land managing agencies, the Governors of the affected States, and the relevant Advisory Council established pursuant to section 5(d) of this Act, submit to the Committee on Interior and Insular Affairs of the House of Representatives and the Committee on Energy and Natural Resources of the Senate, a comprehensive plan for the management, and use of the trail, including but not limited to, the following items:

(1) specific objectives and practices to be observed in the management of the trail, including the identification of all significant natural, historical, and cultural resources to be preserved, details of any anticipated cooperative agreements to be consummated with State and local government agencies or private interests, and for national scenic or national historic trails an identified carrying capacity of the trail and a plan for its implementation;

(2) the process to be followed by the appropriate Secretary to implement the marking requirements established in section 7(c) of this Act;

(3) a protection plan for any high potential historic sites or high potential route segments; and

(4) general and site-specific development plans, including anticipated costs.

CONNECTING AND SIDE TRAILS

SEC. 6. [16USC1245] Connecting or side trails within park, forest, and other recreation areas administered by the Secretary of the Interior or Secretary of Agriculture may be established, designated, and marked by the appropriate Secretary as components of a national recreation, national scenic or national historic trail. When no Federal land acquisition is involved, connecting or side trails may be located across lands administered by interstate, State, or local governmental agencies with their consent, or, where the appropriate Secretary deems necessary or desirable, on privately owned lands with the consent of the landowners. Applications for approval and designation of connecting and side trails on non- Federal lands shall be submitted to the appropriate Secretary.

ADMINISTRATION AND DEVELOPMENT

SEC. 7. [16USC1246]

(a) (1) (A) The Secretary charged with the overall administration of a trail pursuant to section 5(a) shall, in administering and managing the trail, consult with the heads of all other affected State and Federal agencies. Nothing contained in this Act shall be deemed to transfer among Federal agencies any management responsibilities established under any other law for federally administered lands which are components of the National Trails System. Any transfer of management responsibilities may be carried out between the Secretary of the Interior and the Secretary of Agriculture only as provided under subparagraph (B).

(B) The Secretary charged with the overall administration of any trail pursuant to section 5(a) may transfer management of any specified trail segment of such trail to the other appropriate Secretary pursuant to a joint memorandum of agreement containing such terms and conditions as the Secretaries consider most appropriate to accomplish the purposes of this Act. During any period in which management responsibilities for any trail segment are transferred under such an agreement, the management of any such segment shall be subject to the laws, rules, and regulations of the Secretary provided with the management authority under the agreement except to such extent as the agreement may otherwise expressly provide.

(2) Pursuant to section 5(a), the appropriate Secretary shall select the rights-of-way for national scenic and national historic trails and shall publish notice thereof of the availability of appropriate maps or descriptions in the Federal Register; Provided, That in selecting the rights-of-way full consideration shall be given to minimizing the adverse effects upon the adjacent landowner or user and his operation. Development and management of each segment of the National Trails System shall be designed to harmonize with and complement any established multiple-use plans for the specific area in order to insure continued maximum benefits from the land. The location and width of such rights-of-way across Federal lands under the jurisdiction of another Federal agency shall be by agreement between the head of that agency and the appropriate Secretary. In selecting rights-of-way for trail purposes, the Secretary shall obtain the advice and assistance of the States, local governments, private organizations, and landowners and land users concerned.

(b) After publication of notice of the availability of appropriate maps or descriptions in the Federal Register, the Secretary charged with the administration of a national scenic or national historic trail may relocate segments of a national scenic or national historic trail right-of-way with the concurrence of the head of the Federal agency having jurisdiction over the lands involved, upon a determination that: (I) Such a relocation is necessary to preserve the purposes for which the trail was established, or (ii) the relocation is necessary to promote a sound land management program in accordance with established multiple-use principles: Provided, That a substantial relocation of the rights-of-way for such trail shall be by Act of Congress.

(c) National scenic or national historic trails may contain campsites, shelters, and related-public-use facilities. Other uses along the trail, which will not substantially interfere with the nature and purposes of the trail, may be permitted by the Secretary charged with the administration of the trail. Reasonable efforts shall be made to provide sufficient access opportunities to such trails and, to the extent practicable, efforts be made to avoid activities incompatible with the purposes for which such trails were established. The use of motorized vehicles by the general public along any national scenic trail shall be prohibited and nothing in this Act shall be construed as authorizing the use of motorized vehicles within the natural and historical areas of the national park system, the national wildlife refuge system, the national wilderness preservation system where they are presently prohibited or on other Federal lands where trails are designated as being closed to such use by the appropriate Secretary: Provided, That the Secretary charged with the adminis-

tration of such trail shall establish regulations which shall authorize the use of motorized vehicles when, in his judgment, such vehicles are necessary to meet emergencies or to enable adjacent landowners or land users to have reasonable access to their lands or timber rights: Provided further, That private lands included in the national recreation, national scenic, or national historic trails by cooperative agreement of a landowner shall not preclude such owner from using motorized vehicles on or across such trails or adjacent lands from time to time in accordance with regulations to be established by the appropriate Secretary. Where a national historic trail follows existing public roads, developed rights- of- way or waterways, and similar features of man's nonhistorically related development, approximating the original location of a historic route, such segments may be marked to facilitate retracement of the historic route, and where a national historic trail parallels an existing public road, such road may be marked to commemorate the historic route. Other uses along the historic trails and the Continental Divide National Scenic Trail, which will not substantially interfere with the nature and purposes of the trail, and which, at the time of designation, are allowed by administrative regulations, including the use of motorized vehicles, shall be permitted by the Secretary charged with administration of the trail. The Secretary of the Interior and the Secretary of Agriculture, in consultation with appropriate governmental agencies and public and private organizations, shall establish a uniform marker, including thereon an appropriate and distinctive symbol for each national recreation, national scenic, and national historic trail. Where the trails cross lands administered by Federal agencies such markers shall be erected at appropriate points along the trails and maintained by the Federal agency administering the trail in accordance with standards established by the appropriate Secretary and where the trails cross non- Federal lands, in accordance with written cooperative agreements, the appropriate Secretary shall provide such uniform markers to cooperating agencies and shall require such agencies to erect and maintain them in accordance with the standards established. The appropriate Secretary may also provide for trail interpretation sites, which shall be located at historic sites along the route of any national scenic or national historic trail, in order to present information to the public about the trail, at the lowest possible cost, with emphasis on the portion of the trail passing through the State in which the site is located. Wherever possible, the sites shall be maintained by a State agency under a cooperative agreement between the appropriate Secretary and the State agency.

(d) Within the exterior boundaries of areas under their administration that are included in the right- of- way selected for a national recreation, national scenic, or national historic trail, the heads of Federal agencies may use lands for trail purposes and may acquire lands or interests in lands by written cooperative agreement, donation, purchase with donated or appropriated funds or exchange.

(e) Where the lands included in a national scenic or national historic trail right- of- way are outside of the exterior boundaries of federally administered areas, the Secretary charged with the administration of such trail shall encourage the States or local governments involved (1) to enter into written cooperative agreements with landowners, private organizations, and individuals to provide the necessary trail right- of- way, or (2) to acquire such lands or interests therein to be utilized as segments of the national scenic or national historic trail: Provided, That if the State or local governments fail to enter into such written cooperative agreements or to acquire such lands or interests therein after notice of the selection of the right- of- way is published, the appropriate Secretary, may (i) enter into such agreements with landowners, States, local governments, private organizations, and individuals for the use of lands for trail purposes, or (ii) acquire private lands or interests therein by donation, purchase with donated or appropriated funds or exchange in accordance with the provisions of subsection (f) of this section: Provided further, That the appropriate Secretary may acquire lands or interests therein from local governments or governmental corporations with the consent of such entities. The lands involved in such rights- of- way should be acquired in fee, if other methods of public control are not sufficient to assure their use for the purpose for which they are acquired: Provided, That if the Secretary charged with the administration of such trail permanently relocates the right- of- way and disposes of all title or interest in the land,

the original owner, or his heirs or assigns, shall be offered, by notice given at the former owner's last known address, the right of first refusal at the fair market price.

(f) (1) The Secretary of the Interior, in the exercise of his exchange authority, may accept title to any non- Federal property within the right- of- way and in exchange therefor he may convey to the grantor of such property any federally owned property under his jurisdiction which is located in the State wherein such property is located and which he classifies as suitable for exchange or other disposal. The values of the properties so exchanged either shall be approximately equal, or if they are not approximately equal the values shall be equalized by the payment of cash to the grantor or to the Secretary as the circumstances require. The Secretary of Agriculture, in the exercise of his exchange authority, may utilize authorities and procedures available to him in connection with exchanges of national forest lands.

(2) In acquiring lands or interests therein for a National Scenic or Historic Trail, the appropriate Secretary may, with consent of a landowner, acquire whole tracts notwithstanding that parts of such tracts may lie outside the area of trail acquisition. In furtherance of the purposes of this act, lands so acquired outside the area of trail acquisition may be exchanged for any non- Federal lands or interests therein within the trail right- of- way, or disposed of in accordance with such procedures or regulations as the appropriate Secretary shall prescribe, including: (I) provisions for conveyance of such acquired lands or interests therein at not less than fair market value to the highest bidder, and (ii) provisions for allowing the last owners of record a right to purchase said acquired lands or interests therein upon payment or agreement to pay an amount equal to the highest bid price. For lands designated for exchange or disposal, the appropriate Secretary may convey these lands with any reservations or covenants deemed desirable to further the purposes of this Act. The proceeds from any disposal shall be credited to the appropriation bearing the costs of land acquisition for the affected trail.

(g) The appropriate Secretary may utilize condemnation proceedings without the consent of the owner to acquire private lands or interests, therein pursuant to this section only in cases where, in his judgment, all reasonable efforts to acquire such lands or interest therein by negotiation have failed, and in such cases he shall acquire only such title as, in his judgment, is reasonably necessary to provide passage across such lands: Provided, That condemnation proceedings may not be utilized to acquire fee title or lesser interests to more than an average of one hundred and twenty- five acres per mile. Money appropriated for Federal purposes from the land and water conservation fund shall, without prejudice to appropriations from other sources, be available to Federal departments for the acquisition of lands or interests in lands for the purposes of this Act. For national historic trails, direct Federal acquisition for trail purposes shall be limited to those areas indicated by the study report or by the comprehensive plan as high potential route segments or high potential historic sites. Except for designated protected components of the trail, no land or site located along a designated national historic trail or along the Continental Divide National Scenic Trail shall be subject to the provisions of section 4(f) of the Department of Transportation Act (49 U.S.C. 1653(f)) unless such land or site is deemed to be of historical significance under appropriate historical site criteria such as those for the National Register of Historic Places.

(h) (1) The Secretary charged with the administration of a national recreation, national scenic, or national historic trail shall provide for the development and maintenance of such trails within federally administered areas, and shall cooperate with and encourage the States to operate, develop, and maintain portions of such trails which are located outside the boundaries of federally administered areas. When deemed to be in the public interest, such Secretary may enter written cooperative agreements with the States or their political subdivisions, landowners, private organizations, or individuals to operate, develop, and maintain any portion of such a trail either within or outside a federally administered area. Such agreements may include provisions for limited financial assistance to encourage participation in the acquisition, protection, operation, development, or

maintenance of such trails, provisions providing volunteer in the park or volunteer in the forest status (in accordance with the Volunteers in the Parks Act of 1969 and the Volunteers in the Forests Act of 1972) to individuals, private organizations, or landowners participating in such activities, or provisions of both types. The appropriate Secretary shall also initiate consultations with affected States and their political subdivisions to encourage —

(A) the development and implementation by such entities of appropriate measures to protect private landowners from trespass resulting from trail use and from unreasonable personal liability and property damage caused by trail use, and

(B) the development and implementation by such entities of provisions for land practices compatible with the purposes of this Act, for property within or adjacent to trail rights- of- way. After consulting with States and their political subdivisions under the preceding sentence, the Secretary may provide assistance to such entities under appropriate cooperative agreements in the manner provided by this subsection.

(2) Whenever the Secretary of the Interior makes any conveyance of land under any of the public land laws, he may reserve a right- of- way for trails to the extent he deems necessary to carry out the purposes of this Act.

(i) The appropriate Secretary, with the concurrence of the heads of any other Federal agencies administering lands through which a national recreation, national scenic, or national historic trail passes, and after consultation with the States, local governments, and organizations concerned, may issue regulations, which may be revised from time to time, governing the use, protection, management, development, and administration of trails of the national trails system. In order to maintain good conduct on and along the trails located within federally administered areas and to provide for the proper government and protection of such trails, the Secretary of the Interior and the Secretary of Agriculture shall prescribe and publish such uniform regulations as they deem necessary and any person who violates such regulations shall be guilty of a misdemeanor, and may be punished by a fine of not more $500 or by imprisonment not exceeding six months, or by both such fine and imprisonment. The Secretary responsible for the administration of any segment of any component of the National Trails System (as determined in a manner consistent with subsection (a)(1) of this section) may also utilize authorities related to units of the national park system or the national forest system, as the case may be, in carrying out his administrative responsibilities for such component.

(j) Potential trail uses allowed on designated components of the national trails system may include, but are not limited to, the following: bicycling, cross-country skiing, day hiking, equestrian activities, jogging or similar fitness activities, trail biking, overnight and long-distance backpacking, snowmobiling, and surface water and underwater activities. Vehicles which may be permitted on certain trails may include, but need not be limited to, motorcycles, bicycles, four- wheel drive or all-terrain off- road vehicles. In addition, trail access for handicapped individuals may be provided. The provisions of this subsection shall not supersede any other provisions of this Act or other Federal laws, or any State or local laws.

(k) For the conservation purpose of preserving or enhancing the recreational, scenic, natural, or historical values of components of the national trails system, and environs thereof as determined by the appropriate Secretary, landowners are authorized to donate or otherwise convey qualified real property interests to qualified organizations consistent with section 170(h)(3) of the Internal Revenue Code of 1954, including, but not limited to, right-of- way, open space, scenic, or conservation easements, without regard to any limitation on the nature of the estate or interest

otherwise transferable within the jurisdiction where the land is located. The conveyance of any such interest in land in accordance with this subsection shall be deemed to further a Federal conservation policy and yield a significant public benefit for purposes of section 6 of Public Law 96-541.

STATE AND METROPOLITAN AREA TRAILS

SEC. 8. [16USC1247] (a) The Secretary of the Interior is directed to encourage States to consider, in their comprehensive statewide outdoor recreation plans and proposals for financial assistance for State and local projects submitted pursuant to the Land and Water Conservation Fund Act, needs and opportunities for establishing park, forest, and other recreation and historic trails on lands owned or administered by States, and recreation and historic trails on lands in or near urban areas. The Secretary is also directed to encourage States to consider, in their comprehensive statewide historic preservation plans and proposals for financial assistance for State, local, and private projects submitted pursuant to the Act of October 15, 1966 (80 Stat. 915), as amended, needs and opportunities for establishing historic trails. He is further directed in accordance with the authority contained in the Act of May 28, 1963 (77 Stat. 49), to encourage States, political subdivisions, and private interests, including nonprofit organizations, to establish such trails.

(b) The Secretary of Housing and Urban Development is directed, in administering the program of comprehensive urban planning and assistance under section 701 of the Housing Act of 1954, to encourage the planning of recreation trails in connection with the recreation and transportation planning for metropolitan and other urban areas. He is further directed, in administering the urban open space program under title VII of the Housing Act of 1961, to encourage such recreation trails.

(c) The Secretary of Agriculture is directed, in accordance with authority vested in him, to encourage States and local agencies and private interests to establish such trails.

(d) The Secretary of Transportation, the Chairman of the Interstate Commerce Commission, and the Secretary of the Interior, in administering the Railroad Revitalization and Regulatory Reform Act of 1976, shall encourage State and local agencies and private interests to establish appropriate trails using the provisions of such programs. Consistent with the purposes of that Act, and in furtherance of the national policy to preserve established railroad rights-of-way for future reactivation of rail service, to protect rail transportation corridors, and to encourage energy efficient transportation use, in the case of interim use of any established railroad rights-of-way pursuant to donation, transfer, lease, sale, or otherwise in a manner consistent with the National Trails System Act, if such interim use is subject to restoration or reconstruction for railroad purposes, such interim use shall not be treated, for purposes of any law or rule of law, as an abandonment of the use of such rights-of-way for railroad purposes. If a State, political subdivision, or qualified private organization is prepared to assume full responsibility for management of such rights-of-way and for any legal liability arising out of such transfer or use, and for the payment of any and all taxes that may be levied or assessed against such rights-of-way, then the Commission shall impose such terms and conditions as a requirement of any transfer or conveyance for interim use in a manner consistent with this Act, and shall not permit abandonment or discontinuance inconsistent or disruptive of such use.

(e) Such trails may be designated and suitably marked as parts of the nationwide system of trails by the States, their political subdivisions, or other appropriate administering agencies with the approval of the Secretary of the Interior.

RIGHTS- OF- WAY AND OTHER PROPERTIES

SEC. 9. [16USC1248] (a) The Secretary of the Interior or the Secretary of Agriculture as the case may be, may grant easements and rights-of-way upon, over, under, across, or along any component of the national trails system in accordance with the laws applicable to the national park system and the national forest system, respectively: Provided, That any conditions contained in such easements and rights-of-way shall be related to the policy and purposes of this Act.

(b) The Department of Defense, the Department of Transportation, the Interstate Commerce Commission, the Federal Communications Commission, the Federal Power Commission, and other Federal agencies having jurisdiction or control over or information concerning the use, abandonment, or disposition of roadways, utility rights-of-way, or other properties which may be suitable for the purpose of improving or expanding the national trails system shall cooperate with the Secretary of the Interior and the Secretary of Agriculture in order to assure, to the extent practicable, that any such properties having values suitable for trail purposes may be made available for such use.

(c) Commencing upon the date of enactment of this subsection, any and all right, title, interest, and estate of the United States in all rights-of-way of the type described in the Act of March 8, 1922 (43 U.S.C. 912), shall remain in the United States upon the abandonment or forfeiture of such rights-of-way, or portions thereof, except to the extent that any such right-of-way, or portion thereof, is embraced within a public highway no later than one year after a determination of abandonment or forfeiture, as provided under such Act.

(d) (1) All rights-of-way, or portions thereof, retained by the United States pursuant to subsection (c) which are located within the boundaries of a conservation system unit or a National Forest shall be added to and incorporated within such unit or National Forest and managed in accordance with applicable provisions of law, including this Act.

(2) All such retained rights-of-way, or portions thereof, which are located outside the boundaries of a conservation system unit or a National Forest but adjacent to or contiguous with any portion of the public lands shall be managed pursuant to the Federal Land Policy and Management Act of 1976 and other applicable law, including this section.

(3) All such retained rights-of-way, or portions thereof, which are located outside the boundaries of a conservation system unit or National Forest which the Secretary of the Interior determines suitable for use as a public recreational trail or other recreational purposes shall be managed by the Secretary for such uses, as well as for such other uses as the Secretary determines to be appropriate pursuant to applicable laws, as long as such uses do not preclude trail use.

(e) (1) The Secretary of the Interior is authorized where appropriate to release and quitclaim to a unit of government or to another entity meeting the requirements of this subsection any and all right, title, and interest in the surface estate of any portion of any right-of-way to the extent any such right, title, and interest was retained by the United States pursuant to subsection (c), if such portion is not located within the boundaries of any conservation system unit or National Forest. Such release and quitclaim shall be made only in response to an application therefor by a unit of State or local government or another entity which the Secretary of the Interior determines to be legally and financially qualified to manage the relevant portion for public recreational purposes. Upon receipt of such an application, the Secretary shall publish a notice concerning such application in a newspaper of general circulation in the area where the relevant portion is located. Such release and quitclaim shall be on the following conditions:

(A) If such unit or entity attempts to sell, convey, or otherwise transfer such right, title, or interest or attempts to permit the use of any part of such portion for any purpose incompatible with its use for public recreation, then

any and all right, title, and interest released and quitclaimed by the Secretary pursuant to this subsection shall revert to the United States.

(B) Such unit or entity shall assume full responsibility and hold the United States harmless for any legal liability which might arise with respect to the transfer, possession, use, release, or quitclaim of such right- of- way.

(C) Notwithstanding any other provision of law, the United States shall be under no duty to inspect such portion prior to such release and quitclaim, and shall incur no legal liability with respect to any hazard or any unsafe condition existing on such portion at the time of such release and quitclaim.

(2) The Secretary is authorized to sell any portion of a right- of- way retained by the United States pursuant to subsection (c) located outside the boundaries of a conservation system unit or National Forest if any such portion is —

(A) not adjacent to or contiguous with any portion of the public lands; or

(B) determined by the Secretary, pursuant to the disposal criteria established by section 203 of the Federal Land Policy and Management Act of l976, to be suitable for sale.

Prior to conducting any such sale, the Secretary shall take appropriate steps to afford a unit of State or local government or any other entity an opportunity to seek to obtain such portion pursuant to paragraph (l) of this subsection.

(3) All proceeds from sales of such retained rights of way shall be deposited into the Treasury of the United States and credited to the Land and Water Conservation Fund as provided in section 2 of the Land and Water Conservation Fund Act of l965.

(4) The Secretary of the Interior shall annually report to the Congress the total proceeds from sales under paragraph (2) during the preceding fiscal year. Such report shall be included in the President's annual budget submitted to the Congress.

(f) As used in this section —

(1) The term "conservation system unit" has the same meaning given such term in the Alaska National Interest Lands Conservation Act (Public Law 96- 487; 94 Stat. 237l et seq.), except that such term shall also include units outside Alaska.

(2) The term "public lands" has the same meaning given such term in the Federal Land Policy and Management Act of l976.

AUTHORIZATION OF APPROPRIATIONS

SEC. 10. [16USC1249] (a) (1) There are hereby authorized to be appropriated for the acquisition of lands or interests in lands not more than $5,000,000 for the Appalachian National Scenic Trail and not more than $500,000 for the Pacific Crest National Scenic Trail. From the appropriations authorized for fiscal year 1979 and succeeding fiscal years pursuant to the Land and Water Conservation Fund Act (78 Stat. 897), as amended, not more than the following amounts may be expended for the acquisition of lands and interests in lands authorized to be acquired pursuant to the provisions of this Act: for the Appalachian National Scenic Trail, not to exceed $30,000,000 for

fiscal year 1979, $30,000,000 for fiscal year 1980, and $30,000,000 for fiscal year 1981, except that the difference between the foregoing amounts and the actual appropriations in any one fiscal year shall be available for appropriation in subsequent fiscal years.

(2) It is the express intent of the Congress that the Secretary should substantially complete the land acquisition program necessary to insure the protection of the Appalachian Trail within three complete fiscal years following the date of enactment of this sentence.

(b) For the purposes of Public Law 95- 42 (91 Stat. 211), the lands and interests therein acquired pursuant to this section shall be deemed to qualify for funding under the provisions of section 1, clause 2, of said Act.

(c) (1) There is hereby authorized to be appropriated such sums as may be necessary to implement the provisions of this Act relating to the trails designated by paragraphs 5(a)(3), (4), (5), (6), (7), (8), (9) and (10): Provided, That no such funds are authorized to be appropriated prior to October 1, 1978: And provided further, That notwithstanding any other provisions of this Act or any other provisions of law, no funds may be expended by Federal agencies for the acquisition of lands or interests in lands outside the exterior boundaries of existing Federal areas for the Continental Divide National Scenic Trail, the North Country National Scenic Trail, the Ice Age National Scenic Trail, the Oregon National Historic Trail, the Mormon Pioneer National Historic Trail, the Lewis and Clark National Historic Trail, and the Iditarod National Historic Trail, except that funds may be expended for the acquisition of lands or interests therein for the purpose of providing for one trail interpretation site, as described in section 7(c), along with such trail in each State crossed by the trail.

(2) Except as otherwise provided in this Act, there is authorized to be appropriated such sums as may be necessary to implement the provisions of this Act relating to the trails designated by section 5(a). Not more than $500,000 may be appropriated for the purposes of acquisition of land and interests therein for the trail designated by section 5(a)(12) of this Act, and not more than $2,000,000 may be appropriated for the purposes of the development of such trail. The administrating agency for the trail shall encourage volunteer trail groups to participate in the development of the trail.

VOLUNTEER TRAILS ASSISTANCE

SEC. 11. [16USC1250] (a) (1) In addition to the cooperative agreement and other authorities contained in this Act, the Secretary of the Interior, the Secretary of Agriculture, and the head of any Federal agency administering Federal lands, are authorized to encourage volunteers and volunteer organizations to plan, develop, maintain, and manage, where appropriate, trails throughout the Nation.

(2) Wherever appropriate in furtherance of the purposes of this Act, the Secretaries are authorized and encouraged to utilize the Volunteers in the Parks Act of 1969, the Volunteers in the Forests Act of 1972, and section 6 of the Land and Water Conservation Fund Act of 1965 (relating to the development of Statewide Comprehensive Outdoor Recreation Plans).

(b) Each Secretary or the head of any Federal land managing agency, may assist volunteers and volunteers organizations in planning, developing, maintaining, and managing trails. Volunteer

work may include, but need not be limited to—

(1) planning, developing, maintaining, or managing (A) trails which are components of the national trails system, or (B) trails which, if so developed and maintained, could qualify for designation as components of the national trails system; or

(2) operating programs to organize and supervise volunteer trail building efforts with respect to the trails referred to in paragraph (1), conducting trail-related research projects, or providing education and training to volunteers on methods of trails planning, construction, and maintenance.

(c) The appropriate Secretary or the head of any Federal land managing agency may utilize and to make available Federal facilities, equipment, tools, and technical assistance to volunteers and volunteer organizations, subject to such limitations and restrictions as the appropriate Secretary or the head of any Federal land managing agency deems necessary or desirable.

DEFINITIONS

SEC. 12. [16USC1251] As used in this Act:

(1) The term "high potential historic sites" means those historic sites related to the route, or sites in close proximity thereto, which provide opportunity to interpret the historic significance of the trail during the period of its major use. Criteria for consideration as high potential sites include historic significance, presence of visible historic remnants, scenic quality, and relative freedom from intrusion.

(2) The term "high potential route segments" means those segments of a trail which would afford high quality recreation experience in a portion of the route having greater than average scenic values or affording an opportunity to vicariously share the experience of the original users of a historic route.

(3) The term "State" means each of the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands, the Northern Mariana Islands, and any other territory or possession of the United States.

(4) The term "without expense to the United States" means that no funds may be expended by Federal agencies for the development of trail related facilities or for the acquisition of lands or interest in lands outside the exterior boundaries of Federal areas. For the purposes of the preceding sentence, amounts made available to any State or political subdivision under the Land and Water Conservation Fund Act of 1965 or any other provision of law shall not be treated as an expense to the United States.

END

APPENDIX C
ADMINISTRATIVE RESPONSIBILITY FOR
EL CAMINO REAL DE TIERRA ADENTRO NATIONAL HISTORIC TRAIL

United States Department of the Interior

Bureau of Land Management
New Mexico State Office
1474 Rodeo Road
P. O. Box 27115
Santa Fe, New Mexico 87502-0115

National Park Service
Regional Office
P. O. Box 25287
Denver, CO 80225

January 9, 2001

Memorandum

To: Secretary of the Interior

Through: BLM Director & NPS Director

From:

Michelle J. Chávez	Karen Wade
State Director	Regional Director
BLM NM/OK/TX (BLM)	National Park Service, Southwest Region (NPS)

Subject: Administration of the El Camino Real de Tierra Adentro National Historic Trail

Pursuant to our interagency discussions of January 5, 2001, we are recommending joint administration of the El Camino Real de Tierra Adentro National Historic Trail. We are confident that joint administration is in the public's best interest and will better assure the preservation and enhancement of this outstanding national resource. This approach acknowledges the history of investment and commitment made by both the BLM and NPS to this extraordinary public asset, while mobilizing the strengths of both agencies on behalf of the American public.

Key to the success of this joint administrative task, is the need to define long-term agency roles and responsibilities; including overall trail administration and on-the-ground, daily site and segment management. In order to achieve that goal, it will be necessary to complete an Interagency Comprehensive Trail Management Plan for trail administration. This will require the assigning of lead personnel for both NPS and BLM, and the preparation of a Pre-Plan Agreement. The Pre-Plan Agreement will outline the necessary components, budget and time-frame for the Interagency Comprehensive Management Plan.

Lead personnel will be named by the Intermountain Regional Director for NPS and the New Mexico State Director for the BLM. The Pre-Plan Agreement will be completed within 90 days of your concurrence with this approach. At a minimum, the Pre-Plan Agreement will include the following:

- Reiterate and confirm Congressional Intent; as defined in the designating legislation langua
- Describe existing agency assets and commitments of facilities, personnel and materials to the Camino Real Tierra de Adentro National Historic Trail
- Define agency roles and responsibilities for plan completion
- Describe interagency communication processes, protocol and lines of authority
- Identify Tribal, Federal, State and Community Partners (Mexico and US)
- Describe an Interagency Comprehensive Trail Management Plan/NEPA technical approach. At a minimum, this plan will include guidance for Natural and Cultural Resources, Interpretation and Education, Facilities Management, Research and Monitoring, Lands and Rights-of-Way, Events Coordination, Communication, Visitor Management.
- Identify planning time-lines
- Identify necessary knowledge and skill requirements for plan completion
- Identify key personnel from BLM, NPS and other planning partners necessary to complete the technical approach
- Identify overall project budget, funding sources, and budget administrative process
- Develop a comprehensive community involvement plan that is integral to all steps of the planning/NEPA process

We look forward to your advice on this proposal, and are prepared to move forward on this outstanding project.

Michelle J. Chávez
State Director
BLM, NM/OK/TX

Karen Wade
Regional Director
NPS, Intermountain Region

THE SECRETARY OF THE INTERIOR

WASHINGTON

JAN 19 2001

To: Director, Bureau of Land Management
Director, National Park Service

From: The Secretary

Subject: Administrative Responsibility for El Camino Real de Tierra Adentro National Historic Trail

In accordance with the National Trails Systems Act of 1968, I direct that administrative responsibility for the El Camino Real de Tierra Adentro National Historic Trail be assigned jointly to the Bureau of Land Management and the National Park Service. This assignment is consistent with the recommendation of the two agencies (Memorandum from the Bureau of Land Management New Mexico State Director and the National Park Service Intermountain Region Regional Director, January 9, 2001, copy attached) and acknowledges the long history of cooperation and coordination between the two agencies in management of the Trail.

Joint administration of the Trail is a continuation of the commitment from each agency and will be a great asset in assuring preservation and enhancement of this outstanding national treasure.

Attachment

APPENDIX D
COMMUNITY MEETING RESULTS

Possibility statements are descriptions of desired future conditions for El Camino Real de Tierra Adentro NHT, and have formed the basis of the alternatives. These statements were developed during community meetings in 2001, and could be implemented through community action and partnerships.

Possibility statements from El Paso, Texas - October 15, 2001

- Interpretation, preservation, restoration.
- It is essential that the route, including hiking and interpretive trails, follow the original historic route. To facilitate the project, the natural environment (riparian and desert) should be preserved and restored; then, there should be recognition of where historic events took place; and finally, there needs to be a unifying theme especially in signage.
- I live in a community, where we should develop El Camino Real as a backbone uniting local and regional historic, cultural, and community resources in an interpretive way.
- More and enhanced parks and trails, to foster outdoor recreational opportunities and appreciation of natural and cultural community.
- Regional coordination, promotion, preservation, and interpretation of the Camino Real.
- Education, access, preservation, economic development.
- We live in a community where fragmentation has been eliminated. A central point of responsibility involving all the communities on the Río Grande, including bi-national politicians and educators, together have developed a cohesive plan to foster a bi-national understanding of El Camino Real.
- A long-trail theme, which ties local communities together and allows events on the trail; incorporates existing and new features to be used for the protection of natural resources; and benefits and ensures safety of the people, which promotes knowledge and understanding of the trail.

Possibility statements from Socorro, New Mexico - October 16, 2001

- Develop a range of recreational opportunities that contribute to the economic benefit of communities and Socorro and Sierra Counties, including birding, fishing, hot springs, horseback riding, National Radio Astronomy Observatory, radio, Battle of Valverde re-enactment, and other special events.
- Keep our culture alive.
- An El Camino Trail Passport. Each community to have been facilitated with educational and economic advantages to encourage participation in multifaceted visitation, including ecotourism, edutourism, and agritourism. Each facility to have individual stamps. Revenue will be generated from visitors to each site. Money (funding) flowing in by the wheelbarrow loads.
- Cultural and transportation corridor. Overall cultural immersion. Connections with Mexico and Spain with physical artifacts/demonstrations. Education

including, history, archeology, high points, and cultural portrait. Preservation/protection of trails; use previously impacted areas.

Possibility statements from Albuquerque, New Mexico - October 17, 2001

- Make the trail into a living experience that is accessible to people with disabilities, bicycles, horseback, and walkers – no motor vehicles.

- A comprehensive plan, focusing on preservation, and multiple stories/perspectives, providing public interpretation for *all* people in English and Spanish through a variety of educational methods.

- Quality El Camino Real history and heritage is told by New Mexico people who know the history and resources. Interpretation is offered all along El Camino Real to both visitors and local people/communities, and inspires people to protect resources. The international nature of the trail is emphasized: past, present, and future.

- Link communities and community centers along the trail, with emphasis on education, historic site identification, and Spanish emphasis and contribution of the trail, in both U.S. and Mexico.

- Trail offers opportunity to go on an interactive adventure to learn about the [history and culture of New Mexico trade and travel] evolution of the trail consisting of the trade, travel, culture, and recreation.

Possibility statements from Española, New Mexico - October 20, 2001

- Each community being able to tell their own story through visitor centers/interpretive centers/cultural centers along the trail, with centers highlighting the significance of history, traditions, and way of life. Centers will serve to promote, preserve, and protect history and resources pertaining to that community, including living exhibits, oral histories, and promoting local crafts involving youth and peoples of the communities.

- Interpretive centers with educational programs on El Camino Real communities.

- Make the trail a living experience for residents and visitors through awareness of cultural heritage.

- Information, communication, and outreach by awareness through maps and signs and interdisciplinary studies preserving multi-cultural history.

APPENDIX E
HIGH-POTENTIAL HISTORIC SITES

National Trails System Act, SEC. 12. [16USC1251] As used in this Act:

(1) The term **"high potential historic sites"** means those historic sites related to the route, or sites in close proximity thereto, which provide opportunity to interpret the historic significance of the trail during the period of its major use. Criteria for consideration as high potential sites include historic significance, presence of visible historic remnants, scenic quality, and relative freedom from intrusion..

Mission Ysleta, Mission Trail

El Paso, Texas
NATIONAL REGISTER
Era: 17th, 18th, and 19th Century

Mission Ysleta was first erected in 1692. Through a series of flooding and fire, the mission has been rebuilt three times. Named for the patron saint of the Tiguas, the mission was first known as San Antonio de la Ysleta. The beautiful silver bell tower was added in the 1880s.

The missions of El Paso have a tremendous history spanning three centuries. They are considered the longest, continuously occpied religious structures within the United States and as far as we know, the churches have never missed one day of services.

Mission Socorro, Mission Trail

El Paso, Texas
Era: 17th, 18th, and 19th Century

Built of adobe in 1692, Mission Socorro also experienced natural disasters through her history lending her to be rebuilt several times. The famous Statue of Saint Michael was brought to the mission from Mexico by oxcart in the early 1800s. One will also find an excellent example of Indian and Spanish architecture including carved ceiling beams called "vigas" and bell tower.

The missions of El Paso, have a tremendous history spanning three centuries. They are considered the longest, continuously occupied religious structures within the United States and as far as we know, the churches have never missed one day of services.

San Elizario, Mission Trail

El Paso, Texas
NATIONAL REGISTER
Era: 17th, 18th, and 19th Century

San Elizario was built first as a military presidio to protect the citizens of the river settlements from Apache attacks in 1789. The structure as it stands today has interior pillars, detailed in gilt, and an extraordinary painted tin ceiling.

The missions of El Paso, have a tremendous history spanning three centuries. They are considered the longest, continuously occpied religious structures within the United States and as far as we know, the churches have never missed one day of services.

Oñate Crossing

El Paso, Texas
Era: 17th, 18th, and 19th Century

The Oñate Crossing of the Rio Grande in 1598 is commemorated at this small park next to the river. The original crossing was near here. Once Oñate and his contingent of settlers crossed the river he held a thanksgiving in what is now the United States. One of the first bridges to be erected in the area would have been in or very near the location of the crossing.

Boundary Marker # 1

Sunland Park, New Mexico
NATIONAL REGISTER
Era: 19th Century

Boundary Marker # 1 is a four- sided pyramid of white limestone on the West bank of the Rio Grande on the Mexico-New Mexico border. It is the first boundary marker placed after the setting of the international boundary in 1855(*?) There is a small park here on each side of the border where people from each nation can gather and mingle together.

Keystone Park

El Paso, Texas
ARMS (41 EP 494)
Era: 17th, 18th, and 19th Century

Keystone Park is a wetlands site in additional to an archeological site. It is slated for development. It is located along the edge of El Paso's Upper Valey in the path of what was to become the Camino Real trail from Mexico to Santa Fe. During the Archaic period, 4000 years before the appearance of the Spanish, prehistoric Native Americans extablished a village at the edge of the Rio Grande. The Indians built pit houses with shallow, basin-shaped floors and covered with an igloo-shaped or tipi-like structure of timber and branches, plastered with a thin layer of clay. The poeple settled close to theri er and marsh, gathering wild plants and hunting animals such as rabbits.

Brazito, Bracito Battlefield, Paraje

Mesquite, New Mexico
North of Mesquite, NM and south of Brazito Schoolhouse off NM 478.
Era: 18th and 19th Century

Significance: Long-time paraje; mail exchange point on the Camino Real; site of the first land grant in southern New Mexico; site of the Battle of Bracitos during the Mexican-American War.

Annotated History: This campsite, between the east bank of the Río Grande and the Organ Mountains, was used by Lafora on 7 August 1766. He located it some 20 leagues north of the place where he crossed the river. From this paraje, Lafora went to Robledillo (Alessio Robles 1939:90-91).

Robert Julyan places the modern "Brazito" five miles south of Las Cruces, New Mexico, and noted that only a schoolhouse remains of the settlement. He added that in 1776 it was known as "Huerto de los Brazitos" and was part of a the nineteenth-century "Brazito Land Grant" to Juan Antonio García, which stretched along the Río Grande for eight miles south of Las Cruces (Julyan 1996:49). Rancho del Bracito was the exchange point for mail runs between Santa Fé and Chihuahua in the 1820s (Bloom 1913:16; Moorhead 1957:112).

On Christmas day, 1846, the Missouri Volunteers under Colonel Alexander W. Doniphan defeated a Mexican unit at the Battle of Bracitos and then went on to occupy El Paso and invade Chihuahua. George Rutledge Gibson, a soldier in Doniphan's army, wrote that the name Bracito referred to a bend in the river just above the battlefield. The U.S. army had stopped to camp by the river just north of the site where the engagement took place. The Mexican army was at an elevation and had the mountains to their backs as the battle began (Bieber 1935:300,303 -305,308-309). A contemporary map reproduced in the 1997 edition of the Hughes journal gives little context but appears to show the river at its closest approach to the hills. It also shows the island formed by the Bracito from which the name was derived (Hughes 1997:133). In February 1847, Susan

Shelby Magoffin visited the site of the battle and described it as a "perfect plain" (Drumm 1926:202). According to Max Moorhead, the "Paraje de Bracitos" was "on a little arm of the Río Grande encircling a sandy island" (Moorhead 1958:19).

A soldier, Marcellus Ball Edwards, recounted being in a camp about a mile below Doña Ana on 20 December 1846. His company was directed to go a few miles and set up an outpost, but went 12 according to his estimate, before finding a suitable place. There, the river ran close enough to the hills on the east side of the valley that the road ran over sand hills. On Christmas Eve, this company went another mile, and on Christmas, twelve miles to the site of the battle. That adds up to an estimate of 26 miles from Doña Ana and the site of the Battle of Bracitos (Bieber 1936:224- 228). John Taylor Hughes, another soldier with Doniphan, confirms that the camp described by Edwards was about 12 miles from Doña Ana, but placed the camp one mile below as 15 from Doña Ana. He thought it another 18 from there to Bracito (Hughes 1997:130-131). Gibson recalled marches of 12 and 14 miles, a total of 26, between a camp near Doña Ana and the battlefield (Bieber 1935:298-300). The consensus of these estimates is that it was some 26 miles from the town of Doña Ana to Bracitos by the road on which the army traveled. When he passed by in 1855, W.W.H. Davis placed Fort Fillmore, built in 1851, a few miles above the battlefield of Bracito (Davis 1938:212; Frazer 1965:99).

There is some historiographical confusion surrounding the relative locations of historical sites in this section of the Río Grande valley. Max Moorhead wrote that the paraje was a few miles south of the site of the 1846 battle (Moorhead 1958:19). William A. Keleher located Fort Fillmore on the site of Bracito and estimated that it was about four miles south of Las Cruces, about the same distance north of Mesilla, New Mexico, and 36 miles from El Paso, Texas (Keleher 1952:196,n.9). Robert W. Frazer placed Fort Fillmore six miles south of Mesilla (Frazer 1965:99). However, Robert Julyan put Fort Fillmore, 1852-1863, six miles south of Las Cruces and one mile east of Bracito (Julyan 1996:134).

The precise location of the point on the Río Grande known as el Bracito, by which the paraje was known, can best be identified from testimonies and evidence given in the Bracito (Hugh Stephenson), Doña Ana, Mesilla, and Santo Tomás de Iturbide land grant cases before the Surveyor General and Court of Private Land Claims. According to testimony, in 1864 floodwater caused the Río Grande to break away from its old channel and change course substantially. The eventual disposition of the above named grants hinged upon the definition of the riverbed of the 1850s. Through witnesses and surveys, the bed of the Río Grande before 1864 was determined. Therefore, the boundaries of those grants can be taken as the riverbed of the 1850s. It is also clear that the course of the river could have changed more than once since the opening of the Camino Real. That cautionary note should make researchers wary of unequivocal statements regarding the locations of the road, paraje, or the river bed in the lower Río Grande valley of centuries ago.

Most importantly for locating El Paraje de los Bracitos, descriptions of the Bracito Grant show that at its inception its northwestern corner was on the old river bed at the point that was known as Bracito in 1805. In subsequent testimonies, descriptions, and maps, that description is sustained. At its inception it was specified that the grant began at a point known as "el Brasito" and that name continued to be used to describe the same location. In 1820, it was specified that the acequia of the same name was taken from the river at "el Paraje que nombran el Brasito". In the documents filed after the United States occupation of New Mexico that particular acequia was used as the landmark (Hugh Stephenson Grant:892,901,964,passim).

In his map, "Plano del Rio del Norte desde San Elcearco hasta el paraje de San Pasqual" (1773),Bernardo de Miera y Pacheco shows Bracitos at the southernmost eastward bend of the river that defined the Ancón de Doña Ana before the flood of 1864 (Adams and Chávez 1956:268). The point at which the northern boundary of the Bracito or Stephenson Grant leaves the old river bed, its western boundary, and extends east is, then, the place given in 1805 as El Bracito. That also conforms to the Miera y

Pacheco map. The paraje, while not a precise and enclosed point, was likely centered on that location.

Charles M. Haecker, "Brazito Battlefield: Once Lost now Found." New Mexico Historical Review, 72(July 1997) no. 3, pp.229-238.

Fort Fillmore

New Mexico
Era: 19th Century

Along the Rio Grande not far from the Mexican border and a few miles southeast of the town of Mesilla, this tiny adobe fort was founded in 1851 to control local Apaches. by the end of the 1850s it had declined and fallen into disrepair. In 1861, however, spurred by rumors of Confederate invasion of New Mexico, the Army reinforced the fort. During July a force of 250 Texans took Mesilla. Failing in an attempt to liberate the town, the garrison abandoned the fort and marched toward Fort Stanton, but was captured east of las Cruces. The next summer, California Volunteers temporarily occupied the post before moving into Mesilla.

Issue of El Palacio, Summer 1967, vol. 74, no. 2 (Fort Fillmore issue).

La Ranchería (Las Cruces)

Era: 18th Century

Significance: Though not an often-mentioned *paraje*, this was a frequent habitation of local Indians and is now the site of Las Cruuces, the largest city in southern New Mexico.

Annotated History: On 22 May 1726 Rivera followed the bank of the Río Grande eight leagues and stayed at a *paraje* next to the river called Ranchería, which used to be inhabited frequently by the Mansos Indians before they were converted to pueblo life (Alessio Robles 1946:49).

A comparison of the distances given by Rivera and Lafora in the lower Río Grande valley shows Ranchería Grande a little north of Bracito. The referenced map ("Plano del Rio del Norte," 1773) by Bernardo de Miera y Pacheco shows Doña Ana and Bracito at what appear to be eastward bends of the river that defined the Ancón de Doña Ana before the flood of 1864. The Ranchería Grande is depicted as in the bend between those two points, which takes in the area of Las Cruces (Adams and Chávez 1956:268).

Mesilla Plaza (La Mesilla)

Mesilla
NATIONAL REGISTER,
NATIONAL HISTORIC LANDMARK
Era: 18th and 19th Century

In 1848 the Treaty of Guadalupe Hidalgo established the area west of the Río Grande occupied by present-day Mesilla as part of Mexico. (In local usage, it is more often called Mesilla or Old Mesilla.) Las Cruces and Doña Ana, on the east bank of the river, were in American territory. Anglo-Americans arrived to claim land in such force that many native Mexicans moved away. Those who preferred to remain in the area but on Mexican soil crossed the river and settled on a small rise in the river valley. The settlement, known as Mesilla (little table), included about half the population of Doña Ana.

In 1853 the Mexican government issued the Mesilla Civil Colony Land Grant and the town was formed. In 1854 the Gadsden Purchase was negotiated, acquiring from Mexico a strip of land south of New Mexico and Arizona which stretched from Texas to California- 29,142,400 acres for $10 million -a wedge of level land which would eventually serve as the southern railroad route to the Pacific coast. The erstwhile Mexican residents of Mesilla found themselves in the United States.

The new government honored land ownership under the Mexican land grant. On November 16, 1854, the treaty was symbolically formalized in the plaza at Mesilla. The flag of Mexico was lowered, and the flag of the United States was raised. Officials and soldiers from both governments were on hand to see that it was done right. Local Mexican officials swore allegiance to the new government. Residents who did not want to

live under it were "notified to leave and take refuge in Mexican dominions."

In 1858 Mesilla became a stop on the Butterfield Overland Mail route which linked St. Louis and San Francisco. Waterman L. Ormsby, a reporter for the New York Herald, rode the first westbound stage; he described the community. There were more than three thousand inhabitants. He saw "irrigated fields groaning with the weight of heavy crops." But he was not impressed by the cluster of one-story adobe houses; they looked like "miserable dog kennels."

On July 25, 1861, the Civil War came to Mesilla. Lt. Col. John R. Baylor, commanding 258 Texan troops in Confederate service, occupied the village without firing a shot and settled down to await the arrival of Union forces from nearby Fort Fillmore.

Baylor forthwith issued a proclamation taking possession of all of New Mexico south of the thirty-fourth parallel of north latitude "on behalf of the Confederate States of America." He dubbed it the Territory of Arizona: "The city of Mesilla is hereby designated as the seat of government of this Territory." Baylor was appointed governor.

Thirteen months later, in August, 1862, the "California Column" under Gen. James H. Carleton recaptured Mesilla and the surrounding area for the Union.

During its heyday, Mesilla was a bustling community. George Griggs, a lifelong resident, told of activities in his book History of the Mesilla Valley or The Gadsden Purchase. Its prime season began on December 12 with the fiesta of Our Lady of Guadalupe and ended on March 2 with the fiesta of St. Alvino, the patron saint of the town. People came from as far away as Santa Fe, Tucson, and Chihuahua. Ladies came to buy velvet gowns and satin shoes; men came to attend bullfights and street fairs. Mesilla had cock pits, billiard halls, theaters, and even bowling alleys for the entertainment of visitors. There was a flour mill and stores with supplies for the farmers who tilled the rich irrigated farms in the Mesilla Valley.

Griggs cited one firm that sent eighty-three wagons from Kansas City to Mesilla, each loaded with 5,000 pounds of merchandise. That firm paid $30,000 in freight bills on a wagon train containing $126,000 worth of goods which sold within three weeks at a profit of $51,000.

Mesilla's eminence faded in 1881 when the Santa Fe Railroad was routed through Las Cruces instead of Mesilla.

Doña Ana Paraje

Doña Ana, New Mexico
NATIONAL REGISTER
Era: 18th and 19th Century

Significance: One of the noted parajes of the late eighteenth and nineteenth centuries, the name also attached to a section of the Río Grande, to nearby mountains, and to a settlement that still exists. Pedro Tamarón y Romeral, Bishop of Durango, author of Demostración del vastísimo obispado de la Nueva Vizcaya (1765), visited this site in his inspection of churches and missions in Chihuahua and New Mexico in 1760.

Annotated History: On 11 May 1760 Bishop Tamarón described Doña Ana as the sierra on the east side of the river. He camped between Doña Ana and the river (Adams 1953:199).

Lafora described a place between mountain ranges, which he labeled Doña Ana, to the east, and Roblerito, across the river to the west. The name Doña Ana is given elsewhere as the name of a ranchería (Alessio Robles 1939:91).

In August 1846, Wislizenus mentioned that "Doñana" was the first town reached south of the Jornada del Muerto. He said that it was 12 miles south of Robledo but did not describe it as he passed through (Wislizenus 1848:39). On 23 December 1846, Gibson arrived in Doña Ana after what he estimated was a ten-mile trip from Robledo (Bieber 1935:298). In early November 1847, Philip Gooch Ferguson, with an army unit, noted that he camped a mile below the town of Doña Ana (Bieber 1936:337-338). In 1855, Davis, a U.S. Attorney W.W.H. Davis slept with his stock in Doña Ana's corral since there were no

public accommodations (Davis 1938:210-211). According to Julyan, the original 1839 town site was on a hill north of the present village (Julyan 1996:112-113).

The western boundary of the Doña Ana Grant was determined to be the bed of the Río Grande as it ran before the flood of 1864. The northeastern corner of the grant was the head of the old Doña Ana Acequia, "about three miles above the pueblo of Doña Ana at a point where the Río Grande touches the hills on the East; the R.R. track is near the point." It is not entirely clear what the bed of the river was above that point but it evidently came from the west. In testimony related to determining that boundary, Ancón de Doña Ana was described in terms of how the river ran in 1852. At the head of the Doña Ana and Las Cruces Acequia, "the Río Grande makes a bend leaving the foothills on the Eastern bank of said river and bearing Southwestwardly and nearing the foothills on the western bank of said river and continues near the western foot hills of said western bank until it reaches the 'barrancas del brazito' before mentioned, which place was formerly the head of the acequia of Don Juan Antonio Garcia" (or Bracito). The latter point was the boundary of the Doña Ana and Bracito grants and the location of El Bracito (Doña Ana Grant:170;224;passim). In his "Plano del Rio del Norte" (1773), Bernardo de Miera y Pacheco depicted Doña Ana at the northern bend of the two eastward points on the river that defined the Ancón de Doña Ana before the flood of 1864 (Adams and Chávez 1956:268).

Given the descriptions of the old river, Miera y Pacheco's map, and the first locations of the town, it appears that the point originally called Doña Ana was the northern bend of the Ancón de Doña Ana. Unfortunately, we have no distance estimates from the colonial period with which to place Doña Ana relative to other parajes. However, the name is also mentioned in reference to the proximity of mountains to the river and at the suggested place the mountains do approach the river and road. The sketchy estimates given in the 1840s conform to the relationship of that point to Robledo and Bracito. It is reasonable to suggest that the area was popular because travelers could reach the river without descending into the sandy and brambly flood plain as they would for many miles to the south. The paraje of Doña Ana, such as it was, probably took in a larger area.

Fort Selden State Monument

Radium Springs
NATIONAL REGISTER
Era: 19th Century

Situated on a slight rise overlooking the Río Grande at the lower end of the Jornada del Muerto, Fort Selden (1865-90) protected settlers in the Mesilla Valley and travelers on the Camino Real. The garrison, frequently harassed by Indians, took part in the campaigns against the Apaches until the fort's inactivation in 1877. In 1880, during the campaign against Geronimo, troops reoccupied it as a base to patrol the Mexican border. After Geronimo' s surrender, it was abandoned for good in 1890.

Capt. Arthur MacArthur served at Fort Selden in 1884. It was there that his son, Douglas A. MacArthur, learned to ride and shoot before he learned to read or write.

Eroding adobe walls of some 25 buildings stand as high as 10 feet or more. A New Mexico historical marker on U.S. 85, from which the fort is visible, provides a brief sketch of its history.

Robledillo, Robledo

Era: 17th, 18th, and 19th Century

Significance: One of the enduring and popular *parajes*. Its importance stemmed from its easy access to water, forage, and wood, and its proximity to the Jornada del Muerto.

Annotated History: Between 14 May and 21 May 1598 the Juan de Oñate expedition traveled about four leagues after passing the Organ mountains. The road was very primitive, and the train had to be divided. On the 21st they buried Pedro Robledo but did not refer to the burial site as Robledillo (Pacheco, Cárdenas y Torres 1871:XVI.246-247). According to Marshall and Walt, the site was called "La Cruz de Robledo" after the burial place of Robledo (Marshall and Walt 1984:235).

In November 1681, while marching north, Otermín mentioned that it was 32 leagues from Robledo to the next permanent water. He made stops at *parajes* which he called Robledo and Robledo el Chico, one league apart, on the first and second of February, 1682 (Hackett and Shelby 1942:II.202; II.365). It is likely that others referred to the area containing both sites as part of the same *paraje.*

Vargas estimated the distance from Ancón de Fray García to Robledo at 24 leagues, placing it 29 leagues from El Paso (Kessell and Hendricks 1992:369).

On 23 May 1726 Rivera left La Ranchería and traveled seven leagues northwest through land with some small hills, glades and mesquite thickets, then stayed at a *paraje* called Robledillo (Alessio Robles 1946:49).

On 11 May 17, 1760 Bishop Tamarón reached the "dread site" of Robledo. The river flowed between two sierras; the one on the west he called Robledo, and the one on the east Doña Ana. He camped between Doña Ana and the river and described the place as frightening because of attacks by "infidel" Indians, although he didn't personally experience any attacks (Adams 1953:199).

On 8 August 1766, Lafora named "Ancón de Roblerito" as a campsite on the bank of the Río Grande. It was also called "Robles" and "*Paraje* de Robledillo." Lafora placed this point nine leagues from Bracitos and 29 leagues upriver of his crossing near "Presidio del Paso." It was in a hilly area with brush that was thicker than it had previously been and between mountain ranges which he labeled Doña Ana, to the east, and Roblerito, across the river to the west (Alessio Robles 1939:91).

Josiah Gregg gave little description of his 1833 crossing of the Jornada del Muerto but did note that he was grateful to reach "Robledo" on the river, with its abundance of water and wood (Gregg 1933:260). The caravan carrying Wislizenus "at last" arrived at the river after their crossing of the Jornada del Muerto on 5 August 1846. Although Wislizenus wrote that the country was mountainous and described the mountains to the east, calling them the "Organon," or Organ Mountains, they were well known as such, for Antonio Otermín had named them "Los Organos" in 1680. Wislizenus also noted that "Doñana," which was the first town south of the Jornada, was 12 miles to the south (Wislizenus 1848:39). Gibson, having stopped at San Diego, was less anxious to reach "Robledo" on 22 December 1846, but he did note that it was the end of the Jornada and next to the river. He thought it fourteen miles from San Diego and ten from Doña Ana. He described a wide valley with plenty of wood and grass (Bieber 1935:297).

Fort Selden was established in the same area, in part to protect the entrance of the Camino Real into the Jornada del Muerto, in 1865 and operated intermittently until 1889 (Frazer 1965:103). The *paraje* of Robledillo or Robledo was not an exact point on the Río Grande. It was the wide valley, well supplied with forage and wood, adjacent to the dry, barren, Jornada del Muerto, and stretched along and away from the river.

Turney states that the trail across the Jornada north from Fort Selden is marked by a line of mesquite bushes sewn by oxen who were fed on mesquite beans that were often passed without being well digested (Turney 1996:181).

Paraje del Perrillo

Era: 17th, 18th, and 19th Century

Significance: The water source and hills of this name were noted by many travelers from Oñate through the nineteenth century.

Annotated History: On 23 May 1598 the Oñate expedition traveled about four leagues, doing poorly because of the lack of water. They were traveling five or six leagues east of the Río Grande. After one of their dogs returned with muddy paws, they searched for some water holes. Captain Gaspar Pérez de Villagrá and Cristóbal Sánchez each found one, not far away in the direction of the river (Pacheco, Cárdenas y Torres 1871:XVI, 247-248).

In 1680, Otermín mentioned stops at El Perrillo but gave no descriptions or details of distances traveled (Hackett and Shelby 1942:II, 202;II, 365). On the evening of 27 August 1692, Vargas stopped at El Perrillo, but gave no distance from San Diego or Las Peñuelas (Kessell and Hendricks 1992:371). Rivera left San Diego on 25 May 1726 and traveled north-northwest through flat land, passing the Cerros de Perrillo to the east after six leagues (Alessio Robles 1946:49).

On 9 August 1766, Lafora referred to a campsite and to a nearby mountain range as simply "Perrillo." After traveling ten leagues from Robledillo, he camped near pools of rainwater identifing the mountains to the east as the Organ range and to the west as the Sierras del Perrillo and del Muerto. He described the Río Grande as running through a canyon beyond the mountains to the west (Alessio Robles 1939:92).

Wislizenus called this spring "Barilla" (likely a corruption of Perrillo which Gibson below calls "Perrilla") when his party stopped there on 3 August 1846. They had been at a spring to the north, probably El Alemán, which they found dry and then had pushed on 20 miles until they found sufficient amounts of stagnant water to provide for their stock there. Wislizenus observed that spurs from the mountains to the east approached the area and that the soil was more solid than it had been to the north (Wislizenus 1848:39).

Gibson gave the name "perilla" to "an isolated mountain in the valley, which here expands, giving the appearance of two valleys." He also observed that the road veered to the right at this point and was not as flat as it had been. He made it ten miles from El Alemán and ten from San Diego (Bieber 1935:296-297). The Baptist missionary Hiram Read wrote that the "Ponds of Perillo," which he translated as "Ponds of Peril," were three miles south of the Point of Rocks and 22 miles from Robledo (Bloom 1942:136).

The spur, hills, or mountains mentioned by the chronicles conform to the Point of Rocks formation. Oñate reported that the pools (*aguajes*) found by Villagrá and Cristóbal Sánchez were toward the river. Upside Down Tank and Alivio are both to the west of, or toward the river from, the Point of Rocks formation. The road and rail line veer to the right, à la Gibson's description of the road, a little further north at Upham; however, the places mentioned are more likely matches for their nearness to the Point of Rocks and distance from Alemán and San Diego. Read seems to have been at Rincon Arroyo, on which maps show a small pond at about the right place. Point of Rocks Tank, south of Point of Rocks, is also a possibility.

Paraje del Alemán

Era: 17th, 18th, and 19th Century

Significance: The name Alemán (The German) resulted, vicariously, from a seventeenth-century inquisition case involving the German trader from Sonora, Bernardo Gruber, and remained attached to a nineteenth century stage stop and post office. A ranch maintains the name "Aleman" into the twentieth century and beyond.

Annotated History: The name is thought to refer to Bernardo Gruber, a German trader from Sonora who became a target of the Holy Office of the Inquisition in New Mexico in 1668. Gruber was a prisoner for nearly two years before he made his escape, on June 22, 1670, with the aid of his Apache servant, Atanasio. Atanasio later reported that he and Gruber had passed Senecú and Fray Cristóbal and made it through the "hot wasteland" to Las Peñuelas, which was dry. Atanasio went south to San Diego in search of water and returned two days later to find Gruber gone. Atanasio speculated that Gruber had taken one horse and gone south on the Camino Real, though Atanasio himself had been on that stretch of road and had not seen Gruber. Atanasio tried unsuccessfully to locate Gruber and then decided to surrender and report the incident at Senecú. Search parties were sent out in vain. Soon, however, remains that were thought to be Gruber's were found by accident at a point which would later be called Alemán. The discoverers related that they had found Gruber's remains while traveling between Las Peñuelas and El Perrillo, or south of Peñuelas.

Later it was said that Atanasio murdered Gruber. Gruber's ordeal is also thought to have inspired the name Jornada del Muerto (Sánchez 1996:97-104). This is the only time that Las Peñuelas and Alemán can be found in the same account. A comparison of distance estimates given for Alemán and Las Peñuelas suggests that the former may have supplanted the latter in the lore of the Jornada.

On 10 August 1766, Lafora passed by el *paraje* del Alemán, six leagues north of El Perrillo and eight south of Laguna del Muerto, in the Jornada del Muerto of New Mexico. He found the pools, which often gathered rainwater, dry (Alessio Robles 1939:92-93).

"Alamos" was the name used by Wislizenus to describe what was, on 3 August 1846, a dry pool, some 20 miles north of *Paraje* del Perrillo and sixteen miles south of Laguna del Muerto. He camped four miles south on a grassy hill (Wislizenus 1848:39). On 20 December 1846, Gibson arrived at El Alemán, fourteen miles from Laguna del Muerto and ten from El Perrillo (Bieber 1935:296-297). In September 1851, Hiram Read arrived at "Alaman," which he thought to be 40 miles from Fray Cristóbal over a road as good as if it were "McAdamized", or paved (Bloom 1942:136).

Later in the nineteenth century, the name Aleman was continued in a stage stop, post office, and ranch. The name Martin's Well was given to the same site after John Martin, who dug a well and operated an inn at *Paraje* del Alemán (Julyan 1996:12; Cohrs 1974 (Unpublished MS); Marshall and Walt 1984:242).

Las Peñuelas

Era: 18th Century

Significance: A place name well known in the seventeenth and early eighteenth centuries, it may have referred to a site later called by other names.

Annotated History: On 24 May 1598, the Oñate expedition traveled four leagues north of the *Paraje* del Perrillo without any water. They finally came to some small pools next to *Piedras de Afilar* where they drank and rested. They took their horses to the river, more than six leagues off to their left, where it was extremely hilly and very rough (Pacheco, Cárdenas y Torres 1871:XVI, 248-249). Marshall and Walt place Oñate at Las Peñuelas on this day (Marshall and Walt 1984:237). The association of Oñate's camp with Peñuelas, or with Alemán, is reasonable. Through the rest of the Jornada del Muerto, Oñate's journal becomes confused. It appears that there is data missing from it, making any conclusions based upon that source hazardous.

Vargas went from El Perrillo to Las Peñuelas on 28 August 1692, but did not estimate the distance of his journey. He did note that it was six leagues from Las Peñuelas to El Muerto (Kessell and Hendricks 1992:371).

On 25 May 1726 Rivera left San Diego and traveled eleven leagues north-northwest through flat land, leaving the hills called "el Perilloto" the east, and stopped at an uninhabited *paraje*, with no water or fire -wood, called Las Peñuelas (Alessio Robles 1946:49).

Julyan identifies Las Peñuelas as Point of Rocks (Julyan 1996:199). Such an association is obvious on the basis of the name alone. However, chroniclers who visited both the hills and water source of Perrillo and Peñuelas noted considerable, and variant, distances between the two. A comparison of distance estimates suggests that Peñuelas and Alemán (below) were the same, or at least were very near one another. Perhaps the rocks in the name and in Oñate's description of his camp of 24 May refer to Prisor Hill. It is by Aleman Draw and has a well marked on its western flank; however, at about 2 leagues southeast of the modern locale of Aleman it may be too far off the track. Black Hill is further north and a little west. In pinpointing any of these *parajes* the relationships between them must be considered.

Laguna del Muerto

Era: 17th, 18th, and 19th Century

Significance: This seasonal water source was a consistent camp from at least 1692 and well into the nineteenth century. Even when dry, this was

an important camp as a base for water runs to Ojo del Muerto.

Annotated History: Vargas reported that he went six leagues from Las Peñuelas to El Muerto, or *Paraje* del Muerto, on 29 August 1692 (Kessell and Hendricks 1992:372 -373).

On 26 May 1726 Rivera left Las Peñuelas and traveled six leagues before stopping along the road. Because there was no water or wood it was decided to lead the horses to the Laguna del Muerto with a large escort because of the numbers of hostile Indians that inhabited the area (Alessio Robles 1946:49 - 50). It seems clear that Rivera's party actually stopped in the area known as Laguna del Muerto and then sent the horses to Ojo del Muerto, a place known for the danger of hostilities.

Lafora camped at the Laguna del Muerto on 10 August 1766 although it was dry. He reported that it was 14 leagues north of Perrillo, eight north of Alemán, and ten leagues to the southeast of the *Paraje* de Fray Cristóbal at the north end of the Jornada del Muerto of New Mexico (Alessio Robles 1939:93).

In 1833 Josiah Gregg found Laguna del Muerto dry. He described it as "a sink in the plain of a few rods in diameter, and only filled with water during the rainy season." He thought it five or six miles to Ojo del Muerto (Gregg 1933:259).

On 2 August 1846, Wislizenus found this lakebed dry, so his party went to water their animals at the nearby Ojo del Muerto. He put Laguna del Muerto 22 miles from Fray Cristóbal and 16 from "Alamos" (Wislizenus 1848:38). In the same year in December, Gibson's party had the same experience. He wrote that it was 14 miles from El Alemán and 26 miles from Fray Cristóbal (Bieber 1935:296).

Cedar Lake, Engle Lake, and a small, unnamed lake north of Engle Lake match the various distance estimates given for Laguna del Muerto. All that is certain is that it was a basin that periodically held water and was east of Ojo del Muerto and the later site of Fort McRae.

Fray Cristóbal

Era: 17th, 18th, and 19th Century

Significance: Named for a member of the Oñate entrada, the Paraje de Fray Cristóbal remained important throughout the period in which the Camino Real was in use. Oñate's men facetiously remarked that the outline of the ridge of the mountain near present Elephant Butte Reservoir looked like the profile of Fray Cristóbal, saying he was "feisimo" (politely, not very good looking). It was described as a general area rather than a particular point but can be defined by its proximity to both the Río Grande and the Jornada del Muerto. In the nineteenth century, Fray Cristóbal became Fra Cristobal, as a modern local spelling and pronunciation without a "y" in Fray and without an accent in Cristóbal.

Annotated History: Otermín placed Fray Cristóbal 60 leagues from Santa Fé, 32 leagues from Robledo, which he gave as the beginning of the dry jornada, and seven from La Cruz de Anaya (Hackett and Shelby 1942:II, 202;II, 365;II.397). Vargas reached Fray Cristóbal traveling north on 30 August 1692. He noted that it was 32 leagues from San Diego and 65 from El Paso (Kessell and Hendricks 1992:371 -373).

El *Paraje* de Fray Cristóbal marked the northern terminus of the Jornada del Muerto of New Mexico. On 27 May 1726 Rivera traveled north - northwest eleven leagues, passing the Sierra de San Cristóbal, and stayed at a paraje called Fray Cristóbal, located on the bank of the Río Grande (Alessio Robles 1946:50).

On 11 August 1766, Lafora recounted camping there on the bank of the Río Grande five leagues north of the northern end of the Sierra de San Cristóbal (Alessio Robles 1939:93). On 22 November 1780 Anza left Valverde and traveled five leagues south to "Fray Cristoval" (Thomas 1932:199).

In 1895, Coues characterized this as an area more than a specific point (Coues 1895:II, 635 - 636). Josiah Gregg gave a short description of Fray Cristóbal in 1833 that defines the Spanish *paraje* from the Anglo-American point of view.

He wrote that it, "like many others on the route, is neither town nor village, but a simple isolated point on the river-bank - a mere *paraje*, or camping-ground" (Gregg 1933:258).

In August of 1846, Wislizenus understood this title to refer to the last camping place before entering the Jornada del Muerto heading south rather than a particular site. His caravan camped two miles from the Río Grande but he noted that others stayed nearer or further and that there were no buildings with which to identify the name (Wislizenus 1848:38).

In 1851, Reverend Read described a grove of timber where all travelers "halt to feed, rest and obtain a supply of wood and water before entering the Jornada" (Bloom 1942:135). When Davis passed through Fray Cristóbal in 1855, there was still no settlement of any kind (Davis 1938:208-209).

A town called *Paraje*, or Fra Cristobal, founded at about the same site in the late 1850s, survived into the first decades of the twentieth century. A twin town, Canta Recio, was settled directly across the river in the 1870s (Boyd 1986:86). Boyd places the town of Paraje eight miles down river from Fort Craig. During the Civil War, Colonel Edward Canby estimated it at seven miles (Boyd 1986:60, 70 -71). Marshall and Walt note that the site of *Paraje*, designated LA 1124, is south of *Paraje* Well (Marshall and Walt 1984:293). The ruins of *Paraje* lie within the flood basin of Elephant Butte Reservoir. Although it has seldom been completely under water the reservoir contributed to erosion of the town. Boyd writes that during the twentieth century the Río Grande meandered eastward to erode the western portion of the town's ruins (Boyd 1986:110). According to John P. Wilson, the location of the earliest signs of settlement were found by a surveyor in 1857 at the line between Sections 31 and 6 in Townships 8 and 9 South, Range 2 West (Wilson 1985:32). A 1908 Bureau of Reclamation map in Boyd confirms that location (Boyd 1986:103).

The small area of the river occupied by *Paraje* and *Paraje* Well would have been the point where caravans left or reached the river before or after the crossing of the Jornada del Muerto. The "Lava Gate" between lava flows to the northeast and the Fra Cristobal Range to the southwest funneled traffic to the river in that area (Marshall and Walt 1984:241).

A map from the Surveyor General's files of the Pedro Armendaris Grant shows the "old wattering place" (sic) where the "Wagon Road over the Jornada" met the "old bed of the Río Grande." It also has range lines and the town sites of *Paraje* and Canta Recio. It can be used to pinpoint the location where the Camino Real rejoined the river, the focal point of the *paraje* of Fray Cristóbal. However, testimony in that same file notes that there was evidence of several river beds, or meanders, at Fray Cristóbal, "showing that at different times it has had its channel all over the narrow valley which borders the present stream" (Pedro Armendaris Grant #33:108-109,182 -183). The *paraje* also spread along and away from the river at that point.

Fort Craig

New Mexico
NATIONAL REGISTER
Era: 19th Century

This post's predecessor was Fort Conrad (1851-54), a motley group of adobe and cottonwood huts about 9 miles to the north, also on the west bank of the Río Grande. Troops occupied Fort Conrad while they built Fort Craig (1854-84). The mission of the forts, near the northern end of the Jornada del Muerto, was protecting westbound miners from Navajos and Apaches and guarding the Camino Real. The garrison, almost continuously occupied with defensive actions and patrols, took part in the Navajo and Apache conflicts of the 1850s and in the Apache wars (1861-86). Supported by troop remnants from abandoned posts in Arizona and New Mexico that had marshaled at the fort, it also fought in the nearby Battle of Valverde (February 1862), the first major battle of the Civil War in the Southwest. Fort Craig was deactivated in 1885.

The walls of 17 of Fort Craig's adobe buildings, in varying stages of disintegration, and the stone

guardhouse are visible, as are earth mounds representing Civil War fortifications. The military cemetery is still surrounded by a stone wall but the burials, including those who died at the Battle of Valverde, were moved to Santa Fe in 1876.

El Contadero (Mesa del Contadero, Mesa de Senecú, Mesilla de Guinea, Black Mesa)

Era: 18th and 19th Century

Significance: This landmark mesa boasted *parajes* to both the north and the south, both associated with the name Contadero. One, south of the mesa, has been identified with a Mexican and colonial period archeological site.

Annotated History: Between 26 and 27 May 1598, the Oñate expedition traveled nine leagues from the "Arroyo de los Muertos" or "Arroyo de las Parras" without their carts because it was impossible to proceed with them. On the 27th, they arrived at "Ciénega de Mesilla de Guinea," named this because the mesa was made of black rock (Pacheco, Cárdenas y Torres 1871:XVI.249). It was the same formation that shared the names El Contadero, Senecú, and Black Mesa. Hammond and Rey place the marsh on the east bank of the Río Grande, near San Marcial (Hammond and Rey 1953:I.317). That area was later called Valverde.

Otermín, in 1680, twice mentioned El Contadero without giving details about it (Hackett and Shelby 1942:II, 172,364). On another occasion, however, he described camping at the "place...which they call El Contadero, along the banks of the Río del Norte." The next morning they "crossed the Río del Norte, the pueblo of Senecú being on the other side" (Hackett and Shelby 1942:II, 203).

On 12 August 1766, one league north of Fray Cristóbal, Lafora entered a perilous defile through hills and ravines called "el Contadero." It extended north three leagues, as far as the mesa of Senecú. From the mesa the ruins of the pueblo of the same name could be seen across the river (Alessio Robles 1939:94).

In Miera y Pacheco's map ("Plano del Rio Grande, 1773), two sites are featured: Contadero south of "Mesa de Senecú" and an unnamed *paraje* north of the mesa, perhaps Valverde (Adams and Chávez 1956:268;Marshall and Walt 1984:286).

The 1819 description of the Valverde Grant gave as the southern boundary "a peak or knoll located on the southern edge of the Mesilla del Contadero which is the boundary or terminus of the Valverde Valley and which is at the Fray Cristobal *Paraje*" (Bowden 1969:II.163). El Contadero was noted but not described by Gregg (Gregg 1933:258). Ferguson referred to the "high table-land on the east side of the river called 'Cantadero'(sic)" (Bieber 1936:334).

Gibson camped at Valverde, which he described as very close to a mesa. His description of the mesa as a volcanic table, flat except for one little elevation, with very steep sides, identifies it as Black Mesa. When his unit left Valverde it went six miles around the east of the mesa and to the camp of another unit on the south side. That camp was one half mile from water but had forage and wood. It was nine miles from Fray Cristóbal (Bieber 1935:293-294). An 1872 map of the Pedro Armendaris Grant shows a place labeled Contadero south of the mesa with the same name (Pedro Armendaris Grant #34:28). Marshall and Walt place the paraje south of the mesa. They also note a colonial and Mexican period archeological site, Corrales de Contadero (LA 31735, Río Abajo Site No. 72), that may be associated with the paraje (Marshall and Walt 1984:270,294).

Wilson uses the name Contadero for the pass, the mesa, and the point where the road once more reached the river. He also describes the trail as "the very narrow trail along the western and southern base, between the steep sides of the mesa and the waters of the river" (Wilson 1976:6-7). The term Contadero was used over the centuries to describe Black Mesa itself and its southward extension toward Fray Cristóbal, the defile leading through the southern extension to Black Mesa, and camps on both the south and north sides of the mesa. The latter was later known as Valverde.

Oñate named the "Mesilla de Guinea," a reference to its black color, and the marshes along the river beside it. Lafora referred to the mesa itself as the "mesa de Senecú," from which the ruins of the pueblo of the same name could be seen across the river. Miera y Pacheco used the same name for the mesa itself. By referring to "the southern edge of the Mesilla del Contadero" at "Fray Cristobal *Paraje*," the 1819 description of the Valverde Grant used that name to describe the entire formation of which Black Mesa is the northernmost part.

Lafora described Contadero as the narrow defile leading north to the mesa. The 1773 map of Miera y Pacheco depicted Contadero south of "Mesa de Senecú", as did the Armendaris Grant map. That may have been Gibson's 1846 campground on the south side of the mesa, six miles south of Valverde and nine miles from Fray Cristóbal. Marshall and Walt place the *paraje* south of the mesa and also note an archeological site called Corrales de Contadero in that vicinity

Finally, the only Otermín mention of El Contadero in 1680 that can be located was across from the pueblo of Senecú, at or very near the place later known as Valverde. Miera y Pacheco's map showed an unnamed *paraje* immediately north of the Mesa de Senecú. These both conform to Gibson's 1846 description of a campground near the ruins of Valverde. It was in a grove of trees near the base of Black Mesa and bore traces of earlier campers.

For the purposes of this study, Marshall and Walt's Corrales de Contadero archeological site (LA 31735, Río Abajo Site No. 72) should be considered as the appropriate site for the *paraje* of Contadero. The name Valverde later included the flat on the east bank north of Black Mesa.

Valverde

Era: 17th, 18th, and 19th Century

Significance: This *paraje* was called Contadero during the seventeenth century and Valverde by the late eighteenth century. Regardless of its name it was a natural *paraje* as well as the site of a nineteenth-century town and civil war battle.

Annotated History: Otermín described camping at a point that he called El Contadero. It was on the banks of the river across from the ruins of the pueblo of Senecú (Hackett and Shelby 1942:II.203). That description better fits later descriptions of Valverde and the location of the ruins of the hacienda and town of that name, than do later depictions of El Contadero showing it south of Black Mesa and away from the river. The 1773 map by Bernardo de Miera y Pacheco showed an unnamed *paraje* north of "Mesa de Senecú" which would have been Valverde (Adams and Chávez 1956:268; Marshall and Walt 1984:286).

On 20 November 1780 Anza left the spring of the Apaches, or the "Apache Wood," and traveled four leagues to Valverde, where he noted the tracks of many horses and people crossing the river. His party rested there the next day before going on five leagues to Fray Cristóbal (Thomas 1932:198). During the nineteenth century Valverde was often noted as the site of a good ford. The *paraje* of Valverde next appeared in 1805 in a report on vaccinations (Marshall and Walt 1984:286).

The 1819 description of the Valverde Grant noted that it began at the "Ancon de Valverde" on the east bank of the Río Grande, opposite the mouth of the Arroyo de San Pasqual (Bowden 1969:II, 163). There is now a bend in the river adjacent to the Valverde town site and across from the mouth of Tiffany Canyon. Tiffany Arroyo, a name whose origin is in the twentieth century, is across from and slightly south of the ruin of San Pasqual. In 1832, Valverde was described as the ruins of a hacienda on the outskirts of the settlements of New Mexico at the edge of the desert of the Jornada del Muerto (Carroll and Haggard 1942:78-80; Julyan 1996:353).

In 1839, Gregg observed the ruins of Valverde and wrote that it had been founded only 20 years earlier, in some of the richest land in New Mexico, and was deserted due to Indian attacks (Gregg 1933:258). On 30 July 1846, Wislizenus wrote of passing the "ruins of Valverde," which he described as "the mud walls of a deserted Mexican village," in an area of sand hills and cottonwood trees within twelve miles to the

south of Luis López's hacienda (Wislizenus 1848:37).

In 1846, Abert identified the river crossing at Valverde and recommended that southbound wagons be taken to the west bank of the Río Grande at Alburquerque and back to the east side at this ford. Abert mentioned and sketched the Mesa overlooking the ruins of Valverde and placed it 15 miles from Fray Cristóbal (Abert 1962:120,125 -133). Gibson described his camp near the ruins of Valverde in 1846. It was in a grove of trees near the base of Black Mesa and bore traces of earlier campers. When his unit left Valverde it went six miles around the east side of the mesa to a camp on the south side (Bieber 1935:293-294). Depictions of the Civil War Battle of Valverde confirm that the entire battle took place in the shadow of the Mesa del Contadero (Alberts 1984:42;Hall 1960:84,97).

The *paraje* north of Mesa de Contadero variously called Contadero or Valverde probably spread along the riverbank and filled the space between the river sand the edge of the hills. Accounts of the Battle of Valverde also include an old riverbed on the east side of the valley but still in its bottom (Alberts 1984:42,46; Hall 1960:84,97). Depending upon the age of that bed, or the possibility that the river bed has changed regularly over the last several centuries, it could be that the segment of the paraje which experienced the heaviest use is much closer to the hills than to the existing river bed.

Luis Lopez

Era: 19th Century

Significance: The seventeenth-century estancia that belonged to Luis López bequeathed its name to the region and it was attached to this Mexican era community. It was noted by nineteenth-century travelers who used the road on the west bank of the river.

Annotated History: The Mexican period community of Luis López first appears in a list of New Mexico settlements compiled by Manuel Armijo in 1840 (Carroll and Haggard 1942:93; Marshall and Walt 1984:278).

On 29 July 1846, Wislizenus mentioned a small town named Lopez; on his map he marked it L. Lopez. He commented that the mountains came closer to the river there and that this area contained the last settlements before the Jornada del Muerto (Wislizenus 1848:37).

In December 1846, George Rutledge Gibson and Doniphan's army camped at Luis López on the west bank of the Río Grande. They forced residents to sell them needed supplies (Bieber 1935:291).

Marshall and Walt place the Mexican era settlement of Luis Lopez (LA31748) just east of the present village of the same name (Marshall and Walt 1984:277-278).

Teypana, Teypama Piro Pueblo

New Mexico
NATIONAL REGISTER
Era: 17th, 18th, and 19th Century

Teypana or Teypama Piro Pueblo is a prehistoric/ contact period pueblo. This would be a great place to interpret pre-contact people on what would become the Camino Real. The Piro village name "Teypama" appears only in the records of the Oñate Expedition (Hammond and Rey 1953:318 and 346). We find in the June 1598 itinerary (No. 1) that the pueblo of "Teypana" was also called "Socorro." The name Socorro (aid, assistance, or relief) was applied to the village since the inhabitants had furnished the Oñate Colony with a supply of corn and, as Vetancurt described in 1698, "a la venida de l9s carros antes de la fundacion de Guadalupe se les llevaba socorro de pan, y otras cosas a los caminantes" (Vetancurt 1961: 266). (See Marsahll and Walt, p. 250).
Marshall & Walt, p 250

Town of Socorro Plaza

Era: 17th, 18th, and 19th Century

Socorro has been steeped in New Mexico history since Don Juan de Oñate stopped off during his entrada on June 14, 1598. The site was then occupied by Pilabo, the northernmost Piro Indian pueblo; the Oñate documents called it

"Piloque." Oñate was in advance of the main body of colonists. The caravan, still struggling through the desert behind him, was in desperate need of provisions. Of the Piro Indians, Oñate said, they "gave us much corn." The pueblo was renamed Socorro (succor, help) to commemorate the gift.

While Oñate continued north, two priests remained behind to do missionary work among the Indians. Fray Alfonso was so successful that he became known as "The Apostle of Socorro." The two priests built a modest church, to be replaced by a larger structure between 1615 and 1626. Here Fray Zuñiga and Fray Antonio de Arteaga planted the first grapes to be raised in New Mexico.

In late 1681, after the Pueblo Revolt, Governor Don Antonio de Otermin returned to the north in a half- hearted attempt at reconquest. He reached Socorro in November and found the community abandoned and the church profaned. He burned what supplies and provisions were left to keep them from falling into the hands of rebel Indians. He was unsuccessful in negotiating peace. The Indians had "returned to idolatry" and were unwilling to accept the resumption of Spanish rule. On January 2, 1682, Otermin gave up his attempt to reassert Spanish rule and started back toward El Paso.

Ten years later, on August 21, 1692, Don Diego de Vargas set out from El Paso for the reconquest of New Mexico. His force consisted of sixty Spaniards and a hundred friendly Indians. Within four months de Vargas restored twenty-three pueblos to Spain's empire. By September, 1693, de Vargas was back in El Paso gathering an expedition for resettlement. He was not as lucky this time; his force met with resistance. The battle to occupy Santa Fe was short, but it took most of 1694 to subdue the remainder of the pueblos.

During the recolonization, the former residents of Socorro did not return. Except for travelers and caravans on the Camino Real, Socorro was deserted and dormant until 1816 when the Spanish Crown awarded land to twenty-one families by the Socorro Grant.

The settlers depended upon agriculture and raising cattle and sheep. They settled on the hillside and valley floor, irrigating their crops from mountain springs and the Río Grande. There were fields of wheat and corn, vineyards and orchards, and pastures. As protection from the Apaches, they built adobe houses facing a central courtyard.

During the second quarter of the nineteenth century, life in Socorro settled into a leisurely if not lazy agrarian pattern, punctuated by occasional Apache raids and the arrival of travelers on the old Camino Real, now usually called the Chihuahua Road by the Santa Fe traders. Socorro was the last stop before or the first stop after crossing the Jornada del Muerto, and the residents learned to profit from their position.

The 1850s brought changes. Fort Craig was built some twenty miles to the south, and Socorro became an "army town," a trading center and rendezvous for officers and men from the fort. After the Civil War erupted, freighting and storing supplies created a bustle that completely transformed the village.

Lemitar

Era: 19th Century

Significance: Lemitar was built on the west bank variant of the Camino Real in the nineteenth century.

Annotated History: Although Lemitar does not appear on any Mexican period lists of settlements it apparently came into existence in 1831. The present church, completed by 1835, had its first burial in its camposanto shortly afterwards. The plaza was located to the east of the church and the road probably ran through the plaza (Scurlock 1982:7; Marshall and Walt 1984:277).

In November 1846 James William Abert observed Lemitar across the river from his camp on the east bank. He included it on his map of the region (Abert 1962:119,frontispiece). George Rutledge Gibson, in Doniphan's army traveling down the west bank in December 1846, camped

at "Limitar" (Bieber 1935:290-291). The missionary Read dined with ex- governor Manuel Armijo in "Limita" in 1851. Read described a "thriving town of some 300 souls...in a most beautiful portion of the valley" (Bloom 1942:134-135). W.W.H. Davis crossed the Río Grande from east to west near "Limitar" in 1855. His party continued into Lemitar and lunched at the home of the late governor, Manuel Armijo (Davis 1938:202).

Sabino

Era: 19th century.

Significance: The name predates the building of this nineteenth-century town, near the ruins of the seventeenth-century pueblo of Alamillo.

Annotated History: In a 1782 description attributed to Fray Juan Agustín de Morfi, there is mention of a deserted rancho named "Savina" in this area (Thomas 1932:102). "Sabinal," between Belén and Socorro, was listed in reports of 1827, 1831, 1833, and 1840. It was variously recorded as a pueblo, alcaldía, and plaza (Carroll and Haggard 1942:47-49,88,93; Bloom 1913:15)

Wislizenus, heading south, reported passing "through the town Sabino," on the east side of the river, on the morning of 26 July 1846 after camping at La Joya. He noted that large yucca as well as mesquite became more common there than they had been further north (Wislizenus 1848:36). Abert noted that the citizens of Sabino had been fighting with the Navajo in 1846 (Abert 1962:119).

The ruins of Sabino are shown on a 1906 USGS map, across the river from, and about 750 yards north of, Lemitar (Scurlock 1982:8). It has been identified as LA 8870 (Marshall and Walt 1984:306).

Alamillo pueblo

Era: 17th and 18th Century

Significance: The mission-pueblo ruins of Alamillo marked a nearby *paraje* long after the pueblo was deserted. The most significant event that occurred at Alamillo took place when Governor Bernardo Lopez de Mendizabal, during his inspection of New Mexico, investigated the ninety-year- old Father Alonso de Peinado, the resident missionary, in 1659 and humiliated him before the Indian pueblo. Soon after, Lopez ordered that the Alamillo mission Indians be moved back to Sevilletta, their native land.

Annotated History: The Piro pueblos of El Hosso (or El Oso) and La Pedrosa were mentioned together in Hernan Gallegos's account of the Sánchez Chamuscado entrada of 1581. Both were located on the east bank of the Río Grande, evidently in the area of Alamillo, New Mexico (Mecham 1926:275; Hammond and Rey 1927:45). It is possible that they conform to Alamillo and Acomilla.

In 1692, Vetancurt wrote of the church dedicated to Santa Ana three leagues from Socorro. He mentioned that the people lived on fish gathered from the Río Grande. The pueblo was burned in 1680 (Vetancurt 1961:266).

In October 1681 it was reported that the Piro pueblos of Alamillo, Sevilleta, and Socorro had been deserted after the revolt (Hackett and Shelby 1942:II.168). On 30 November 1681, Otermín marched north from Socorro through La Vuelta de Socorro to the Pueblo of Alamillo. He described its setting as in a plain on the banks of the Río Grande. Otermín's company camped beside the pueblo and then went on to Sevilleta. Returning south in January 1682, Otermín reported that he went from Sevilleta through Las Vueltas de Acomilla, over the "hill of Acomilla" and down into the pueblo of Alamillo. They stayed there two days to wait out inclement weather and then continued south (Hackett and Shelby 1942:II,206,II, 363).

Vargas stopped at the abandoned pueblo of Alamillo on 3 September 1692 after a march of five leagues from Socorro. The road was bad enough that he has trouble with his wagons. It was six or seven leagues to the abandoned hacienda of Felipe Romero, north of Sevilleta, the next day (Kessell and Hendricks 1992:374).

On 29 May 1726, Rivera traveled north twelve leagues from San Pasqual, through the hills of Acomilla, to Alamillo. He saw several ruins on

the east side of the river, where there had been haciendas de labor before the revolt. He found the pueblo of El Alamillo, located on the east side of the river, and stayed in an uninhabited place near it (Alessio Robles 1946:50).

On 17 May 1760, after seeing the remains of Socorro, Bishop Tamarón stopped at the site of "Alamito" (Adams 1953:201). Lafora saw ruins when he camped nearby on 13 August 1766. He located it four leagues to the south of the ruins of the pueblo of Sevilleta by a rough road (Alessio Robles 1939:95). On 17 November 1780 Anza left the Vueltas de Romero and traveled five leagues south to the region of Alamillo (Thomas 1932:198). The Vueltas de Romero are featured in Bernardo de Miera y Pacheco's map of 1779.

Despite the long-lived notoriety of Alamillo its location is now a mystery. Marshall and Walt write that they are certain that it was south of Alamillo Arroyo and north of Pueblito and speculate that it was probably very near the later town of Sabino. They conclude that its proximity to the river may have caused traces of it to be destroyed by floods (Marshall and Walt 1984:255).

La Joya de Sevilleta

New Mexico
Era: 17th, 18th, and 19th century

Significance: The modern town of La Joya was founded as a frontier outpost for protection of the Camino Real adjacent to the site of a seventeenth-century Piro pueblo. The village of La Joya de Sevilleta marks the lower end of Rio Abajo. For a time it was where caravans would gather and await the rest of the caravan and/or presidial troops who would escort them down the trail. The church and possibly the plaza, along with some ruins of structures, remain of this important village.

Annotated History: In his account of the Sánchez Chamuscado entrada, Gallegos named the two northernmost Piro pueblos in New Mexico Ponsitlan and Pueblo Nuevo. The latter was still being built at that time. They were both on the east side of the Río Grande and one may have been Sevilleta, later the northern border of the Piro nation (Mecham 1926:275;Hammond and Rey 1927:46).

On 15 June 1598 the Oñate expedition traveled seven leagues from Socorro to the little pueblo which they named Nueva Sevilla. They thought it necessary to take refuge in the houses of the pueblo in case the Indians of the area decided to attack and made this the first pueblo in which they camped. They stayed there until 21 June. Between 15 June and 22 June 1598 the Maese de Campo, Juan de Zaldivar, and Sargeanto Mayor, Vicente de Zaldivar, visited "the pueblos of Abo" (Pacheco, Cárdenas y Torres 1871:XVI, 251-252). Nueva Sevilla also came to be known as Sevilleta, so named because of its resemblance to Seville, Spain. It was located on the east bank of the Río Grande, about 20 miles north of Socorro (Hammond and Rey:1953:I, 318). Vetancurt wrote that it received its name due to its large Piro population. In 1692, Vetancurt said that this pueblo was five leagues from Alamillo. Sevilleta had been razed before that time (Vetancurt 1961:266).

In 1634, Fray Benavides reported that the Piro pueblo of Sevilleta boasted a convent and Indians who lived Christian lives. He wrote that when he arrived in New Mexico at the beginning of 1626, Sevilleta was burned and in ruins due to warfare with other Indians, likely the Apache. During the tenure of Benavides as Custodian of New Mexico, the pueblo was rebuilt and resettled and the convent erected and dedicated to San Luis Obispo. Benavides also used the name "Seelocú," evidently the Piro name for Sevilleta (Hodge, Hammond, and Rey 1945:63-64,252-253). Governor Juan Manso de Contreras moved the inhabitants of Sevilleta to the pueblo of Alamillo during the 1650s. The next governor, Bernardo López de Mendizábal, returned them in 1659 despite protests by the Franciscans in the area (Primera Audiencia de don Bernardo López de Mendizábal, 1663; Scholes 1942:29).

When Maestro de Campo Alonso García retreated down the river in August 1680 the natives of Sevilleta went south with him. It was

later reported that Sevilleta was left deserted along with the other Piro pueblos of Alamillo and Socorro (Hackett and Shelby 1942:I, 70,II, 168). Otermín passed Sevilleta in January 1682 as he retreated to the south after his brief return to New Mexico (Hackett and Shelby 1942:II, 363). Vargas left the abandoned pueblo of Alamillo on 3 September 1692 and went north to the abandoned pueblo of Sevilleta. He continued on to the estancia that had belonged to Felipe Romero to find pasture for his mounts, a distance of six or seven leagues from Alamillo (Kessell and Hendricks 1992:375).

On 30 May 1726, Rivera left El Alamillo and traveled north-northeast through flat land dotted with hills, ravines and thickets and came to the ruins of a pueblo called Sevilleta, located on the east side of the river (Alessio Robles 1946:50-51). On 18 May 1760, after stopping at "Alamito," Bishop Tamarón came to the site where the pueblo of Sevilleta stood, and a little beyond it the ruined estancia of Felipe Romero. Tamarón wrote that both were "lost with the kingdom" (Adams 1953:201). Lafora viewed the ruins of Sevilleta when he passed through on 14 August 1766. He placed it across from the mouth of the Río Puerco in an area of steep hills (Alessio Robles 1939:95).

After the visit of Lafora, the area was resettled as the town of La Joya. In the 1790s landless families from Taos, Las Vegas, and Mora who had experience fighting Indians were moved there to provide protection for caravans to and from Mexico. An 1819 land grant to 67 individuals confirmed their defensive responsibilities (Taylor and Diaboli 1937:20).

On 10 March 1807, Zebulon Montgomary Pike described "Sibilleta" as "the neatest most regular village I have yet seen." It was a square, with a mud wall facing the outside and the windows and doors pointing inward toward the plaza. He thought the population to be 1000. This was the last village Pike stayed in before entering "the wilderness" on his trip to Mexico as a Spanish prisoner and he noted that caravans gathered there before heading south (Coues 1895:II, 628-632). In 1812, Pedro Bautista Pino explained that the hazards of the journey to Chihuahua made it necessary for travelers to gather at "Joya de Sevilleta" in sufficient numbers to ensure their safety during the trip south. He also noted it as "Sevilleta," a frontier post in which seven soldiers were stationed (Carroll and Haggard 1942:106,69).

Wislizenus simply called it "Joya, another small town" when he went through on 25 July 1846. His map shows the road continuing straight south as the river curved to the west (Wislizenus 1848:36). In September 1851, Baptist missionary Hiram Read arrived at "La Jolla, (La Hoyah - The Hole)," and found that he had to stay with "a Mexican, there being no American in town" (Bloom 1942:134). In 1855, Davis described "La Hoya" as a town of 400 a few hundred yards from the east bank of the Río Grande (Davis 1938:201).

The modern town of La Joya is apparently just below the ruins of Sevilleta (Marshall and Walt 1984:247).

Nancy Hunter Warren, Villages of Hispanic New Mexico. School of American Research, 1987.

Marta Weigle, Hispanic Villages of Northern New Mexico, Part II, Bibliography. Santa Fe: The Lightning Tree, 1973.

Las Nutrias

Era: 17th, 18th, and 19th century

Significance: The name Las Nutrias appears in the seventeenth century. It was later the center of an attempt to found a land grant community and remains attached to a modern community.

Annotated History: In 1680, Maestro de Campo Alonso García, commander of the Río Abajo, met Governor Antonio de Otermín and the refugees from Santa Fé at Las Nutrias (Hackett and Shelby 1942:I, 104,II, 168,172,174-175). When Otermín led his party and many Indian refugees south from Isleta toward El Paso on the east side of the Río Grande early in 1682, he recorded his route past "La Vega de las

Nutrias" among other places (Hackett and Shelby 1942:II, 362; Hackett 1915:391).

On 30 May 1726 Rivera traveled north then northeast from Sevilleta through flat land dotted with hills, glades and thickets. He passed some arroyos without water after the ruins of Sevilleta and stayed at a *paraje* on the bank of the Río Grande called Las Nutrias. He estimated that he went eight leagues from El Alamillo to Las Nutrias (Alessio Robles 1946:50-51). When Lafora was there on 14 August 1766, he described it as a recently formed town of 30 families, four leagues from Sevilleta and eight from Alamillo. He passed the ruins of "las casas de Felipe Romero" about halfway from Sevilleta to Las Nutrias (Alessio Robles 1939:95-96).

A petition for settling San Gabriel de las Nutrias grant was filed in early 1764. After several attempts to settle the area and gain official approval the grant was revoked in 1771, but the settlement survived (Ebright 1996:203 -208; Bowden 1969:II, 207-208). It appears regularly on maps from the late eighteenth century (Wheat 1959:I, plates 176,185,195,272). On 15 November 1780 Anza left the area near Belen and traveled five leagues south to Las Nutrias (Thomas 1932:198).

Casa Colorado

Era: 18th, and 19th century

Significance: Casa Colorado may have been a seventeenth-century landmark. It began its existence as a community early in the nineteenth century.

Annotated History: On 19 May 1760, after coming to Sevilleta, Bishop Tamarón passed the ruins of "the house they called Colorada," and from that point on they began to see pens of ewes, corrals, and small houses (Adams 1953:201). Given that this is the only colonial era mention of this place and that at the time it was already in ruins, perhaps a pre-revolt estancia which was located there gave its name to the area.

The modern settlement of Casa Colorado was born of a petition for a community grant in 1823. The grant may not have been confirmed at that time but the town continued in existence (Bowden 1969:II, 205). Testimony in the adjudication of the grant before the Surveyor General confirmed that the town was built in 1822 or 1823 in the place already known by the name Casa Colorado (Town of Casa Colorado Grant:12). It was included in lists of New Mexico towns in 1833 and 1840 (Bloom 1913:14;Carroll and Haggard 1942:93).

Wislizenus only referred to the nearby sand hills and the location of "Casas Coloradas," six miles south of Tomé, when he camped there on 22 July 1846 (Wislizenus 1848:35). Later in the same year Abert commented on some large ponds north of town which were filled with water birds. His party had reached the Río Grande near there after descending from Abó Pass (Abert 1962:117-118).

In 1855, W.W.H. Davis observed that at Casa Colorado his party "struck a young desert, an excellent pocket edition of the great African Zahara, over which we journeyed for about four miles." Through the area north of "La Hoya" the sand made travel difficult and the land barren with the exception of "occasional small patches in some of the valleys close to the river" (Davis 1938:200).

In the 1920s the local Post Office was given the name "Turn" because there was a turn in the road at Casa Colorado and that name has since appeared on many maps but the original name is still in general use (Julyan 1996:67).

Las Barrancas

Era: 17th Century

Significance: Las Barrancas was an estancia before the revolt of 1680 whose name all but disappeared by 1900.

Annotated History: This was an estancia located between Sevilleta and Isleta on the east side of the Río Grande where Otermín camped the night of 5 December 1681 before attacking Isleta on the sixth (Hackett 1915:383). It was reported to be 23 leagues north of Senecú and 10

leagues south of Isleta (Hackett and Shelby 1942:II, 213).

Vargas went slightly more than three leagues north from the hacienda of Felipe Romero to Las Barrancas, the hacienda of Francisco Gómez, on 5 September 1692. It was about five leagues south of the hacienda of Tomé Domínguez (Kessell and Hendricks 1992:375).

The place name "la Barrancas" appears in the 1778 map drawn by Edward Ruggles, Jr., a Connecticut map-maker, from information on other existing maps (Wheat 1959:I, 149, plate 214).

The State of New Mexico placed a marker commemorating Las Barrancas alongside New Mexico Highway 47 just south of the A.T.&S.F. railroad tracks.

Jarales

Era: 19th Century

Significance: Jarales and Sabinal were ranchos outside Belén in the eighteenth century through which the west bank variant of the Camino Real ran.

Annotated History: According to Adams and Chávez, Domínguez was referring to Jarales when he described ranchos of genízaros living near Belén in 1776 (Adams and Chávez 1956:208). Chávez names Los Jarales as one of the main genízaro settlements of New Mexico in the late eighteenth century (Chávez 1979:199).

The name "Plaza de los Jarales" appears in an 1802 census, but not that of 1750 (Olmsted 1981:138-139). Among official listings of the early nineteenth century it is only found in 1822 (Bloom 1913:15; Carroll and Haggard 1942:47-48).

Zebulon Pike reported passing "Xaxales" on 10 March 1807, on the east side of the Río Grande between Tomé and Sevilleta, south of Sabinez or Sabinal. He recorded a population of 300. In 1895, Coues guessed that the name was probably a poor rendering of Jarales, a town in that area, but not in the same location (Coues 1895:II, 628-629).

Sabinal

Era: 19th Century

Significance: Sabinal, like Jarales, was founded outside Belén in the eighteenth century. The west bank variant of the Camino Real ran through the town.

Annotated History: In his reminiscences, recorded in 1777, Juan Candelaria described the founding of many towns after the Spanish reconquest of New Mexico in the 1690s. He thought that Sabinal was founded in 1741 and associated it with Belén (Armijo 1929:280-281).

Sabinal is listed on official registers of towns for 1820s (Bloom 1913:15; Carroll and Haggard 1942:47-48). It does not appear in some of the early censuses of the nineteenth century, but a complete census exists for 1827 (Olmsted 1981:250-260).

Zebulon Pike reported passing "Sabinez" on 10 March 1807, on the west side of the Río Grande between Tomé and Sevilleta (Coues 1895:II, 628-629).

George Rutledge Gibson wrote in his journal that he went through "San Sabinal" with Doniphan's army in December 1846. Doniphan's army passed was following the west bank of the Río Grande from Alburquerque to Valverde (Bieber 1935:290).

Belén (Bethlem)

Era: 18th and 19th Century

Significance: Belén was constructed on the west bank of the Río Grande. Colonial travelers saw it from their camps across the river while later users of the west bank road stopped within the town.

Annotated History: In his 1777 reminiscences, Juan Candelaria recalled that "Nuestra Señora de Belen" was founded in 1741 with the help of genízaro Indians (Armijo 1929:280-281).

On 19 May 1760 the houses of the settlement of Belén on the other side of the Río Grande came into Bishop Tamarón's view, and from there on

the countryside was covered by great poplar groves. Tamarón was received by the alcalde of Tomé with the citizens of his town, of Belén and of Isleta (Adams 1953:201). On 14 August 1766 Lafora commented that this settlement of 38 genízaro and Spanish families lay across the Río Grande from Tomé in a well-cultivated and pastured area (Alessio Robles 1939:96). On 14 November 1780, Juan Bautista de Anza left the pueblo near Valencia and traveled six leagues south, stopping for the night opposite the pueblo of Belen. It was five leagues further south to Las Nutrias (Thomas 1932:198).

In December 1846, George Rutledge Gibson and Doniphan's army passed through Belen while following the west bank of the Río Grande from Alburquerque to Valverde (Bieber 1935:284- 287).

Given that most colonial traffic passed along the east bank of the Río Grande, the most used caravan paraje would have been opposite the town of Belén.

Los Cháves

Era: 19th Century

Significance: Los Chávez was founded as a farming community and was a stop for caravans that used the west bank to travel along the Río Grande.

Annotated History: The settlement of Los Chávez, on the west bank of the Río Grande, dates to a 1738 grant to Nicolás Durán y Chávez from Atrisco. In 1790 it consisted of six plazas (Julyan 1996:78;Espinosa and Chávez 1967:41-43). It was included in the 1802 census (Olmsted 1981:139-140).

In the autumn of 1847 a unit of the U.S. Army traveled south along the west bank of the Río Grande. Philip Gooch Ferguson reported that "the road most generally traveled" was on the east bank but the west side of the river was better for water. Ferguson mentioned camping near a small town named "Plaza Chavez" (Bieber 1936:326-328).

Tomé Hill, Cerro Tomé

NATIONAL REGISTER

Era: 17th, 18th, and 19th Century

Significance: Tomé Hill, a natural landmark, served all travelers from prehistoric times into the historic period. A seventeenth-century road ran to the east of the hill. After the river changed its course in the early eighteenth century and the town was founded, the main road shifted to go along the valley and by the plaza.

Annotated History: When Otermín led his party and many Indian refugees south from Isleta toward El Paso on the east side of the Río Grande early in 1682, he noted passing "Serillo de Tome" (Hackett 1915:391). On 6 September 1692 Vargas noted that the road in the neighborhood of the hacienda that had belonged to Tomé Domínguez was so sandy that cargo had to be transferred from wagons to pack animals (Kessell and Hendricks 1992:375). Such a description fits the area around Tomé Hill more than it does the floor of the valley as it is at present.

According to Scurlock, Gerow, and Kammer, from the time of Oñate through that of Vargas the course of the Río Grande was further east, close to the western base of Tomé Hill. The "Rio Grande Pueblo Indian Trail," which became the Camino Real, ran along the along the eastern bank of the river. It went on the east side of the hill, "following the edge of the rincon sandhills just to the east of present La Entrada Road." Later, that track would be the "upper branch of the Camino Real." The river shifted west before 1739, when the Tomé grant was settled. An "inner valley branch" of the Camino Real then ran through the plaza of Tomé, connecting it to other settlements in the Río Grande valley (Scurlock, Gerow, and Kammer 1995:73,98-106). The river reportedly shifted eastward a short distance in 1769, flooding some of the houses and lands of Tomé (Adams and Chávez 1956:8).

Juan Candelaria dated the village of Tomé to October 1740 and added that the settlers immediately began construction of a church (Armijo 1929:278-279). In 1744, Fray Juan Miguel Menchero identified the petitioners as genízaros (Hackett 1937:401 -402). Other sources say that

some genízaros joined Spanish families from the Alburquerque area in a request for lands in 1739 that included Tomé hill and the site of the former estancia of Tomé Domínguez de Mendoza, then on the east side of the river. Soon a plaza and church were begun just over a mile southeast of the hill, probably on the site of a former pueblo (see Scurlock, Gerow, and Kammer 1995:75).

On 19 May 1760 Bishop Tamarón was received by the alcalde of Tomé with the citizens of this town, of Belén and of Isleta. Tomé was a new settlement of Spanish citizens that, according to Tamarón, had the potential of becoming the best in the kingdom because of its extensive lands and the ease of running an irrigation ditch from the river. He wrote that they were already building a church, which was 33 varas long by 8 wide with a transept and three altars, that was dedicated to the Immaculate Conception. Bishop Tamarón confirmed 402 persons that afternoon. He did not record the population of this settlement until later because it was included in the census of the town of Alburquerque, to which it was subordinate (Adams 1953:201).

Lafora passed by Tomé on 14 August 1766 and wrote that it was also called "pueblo de la Limpia Concepción" and "Fuenclara." He located it six leagues north of Las Nutrias on good, flat road and across the Río Grande from Belén. It contained a population of 70 Spanish vecinos and their families. The entire region was well-cultivated and small livestock grazed on ample pasture (Alessio Robles 1939:96).

Pike stayed near what he called "St. Thomas" on 9 March 1807. He reported that the population was 500 and that the camp was constructed to be able to withstand an attack (Coues 1895:II.628). Wislizenus noted the fine irrigated fields of Tomé, which, he wrote, was stretched along the road. He passed by on 21 July 1846 and camped nearby (Wislizenus 1848:35). Tomé was one of the main genízaro settlements of New Mexico in the middle of the eighteenth century (Chávez 1979:199).

Because of the shift in the bed of the Río Grande, there were two separate roads through the Tomé area. The earlier road ran directly east of Tomé Hill while the later went through the present plaza.

Dan Scurlock, et al., Spiritual Land, Historical Land: Tome Hill, New Mexico. Brochure prepared by the Valley Improvement Association.

Los Lunas

Era: 19th Century

Significance: Los Lunas/Los Lentes was the site of a pueblo and of early land grants. It became a political and economic center under the tutelage of the powerful Luna family.

Annotated History: One of the first Tiwa pueblos found by the Sánchez Chamuscado party in 1581 as they traveled north along the Río Grande through New Mexico was Piquinaguatengo on the west bank of the river. It has been identified with the pueblo of San Clemente, or Los Lentes, now within the boundaries of Los Lunas, New Mexico (Mecham 1926:276; Hammond and Rey 1927:46; Julyan 1996:209).

The roots of the town of Los Lunas are in the San Clemente grant of 1716, which came to be owned by the Luna family in the middle of the eighteenth century. Los Lunas also came to include Los Lentes, immediately to the north, originally a Tiwa pueblo (Espinosa and Chávez 1967:53; Julyan 1996:209). Only Los Lentes was included in the 1802 census (Olmsted 1981:140 - 142). "Lentes y Lomas" was listed in 1833 (Bloom 1913:15). The names of both Los Lentes and Los Lunas appear among the settlements listed by Manuel Armijo in 1840 (Carroll and Haggard 1942:93).

George Rutledge Gibson, in Doniphan's army in December 1846, camped at Los Lunas while following the west bank of the Río Grande from Alburquerque to Valverde (Bieber 1935:284- 287). In the autumn of 1847 Philip Gooch Ferguson, a U.S. Army unit traveling south along the west bank of the Río Grande rather than the more usually traveled east bank, wrote of camping near the town of Los Lunas (Bieber 1936:326-327).

Valencia

Era: 17th, 18th, 19th Century

Significance: The site of Sangre de Cristo Church in Valencia also boasted a pre-colonial pueblo and a seventeenth-century estancia. Before 1800, two plazas were established, one at the old pueblo and estancia site and the other to the south.

Annotated History: Francisco de Valencia received an encomienda at the later site of the hacienda on the east side of the Río Grande early in the seventeenth century. It included the pueblo of Los Lentes on the west side of the river. During the 1630s he built an estancia at or very near the site of an already abandoned Southern Tiwa pueblo. The estancia was burned in the 1680 revolt. The pueblo at which Valencia built his estancia was probably that called Caxtole by the Sánchez Chamuscado party in 1581 (Brown and Vierra 1997:41-42; Vivian 1932:42; Mecham 1926:276; Hammond and Rey 1927:46).

On 7 September 1692 Vargas stopped at the "outpost and ruined estancia of Juan de Valencia" (Kessell and Hendricks 1992:376). On 31 May 1726 Rivera left Las Nutrias and traveled eight leagues through flat land, seeing meadows and poplars on both sides of the Río Grande. He found many ruins of haciendas de labor and livestock estancias. He stayed at an abandoned estancia called Valencia (Alessio Robles 1946:51).

Candelaria gave the date of the resettlement of Valencia as 1751 (Armijo 1929:278-279). Other sources place it in the 1740s when a group of genízaros settled the Valencia area and two plazas were established by 1790. One was near the site of the former pueblo and estancia, and the present Valencia "Y"; the other was near the modern intersection of New Mexico Highway 47 and North El Cerro Loop (Taylor 1989:11). Valencia has been named as one of the main genízaro settlements of New Mexico in the middle of the eighteenth century (Chávez 1979:199). A church, called both Valencia and Sangre de Cristo, was begun around 1800 (Taylor 1989:39). It has been described as being 35 yards west of the Camino Real (Brown and Vierra 1997:45). The settlement was called "La Sangre de Cristo, Puesto de Valencia" in the census of 1802 (Olmsted 1981:135).

On 13 November 1780 Anza left the Ranch of Juan Sanches and traveled five leagues south to the pueblo of Valencia (Thomas 1932:198). Wislizenus noted the rich soil when passing through this area of New Mexico between Peralta and Tomé on 21 July 1846 (Wislizenus 1848:35).

The site of the Tiwa pueblo and the Valencia estancia, on the west side of N.M. Highway 47 at the present Sangre de Cristo church, was given the designation LA 953. The southern plaza, at N.M. Highway 47 and North Cerro Loop is LA 67321 (Brown and Vierra 1997:2).

Peralta

Era: 19th Century

Significance: Peralta was a thriving nineteenth-century community that grew up around the estancias of the Otero family.

Annotated History: The Tiwa pueblo identified by the Sánchez Chamuscado party as Mexicalcingo in 1581 was at or near Peralta (Vivian 1932:43). The town of Peralta grew up around the holdings of the Otero family, who lived there at least as early as the late 1830s. The original hacienda has been placed in the site now occupied by the Church of Our Lady of Guadalupe. Taylor wrote that the *sacristia* (probably meaning chapel) of the Juan Antonio Otero hacienda and early plaza of Peralta was at the north end of the Otero hacienda, on the south side of the plaza, and directly south of the church (Chávez 1992:251-252; Taylor 1989:13-14,17,40-41).

Wislizenus referred to this settlement as both Peralta and as "Ontero's hacienda" when he passed it on 21 July 1846. He commented on the adobe walls that surrounded its livestock and irrigated (Wislizenus 1848:35). John M. Taylor clarified the note by Wislizenus, adding that the description was of the hacienda of Juan Antonio Otero (Taylor 1989:13).

Bosque, or Alamos, de Pinos (Bosque Farms)

Era: 19th century

Significance: One of the most luxurious estancias in nineteenth century New Mexico was the actual site of the Civil War Battle of Peralta (1862).

Annotated History: Bosque de los Pinos was created in 1769 when floods caused the Río Grande to change course approximately two miles to the west, cutting off pieces of the Sedillo and Gutiérrez grants. The tract eventually came into the hands of Francisco Xavier Chávez, who built a hacienda on the property that was occupied by his son, José Mariano, in the late 1830s. After the death of José Mariano Chávez, his widow married trader Henry Connelly, a territorial governor during the Civil War (Taylor 1989:19-21). Taylor located the hacienda on the east side of New Mexico Highway 47 between Abo and Pine Streets in modern Bosque Farms (Taylor 1989:19-21).

The caravan bringing Wislizenus stopped at "Bosque, or Alamos, de Pinos," five miles south of Isleta pueblo, New Mexico, and a mile east of the Río Grande after crossing some difficult sand hills on 21 July 1846. Wislizenus also described the hacienda of Mariano Chávez's widow, two miles south of Bosque de los Pinos and one mile north of Peralta. He called it the largest which he had seen in that region. Its large fields and pastures were walled and irrigated and its quarters reminded him of plantations in the southern United States (Wislizenus 1848:35). For the distance estimates of Wislizenus to make sense, even as somewhat long, his Bosque de Pinos had to have been northwest of North Bosque Loop. His route from Isleta stayed away from the river in the sand hills, perhaps going near Chical, and then turning to the camp one mile from the river and still two miles, more or less, from the Chávez home.

In October 1846, Susan Shelby Magoffin camped in a grove of cottonwoods belonging to the Chávez family after leaving a pueblo that could only have been Isleta. The next morning she went on to visit the "widow of Don Mariano Chaviz." Magoffin described the luxurious Chávez home in some detail (Drumm 1926:202). In 1855, W.W.H. Davis wrote that "about a mile below Doctor Connelly's we passed what is known as the bosque, a large tract of fine timber, mostly cottonwood, something very rare in New Mexico" (Davis 1938:197). Given that Davis placed the bosque south of Los Pinos while Wislizenus and Magoffin had it to the north of the hacienda it may be assumed that the entire area was known for its forest.

The minor, but locally famous, Civil War Battle of Peralta took place there on 15 April 1862 when Union forces besieged a Confederate unit in the Chávez/Connelly hacienda. A small skirmish also occurred away from the hacienda, between West Bosque Loop and the river, when a Confederate relief column was turned back as they attempted to cross the river (Alberts 1983:369-374).

After the Battle of Peralta the United States used Los Pinos as a supply depot and a military post. Maps and photographs of Los Pinos show the road between Albuquerque and Peralta running through the middle of the post of Los Pinos (Miller 1987:2,18). Evidently, then, the modern highway generally follows the colonial road and the bulk of the estancia was located to its east.

El Pueblo de Isleta

Era: 17th, 18th, and 19th Century

Significance: Isleta still occupies the same site as it did when the Spaniards first visited in 1540 though the river has changed its course since that time. The open area against the hills directly across the river was a popular *paraje*.

Annotated History: Isleta may have been the Tiwa pueblo that was called Taxumulco (or Taxomulco) by Sánchez Chamuscado in 1581. It was located directly across the Río Grande from a pueblo called Tomatlan (Mecham 1926:276; Hammond and Rey 1927:46; Vivian 1932:43). It was at Isleta that Gaspar Castaño de Sosa, in 1592, was told of the arrival of the Juan de Morlete party that came to arrest him for his illegal entrada (Hull 1916:330; Schroeder and Matson 1965:167-173; Pacheco, Cárdenas y Torres 1871:IV, 352).

In his 1634 memorial, former Custodian of New Mexico Fray Benavides reported that a convent was located at "San Antonio de la Isleta" of the "Tioas"(Tiwas) nation. This first convent was erected around 1613 and was considered to be unusually fine (Hodge, Hammond, and Rey 1945:64-65, 253-258). The large church and convent were dedicated to San Antonio de Padua (Vetancurt 1961:267). Isleta's native name was reported to be Shi-e-hwib'-bak (Lummis 1894:4). The Spanish called it "Isleta" because the Rio Grande split north of it and rejoined south of it surrounding the pueblo during floodtime.

Isleta did not participate in the 1680 revolt. During his attempt at reconquest, Otermín captured Isleta on 6 December, 1682. It was on the west bank of the Río Grande and the first pueblo found to be inhabited as Otermín entered New Mexico from the south. Otermín took at least 385 Isletans south to the region of El Paso, where Isleta del Sur was established (Hackett 1915:383-384; Hodge, Hammond, and Rey 1945:64-65,253-258). Vetancurt put the number of Isletans taken south by Otermín at 519. He also noted that the road to Acoma, Zuñi and Moqui (Hopi) left the river at Isleta (Vetancurt 1961:267). Scattered Tiwas were settled on the sight of the old pueblo after the reconquest and the church was rebuilt in 1709 (Hodge, Hammond, and Rey 1945:64-65,253-258).

On 1 June 1726 Rivera left Valencia and traveled north-northeast following the river. After five leagues he saw the pueblo of Isleta, inhabited by a small number of Tiwa families, on the west side of the river (Alessio Robles 1946:51). Fray Juan Miguel de Menchero reported that 80 families lived there in 1744. He also observed that some Hopis had been brought to Isleta for the purpose of converting them (Hackett 1937:405-406). On 19 May 1760 Bishop Tamarón was received by the alcalde of Tomé with the citizens of this town, of Belén and of Isleta (Adams 1953:201). Lafora passed through the neighborhood of this Tiwa pueblo, following north along the Río Grande, on 16 August 1766. It was ministered by a Franciscan priest. He reported that it lay along the road on the other (west) side of the river in a large alameda (poplar grove) which covered both banks of the river (Alessio Robles 1939:52).

Wislizenus camped below some sand hills across the Río Grande from the pueblo of Isleta on 19 July 1846. He commented on the church, orchards, fields, and cottonwood trees. His party ate apples from the pueblo that night. To the south, the sand hills became more difficult to cross (Wislizenus 1848:35). George Rutledge Gibson, in Doniphan's army in December 1846, passed through Isleta while following the west bank of the Río Grande from Alburquerque to Valverde. Gibson wrote that they traveled along the river bottom from Alburquerque to Isleta, not mentioning any other locations in the interim (Bieber 1935:284-287). It must have been Isleta that Philip Gooch Ferguson called "San Durasnos" in 1848. His army unit crossed from the east to the west bank of the Río Grande near Isleta and continued south down the less used road on the west side (Bieber 1936:326-327).

According to a sketch map by Ted Jojola of Isleta Pueblo, the riverbed in the Isleta area was different than it is today when the Spanish arrived in New Mexico. It deviated to the west about a mile above the pueblo, then crossed the modern bed a little below the pueblo and ran to the east until about Los Lunas. If both beds shown in the map were running full it would make of the pueblo site an island and explain the name bestowed by the Spanish. Given that early chroniclers consistently describe Isleta as being on the west bank, the northern segment must have changed to its modern alignment early in the colonial period. The rest of the bed changed course approximately two miles to the west in 1769 and the area between the old and new channels came to be known as Bosque de los Pinos. In later floods the original bed filled and the land between them also flooded up to five feet deep (Taylor 1989:5,10,19).

Los Padillas

Era: 19th Century

Significance: The history of Spanish settlement at Los Padillas extends back to the seven-

teenth century. Its use as a paraje was increased in the nineteenth century when more travelers began using the road along the west bank of the Río Grande.

Annotated History: Juan Candelaria recalled Los Padillas being settled in 1710 (Armijo 1929:280-281). It appeared in the 1802 census (Olmsted 1981:142-143).

Wislizenus mentioned this as a hacienda south of Alburquerque on 19 July 1846. He was on the east side of the Río Grande, and noted that the more verdant west bank contained many ranchos and haciendas, among them one called Padillas (Wislizenus 1848:35). On 22 November 1846 the army unit which included Marcellus Ball Edwards came in from a campaign against the Navajo and reached Los Padillas, where they stayed at the house of José Chávez (Bieber 1936:211).

Given that the Chávez family resided at Los Padillas, this was probably the "Chávez or Padillas" listed in an 1822 register of New Mexico settlements (Bloom 1913:14).

Pajarito

Era: 19th Century

Significance: Pajarito appears in documents from the seventeenth century. The earliest known reference is 1643 when the resident priest at Isleta acquired Pajarito as a small ranch. The origins of Pajarito are, indeed, nebulous. The land, about a league north of Isleta, was used for raising crops and herding. By the eighteenth century, the area would bear the name Puesto de San Isidro de Pajarito. In the nineteenth century more travelers began using the road along the west bank of the Río Grande which brought more visitors to the Atrisco Valley and Pajarito.

Annotated History: A violent dispute over land between the Pueblo of Isleta and the nearby estancia of "Paxarito" was discussed during the 1663 trial of Governor López Mendizábal of New Mexico before the Inquisition in Mexico City (Primera Audiencia de don Bernardo López de Mendizábal, 1663). Juan Candelaria thought that Pajarito was resettled by Juan Fernandez in 1711 (Armijo 1929:279-280). It was listed in the 1802 census (Olmsted 1981:143). Although this area has also been known by other names, in the 1894 hearings on the Atrisco Land Grant before the United States Court of Private Land Claims, the northern boundary of Pajarito was given as the southern boundary of the Atrisco grant (Sánchez 1998:81-82). In 1659 for example, a reference was made to a short-lived Spanish cattle ranch near Isleta Pueblo called Pajarito, on the southern end of the Valle de Atrisco.

Atrisco

Era: 19th Century

Significance: Atrisco's rich history began in the seventeenth century. The nineteenth century brought more traffic to the west side of the Río Grande and to Atrisco.

Annotated History: Richard Greenleaf and Joseph Metzgar point to a 1662 attempt by Governor Peñalosa "to found a villa in the midst of the settled region, in a valley called Atrisco" as the earliest evidence for the existence of this settlement (Greenleaf 1967:5; Metzgar 1977:269). This document went on to call Atrisco "the best site in all New Mexico" (Hackett 1937:265). Before the 1680 Pueblo revolt this area was well populated, according to documents cited by Charles Wilson Hackett (Hackett 1911:129). Maestro de Campo Juan Domínguez de Mendoza testified to going by his old hacienda "in the jurisdiction that they call Atrisco" on 8 December during the 1681 attempt to reconquer New Mexico (Hackett and Shelby 1942:II.258; Hackett 1915:383-384).

In 1692, Fernando Durán y Chávez, a resident of the area before the 1680 revolt, asked Governor Vargas for a grant to the lands of Atrisco and Vargas assented. In 1701, Durán y Chávez officially petitioned for a grant. Atrisco was resettled in March 1703 (Sánchez 1998:9-12; Armijo 1929:278-279).

Menchero described Atrisco along with the villa of Alburquerque in 1744. He wrote that the two were on the banks of the Río Grande,

engaged in farming and weaving, and were administered by a priest in the villa (Hackett 1937:400-401). In 1760, Bishop Tamarón noted the danger faced by the priest in Alburquerque when he crossed the Río Grande to minister to citizens on the west bank. Such a crossing would have taken him to Atrisco and shows that Atrisco was an ecclesiastical dependency of Alburquerque (Adams 1953:202; Sánchez, 1998:17; Simmons 1973:10). Fray Domínguez gave a brief description of "Atlixco" in 1776. He placed it directly across the river from Alburquerque on a beautiful sandy plain and cited a population of 52 families, 288 persons. He also referred to it as Atlixco and Atrisco of Alburquerque (Adams and Chávez 1956:154,207,243).

When Zebulon Pike traveled down the Río Grande as a Spanish prisoner in 1807, he crossed the Río Grande from east to west "a little below Alburquerque" on 7 March. In 1895, Coues identified the ford as Atrisco, a common crossing before the advent of roads and the railroad (Coues 1895:II.621,625; III.946).

Los Ranchos de Alburquerque, Old Town Albuquerque

Albuquerque, New Mexico
Era: 18th and 19th Century

Significance: Alburquerque was founded as a villa in 1706 in a rich agricultural region of New Mexico. Its "Old Town" plaza was the original town center.

Annotated History: Evidently, the decision to settle the "Bosque Grande of Doña Luisa" was made in 1698. A manuscript from February 1706 showed that Governor Cuervo y Valdéz authorized the actual settlement, which took place shortly thereafter. A church, dedicated to Saint Francis Xavier, was quickly built and soldiers sent to guard against Indian raids (Greenleaf 1964:6-7). The pre-revolt estancia of "Doña Luisa de Trugillo" has been placed three leagues south of Sandia Pueblo. The area of Alburquerque contained 19 Spanish landholding Spanish families before the 1680 revolt (Twitchell 1911:I.364).

Among the reasons for Governor Cuervo's choice of site were that it was on the Camino Real, near a good ford of the river to the west, and directly west of a pass (Tijeras) to the plains (Simmons 1980:191). In addition, estancias were already scattered for a league up and down the river, from Alameda to the swamps of Mejía, before the 1680 revolt (Simmons 1980:197-202).

On 1 June 1726, after passing the pueblo of Isleta, Rivera went four leagues to the Villa of Alburquerque, a settlement of Spaniards, mestizos and mulattos who lived in various ranchos. The name was changed to Albuquerque after the United States militarily occupied New Mexico (Alessio Robles 1946:51). In 1754, Father Trigo referred to "the site of the Villa of Alburquerque, for the settlers, who inhabit it on Sunday, do not live there." He added that they spent most of their time on their farms in Alameda (Hackett 1937:464), and likely Atrisco and other villages as far down as Pajarito.

On 20 May 1760 Bishop Tamarón described Alburquerque as a villa composed of Spanish citizens and Europeanized mixtures. He wrote that their priest and missionary was a Franciscan friar, and that it was located 10 leagues north of Tomé. He counted 270 families totaling 1814 persons. Eleanor B. Adams added some other population estimates from the same era in a note (Adams 1953:202). Lafora camped at this villa of 70 Spanish families on 16 August 1766 and commented on its militia of 80 well-armed and mounted men, its civil officials, and the Franciscan priest (Alessio Robles 1939:96).

In 1776 Fray Domínguez wrote that the "mission of the Villa of San Felipe Neri de Alburquerque" was "four leagues down the road to the south on the same plain as the mission of "Our Father Santo Domingo." The church and convent were about "two musket shots" from the Río Grande. Until 1706 the general area of Alburquerque was variously called "Bosque Grande," "Bosque Grande de Doña Luisa," "Estancia de Doña Luisa de Trujillo," and "Bosque Grande de San Francisco Xavier" (Adams and Chávez 1956:144).

When Zebulon Pike traveled down the Río

Grande as a Spanish prisoner in 1807, he described the Alburquerque area as the best cultivated and inhabited that he had yet seen. He later referred to Alburquerque and El Paso as the second cities of the province of New Mexico. As he passed through on 7 March, he observed the residents opening irrigation canals from the river for the purpose of cultivating the plains and fields on both sides of the river (Coues 1895:II.619-621,739).

Wislizenus arrived in Alburquerque from the east on 12 July 1846 after going away from the Río Grande to explore some mines to the south of Santa Fé. He commented that an abundance of stock was grazing on the plain to the east of town and wrote that the surrounding countryside was irrigated and cultivated. He also noted that Alburquerque was spread along the river for several miles and was comparable in size to Santa Fé. His caravan was delayed north of Alburquerque when rain damaged part of the road that followed the river. Eventually they made it to a higher road to the east that also became impassable just south of Alburquerque. Wislizenus wrote that although some caravans crossed to the west bank of the river at Alburquerque and recrossed at Socorro, his did not, electing to remain on the east bank throughout its journey (Wislizenus 1848:33-34).

Later in 1846 Abert advised travelers to cross to the west at Alburquerque and back in the area of Fray Cristóbal (Abert 1962:120). ccording to George Rutledge Gibson, Doniphan's army followed Abert's advice in December 1846. It crossed the Río Grande east to west at Alburquerque and followed the west bank to Valverde (Bieber 1935:284). In the autumn of 1848 an army unit went south through Alburquerque, mentioning a stop in "Las Varelas," now the Barelas neighborhood, and then crossed to the west bank near Isleta (Bieber 1936:325 -326).

The high road mentioned by Wislizenus was known as La Ladera Road. It ran along the foothills on the east side of the river valley to avoid the valley bottom as needed because of floods and swampy conditions. Though it undoubtedly received much use through the centuries there are no plazas from before 1800 along it to highlight as parajes. It is reasonable to assume that travelers most often took their rests at populated places, such as Indian pueblos, Alburquerque after 1706, and estancias, whose locations are, in general, unknown (Sargeant and Davis 1986:175-177).

Alameda

Era: 18th and 19th Century

Significance: Alameda was the name given by early Spanish settlers to a Tiwa pueblo on the west side of the Río Grande. The Alameda land grant, founded in 1710, was originally on the west side of the river. Later, the name was ascribed to its Spanish community on the east bank that was founded in Alburquerque's north valley. Alameda, today, is unincorporated.

Annotated History: In his account of the Sánchez Chamuscado entrada, Gallegos located the Tiwa- speaking pueblo of Santa Catalina on the west side of the Río Grande and upriver of those pueblos generally agreed to be in the vicinity of Isleta, New Mexico. This was probably the site of Alameda pueblo at the time (Mecham 1926:277; Hammond and Rey 1927:46). On 14 February 1583, Espejo's party left *El Corvillo* and continued north along the Río Grande for four leagues before coming upon two pueblos whose residents had fled to the mountains at the approach of the Spaniards. They called these *Los Despoblados*. On 16 February, they again headed north, and after five leagues encountered another deserted pueblo. This time they took provisions, including turkeys, after whom they named the pueblo *"Los Guajolotes."* This was probably the pueblo later known as Alameda (Hammond and Rey 1929:79; Vivian 1932:50-52).

In 1681 and before, Alameda was located on the west bank of the Río Grande 71/2-8 leagues above Isleta. It was reached from Isleta and Atrisco without a river crossing and then the river was forded to reach Puaray and Sandia (Hackett and Shelby 1942:I.227 -230; Hackett 1915:381).

The claims of the Town of Alameda and Elena Gallegos grants posit a different course for the Río Grande through the Alameda area in the early eighteenth century, one that ran close to hills east of the present bed. José Urrutia's map of 1769 placed Alameda on the east side of the Río Grande, showing that the river changed course to its present bed sometime between 1710 and 1769 (Town of Alameda Grant:20-21,83; Elena Gallegos Grant:3; Sargeant 1987:39-44).

The church there was dedicated to Santa Ana, according to Vetancurt, and it was burned in the 1680 revolt (Vetancurt 1961:267). In his reminiscences, recorded in 1777, Juan Candelaria gave a post-conquest history in which Alameda was repopulated in 1702 by Tiwa Indians; they were relocated to Isleta in 1708; the town was settled by Spaniards in 1711; and construction of the church began in 1712 (Armijo 1929:276-278). In 1754, Father Joséj Manuel San Juan Nepomuceno y Trigo reported that the residents of Alburquerque actually lived at their farms located in Alameda and only inhabited Alburquerque on Sunday (Hackett 1937:464). Actually, Alburquequenses lived up and down the valley from Bernalillo to Pajarito.

The post-revolt Hispanic plaza of Alameda was located immediately north of the intersection of Río Grande Boulevard and Alameda Road until 1903. At that time, destruction by floodwaters forced the church to move southeast to its present location (Sargeant 1987:45; Steele 1995:165; Sargeant and Davis 1986:19).

Sandia Pueblo

Era: 17th, 18th, and 19th Century

Significance: Sandia pueblo was deserted after the Pueblo Revolt of 1680. The earliest known reference to that name is 1611. The Spanish resettled the pueblo in the middle of the eighteenth century.

Annotated History: In his 1634 memorial, Benavides counted "San Francisco de Sandia" as one of the two convents of the "Tioas" nation. He noted that the body of Fray Francisco López of the Sánchez Chamuscado expedition was interred in that convent (Hodge, Hammond, and Rey 1945:64-65). In 1692, Vetancurt described a large church, dedicated to Saint Francis, and a good convent at "Zandia." It was razed in the revolt of 1680, but not until the padres had escaped (Vetancurt 1961:268).

In 1681, Sandia was one league above Puaray on the east side of the Río Grande (Hackett 1915:381). Many of the inhabitants of Sandia fled to the Hopi region after the revolt of 1680 and Otermín destroyed the pueblo in 1681 (Hackett 1937:464). On 2 June 1726 Rivera found only the remnants of the pueblo of Sandia, five leagues north of Alburquerque (Alessio Robles 1946:51).

In 1777, Juan Candelaria recalled that Father Juan Miguel de Menchero resettled Sandia with Tiwas and some Moquis (Hopis) in 1746 (Armijo 1929:280). The resettlement date has also been given as 1748 (Hodge, Hammond, and Rey 1945:64-65,253-258). In 1754, Sandia was reported to contain some fifty families (Hackett 1937:464).

In 1759 Bishop Tamarón wrote that this pueblo of Moqui and Tiwa Indians was new and located four leagues north of Alburquerque. He found one Franciscan missionary parish priest who administered 35 families of settlers, totaling 222 persons. He described the Indians as living apart in their tenements, separated after the "manner customary in this kingdom." The Tiwa section housed 51 families totaling 196 persons while that of the converted Moqui Indians held 16 families, totaling 95 persons (Adams 1953:203). On 17 August 1766, Lafora estimated that this pueblo was five leagues north-northeast of Alburquerque. The Tiwas and "Moquiños" there were administered by a Franciscan cleric (Alessio Robles 1939:97).

In 1776 Fray Domínguez wrote that from Santo Domingo one traveled south some seven leagues downstream along the meadow of the Río Grande, which was on the east bank. He described the pueblo and mission of "Nuestra Señora de los Dolores de Sandia" as being located 16 leagues from Santa Fé. In the Sandia registers the title was also given as "Our Lady of Sorrows and St. Anthony." Domínguez wrote

that the convent resembled nothing more than the old half- fallen houses usually found in Indian pueblos near Mexico City. He wrote that the pueblo lay to the east of the church and convent, below their facade. It was arranged and built in three small blocks, or buildings, to the north and two small plazas to the south. Everything was made of adobe and distributed and arranged like the other missions. The pueblo still housed Indians of two nations, the majority being Tiwas and the others Moquis. In his census the Indians number 92 families, totaling 275 persons (Adams and Chávez 1956:138-139,141-144).

Pike referred to this as "St. Dies" when he passed by it on 6 March 1807. He noted that it was administered by the priest from San Felipe and contained a population of 500 (Coues 1895:II, 618-619).

Bernalillo

Era: 18th and 19th Century

Significance: Bernalillo was a heavily populated district when visited by sixteenth-century Spaniards. It continued that tradition as a Spanish community, though it was not generally visited by the bulk of travelers who were across the river on the east bank. Alburquerque was founded by settlers from Bernalillo.

Annotated History: Coronado headquartered his expedition in the Bernalillo area in 1540 -1541 (Julyan 1996:36). According to the Gallegos account of the 1581 Sánchez Chamuscado journey into New Mexico, the Tiwa pueblos of Analco, Culiacán, Villarrasa, and La Palma were encountered, in that order, going north along the west side of the Río Grande. The Tiwa pueblos of Zenpoala, Nompe, Malpais, and Caseres were found along the east side of the Río Grande. Caseres seems to have marked the northern end of the Tiwa pueblos. All of these were probably located in the area of modern Bernalillo (Mecham 1926:277-278; Hammond and Rey 1927:46-48).

Julyan writes that the name "Bernalillo" dates back to the seventeenth century though he contradicts himself as to the specific date. Julyan suggests that (Julyan 1996:16-17,36-37). Fray Angelico Chávez also speculates that the name "Bernalillo" may have come from a priest in New Mexico named "Bernal" or from "Bernardo", the son of Fernando Duran y Chávez, an early settler. In either case it was bestowed before the 1680 Pueblo Indian revolt (Chávez 1948:111).

The Bernalillo that was founded, or refounded, after the revolt, stretched for several miles upstream of its present location and probably on the west side of the Río Grande. Some colonists built a plaza and a church, which was dedicated to San Francisco, in 1695 (Kessell 1989:313). In his 1777 reminiscences, Juan Candelaria noted that a convent was built in Bernalillo sometime after 1698, but it was destroyed by flood in 1735-36 (Armijo 1929:276).

In 1776 Fray Atanasio Domínguez wrote that the mission in Sandia also had charge of the administration of some citizens divided into two small groups one of which, two leagues to the north, was called Bernalillo. It had 27 families with 81 persons (Adams and Chávez 1956:144). Lafora gave this name to a collection of ranchitos scattered along both sides of the Río Grande between the pueblos of Sandia and San Felipe in New Mexico on 18 August 1766 (Alessio Robles 1939:97). On 11 November 1780, Anza placed Bernalillo six leagues south of Santo Domingo (Thomas 1932:197-198).

Santa Ana Pueblo

New Mexico
Era: 17th, 18th, and 19th Century

Significance: Santa Ana has remained an important pueblo throughout the colonial, Mexican, and U.S. periods.

The old village which the Spaniards knew as Tamayo, was located on the north bank of the Jémez River against the cliffs of Black Mesa. There they built a mission church about 1600 and, like most of the Spanish missions, it was destroyed during the Pueblo Revolt. The pueblo was reoccupied after the revolt; however, the re-occupation did not last. The U.S. Census for 1890 found the old pueblo deserted.

The Camino Real ran close by Santa Ana Pueblo and the pueblo provided foodstuffs to travellers.

Coronado State Monument, Kuaua Pueblo

Bernalillo, New Mexico
NATIONAL REGISTER
Era: 17th and 18th Century

Kuaua is a Tiwa word for "evergreen." It was first settled around AD 1300 by American indains who had long known about he fertile land near the Rio grande. Successful at agriculture elsewhere, many moved into the area, allying themselves with the local population. The resulting pubelo flourished and grew, as did the many neighboring villages along the life-giving Rio Grande.

In 1540 Francisco Vasquez de Coronado - with 300 soldiers and 800 Indian allies from New Spain - entered this valley. Coronado's expedition was searching for the fabled cities of gold ubt instead found villages inhabited by properous native people. Coronado's party camped near the Tiwa pueblo of Kuaua, one of the many villages contacted by the explorers. Acording to v. of the Handbook of North American Indians, Kuaua was found to be occupied during the time of the Spanish Entradas 146).

Kuaua is an earthen pueblo excavated in the 1930s by WPA workers, who also reconstructed new ruin walls over the reburied original ruins. A square kiva, excavated in the south plaza of the community contained many layers of mural paintings. These murals represent some of the finest examples of Pre-Columbian mural art in North America. Both the kiva and one of the mural layers are reconstructed and oppen to visitors, while several of the preserved mural segments are open to viewing in the mural room of the visitor center. The visitor center also contains prehistoric and historic Indian and Spanish colonial artifiacts exhibits with weveral hands-on components.
State Monuments brochure

San Felipe Pueblo

Era: 17th, 18th, and 19th Century

Significance: Although it evidently moved at some point, San Felipe has remained an important pueblo throughout the colonial, Mexican, and U.S. periods.

Annotated History: The Sánchez Chamuscado party of 1581 visited a Keres pueblo that they named "Palomares." It sat across (west of) the Río Grande from "Campos," or Santo Domingo, near modern Cubero. It has also been identified as "Kat-isht-ya, or the first San Felipe," (Mecham 1926:278-279; Hammond and Rey 1927:47-48).

On 30 July 1598 the Oñate expedition passed "Sant Phelipe" while heading to Santo Domingo (Pacheco, Cárdenas y Torres 1871:XVI, 254). Vetancurt reported in 1692 that the convent at "San Phelipe" was a well-stocked infirmary. It also had a music chapel ("Capilla de musicos") and, together with the smaller Santa Ana pueblo nearby, accounted for many faithful. There were 600 persons in the two pueblos (Vetancurt 1961:270). Otermín reported stopping by San Felipe during his retreat from Santa Fé in 1681. Hackett and Shelby note that the river was running very high at the time, making it unlikely that the party would cross to visit the pueblo. They conclude that the pueblo may have been on the east side of the river during the seventeenth century (Hackett and Shelby 1942:I.22; I.xlii).

On 2 June 1726 Rivera found the Keres pueblo of San Felipe five leagues from Sandia and ten from Alburquerque, on the west side of the river (Alessio Robles 1946:51). In 1744, Fray Juan Miguel de Menchero placed San Felipe three leagues from Santo Domingo and 15 from Santa Fé. Menchero added that the pueblo had earlier been located atop the adjacent mesa but had moved down to the river after the revolt of 1680 (Hackett 1937:404). In 1760 Bishop Tamarón located this pueblo four leagues south of Santo Domingo and on the opposite side of the Río Grande (Adams 1953:203). A Franciscan priest ministered to "Keres" Indians in this mission, which Lafora thought was two and a half leagues southwest of Santo Domingo pueblo on the right

bank of the Río Grande (Alessio Robles 1939:97). In Morfi's 1782 description of New Mexico he described the locale of San Felipe as a narrow place between the Río Grande and a stony mesa 12 leagues from Santa Fé. Morfi echoed Menchero's description of the pueblo moving off the mesa after 1680 (Thomas 1932:97). According to Joseph P. Sánchez, San Felipe was atop the mesa at least as late as 1696 (Sánchez 1998:11).

Zebulon Pike traveled down the Río Grande as a Spanish prisoner in 1807. On 6 March he crossed the Río Grande to the west bank by a wooden bridge of eight arches and entered the pueblo which he called "St. Philip's." Upon leaving, he recrossed the bridge and continued down the east side of the Río Grande. He marked San Felipe's population as 1,000 (Coues 1895:II.616-618).

Regardless of whether or when San Felipe was located on the east bank or atop a mesa on the west bank the paraje would have been adjacent to the east bank of the river alongside the Camino Real. Trade with the pueblo would have occurred on either side of the river. Notwithstanding the location of the *paraje*, lodging in the pueblo during the colonial period was common.

Santo Domingo Pueblo

Era: 17th, 18th, and 19th Century

Significance: In the seventeenth century, Santo Domingo boasted the best convent in New Mexico and was the repositoy of the Franciscans' archives. It remains an important pueblo in New Mexico.

Annotated History: Going north from Tiwa country during their 1581 entrada, Sánchez Chamuscado entered the land of the Keres speakers at the pueblo which they called "Campos." It was found on the east side of the Río Grande in the vicinity of the pueblo of Santo Domingo (Mecham 1926:278-279; Hammond and Rey 1927:47-48). On 8 and 9 March 1591, Castaño de Sosa moved his camp from San Marcos in the Galisteo basin to a point near Santo Domingo. Apparently Castaño gave the pueblo its Spanish name. Later, it was at a ruined pueblo near Santo Domingo and "Gipuy" that he was arrested by Morlete (Hull 1916:328-330; Schroeder and Matson 1965:142; 157-160; Pacheco, Cárdenas y Torres 1871:IV, 347).

On the night of 27 June 1598 Oñate came six leagues from Puaray to Ji-pi-y or Santo Domingo in order to impress into service, as translators and guides, two Indians named Tomas and Xupal. They were arrested on the 28th and brought back to Puaray. On 30 June 1598, they were back in Santo Domingo, in whose province the "Convent de Nuestra Señora de la Asumpcion" was erected (Pacheco, Cárdenas y Torres 1871:XVI, 253-254; Mecham 1926:278). On 7 July 1598 a general council of seven Indian chieftains of different New Mexico provinces was held at Santo Domingo. Each pledged obedience to the Spanish king (Pacheco, Cárdenas y Torres 1871:XVI, 256). When the Oñate expedition returned to Santo Domingo on 27 July 1598, Ginés de Herrera Horta, chief auditor and legal counsel to Oñate, reported seeing about 100 Indians dancing to celebrate the coming of the Spaniards (Hammond and Rey 1953:II.643,662). Captain Alonso Gómez Montesinos, one of the settlers of San Gabriel, stated that the Indians of Santo Domingo came to recite their prayers at the ringing of the bell and that the natives taught each other the prayers willingly and devoutly (Hammond and Rey 1953:II.711).

In 1662, Governor Don Bernardo López de Mendizábal was briefly imprisoned by the Franciscan Friars in the *baptisterio* of Santo Domingo before he was transported to Mexico City for his trial before the Inquisition (Primera Audiencia de don Bernardo López de Mendizábal, 1663). In his 1692 treatise, Friar Vetancurt wrote that the convent at Santo Domingo was the best of the custodio and noted that it was the repositoy of the Franciscans' archives. The church and all of its imágenes were burned in the 1680 rebellion and three priests were killed. He went on to describe the road to Santa Fé as "flat" (Vetancurt 1961:270).

On 2 June 1726 Rivera found Santo Domingo, two leagues from San Felipe, inhabited by the Keres Indians. This same day he met with the

governor of this region, who was then Juan Domingo de Bustamante, governor from 1722 to 1731 (Alessio Robles 1946:51). Menchero described Santo Domingo as twelve leagues from Santa Fé on the banks of the Río Grande (Hackett 1937:404). In 1760 Bishop Tamarón wrote that Santo Domingo was located six leagues north of Sandia. He wrote that there were no settlers and that the mission priest was a Franciscan friar. He counted 67 families of Indians, totaling 424 persons (Adams 1953:203).

In 1776 Fray Domínguez described the river Las Bocas as joining the Río Grande from the plain above the "Mission of Our Father Santo Domingo" (Adams and Chávez 1956:41). He wrote that Santo Domingo was reached by traveling about nine leagues from Santa Fé to the southwest. It was established and located in full view of the Río Grande. He stated that there were two churches in this mission, one old and the other new. Floods destroyed these buildings in 1886; the present church at Santo Domingo dates from about 1890 (Adams and Chávez 1956:137).

Fray Domínguez described the rancho of a citizen and his family located one league north on the same plain. This was the "Rancho de José Miguel de la Peña" from 1777 to 1780, the "Rancho de Peña" in 1791, and from 1792 on it was "Rancho de la Peña Blanca." He wrote that the pueblo of Santo Domingo consisted of six blocks, or buildings, of dwellings. The whole pueblo was surrounded by a high adobe wall with two gates. In order to reach the pueblo one had to travel the highway going up or down. He observed abundant cultivated lands above and below the pueblo, as well as on the opposite bank, and also small peach and apricot trees and an abundance of melons and watermelons. He wrote that the Keres of this pueblo were commonly called "Chachiscos" as well. In his census, Fray Domínguez counted 136 families, totaling 528 persons (Adams and Chávez 1956:130-138).

Ten leagues from Santa Fé, New Mexico by the main road, this "Keres" pueblo and Franciscan mission was visited by Lafora on 18 August 1766. There, the main road left the Río Grande for the final stretch into the capital (Alessio Robles 1939:97). When, on 10 November 1780, Anza left Las Golondrinas and traveled six leagues south to the pueblo of Santo Domingo, he met two Navajo Apaches who wanted to exchange a young Spaniard from "Presidio del Paso" for a little girl who was a captive. The next day Anza turned her over to "her owners" (Thomas 1932:197).

Zebulon Pike traveled down the Río Grande as a Spanish prisoner in 1807. On 5 March he arrived at the pueblo of Santo Domingo, which he reckoned had a population of about 1,000 "Keres" Indians. Although he thought little of the buildings in the pueblo he was quite impressed by the elegant ornamentation of the paintings and statues of the patron saint in the church. He also noted the view of the river and the "St. Dies" or Sandia mountains (Coues 1895:II.615).

Cochiti Pueblo

Era: 17th, 18th, and 19th Century

Significance: Cochiti has remained an important pueblo throughout the colonial, Mexican, and U.S. periods.

This small Keresan pueblo has occupied the same site on the west bank of the Río Grande since 1250 A.D. The first European visitor was Fray Agustín Rodriguez in 1581. The Mission of San Buenaventura was built between 1625 and 1630 and was burned during the Pueblo Revolt.

When the reconquest began, the Cochiti people fled to a mountain stronghold named Cieneguilla. After de Vargas conquered Cieneguilla most of the Indians returned to Cochiti to help construct a new mission; it is still standing. The Camino Real ran close to Cochiti Pueblo and passed through an ancient pueblo likely of Cochiti heritage.

San Marcos Pueblo

NATIONAL REGISTER, ARMS
Era: 17th and 18th Century

San Marcos Pueblo was mentioned by Oñate on his way to San Juan Pueblo in 1598. It was a 1500 room pueblo although not all rooms were occupied at one time. San Marcos is the pueblo credited with mining in the Cerrillos hills, particularly the Turquoise. The Camino Real would go up Galisteo Creek and head north approximately on State Route 14 and pass San Marcos on its way to San Juan and/or Santa Fe.

La Badaja

Era: 17th, 18th, and 19th Century

At what is traditionally the dividing point in New Mexico between Rio Arriba (Upper River district) and Rio Abajo (Lower River district) travelers on the Camino Real could choose one of three ways to reach Santa Fe. (1) La Bajada Hill was the most difficult; (2) the Santa Fe River Canon (la Boca) was the most used in the colonial period; and (3) traveling Galisteo creek to over the escarpment in the Juana Lopez Grant was used in territorial times. Galisteo Creek was also traveled to a point south of San Marcos Pueblo where the road turned north past the pueblo and headed to San Juan Pueblo or to Santa Fe.

The community of La Badaja is a small settlement that was a freight depot, stage stop, and trading center for freighters during the 19th century, although Robert Julyan in Place Names says that it was established prior to 1680. Incoming freighters had to travel a winding route down the face of the nearby black basalt cliff, bracing their wagon wheels with boulders when they stopped. Northbound caravans rested before ascending the santa Fe River canyon, one of the more difficult passages of the entire route.

LA BAJADA HILL (Santa Fe; 11 mi SW of Santa Fe). From 1598, when Spanish colonists trudged beside lumbering oxcarts, to the early 20th century, when American tourists drove Model A automobiles, the steep and abrupt escarpment of La Bajada Hill was a notorious landmark on the road between Santa Fe and Albuquerque. The old route up La Bajada Hill was barely 1.5 miles long, but it traversed tough volcanic rock; in the 20th century it included 23 hairpin turns and was the scene of countless frustrations and mishaps, from overturned wagons to boiling radiators. Residents of the village of La Bajada (see entry) at the hill's base named a spot on the hill Florida because a truck carrying oranges overturned there. In 1932, a new route up the escarpment was laid out, followed today by I -25, and the original route, 5 mi N and W, fell into disuse, though a few drivers still attempt it to test their vehicles' toughness. The name La Bajada now is gradually being transferred to the new route.

During colonial times, La Bajada Hill was the dividing line between the two great economic and governmental regions of Hispanic NM, the Rio Abajo, "lower river," and the Rio Arriba, "upper river." The large, sprawling mesa on whose edge La Bajada Hill is located is called La Majada, "sheepfold," or "place where shepherds keep their flocks," but because the road from Santa Fe to the Rio Abajo descended from the mesa here, the escarpment took the name La Bajada, "the descent." "Hill" was added to the name much more recently, an addition that often causes confusion to Spanish speakers, as the name now seems to consist of two generics.

La Ciénega

Era: 18th and 19th Century

Significance: This area has often been called the closest *paraje* to Santa Fé. It has been inhabited nearly continuously since before the arrival of the Spanish.

Annotated History: La Ciénega was a seventeenth-century pueblo that was resettled by Spaniards in the early eighteenth century. Schackel notes that it was also called El Guicú, San José del Guicú, and La Cañada del Guicú in the eighteenth century (Schackel 1979:5-8).

In 1777, Juan Candelaria's 1777 reminiscences included mention of the settlement of Cienega in 1715. He added that it was four leagues from Santa Fé and was watered by Los Ojos del Alamo (Armijo 1929:282 -284).

In 1776 Fray Domínguez identified Ciénega Grande as the settlement below Cieneguilla and five leagues from Santa Fé. He wrote that it lay in a kind of nook between two cañadas, and that the outlines of ancient ruins were visible at the site of this settlement, which might have been "pagan" pueblos (Adams and Chávez 1956:41).

Morfi described Ciénega as a ranch on the Río de Santa Fé directly west of Alamo. It was home to four families (Thomas 1932:93).

Pike's 1807 map contained a town marked "Vitior" which Coues identified in 1895 as being at or near La Bajada. However, it has also been connected to the town of Cienega or Sienega, on a creek of the same name and two miles southeast of Cieneguilla (Coues 1895:II.613-614; III.950).

El Rancho de Las Golondrinas

Era: 18th and 19th Century

Significance: The Rancho de las Golondrinas, near La Ciénega, is now an historic site, commemorating many themes of Spanish colonial life, including the Camino Real.

Annotated History: According to Schackel, the name Las Golondrinas first appeared in documents in the 1770s. The rancho was also known as the Baca y Terrus hacienda, El Rancho de los Bacas, and the Sandoval ranch. It was directly north of the ranch of El Guicú, a name associated with La Ciénega. El Alamo lay to the north and La Cieneguilla to the west (Schackel 1979:8). El camino del Alamo appears on Urrutia map of Santa Fe dated 1766.

On 9 November 1780 Anza left Santa Fé and traveled four leagues south to the pueblo of Las Golondrinas (Thomas 1932:197). Morfi's description, from 1782, placed Golondrinas next to Alamo on its east. It belonged to the resident Sandoval family (Thomas 1932:93).

William Carr Lane described Las Golondrinas as a ranch twelve miles of good road from Santa Fé (Schackel 1979:30).

El Alamo

Era: 18th and 19th Century

Significance: El Alamo was one of several ranchos in the La Ciénega area at which travelers could rest as they were entering or leaving Santa Fé. The camino del Alamo shown on Urrutia's 1776 map of Santa Fe indicates it is a variant of the Camino Real.

Annotated History: Sandra Kay Schackel writes that El Alamo in the time of Vargas was an abandoned estancia that was just north of La Ciénega and Las Golondrinas (Schackel 1979:6).

Juan Candelaria described Alamo, settled in 1730, as near to and similar to, Ciénega and four leagues from Santa Fé (Armijo 1929:283 -284).

On 24 May 1760 Bishop Tamarón reached the house of El Alamo, six leagues from Santo Domingo. He described it as large, with an upper story and many corridors (Adams 1953:203).

In 1782, Morfi described Alamo as a small ranch of one Spanish family one quarter league south of Cieneguilla (Thomas 1932:93).

Cieneguilla

Era: 18th and 19th Century

Significance: Cieneguilla was a *paraje* near Santa Fé for travelers who followed the Río de Santa Fé to or from the capital.

Annotated History: In 1777, Juan Candelaria recalled that the eighteenth-century settlement of Cieneguilla took place in 1698. It was four leagues from Santa Fé and was watered by the Río de Santa Fé (Armijo 1929:282 -283).

In 1776 Fray Domínguez wrote that two roads went down from Quemado like a V and led to two settlements or ranchos, both of which were to the southwest. They were two leagues apart and about five leagues from Santa Fé. The higher settlement was called Cieneguilla; it was in a canyon that came down from San Ildefonso Springs where it met the channel of the Santa Fé River. There were a number of springs a little

below this settlement, which he thought were a resurgence of the Santa Fé River. These springs ran west in little ravines (Adams and Chávez 1956:41).

Morfi's 1782 description of New Mexico portrayed "La Ciénegilla" as a ranch four leagues west of Santa Fé on the banks of the Santa Fé River. Nine Spanish families resided at Cieneguilla (Thomas 1932:93).

Pike's 4 March 1807 description of his route south out of the capital is rather vague but as interpreted in 1895 by Elliot Coues it forked near Agua Fria. The left fork met the Santa Fé River at the town of Cieneguilla and then followed it to La Bajada (Coues 1895:II.613-614).

In December 1846, Abert nearly lost his life and then his mule when he attempted a shortcut across some marshy land at Cieneguilla. Only the fact that much of the ground was frozen allowed him to escape and to save the mule (Abert 1962:139).

Agua Fria/Quemado

Era: 19th Century

Significance: While perhaps too close to Santa Fé to see much use as a *paraje*, Quemado and Agua Fria were visited by many travelers into and out of the capital throughout the colonial, Mexican, and U.S. periods.

Annotated History: The 1766 plano drawn by José de Urrutia demonstrates the physical layout of the Villa de Santa Fe. Juan Candelaria remembered that Cristóbal Baca settled Quemado in 1730. Candelaria placed it one and one quarter league from the capital and added that it was irrigated from the Río de Santa Fé (Armijo 1929:284- 286). In 1776 Fray Domínguez wrote that Quemado was one league west and at the very outskirts of Santa Fé. It was an Indian pueblo in the old days and had this name because it was purposely burned. The settlement near this place was later called Agua Fría. The burned pueblo was excavated after the Santa Fé River laid part of it bare (Adams and Chávez 1956:41).

When Pike left Santa Fé under Spanish escort on 4 March 1807, he followed a road which took the high ground between the Río de Santa Fé and Arroyo Hondo. Just past Agua Fria it forked, with both forks eventually reaching La Bajada and the Río Grande (Coues 1895:II.613-614). Years later, when Wislizenus prepared to leave Santa Fé for Chihuahua on 8 July 1846, he met the caravan that he was traveling with at their camp in Agua Fria. From there, the caravan took "the usual road, by Algodones, for the Río Grande" (Wislizenus 1848:29).

Palace of the Governors

Santa Fe, New Mexico
NATIONAL REGISTER,
NATIONAL HISTORIC LANDMARK
Era: 17th, 18th, and 19th Century

Significance: Originally constructed in the early 17th century as Spain's seat of government for what is today the American Southwest, the Palace of the Governors in Santa Fe chronicles and documents the history of the city, as well as New Mexico and the region. As a Presidio the Palace served many times as an end destination for travelers and supply caravans on the Camino Real. New Governors of the Province of New Mexico and outgoing Governors would travel the Camino Real to and from Mexico. Soldiers from this presidio would escort trains and campaign against Indian Nations along and in the Camino Real corridor. The Palace of the Governors since it was built c. 1610 up to the present day was and remains a keystone landmark on El Camino Real de Tierra Adentro.

Museum exhibits and collections, and library and archives holdings reflect the Spanish colonial, Mexican, U.S. Territorial and Statehood periods of history. The adobe building was designated a Registered National Historic Landmark in 1960, and an American Treasure in 1999.

Annotated History:
Palace of the Governors, by Bruce Ellis

El Palacio-1610

NEW MEXICO'S famed Palace of the Governors, the anvil on which was shaped so much of the history of 'Western America, has been called "the oldest public building, continuously used, within the continental borders of the United States." This claim is too modest. Almost certainly, the Palace is the oldest European-built structure of any kind now standing within the nation's seaboard limits.

We say "almost certainly." The old Palace has no dated cornerstone, and no written account of the laying of its first adobe brick has yet been found. But the Archives of the Indies, in Seville, Spain, still contain a copy of the orders given in March, 1609, to Don Pedro de Peralta, New Mexico's third Spanish governor, directing him to establish a new capital in the province and to have its officials "designate . . . one block of the streets for the erection of Royal Houses." In the spring of 1610, historians believe, the new *Villa de Santa Fe* was founded. The "Royal Houses" (Casas Reales)—residence of the governor, stronghold and arsenal, civic and military nub of the whole new little settlement—would have received priority over any other construction except, perhaps, that of a temporary church. We can be reasonably sure that by the winter of 1610-11 Governor Peralta had a dirt roof over his head and stout adobe walls around him.

Fourteen hundred miles to the east, other Spaniards had founded St. Augustine, Florida, in 1565. After a first unsuccessful venture on Roanoke Island in 1585 Englishmen came back to Virginia in 1607 and built the little city of Jamestown. All other settlements on the nation's east coast, beginning with the New Amsterdam of the Dutch in 1614 and the English Pilgrim s Plymouth in 1620, were later than Santa Fe.

Today, of the sixteenth and early seventeenth century structures of St. Augustine, which were built of wood, nothing remains. All of Fort Raleigh now visible above ground on Roanoke Island is a reconstruction. Jamestown's first buildings, also wooden, have vanished. Even the very first Dutch or English-built structures in what are now New York and New England are completely gone.

But Santa Fe's adobe Palace—the first and now the last of Governor Peralta's "Royal Houses"—still stands.

Not much is known of its earliest decades. Archives in Europe and Mexico have yielded tantalizing hints about new apartments built by Peralta's successors in office, a room where Indians masked and robed themselves for dances in the Plaza (much to the disapproval of the churchmen, who were at odds with the govern-ors, most of these years), drawing-rooms and dressing-rooms of the governors ' wives, even a shop in the Palace where one thrifty governor eked out his royal salary by selling chocolate, shoes and hats to the citizens.

By 1680, the walled and fortified "Royal Houses" had grown large enough, we are told, to accommodate "more than a thousand persons, five thousand head of sheep and goats, four hundred horses and mules, and three hundred head of beef cattle, without crowding." All these settlers and their livestock, congregated from upcountry and down, had urgent need of a fort that year. The long-suffering Pueblo Indians had revolted, slaughtering more than four hundred Spaniards in outlying villages, farms and missions, and descending in fury upon Santa Fe. Governor Otermín battled them in the Villa for eight days and flame -filled nights, until they diverted a ditch which supplied the Casas Reales with water—and by this ruse broke, temporarily, Spain's hold upon New Mexico. Out of the main gate of the fort, across Santa Fe's bloody Plaza and through the smoking ruins of the town, Otermín led his people south, to the safety of settlements below what is now El Paso, Texas. There they stayed for twelve years, while the Indians settled down in what their torches had left of Santa Fe.

They made a bonfire of the official archives, which is why we know so little about the preRevolt Palace. Copies of some documents had been sent to Mexico and Spain, but the New

Mexican records there, too, have suffered from looting and fire over the centuries. If floor- plans of the early Casas Reales ever were drawn, they either went up in smoke in 1680 or later, or still await finding by some modern researcher luckier than his fellows thus far.

Reconquest

When Governor and Captain-General Don Diego de Vargas brought his reconquistadores back to Santa Fe in 1692, he found the Casas Reales transformed to a high -walled pueblo, with a fortified main gateway opening on the Plaza and a tower at each of its four corners. It comprised, he said, "what was formerly the major portion of the Palace and Royal Houses of the governor," and he found it such an impregnable stronghold that to retake it on his second trip, a year later, he had to use the Indians' earlier stratagem of cutting off its water supply. And afterwards, bitterly, he accused his successor in office of allowing all those lofty walls and towers, which had given him so much trouble, to fall into ruin.

They were never rebuilt as he wanted them to be, for conditions had changed. Before 1680, the entire Casas compound, covering many acres north of Santa Fe's main plaza, had been at once a fortress, the seat of government, and the governor's residence. New Mexico then had no standing army; all the able-bodied male settlers were at the same time soldiers, subject to military call. They lived on their farms and in their own houses in the Villa. But Vargas brought back with him a paid presidio troop, and its men needed barracks.

These were not completed until many years later, and then they stretched west from the Palace and north in two long rows, along the lines of present-day Grant and Washington Avenues, to what is now Federal Place. There they were joined by another row, east and west. The exteriors formed a wall enclosing a roomy parade-ground, corrals, storerooms and outbuildings—and in the southeast corner the smaller compound of the remaining old *Casas Reales*. This, a rectangle based on the long building on the Plaza which Vargas was the first to call *El Palacio Real*—the Royal Palace, included stables and guardrooms extending north from the ends of the Palace itself, two inner patios, kitchens and other service quarters, a coach-house and the governor's garden.

With the Palace now changed largely to a civil and domestic establishment, it entered into long years of complaints about leaky roofs, scanty furniture and missing door- keys, posted indignantly down to Mexico by its succession of royal governors. These changed to republican governors in 1822, when Mexico won its independence from Spain, and for the first time a large room in the Palace was fitted up as a meeting-hall of elected New Mexico Deputies. It was renamed a Council Hall in 1837, with a change in the form of government, and ten years later, with the United States flag flying over the Palace, it was made ready to house the first session of the Territorial House of Representatives.

The Palace was then half again as long as it is today, its west end being about where the southwest corner of the Museum's Fine Arts Building now stands. There was a tower at this end in which gunpowder had been stored, and near it were the jail and the Legislative Hall. These, in poor condition, were demolished in 1866, when Lincoln Avenue was opened from the Plaza to run north through the then Fort Marcy Military Reservation to the uncompleted Federal Building.

This loss of the western third of the Palace accounts for its former main hall, still running through the building from the Plaza to its inner patio, being off center. The hall undoubtedly was once a covered zaguan, through which horsemen and carriages could pass—the same exit, probably, through which Otermín led his despairing followers on that sad August day of 1680, starting their long flight to Mexico.

U.S. Occupation

The 1860's and 70's saw many other "improvements" of the old Spanish building, by its U.S. Government occupants. The east end, which also had its tower, was largely rebuilt to form two new halls for the Legislature and a separate

Territorial Library. Old outbuildings at the rear were torn down and replaced by a new set much closer to the Palace itself than the others had been, thus reducing the size of the inner patio by more than half. As late as 1880, the patio was completely bare of grass and bore only a single cottonwood tree.

The portal along the front, probably first built in the 1700's (there is no mention of one in Otermín 1680 reports), was a plain affair of peeled logs and a dirt roof when General Stephen Kearny entered Santa Fe and occupied the Palace in August, 1846. It may have been given some thought by the new caretakers soon afterwards (a traveller in 1866 described it as an "American portico"), but it underwent a radical change in 1878. In that year it was replaced by a porch in true mid- Western Victorian style, with posts of milled lumber, painted white, neatly set off by a full-length balustrade on the roof. This, which in its proud designer's words "elicited many expressions of gratification and pleasure," survived until 1913, when the present portal in New Mexican Spanish style was built.

The records reveal that from time to time, during its long history, the Palace became so dilapidated that the incumbent governors—or their wives—refused to live in it, and found quarters elsewhere in Santa Fe. Except for its thirteen years as an Indian pueblo, however, and also for a brief two months in 1862 when Sibley's Confederates were in Santa Fe, it never ceased to be the official residence and office of the Spanish, Mexican and United States civil and military governors from 1610 to 1900, when New Mexico's second "new" capitol building was erected. All in all—actual, acting and interim, with several serving more than one term—these governors numbered:

Under Spanish rule, 1610 to 1822	59
Under Mexican rule, 1822 to 1846	14
Under United States rule, 1846 to 1900	24

Brief Chronology of the Palace

1610.....Built (probably) as the main structure of the "Royal Houses" in New Mexico's new capital.
1680.....Occupied by the Pueblo Indians, after they had driven the Spaniards from Santa Fe.
1693.....Reoccupied by the Spaniards.
1807.....Lt. Zebulon Pike, U.S. Army, imprisoned in Palace jail.
1822.....Mexican independence. The Palace no longer "Royal."
1837.....José Gonzales, a Taos Indian, installed as governor during short-lived insurrection; soon afterwards executed.
1846.....Occupied by General Stephen Watts Kearny, U.S. Army, on August 18th.
1862.....Occupied for two months by invading Confederate army from Texas.
1866.....West third of building, and old outbuildings at rear, demolished. Extensive remodelling during next few years.
1869.....James L. Collins, U.S. Depository, found dead in office in west end of Palace, and safe robbed.
1870.....Spanish and Mexican archives, in Palace since 1693, sold by Governor Pile as scrap paper.
1878-81....Governor Lew Wallace wrote large port of Ben Hur in Palace.
1900.....Palace given up as Capitol, upon completion of new Capitol Building in Santa Fe. Used as private offices, Post Office.
1909.....Palace became first unit of the newly formed Museum of New Mexico.

Santa Fe Plaza

Santa Fe, New Mexico
NATIONAL REGISTER,
NATIONAL HISTORIC LANDMARK

Significance: The Santa Fe Plaza was for a number of years the end of the Camino Real.

Annotated History: Castaño de Sosa's party may have passed near the future site of the capital on 7 January 1591 while going from Pecos pueblo to the Tewa pueblos to the north. He noted passing a river after crossing the mountains; this was probably the Santa Fé River just northwest of the present city (Hull 1916:324; Schroeder and Matson 1965:112).

In his 1634 memorial, Fray Benavides reported that Santa Fé contained some 250 Spaniards and their wives, families, and servants, a total of about 1000 people. The original church had collapsed but Benavides oversaw the building of a fine replacement (Hodge, Hammond, and Rey 1945:68). In Vetancurt's 1692 description of pre - revolt New Mexico, the area between Santa Domingo and Santa Fé was depicted as flat and no settlements were noted between the two. This seems to indicate that he was thinking of a route through the Galisteo basin from the Río Grande to the capital. Vetancurt described an attractive plaza with some small artillery pieces and noted that the governor, some soldiers, and four priests had lived there before the 1680 revolt (Vetancurt 1961:270 -271).

On 4 June 1726 Rivera traveled east from El Pino along the west bank of the Santa Fé river four leagues until he reached the villa of same name. He wrote that it was the capital of the "reino and provincia de la Nueva Mexico," and that its population was made up of Spaniards, mestizos and mulattoes. He stated that it served as the quarters for the presidio's 80 soldiers, whose salaries were paid for by the king (Alessio Robles 1946:52)

On 24 May 1760 Bishop Tamarón came four leagues east from the house of El Alamo to Santa Fé. On 25 May 1760 he visited the principal church, which he described as large, with a spacious nave and a transept adorned by altars and altarscreens, all of which he inspected. He wrote that two Franciscan friars served this villa. The census showed 379 families of citizens of Spanish and mixed blood, which totaled 1285 persons. But, since Bishop Tamarón confirmed 1532 persons, he was convinced that the census was wrong. He also visited a church dedicated to the Archangel St. Michael. In the plaza, another church, dedicated to the Most Holy Mother of Light, was then being built. The chief founder of this church was the Governor, Francisco Marín del Valle. Tamarón noted that all the buildings of Santa Fé were adobe and that there was no fortress or any formal presidio building. The garrison consisted of 80 mounted soldiers.

In his general description, Tamarón wrote that the villa lay at the foot of a sierra, which was east of it and ran to the north. He explained that water was scarce because the Santa Fé River dried up in the months before harvest. From Santa Fé Bishop Tamarón visited Pecos, Galisteo, Tesuque, Nambe, Pojoaque, Picurís, and Taos (Adams 1953:204- 215).

In 1776 Fray Domínguez described Santa Fé as the capital of the kingdom and seat of political and military government and of a royal presidio. He located it about 700 leagues to the north of the "great city of Mexico" and wrote that it was established on a very beautiful site at the foot of the Sierra Madre, which was not far to the east of the villa. The church was almost in the center of the villa, its titular patron "Our Seraphic Father St. Francis" (Adams and Chávez 1956:12).

Domínguez stated that the location and site of Santa Fé was as good as he had pictured it, but that its appearance, design, arrangement and plan did not correspond to its state as a villa. He described it as "a rough stone set in fine metal." He also compared Santa Fé to quarter of Tlatelolco in Mexico City and described its appearance as mournful. His opinion of the adobe houses was that they were made of earth, unadorned by "any artifice of brush or construction." Santa Fé consisted, at the time, of many small ranchos at various distances from one another, with no plan as to their location. There was a semblance of a street, which extended 400 or 500 varas from the west gate of the cemetery of the parish church. According to

Domínguez, this "street" lacked orderly rows of houses. He wrote that the harvest of Santa Fé consisted of wheat, maize, legumes and green vegetables, and fruits such as melon, watermelon and apricots (Adams and Chávez 1956:39-41).

Lafora arrived in the capital of the kingdom of New Mexico, on a good road, on 19 August 1766. He reported that a company of 80 men guarded a population of 2,324, divided among the families of the 80 soldiers, of 274 Spanish vecinos, and of 89 Indians of various nations. He judged the existing fortifications unusable for defense (Alessio Robles 1939:98). On 15 August 1779, Anza described marching north from Santa Fé along the Camino Real to the pueblo of "Pujuaque," where he and his troop stayed the night (Thomas 1932:123). By 10 September 1779, Anza and his army had returned to Santa Fé by way of Taos Pueblo where they picked up the Camino Real leading to the capital (Thomas 1932:139).

Zebulon Pike entered the city of Santa Fé as a prisoner of the Spanish government on 3 March 1807, coming from the north past old Fort Marcy. He described it as being only three streets wide and extending for a mile along the banks of the Río de Santa Fé, which he called a small creek. In 1895, Elliot Coues also referred to the Río de Santa Fé as the "Río Chacito." Pike contrasted the two magnificent churches with the modest appearance of the typical houses. The soldiers were quartered to the north of the central plaza, which was surrounded by the government palace on the north and, across from it, the clergy and public officers. He reported the population of Santa Fé to be 4,500 souls. On the next day, Pike left the capital heading south down the Santa Fé River to the Río Grande (Coues 1895:II.604-613).

The German born Wislizenus found Santa Fé disappointing for a capital when he arrived from Missouri on 30 June 1846. He reported a population of 3,000 in the city itself and 6,000 including nearby settlements. He said that, aside from two churches and the Palace of the Governors, all of the houses were one-story adobes scattered along "irregular, narrow, and dusty" streets. He did admire the mountainous surroundings (Wislizenus 1848:19,28-29).

The Casas Reales, or the Palace of the Governors, was built in 1610 when Santa Fé was established. People took refuge in it during the Indian siege of August 1680. In 1731 it was recorded that Governor Bustamante had "built at his own expense the Casas Reales where the governors reside today" (Adams and Chávez 1956:22). Much of Santa Fé was built between 1610 and 1612. There were later additions, including a large military compound containing arsenals, offices, a jail, a chapel, and the governor's residence and office. The outer walls of adjoining structures served as the defensive walls of the compound and enclosed two interior plazas. The dwellings in these two plazas were three and four stories high (Sánchez 1989:28). The barrio of Analco, across the Río de Santa Fé from the plaza, was one of the main genízaro settlements of New Mexico from its founding at least until the late eighteenth century (Thomas 1932:91-92; Chávez 1979:199).

San Ildefonso Pueblo

New Mexico
Era: 17th, 18th, and 19th Century

Significance: San Ildefonso has remained an important pueblo throughout the colonial, Mexican, and U.S. periods.

Ancestors of the residents of San Ildefonso came from the ancient community of Mesa Verde by way of the communities at Frijoles Canyon (Bandelier National Monument). The present village began about the turn of the seventeenth century. As was the case with most of New Mexico's pueblos, the San Ildefonso Indians participated in the Pueblo Revolt.

From 1598 until Santa Fe was established, the Camino Real ran through San Ildefonso headed for San Juan Pueblo.

Santa Clara Pueblo

Era: 17th, 18th, and 19th Century

Significance: Santa Clara has remained an important pueblo throughout the colonial, Mexican, and U.S. periods.

Santa Clara Pueblo was constructed early in the fourteenth century. The Tewa name was K'hapoo ("where roses grow near the water"). The people are living descendants of the Puyé cliff dwellers. The cliff dwellers settled in the cliffs of the Pajarito Plateau late in the 12th century. The area was abandoned in the 1500s because of severe drought. The cliff dwellings are more than a mile long and one to three stories high. The house remains on the mesa top are believed to have contained more than 1,200 rooms.

San Gabriel

New Mexico
NATIONAL HISTORIC LANDMARK
Era: 17th, 18th, and 19th Century

San Gabriel was the site of the first or second Capitol of Spanish New Mexico. It was established when Juan de Oñate and his colonists moved out of neighboring San Juan Pueblo across the Rio Grande and moved here, called by the Indians Yungue. The colonists renamed it San Gabriel as most of the Indians previously living there, moved into San Juan Pueblo.What the Spaniards did was remodel San Gabriel to their own taste and uses. Like other multistoried pueblos, Yungue had no doors or windows on the first floor. That was for protection during attacks. They climbed ladders to the upper levels and entered the ground floor by descending through holes in the roof.

In their remodeling, the colonists opened doors and windows in the lower level. Evidence of these changes was discovered in 1962 by Ellis and her students.

Digging also revealed the plan of the old plaza. In one of its corners were found tracks of two dogs that had run across the square after a rain.

Their deep footprints in the mud had dried and remained preserved for more than 350 years.

From the historical record, we know next to nothing of daily life in San Gabriel. It did have a cabildo, or Spanish-style town council. And it was also the capital of New Mexico, as mentioned in several documents of the period.

One thing not in doubt is that San Gabriel survived only a few years. Probably, Oñate soon realized that there was not enough farmland in the area to support both the Indians and the settlers.

Looking around, he chose a new spot, a dozen leagues to the south, as the location for a new capital. On a small river, the land was not occupied by any pueblo Indians.

San Juan Pueblo, Yunge-Yunge

New Mexico
NATIONAL REGISTER
Era: 17th, 18th, and 19th Century

San Juan pueblo was existing in 1598 when Oñate came here and established the first capitol of Spanish New Mexico. First named San Juan Bautista, it became later known as San Juan de los Caballeros. In the last quarter of 1598, the Hispanic colonists temporarily moved into San Juan , alongside the Indians. Oñate was planning to build a Spanish Town, to be called San Francisco just south of the pueblo but difficulties caused him to abandon the idea. Instead, the colonists moved across the Rio Grande to a smaller pueblo named Yungue, which he renamed San Gabriel. Most of the Indians vacated the village and took up new homes inside San Juan.

APPENDIX F
HIGH-POTENTIAL ROUTE SEGMENTS

National Trails System Act, SEC. 12. [16USC1251] As used in this Act:

(2) The term **"high potential route segments"** means those segments of a trail which would afford high quality recreation experience in a portion of the route having greater than average scenic values or affording an opportunity to vicariously share the experience of the original users of a historic route.

Route Segments were identified by Mike Marshall in 1991. His text is used in these descriptions. Michael P. Marshall, El Camino Real de Tierra Adentro, An Archeological Investigation. Santa Fe: The 1990 New Mexico Historic Preservation Division Survey, 1991.

ROUTE SEGMENTS

A DESCRIPTION OF THE CAMINO REAL IN THE JORNADA DEL MUERTO

ROBLEDO STUDY AREA

Robledo Road LA 80068, Segment No. 1

This one kilometer long section of the Camino Real is located in the Radium Springs Arroyo. It is directly southwest of the Interstate Highway 25. The Camino Real, in this area, follows along the northern side of Radium Springs Arroyo. The trail is defined by a broad sandy swale, eight to ten meters wide and up to two meters in depth. The road is devoid of vegetation while mesquite appears in the surrounding area. This section of the trail is captured by a small arroyo approximately 200 meters southwest of Interstate Highway 25 (I-25).

Robledo Road LA 80068, Segment No. 2

This 500 meters segment of the road crosses the upper drainage of Radium Springs Arroyo). A modern two track road joins the old Camino Real swale in this area. The road is defined by an obvious swale, eight meters wide and about one meter in depth. The edges of the roadbed are cut into the caliche substrate.

Robledo Road LA 80068, Segment No. 3

This 900 meter section of the Camino Real extends from the crossing of the Radium Springs Arroyo, across and down a low sandy ridge. A modern two-track road follows along a very wide swale in this area. The swale is 12 to 15 meters in width and up to 1.5 meters in depth.

SAN DIEGO STUDY AREA

The North-South Avenue (LA 80064).

A two kilometer section of the north-south avenue of the Camino Real was surveyed in the San Diego area. This section of the Camino Real is designated as site LA 80064, Segment proveniences Nos. 1 thru 4. The Camino Real runs parallel to I-25 in the area directly north of the present U.S. immigration checkpoint and east of a small rest stop. The survey area extends from

the T19S-T20S fence line near "South Tank," north two kilometers to the area of an empheral playa. The Camino Real, in this area, is well preserved and easily defined in the aerial imagery.

San Diego North-South, Road Segment No. 1

This segment of the Camino Real extends across the desert grassland plain, in the area of South Tank, for a distance of 600 meters north of the T19S-T20S fence line. The trail is defined by a swale that is 6 to 8 meters in width. This swale has a sandy base which is devoid of vegetation, but is fringed by dense growths of mesquite and yucca. The trail is best defined in this area by the absence of vegetation. In some areas, the trail has captured runoff and is a shallow sand- filled arroyo.

San Diego North-South, Road Segment No. 2

This section of the Camino Real extends 500 meters south from the South Fork or south river- side avenue. The South Fork avenue branches northwest from the North-South road and leads by way of the Paraje San Diego encampment (San Diego Site No. 1, LA 6346) to the escarpment edge (north of Detroit Tank), and down to the river.

The road extending 500 meters south from the South Fork junction is a shallow well-defined swale 10 meters in width. Here the road passes between a mesquite grassland and a creosote community. In some areas, the trail is defined by a band of mesquite, while in others it is devoid of vegetation, but fringed by creosote.

San Diego North-south, Road Segment No. 3

Here, the Camino Real passes along the east side of an ephemeral pond or playa. This pond area supports large mesquites, which were no doubt a firewood source. The road in the area of this playa is defined by a wide and shallow swale as well as a low and somewhat scattered band of mesquite.

San Diego North-South, Road Segment No. 4.

A section of the Camino Real , 200 meters in length, was examined in the area north of the playa. The trail is a well- defined swale 10 meters wide with a narrow sandy base. In some areas, it supports growths of tall grass. In other areas, exposed carbonate soils form a firm road base compared to adjacent dunes.

THE SAN DIEGO SOUTH FORK ROAD (LA 80065)

South Fork Road Segment No. 1.

This section of the South Fork road extends from the actual South Fork intersection of the north-south roadway, 600 meters to the northwest. In this area, the road is defined by a swale, 10 to 15 meters wide, which supports growths of dense grass and mesquite in a plain which is populated by scattered mesquite and creosote. The trail, in some areas, has the appearance of a wide and shallow drainage. There is also a thin patina of organic material in the road depression which has accumulated by runoff catchment. This patina of grey organic matter constrasts to the bare reddish clay on the adjacent plain.

South Fork, Road Segment No. 2.

This section of the South Fork road extends from an angle change at the north end of road segment No. 1, northwest 300 meters to the I-25 crossing. This section of the trail, which crosses a creosote flat, is defined by a deep swale (up to 1.0 m below surrounding terrain), 6 to 8 meters in width. A road cut drainage outlet has been made into the swale from the dirt road which parallels I-25 to the east.

South Fork, Road Segment No. 3

This section of the San Diego South Fork road extends from I-25 on the south, 800 meters northwest to the Rio Grande valley escarpment

edge (Selden Canyon Quadrangle). The road in this area is a well-defined swale, 10 to 15 meters wide.The road is defined as a wide shallow swale and linear void of vegetation in a flat creosote plain. This road segment parallels a modern gravel road that is 100 meters to the east and the Rio Grande valley escarpment, 50 meters to the west. Both the South Fork and the modern gravel road join at an arroyo crossing on the escarpment edge which is the north end of road segment No. 3.

South Fork, Road Segment No. 4.

This section 750 meter section of the San Diego South Fork road extends from the arroyo crossing on the Rio Grande escarpment edge (ie. north end of segment No. 3) northwest to Detroit Tank. The trail, over most of this section, is defined by a 10 meter wide path or shallow swale. It is best defined in this area by vegetative differentiation. The native creosote of the area has failed to re -vegetate the trail which, instead, is a linear corridor of snakeweed. The trailway as it approaches the escarpment arroyo has been captured by a lateral drainage and is a deep narrow swale with a sandy floor.

South Fork, Road Segment No. 5.

This segment of the South Fork Camino Real extends from the area of Detroit Tank, one kilometer west-northwest to the escarpment edge and road descent into the Rio Grande valley (Thorn Well Quadrangle). This section of the road is not so obvious as road segments 1 through 4. The trail in this area is defined by a narrow 5 to 6 meter wide swale which crosses a area of low stablized dunes. The trail is best defined as a linear void in the creosote. In some areas, the trail is a narrow and deep track (50 cm in depth), while in others it is almost obscured by drifting sands. The narrow and poor definition of trail segment No. 5 is probably due to its primary use as a stock trail rather than a wagon road. This section of the South Fork road approaches and descends the escarpment. It is known historically that stock were unhitched from the carts and wagons and were taken down this road to water at the river.

The actual escarpment edge at the northwest end of road segment No. 5 is a two meter high bluff of Carbonate strata, below which is a steep slope. There is a cut in the bluff edge where the trail descends. This cut is 4 meters wide and does not appear to have been developed or constructed. This is one of the few areas where descent off the escarpment is possible. The trail descent is of such an incline as to prevent normal passage by wagons. This is consistent with the historic use of this section of the trail as a stock avenue.

THE RINCON ARROYO STUDY AREA "PARAJE EL PERRILLO"

Rincon Arroyo Road Segment No. 1

This 400 meter section of the trail extends across the benchland, 600 meters to 1.0 kilometers north of the Rincon Arroyo windmill (Alivio Map). The north end of the segment is an eastern lateral arroyo to Barbee Wash. Here, the Camino Real is defined by a shallow, 4 to 6 meter wide, swale. The trail is best recognized by the relative absence of creosote brush, scattered artifacts and battered limestone cobbles in the roadbed. The road swale is captured and incised by occasional small arroyos which cross the benchland. On the north end of the segment, the road enters a rather large lateral arroyo. There is no evidence of developed rampway construction at this crossing, but the swales, as they enter the wash, are well-defined and cut by erosion.

Rincon Arroyo Road Segment No. 2

This 350 meter section of the Camino Real extends across the east benchland of Barbee Draw north from the Rincon Arroyo windmill. The trail in this area is difficult to discern from ground observation, but it is defined by occasional shallow swales and the absence of creosote brush.

Rincon Arroyo Road Segment No. 3.

This section of the Camino Real extends 200 meters south from the windmill to the Rincon Arroyo. There is a swale, 6 to 8 meters in width, visible where the road enters the north side of the arroyo. The lower slope and floor of the arroyo is quite sandy.

THE POINT OF ROCKS STUDY AREA

THE POINT OF ROCKS ROAD SEGMENTS-LA: 80059

Point of Rocks Road Segment No. 1.

A 500 meter long section of the Camino Real was inspected in the Cerro Bolon area. It stretches from 300 to 800 meters north of the Slerra- Dona Ana county line. The road in this area crosses along the eastern margin of the Barbee Wash floodplain and the western edge of the creosote covered alluvial slopes. The condition of the trail in this area is poor. Sections of the trail have been inundated by the floodplain. In other areas, it has been covered by alluvium from the west slope erosion. The area is now overgrown with grass and scattered mesquite and the trail is difficult to discern. Braided cattle paths also obscure the trail.

Point of Rocks Road Segment No. 2.

This section of the Camino Real is a 600 meter long section which extends along the base of the Point of Rocks ridge escarpment. The road passes directly below the rocky outcrops of the ridge and alternately along the edge of the Barbee Wash floodplain and the west alluvial slopes. Most of the trail in this area is obscured by alluviation. Much of the road segment in the floodplain is an erosional channel, 6 to 8 meters wide and one to two meters in depth, which supports dense growths of grass and mesquite. A double roadbed swale, each four meters wide, was seen on a shallow arroyo crossing 50 meters north of the southernmost rock outcrop. A faint roadway swale was also seen in two areas where the trail crosses alluvial slopes.

Point of Rocks Road Segment No. 3.

A section of the Camino Real, 300 meters in length, was examined directly north of the Point of Rocks escarpment in the area of the Upside Down Tank. The trail in this area is entirely within the Barbee Wash floodplain and is defined by a re -vegetated arroyo.

JORNADA DEL MUERTO YOST DRAW STUDY AREA

Yost Road LA 80070, Road Segment No. 1

This southernmost segment of the Camino Real in the Yost Draw study area is located on an elevated plain above and south of the Yost Draw escarpment. The trail in this area is well defined on the aerial imagery by a sharp lineation. The level gravel-paved surface of the plain is very stable and the road is well preserved. The 200 meter section of the trail as it approaches the escarpment from the south, is defined by a shallow swale, 10 meters in width, which is mostly devoid of vegetation. This contrasts to the vigorous growths of creosote and tar brush adjacent to the trail. The trail in this area is best characterized by the absence of vegetation. Further south on the elevated plain, the road swale is narrower and deeper (5 meters wide and up to 50cm in depth). In this section, due to the capture of runoff water, vegetation is dense and consists of grasses and mesquite, in contrast to the adjacent creosote.

Yost Road LA 80070, Road Segment No. 2

In this area, approximately 400 meters north of the Yost escarpment, the trail passes over a saddle between two low hills. The trail in this area is defined by a conspicuous swale, five to seven meters in width, on an exposed pebble-

paved surface. This provenience area is also the location of an artifact concentration.

Yost Road LA 80070, Road Segment No. 3

The Provenience No. 3 segment is located in the wide bottomlands south of the Yost Arroyo. This area is somewhat alluviated and definition of the trailway is discontinuous. The trail, in some areas, is defined by a shallow swale and in others by the absence of vegetation. In some areas, there is an open path throuqh the sparse vegetation of mesquite, tar brush, grasses and crucifixion thorn.

Yost Road LA 80070, Road Segment No. 4

In this area, the trail enters the alluviated lowlands immediately south of Yost Draw Arroyo. Here, the roadway veers 200 meters to the west to pass around the eroded headlands of entrenched tributary arroyos to Yost Draw. Most of these entrenched arroyos have advanced to the east and bisected the trail. The trail is poorly defined In the alluviated red clay bottomlands of Yost Draw. A discontinuous alignment of mesquite can be seen in the aerial imagery, but the trailway path on the ground is not visible. No artifacts were observed.

The Yost Draw Crossing LA: 800544

The Camino Real crossing of Yost Draw Arroyo was developed by the construction of earth ramps down the upper embankments. These ramps were excavated into the walls of the upper clay embankments on both the north and south sides of the arroyo. Both ramps are four meters in width and provide a road grade to the cobble-strewn arroyo floor. The ramps are 20 and 30 meters in length and provide an even grade to the arroyo floor. Some cobble stones were imported to the south ramp to provide a solid base for the clay roadbed. An exposure of bedrock appears at the base of the north ramp which provides a solid base for the ascent. This bedrock exposure is worn in the area of the roadbed. A low mound of soil and gravel on the north embankment summit, in the roadbed, appears to be backfill removed during the north ramp construction. This suggests that the ramp was constructed by use of a "Fresno" (a stock drawn scoop).

Yost Road LA 80070, Road Segment No. 5

This is a 500 meter section of the Camino Real which extends north of the Yost Draw lowlands up slope to an east -west fence line. The trailway on the slope is defined by a linear arroyo, 5 to 7 meters in width. It is eroded to one meter in depth. Where the trail approaches the alluviated lowlands it is obscured. As the trail approaches the summit of the slope, it is defined by a conspicuous depression and a line of large mesquites. The trail crosses the east -west fence line just west of an old gate.

Yost Road LA 80070, Road Segment No. 6

This 600 meter section of the Camino Real extends across an open upland plain between the slopes north of Yost Draw and south of a west tributary of Aleman Wash. This section of the trail is defined by a conspicuous depression, 6 meters across and 50 cms in depth. This swale acts as a runoff catchment which has been enhanced by the construction of small earth dams across the swale. The water catchment in the swale has resulted in the growth of tall mesquite and dense grasses in an area of low growing mesquite and scattered grass. Occasional saltbush growths appear along the trail margin, but not within the swale. Sections of the road, as it crosses the gravel-paved plain, have low earth and gravel berms. A few limestone cobbles in this area exhibit battering marks from the passage of stock and vehicles.

Yost Road LA 80070, Road Segment No. 7

This 300 meter section of the Camino Real passes down a series of low hills which form the south slopes of an eastern tributary of Aleman Wash. This section of road is defined in the aerial imagery as a very clean hard line. This is

because the road is devoid of vegetation and consists of a well defined swale in the gravel benchland. Here, the road is characterized by a shallow swale, four to five meters in width, with occasional roadside berms. The road forms an open path in an area of otherwise densely covered creosote. Much of the area is gravel and cobble-strewn and many of the small arroyo crossings are rather rough. Many of the limestone cobbles in the roadbed exhibit battering caused by the passage of livestock and vehicles.

Yost Road LA 80070, Road Segment No. 8

In this 200 meters section of the Camino Real, the trail crosses the grass covered lowlands of a western tributary of Aleman Draw. Here, the trail veers to the west to pass around the entrenched headlands of small arroyos. Definition of the trail in these lowlands is obscured but may be discontinuously traced by a linear growth of mesquite.

Yost Road LA 80070, Road Segment No. 9

This segment of the Camino Real is an approximate 600 meter section which crosses the plain between the Aleman Draw and an eastern tributary to Aleman Draw. On the north slope of the tributary, the trail is well defined by an eroded linear swale which is 10 meters in width and 50cm to 1.0m in depth. In one area, a 100 meter long double or parallel road segment is present. The road is also closed by small earthen dams that were constructed to control erosion and hold runoff water. The trail in the area above the cross dams is defined by a tall linear growth of mesquite.

Yost Road LA 80070, Road Segment No. 10

This section of the Camino Real is the 900 meter south approach to Aleman Wash. The trail, as it passes over the south plain to Aleman Ranch, is defined by a subtle and discontinuous swale and a linear scatter of artifacts. There is a definite increase in the density of trail associated artifacts as the road approaches the Aleman Wash.

JORNADA LAKE STUDY AREA DESCRIPTION OF THE JORNADA LAKE ROAD

Jornada Lake LA 71819, Road Segment No. 1

Road segment No. 1 is a 400 meter section of the Camino Real which crosses an open grassland that divides the south playa of Engle Lake and an eastern tributary of Jornada Draw. The trail in this area is defined by a wide shallow swale, 12 to 20 meters in width and 50cm in maximum depth. The swale area supports growths of mesquite which form a linear path across the otherwise grassland plain. In some areas the trail swale is difficult to trace, but the path of the trail is well defined by a linear growth of mesquite. In some areas the road is bare, in contrast to the adjacent grassland. Runoff catchment in the road swale is evident by moisture cracks and a patina of organic matter.

Jornada Lake LA 71919, Road Segment No. 2

Provenience No. 2 is an approximate 200 meter section of the trail which extends down the north slope of an eastern tributary drainage to Jornada Draw. In this area, shallow arroyos have formed along the path of the road. In one area, where the trail crosses a section of hard caliche soil, there are two distinct and parallel swales, each about six meters wide and separated by a berm five meters in width. The eroded swales vary from 50cm to 1.0 m in depth. The presence of a double road track here is probably due to the erosion and abandonment of the older road and to the passage of vehicles on the bypass avenue. The path of the Camino Real as it enters the lowlands of the eastern tributary drainage is obscured by alluviation. It is in this area that the trail crosses the railroad tracks and the county road.

Jornada Lake LA 71818, Road Segment No. 3

Provenience No. 3 is a one kilometer segment of the trail which extends southeast from the A013 county road crossing. The trail is not espe-

cially visible on the aerial imagery, since only occasional mesquites grow along the path. A rather obvious road swale, however, was observed in the survey. This swale is six to eight meters in width and 25cm to 50cm. in depth. The compact sandy sediments along this section of the trail appear to be rather stable, hence the good preservation of the road.

Jornada Lake LA 71818, Road Segment No. 4

This segment of the trail extends across an open plain directly south of an east -west two track road. This open plain has a sand and carbonate pebbled substrate. Definition of the trail in this area is very faint and was traced by the projection of the alignments visible on the aerial photograph north and south of the area.

Jornada Lake LA 71818, Road Segment No. 5

This 600 meter segment of the Camino Real is defined by a vegetative lineation in the aerial imagery. This segment crosses an open grassland plain with low stabilized dune hummocks. A well defined swale is present which is six meters in width and 25cm in depth. This swale acts as a catchment area and fosters a vigorous growth of mesquite and grasses. It is the linear growth of mesquite that defines the aerial alignment. In one bottomland crossing, the trail is defined by a linear path of tall grass. In another short segment, the trail has been captured by an arroyo.

Jornada Lake LA 71818, Road Segment No. 6

In this 100 meter section, along the north side of a dune field, the Camino Real road has a positive topographic expression. A linear mound about 6-8 meters wide and up to one meter in elevation is stabilized by mesquite and grasses. The area adjacent to the mound is deflated by wind action. Apparently the trail area was once a swale stabilized by vegetation. As such, it resisted subsequent aeolian deflation.

Jornada Lake LA 71818, Road Segment No. 7

This 600 meter section of the Camino Real enters a wind swept dune field. The area consists of a series of tall stabilized dune hummocks interconnected by deflated blow- outs. The road alignment is not visible on the aerial imagery nor could roadway definition be made on the ground. The projected alignment of the trail was inspected. The road apparently crossed the dune field through a maze of interconnected blow-outs.

Jornada Lake LA 71818, Road Segment No. 8

This one kilometer segment of the Camino Real extends north of Jornada Draw arroyo. Definition of the road in this area is generally poor. Here the road crosses an open plain and extends north into a dune field. More mesquite is present in the road than in the surrounding terrain, but this is difficult to discern from ground observation. A slight road swale, occasional battered limestone cobbles define the trail corridor.

Jornada Lake LA 71818, Road Segment No. 9

This 500 meter section of the Camino Real extends from Jornada Draw arroyo on the north to a modern east -west road on the south. This section of the Camino Real is defined in the aerial imagery as a vegetative lineation. The trail is difficult to trace on the ground and in some areas, is defined by a wide grassy area framed by mesquite. No road swale was observed along this section

Jornada Lake LA 71818, Road Segment No. 10

This 400 meter section of the Camino Real extends from an east -west road on the north to Hackberry Draw arroyo on the south. The road is defined in the aerial photography as a lineation of mesquite. Ground survey revealed only a subtle and shallow swale crossing an area of low dunes

Jornada Lake LA 71818, Road Segment No. 11

This 300 meter segment of the Camino Real extends from Hackberry Draw arroyo on the north, south into a dune field. This section of the trail is defined in the aerial imagery as a distinct line of vegetation. Ground survey revealed a shallow swale 10 to 15 meters in width. There is a line of mesquite in the road with yuccas lining the trail edge. The Hackberry Draw bottomlands and arroyo would have proved difficult for wagon traffic during the rainy season. It is today a wide grassy floodplain with an incised arroyo channel.

THE ENGLE LAKE NORTH AND SOUTH STUDY AREAS JORNADA DEL MUERTO

THE ENGLE LAKE NORTH STUDY AREA

Engle Lake North Road LA 80067, Segment No. 1

This one kilometer segment of the Camino Real extends north from the north Engle Lake playa to the area of Road Segment No. 2. This section of the trail is defined in the aerial imagery as a linear concentration of mesquite. Here, the road crosses a sandy grassland with occasional mesquite hummocks. The road is visible as a shallow and discontinuous swale 4 to 6 meters wide. Much of the roadbed is filled with sand and is re -vegetated. The linear pattern of mesquite, conspicuous in the aerial imagery, is difficult to discern on the ground. A light scatter of artifacts was found along the trail. The road is entrenched on the slope as it approaches the north Engle Lake playa for a distance of about 200 meters. The margin of the playa is very alluviated and the road around the playa is buried in silt.

Engle Lake North Road LA 80067, Segment No. 2 (The Cross Roads)

The Engle Lake North No. 2 road segment is located 2.5 km northwest of Engle, New Mexico and 1.3 km. north of the north Engle playa. Here, the Camino Real trail crosses an old road leading northwest from Engle Station to an unknown (possible Fort McRae) destination.

Both of the roads at this crossing are very eroded and are defined by linear entrenchments which are very conspicuous in the aerial imagery. Both roadbed arroyos are 10 to 12 meters in width and one to two meters in depth. A series of large earthen check dams have been constructed, at interval, across both roads. A check dam has been constructed at the actual cross roads. This eroded area extends along a 1.5 kilometer section of the Camino Real north of the Cross Roads. This area is an open grassland with a white clay-caliche soil.

Engle Lake Road North LA 80067, Segment No. 3

This 700 meter section of the Camino Real trail is deeply entrenched and is, today, a linear arroyo across which have been constructed arroyo control check dams. The trail has been eroded to a depth of one to two meters. It is 8 to 10 meters in width, with lateral eroded slopes on either side up to 10 meters wide. The trail is furthermore defined by a linear growth of mesquite and yucca in an otherwise grassland plain. Occasional plated clay sediments on the road surface are exposed along the upper edge of the entrenchment.

Engle Lake North Road LA 80067, Segment No. 4

This 300 meter section of the Camino Real appears directly south of a vineyard which is located four kilometers north of State Highway 52. The road in this area is a shallow swale, 12 to 15 meters in width, which forms a shallow course leading south toward the entrenched section of road segment No. 3. Occasional large mesquite

and yuccas, which are not present on the adjacent grassland plain, grow in the road.

Engle Lake North Road LA 80067, Segment No. 5

This section of the Camino Real is located approximately four kilometers north of the north Laguna Del Muerto playa. The segment extends from the north boundary of a vineyard, 550 meters northwest, to the vineyard road. The Camino Real in this area is defined by a distinct swale which fosters a linear growth of mesquite and yucca. The trail is 6 meters in width and has wide lateral slopes 8 to 10 meters in width.

Engle Lake North Road LA 80067, Segment No. 6

This 500 meter segment of the Camino Real trail is located in the area of a vineyard warehouse, approximately 5.5 kilometers northwest of Engle, New Mexico. The segment extends from the north-south road to the vineyard warehouse, east of the warehouse to an east-west two track road. The Camino Real in this area is defined by a single swale, 10 meters in width and 50cm in depth. The trail is well defined by a dense linear growth of tall yucca and mesquite in an open grassland plain. Water catchment in the trail promotes the growth of desert holy which is otherwise absent from the adjacent grassland.

Enqle Lake North Road LA 80067, Segment No. 7

This 700 meter section of the Camino Real is located in the area approximately 1.5 kilometers west of Cedar Lake. The segment extends from an east-west track north of a green vineyard warehouse to a low hill top and Engle Lake locality No. 2. Part of the trail crosses the east slope of a low hill and is defined by a shallow swale, 9 to 10 meters in width, which is cut into the slope. Carbonate gravels are exposed in this road cut and in a narrow 1.0 m wide berm on the opposite road bank. The road is devoid of the mesquite and yucca vegetation which is scattered in the adjacent plain. The relative absence of vegetation on the trail in this area is apparently due to the exposed carbonate substrate.

Engle Lake North Road LA 80067, Segment No. 8

This 500 meter section of the Camino Real trail is located in an open grassland plain where the road begins to trend east toward the railroad grade. The road in this area is defined by a shallow swale, 8 to 10 meters in width. In some areas, carbonate gravels are exposed on the upper west road slope and in a narrow berm on the west. Occasional battered limestone cobbles were observed in the road. These cobbles were battered as a result of impact by stock and wagon traffic. There is some differentiation of the trail avenue by mesquite growths.

Engle Lake North Road LA 80067, Segment No. 9

This 600 meter section of the Camino Real is located in an open grassland plain where the road parallels (200 meters to the west) the railroad. The road in this area is difficult to follow. Where it is visible, it is defined by a shallow swale. The soil is sandy.

ENGLE LAKE SOUTH SURVEY AREA

ENGLE LAKE SOUTH ROAD SEGMENTS, LA 80066

Engle Lake South Playa, Road Sequent No. 1

This 700 meter long road segment is located west of "Engle Lake", which is the south playa of the Laguna Del Muerto. This segment is 1.6 kilometers southwest of Engle, New Mexico. The area north of this segment has been destroyed by a vineyard for a distance of one kilometer north to State Highway 52.

The Camino Real in this provenience crosses an exposed and eroded plain and is poorly defined. This area is a wide zone of exposed soils, 50 to 100 meters in width. In some areas, there is a wide grassy swale, 20 to 40 meters, which is the probable road area.

Engle Lake South Playa, Road Segment No. 2

This 650 meter section of the Camino Real represents the southern approach to the south playa of the Laguna del Muerto. The trail proceeds down the north slope of a low hill to the Engle Lake arroyo drainage. The trail in this area is vegetatively differentiated by a dense band of mesquite growing in the trail in an otherwise open grassland plain. This linear band of mesquite can be seen crossing the hill from State Highway 52 to the south. The trail in this area is defined by a swale, 12 to 15 meters in width and 50cm in depth. A few battered limestone cobbles were observed in the road. Near the summit of the hill, exposed Carbonate soils appear along the edge of the road.

Engle Lake South Playa, Road Segment No. 3

This one kilometer section of the Camino Real crosses the hill crest and open grassland plain south of the Engle Lake Playa. This road segment on the south joins with the Provenience No. 1 segment of the Jornada Lake study area. The south end of the segment is the south boundary of the Armendaris Land Grant. There is a scattered band of mesquite visible along the trail in the aerial imagery, however the trail is best defined, from ground observation, as a wide shallow swale. The road is 10 to 12 meters in width and 25 to 50cm in depth. Carbonate gravels are exposed in road, while the adjacent plain is covered by grasses.

JORNADA DEL MUERTO DOCKER POND STUDY AREA

Crocker Pond Road LA 80069, Segment No. 1

This southernmost road segment of the Crocker Pond study area is a 100 meter section which ascends a low ridge southwest of the south Crocker playa. Here, the road is cut into the eastern slope of the ridge, exposing a path of carbonate gravels.The trail is 8 meters in width and 50cm to 1.0 m in depth.

Crocker Pond Road LA 80069, Segment No. 2

A 200 meter segment of the Camino Real which passes west of the south Crocker playa is designated as Road Segment No. 2. This road section is crossed by numerous small arroyos leading down to the playa and is eroded. The trail is poorly defined and is recognized only on the basis of concentrated vegetation (mostly grass).

Crocker Pond Road LA 80069, Segment No. 3

This section of the Camino Real extends from the crossing of the powerline at power pole No. 654, approximately 300 meters to the southwest. The trail in this area is defined by a well-defined swale six meters wide and 50cm in depth. Carbonate pebbles are exposed along the edges of the road bed.

Crocker Pond Road LA 80069, Segment No. 4

This 400 meter segment of the Camino Real is located west of the north Crocker playa and extends from the power line north to an east - west road crossing. The trail is defined by a swale, eight meters wide and 25cm to 50cm in depth, which crosses an open sandy area. There is no conspicuous vegetative differentiation of the trail in this area.

Crocker Pond Road LA 80069, Segment No. 5

This 300 meter long segment of the Camino Real crosses an open grassland plain. It is poorly defined and consists of a very shallow swale eight to ten meters wide. This section of the trail is somewhat difficult to follow from ground observation. A battered limestone cobble, from stock traffic, was observed in the trail. A possible southwest branch road may join the Camino Real in this area. Aerial imagery of this section should be consulted.

Crocker Pond Road LA 80069, Segment No. 6

This 400 meter segment of the Camino Real extends north across the summit of a low hill in an open grassland and ends on the upper edge slope of the hill. From this hill the first sight north to Black Hill and the Red Lake drainage system can be made. This is also the first view north along the Camino of San Pascualito and San Mateo mountains. It was from this location that travelers coming up from the south first caught sight of New Mexico and the Piro Province. The trees of Tucson Springs (Ojo de Anaya) can also been seen on the distant plains to the northeast.

The trail in this area is defined by a wide (15 to 17m) shallow swale. Scattered mesquite appears along either side of the trail while grasses and snakeweed grow in the road.

Crocker Pond Road LA 80069, Segment No. 7

This segment of the Camino Real extends for a distance of 300 meters down the north slope of a hill and into a dune area. It ends on the north at the railroad tracks. The road is defined by an eroded path ten meters in width. The road on the upper hill slope is defined by an eroded swale which is cut into the Carbonate gravels. On the lower hill slope, the road enters an area of low dunes and is defined as a wide sandy arrroyo.

A DESCRIPTION OF THE CAMINO REAL IN THE BOSQUE DEL APACHE

THE BOSQUE DEL APACHE

Description of The Bosque Del Apache Road

Road survey in the Bosque Del Apache study area was restricted to those alignments visible in the USFWS infrared imagery. A total of 13 road segments were investigated and are described in the following the notes. All of the road segments that were identified in the Bosque Del Apache study area are designated as components of the LA 80057 road complex.

The North Boundary Provenience, Bosque Road Segment No. 1

An old road alignment is visible on the aerial imagery approximately 600 meters south of the north Bosque boundary and 50 to 100 meters east of the present east road. This alignment extends for a distance of 300 meters and joins the present east road on the north and an the south. The alignment is defined in the aerial imagery as a sharp, narrow and sinuous lineation. The road path on the ground is extremely subtle, despite the excellent definition in the aerial imagery. The alignment is located in a dune environment with large mesquite hummocks and blow- outs. The dunes have, in many areas, reclaimed the road. In some locations, there is an absence of large brush in the track while large mesquite and saltbrush appear marginal to the alignment. It is apparently this bare vegetative cover which gives the alignment such excellent definition in the aerial imagery. No artifacts were observed.

The New Hacksaw Well Alignments

Two old road alignments are located in the New Hacksaw Well area, approximately 1.6 kilometers south of the north Bosque Del Apache boundary. Both alignments are obviously older paths for the present east side road. One align-

ment is located north of the well (Bosque Road Segment No. 2) and east of the present road. It is four meters in width and extends for a north - south distance of 500 meters. This road segment is located on the upper bench slope and edge, about 50 meters east of the existing road.

Another alignment (Bosque Road Segment No. 3) is located south of Hacksaw Well and west of the present road. This segment extends for a distance of 200 meters. This road is a four meter wide depression which is characterized mostly by the absence of vegetation. Saltbrush lines path, but is not present in the road. No artifacts were found along either of the New Hacksaw Well road segments.

The Army Well Alignments

Two well-defined parallel and linear alignments cut across a bench point for approximately one kilometer in the area of Army Well (San Antonio SE 7.5 Minute Quadrangle). The present east bank road follows the bench point along the edge of the river valley. The older alignment cuts across the point through an area of low dunes. The alignments are parallel and 75 meters apart. The west alignment is defined by a conspicuous swale which is, in many areas, devoid of vegetation. This path appears to be of recent 20th century vintage. The east path, although very well defined in the aerial imagery, has been re-stabilized and is defined by a subtle vegetative alignment. The east path probably has some antiquity and was apparently last used during the 19th century.

The east parallel road (Bosque Road Segment No. 4) may be a section of the Camino Real Trail. The segment crosses a stabilized dune field and is filled with sand. It is substantially re -vegetated. Where a road depression is discernable, it is eight meters in width. The alignment visible on the infra- red imagery is primarily the result of vegetative differentiation. This differentiation is subtle and is defined by dense growths of Dalea scoparia in the roadbed. Also, the saltbrush and the tall vegetation that is along the roadside is not present in the road. No artifacts were found along this sandy section of road, except for a single hole-in-top can near the north end.

The west parallel road (Bosque Road Segment No. 5) appears to be a 20th century automobile road. This road is defined by a conspicuous swale which is four to five meters wide and 50cm to l.om in depth. The road is defined in many areas by the total absence of vegetation . Artifacts observed along the alignment include; narrow mouth oil cans, beer bottle glass, white glass and beer or soda cans opened with a can opener. This alignment is an automobile road which was apparently used up to the 1940's and 1950's.

The Bosque Crossing Alignments

A group of old roadbed alignments were inspected along and adjacent to the present Bosque west road in the area west of Antelope Well. These alignments appear at the seasonal river crossing to the west bank of the Bosque Del Apache, hence the name Bosque Crossing. Four road provenience alignments were examined in this area, two of which are along the present roadbed.

The Bosque Road Segment No. 6 location is defined by three parallel roadbeds. The eastern alignment is also the present road. There are two older road swales in this area parallel and west of the present road. Each of the roads are defined swales four meters in width and 50cm in depth. Three meter wide berms separate the roadbeds. Large Tornillo-Screw Bean trees, 3 to 6 meters in height, are present in both of the western alignments, suggesting that they were abandoned some time ago. There is a separate linear growth of tamarisk along the swales in the south alignment area. The parallel road alignments in this area are preserved in the compact clay-loam of the valley edge floor. No artifacts were found. These parallel alignments indicate that the old east side road was in the area of the present road. It is probable that these alignments are of least Territorial affinity and that they represents sections of the Camino Real Trail.

The provenience No. 7 alignment is located in the south Bosque Crossing area and extends for a distance of approximately one kilometer. The alignment is defined by a fine clean lineation in the aerial imagery. It crosses the existing roadway and enters and crosses a section of the floodplain-tamarisk bosque. The alignment is defined on the ground surface by the relative absence of sage vegetation and by a linear path of snakeweed. A subtle swale is visible, especially adjacent to the floodplain crossing, which is four meters in width. The alignment crosses a small peninsula of the floodplain for a distance of 200 meters. It is visible in aerial imagery and on the ground in the tamarisk and cottonwood bosque. The only artifact found along the alignment is a yellow crock fragment which was seen near the north end of the alignment.

The provenience No. 8 alignment in the Bosque Crossing area is located within the existing east-side road. The segment is directly south of the eastern junction track to Antelope Well. For approximately 300 meters, the existing road is very entrenched and appears to have considerable antiquity. Here, the road is a trough two meters in depth and four meters in width. The depth of this road indicates that this pathway has been used for a considerable period of time.

The provenience No. 9 Bosque road segment exists parallel to and east of the present road. It extends for a distance of approximately one kilometer. The alignment is well defined in some areas by the absence of sage, while other areas the alignment is re -vegetated. In some areas, a shallow swale four meters in width is visible. No artifacts were found along this segment.

The Low Mountain

This 200 meters long lineation (Bosque Road Segment No. 10) is located parallel and east of the existing roadbed. It represents a braided segment of the existing road which is located in an area of dunes. The road is a well defined, swale four meters in width, which is filled with sand. No artifacts were found. This is an older avenue for the present road. The Camino Real in this area appears to have been located along the avenue of the present road.

The San Pascual Pueblo Alignments

A discontinuous alignment of three old roadbed proveniences, visible in the area of San Pascual Pueblo (LA 487), was surveyed. In this area, an old roadbed exists to the east of and incorporates sections of the existing road. This road also enters the area of San Pascual Pueblo and passes its eastern roomblocks.

The Bosque Road Segment No. 11 alignment is located in an area of stabilized dunes and blowouts north of the San Pascual Pueblo. This alignment, visible in the aerial imagery, extends for a distance of 300 meters. The alignment is disturbed on the north by a canal construction. The roadbed is defined by a shallow four meter wide swale which is bordered in some areas by two narrow roadside berms. In other areas, it is a six meter wide swale which passes between large mesquite hummocks. No artifacts were found.

The Bosque Road Segment No. 12 alignment is a well defined linear swale which is located in the area of San Pascual Pueblo. Here, the road passes on a north-south orientation in the plaza area between roomblocks one and two. The road is defined by a swale, 8 meters in width and 50cm to 1.0m in depth. This alignment is visible for a distance of 300 meters. On the south, it joins the present roadbed. On the north, it is captured by an arroyo extending directly below the pueblo.

The Bosque Road Segment No. 13 is a 350 meter alignment located south of San Pascual Pueblo. Near the north end of the alignment the road is cut by a deep arroyo, which suggests that the road has some antiquity. The road south of alignment is also invaded by a linear arroyo drainage. A late 19th-early 20th century homestead is present on the bench edge west of the alignment. South of the arroyo, the alignment is defined by subtle swale passing between a series of mesquite hummocks. The present road exists

to the east of the alignment and passes around and east of the arroyo head.

A DESCRIPTION OF THE CAMINO REAL IN SANTA FE-LA BAJADA

THE JUANA LOPEZ-SAN FELIPE ROAD

Juana Lopez-San Felipe Alternate of the Camino Real

The Juana Lopez-San Felipe Road is a major alternate of the Camino Real which extended from the area of La Cienega south to San Felipe Pueblo. This avenue was the major bypass of the Los Bocas Canyon and La Bajada escarpment roads. The road left La Cienega and passed south, across the western plains of the Los Cerrillos range, to the edge of the La Bajada escarpment. It then descended the La Bajada escarpment, crossed the Galisteo drainage, and proceeded southwest over the plains to San Felipe.

This alternate avenue of the Camino Real was probably developed sometime during the late Colonial or Mexican period. It may have been opened by Santa Fe traders in order to bypass the rough wagon road through Las Bocas canyon. The road was well established by the time of the American invasion in 1846 and it was the route used by General Kearny and the American Army (1886 testimony of Miguel Naravis and Nazario Gonzales, Mesita de Juana Lopez Land Grant Papers). The road is indicated on the Abert and Peck 1846 map and on the H. Kern 1850 map. It is also marked on the Wheeler 1877 map which illustrates a telegraph line following the avenue. Sections of the road along the La Bajada descent and the Galisteo crossing were improved by the U.S. Corps of Topographical Engineers in 1857 and 1858.

The Juana Lopez-San Felipe road was probably abandoned when tne La Bajada escarpment road, north of Santa Fe Canyon, was improved around 1903 or before. Survey along approximately 12 kilometers of the Juana Lopez road has failed to reveal any signs that it was ever used by automobile traffic.

There is ample evidence of Territorial use along the Juana Lopez-San Felipe road, but there is no indication of Colonial period use. It should be noted, however, that evidence of Colonial utilization along other sections of the Camino Real is often very limited. The earliest use of the Juana Lopez-San Felipe road is as yet undetermined, but it was clearly a well established road by 1846. The road may have been first used for interstate wagon traffic during the Mexican Period by the Santa Fe traders.

The Cerro de la Cruz Study Area of the Juana Lopez Road

The Cerro de la Cruz road is a northern extension of the Juana Lopez study area. This section is the south approach and entrance to the La Cienega valley. Only a short section of this road, in the Cerro de La Cruz area, has been subject to survey. If additional surveys of alternate roads in the La Cienega area are completed they should be appended to this study area. In this study, a one kilometer section of the road on the plain west of Cerro de La Cruz was completed. There are three road segments identified in the study area from State Highway 22 north to its crossing with Interstate 25 at the La Cienega overpass-ex it.

This section of the Camino Real is well-defined in the aerial imagery. Entrenchment and re -vegetation of the road alignments in the 1935 imagery indicates that the road has considerable antiquity.

An eastern branch joins the road at the arroyo crossing northwest of Cerro de la Cruz. This east road probably led to the Galisteo Road and may have continued east to the Pecos Road and the Santa Fe Trail.

Cerro de la Cruz Road LA 80016, Segment No. 1

This section of the road extends for a distance of 500 meters across the grassland plain below and west of Cerro de la Cruz. The road, for a distance of 200 meters north of State Highway 22, consists of a well-defined swale, 10 meters in width and 50 cm in depth. It is vegetatively differentiated by growths of junipers in the road, two to three meters high. There is also a higher density of cholla in the roadbed. In the area 200 to 500 meters north of Highway 22, the road diverges into three parallel swales. These tracks are four to five meters wide and are separated by distinct berms two to three meters in width.

Cerro de la Cruz Road LA 80016, Segment No. 2

This section of Juana Lopez road is located at an arroyo crossing northwest of the Cerro de la Cruz. Three parallel roads cross the plain below Cerro de la Cruz and diverge into an eastern branch road and two alternate arroyo crossings. The branch road probably joins the old Santa Fe to Galisteo Road (identified as the Camino de Galisteo in the 1766 Urrutia Map), or it leads further east to the Pecos Road and the Santa Fe Trail. This eastern branch road has not been subject to survey. However, the entrenched and re-vegetated signature of the road on the SCS 1935 imagery suggests that it has considerable antiquity.

The arroyo crossing northwest of Cerro de la Cruz is deeply entrenched and steep banks now exist at the former road crossings. It is evident that this entrenchment began during the use of the road, as there is a bypass alternate. Erosion of the arroyo has, however, continued east and the alternate bypass is also now cut by deep embankments.

Cerro de La Cruz Road LA 80016, Segment No. 3

This 300 meter section of the Juana Lopez road leads northwest from the Cerro de la Cruz arroyo up, a ridge slope to the present area of the La Cienega I-25 Overpass. The lower section of the road is eroded and consists of a long linear arroyo. The road follows a narrow valley floor. Near the upper ridge crest, it is defined by a shallow swale with two narrow erosional channels. These channels were apparently cut into the tracks of the wagon road.

THE JUANA LOPEZ STUDY AREA

A four kilometer section of the Juana Lopez-San Felipe road was surveyed in the area parallel and east of Interstate Highway 25. The Camino Real, within the Juana Lopez study area, is a well defined avenue.

A total of 10 well defined road segments were identified in the archeological survey. This site appears to have been established in the late 19th century and was occupied only during the last stage of the Juana Lopez road use. The artifact assemblage from the site indicates a post railroad period occupation while the Juana Lopez road assemblage indicates an earlier Territorial Period use. The LA 80001 casa- corral is probably part of the La Bonanza community rather than the famous Pino's Ranch (ie. Pino's Ranch was a common rest stop along this section of the Camino Real).

The Juana Lopez road, as it crosses the plains west of the Cerrillos range and above the La Bajada escarpment, is a well-defined avenue that obviously saw considerable wagon road use. In many areas, it is defined by two, three and even four parallel swales, each 4 to 6 meters wide. As the road approaches drainage areas, it is usually a single wide path 15 to 23 meters in width. There is a road by-pass at the Juana Lopez arroyo crossing to avoid an entrenched section of the drainage. At the Arroyo Yupa crossing there is a cut and fill roadbed construction on the south approach.

Juana Lopez Road LA 80012, Segment No. 1

This section of the Camino Real is located on the north slope of Alamo Creek Arroyo. The segment is parallel to and 200 meters east of

Interstate Highway 25. It extends from State Highway 22, southwest 700 meters, to the Alamo Creek. This road crosses an open grassland plain and is defined, over most of the section, by three parallel tracks. The road depressions vary in width from 4 to 6 meters and are 25 cm to 75 cm in depth. There is no obvious vegetative differentiation in this area. The road crosses the floor of Alamo Creek directly east of the Alamo Creek casa- corral site (LA:80001). The Alamo Creek casa- corral is a late 19th century settlement.

Juana Lopez Road LA 80012, Segment No. 2

This 300 meter section of the Camino Real extends up the south slope of Alamo Creek and across the grassland ridge between Arroyo Alamo and Arroyo Juana Lopez. The road on the ridge top between the arroyos is defined by a wide (12-15m) shallow swale. On the south slope leading into Alamo Arroyo, there are multiple swales over a path 20 meters in width.

Juana Lopez Road LA 80012, Segment No. 3

This section of the Camino Real is the 100 meter crossing of the Juana Lopez Arroyo. Crossing the Juana Lopez required an angle change in the Camino Real to avoid an entrenched section of the arroyo. Here, the road crosses the arroyo immediately east of a deep bedrock trough. The actual arroyo crossing is in a shallow sandy area and did not require roadway development. As the road approaches the Juana Lopez Arroyo it becomes a joined double swale. The main road is 6 meters across and eroded to 1.0 meter in depth. A parallel and contiguous upper road, apparently used after the erosion of the lower road, is 4 meters wide and 50 cm in depth.

Juana Lopez Road LA 80012, Segment No. 4

This segment of the Camino Real is a 350 meter section which extends across the grassland plain between the Juana Lopez and the Yupa Arroyo drainages. The road is defined by a wide (15 to 20 m) and shallow (25 cm) swale. The trail, in this area, is without vegetative differentiation.

Juana Lopez Road LA 80012, Segment No. 5

Provenience No. 5 of the Mesita Juana Lopez road is a 150 meter segment which is located on the north slope of the Yupa Arroyo. In this area, the road makes a sharp western curve to provide a gentle grade to the Yupa Arroyo crossing. The road flanks an east -west trending ridge, cuts across the west end of the ridge slope and enters Yupa Arroyo. The road is defined by a single swale, 6 to 8 meters in width. A few cobble stones appear in the roadbed directly above and north of the arroyo. These cobble stones were apparently placed in the roadbed to provide a firm base for traffic ascending the north arroyo grade.

Juana Lopez Road LA 80012, Segment No. 6

This section of the Camino Real is a 100 meter segment of the road as it approaches and enters the south slope of Yupa Arroyo. As the road descends into Yupa Arroyo, it appears to have a cut bank and an earth filled roadbed. A deep-cut arroyo, directly east of the road, may have been the former eroded roadbed. Examination of the exposed roadbed section in the adjacent arroyo revealed a clay-plated soil structure in the upper strata. This plated soil is the result of compaction caused by the passage of wagons and livestock on the road. Examination of the exposed banks nearby, but outside of the road, failed to reveal this plated soil structure.

Juana Lopez Road LA 80012, Segment No. 7

This section of the Camino Real trail extends for a distance of about 500 meters across a grassland plain south of Yupa Wash and north of an unnamed arroyo. The trail in this provenience crosses south into the Mesita Juana Lopez Land Grant. The Camino Real, south of this boundary, is defined by a wide (15 to 20 m) shallow swale. The trail to the north of the boundary crosses a gentle western slope.

Juana Lopez Road LA 80012, Segment No. 8 (The White Arroyo).

This 300 meter section of the Camino Real is defined by a group of three parallel and substantially eroded roadbeds. These roads lead down the north slope of a grassland plain into an unnamed arroyo. The roadbeds are 4 to 5 meters in width and are entrenched to a depth of 1.5 meters. The white soils exposed in the eroded roadbed are defined as three conspicuous white scars in the aerial imagery. Rock erosion control alignments have been placed across the upper south ends of these roads.

Juana Lopez Road LA 80012, Segment No. 9

This 500 meter section of the Camino Real extends across the open grassland plain of the Mesita Juana Lopez. The trail in this area is represented by four parallel road swales. Occasional juniper trees, two to three meters high, grow in the roads. The trail avenues range from 6 to 6 meters wide and are 50 cm to 1.0m in depth. These four parallel roads form a wide corrugated path, 100 meters in width

Juana Lopez Road LA 80012, Segment No. 10

This 500 meter section of the Camino Real extends across the plain northwest from the powerline crossing. The trail is defined by three parallel avenues which diverge into four avenues as they joins the Provenience No. 9 segment. The roads are 6 to 8 meters wide and 50 cm in depth. A branch road to the northeast diverges from the Camino Real in this area. This branch road joins the southeast alternate from the Yupa Wash Provenience No. 5-6 crossing. This road may represent an alternate Camino Real avenue which avoids the eroded Provenience No. 8 area and which also joins the Bonanza Canyon mining-logging road.

THE GALISTEO NORTH STUDY AREA

Description of the Road in the Galisteo North Study Area

The Galisteo North Road (LA 80011) Segment No. 1, The La Bajada descent.

The Juana Lopez-San Felipe branch of the Camino Real separated from the the Las Bocas road at La Cienega and Los Pinos Ranch. It then crossed over the plains west of the Los Cerrillos range and descended into the Galisteo drainage. The road began at the eastern edge of the La Bajada cliff in the present location of the modern Waldo road. The trail followed the crest of a gravel ridge and then an arroyo to the plains below. Unfortunately, this area has been destroyed by the modern Waldo road and by gravel pit operations. The original roadway alignments can be seen in the SCS 1935 aerial imagery.

It is unfortunate this important descent along the Camino Real has been destroyed by modern development. It was this section of the road which appears to have been improved by the U.S. Military in 1858. Reference to this improvement is made by Colonel J. J. Abert, Commander of the U.S. Corps of Topographical Engineers, in the annual report of 1858 (Senate Executive Document No. 1, 35th Congress 2nd Session, Vol. 3 No. 1, Appendix F). In reference to this improvement, Colonel Abert states;

> "The sum of $12,000 originally appropriated for this long road of some 300 miles (ie. road from Santa Fe to Doña Ana), was entirely too small. The small balance that came into the hands of the engineer in charge has been applied to that section of the road between Santa Fe and Albuquerque, and a party has been at work upon the descent into the valley of the Galisteo"

> "a party has been set at work upon the somewhat difficult descent into the valley of the Galisteo, as being the point where most good can be done with the means available."

Inspection of the gravel benchlands in the area of La Bajada descent failed to reveal any evidence of the original Camino Real road bed. It is most probable that the precise route is now followed by the Waldo road which is a wide and graded avenue.

The Galisteo North Road (LA 80011), Segment No. 2

This 500 meter long section of the Camino Real trail is defined by a subtle swale four to six meters wide. The trail, in this area, passes along the west side of a small wash about 150 meters west of a stock water well. The road then enters a wash to the north and is obscured by alluvium.

The Galisteo North Road (LA 80011), Segment No. 3

This one kilometer section of the Camino Real extends across an open grassland plain on the north slope of the Galisteo valley. This portion of the road extends one kilometer northwest from the present railroad grade. The main road in this area is substantially eroded and forms a long linear arroyo four meters wide and up to two meters in depth. There is a parallel avenue to the west of this road which appears to have been used following the initial erosion of the main avenue. However, this road was also abandoned and an alternate route (road segments Nos. 5 thru 9) down the adjacent valley to the east was developed.

Entrenchment of the main roadbed in the Segment No. 3 area is extensive on the lower south end near the railroad grade. Erosion in this area has cut two meters in depth to the bedrock. Erosion of the roadbed decreases to one meter in depth at 200 to 300 meters north of the railroad bed. Juniper trees, two to three meters in elevation, grow in the roadbed along this section. Near the north end of this road segment, erosion control dams have been constructed to prevent further entrenchment. Above these dams, the road swale reduces to 50 cm in depth and six meters in width.

The Galisteo North Road (LA 80011), Segment No. 4

This two kilometer section of the Camino Real is the north approach to Galisteo Wash. It has been substantially destroyed by erosion. The roadbed, as it crosses the present railroad, is a deeply entrenched arroyo. From here, the road proceeded south down a lateral valley to the Rio Galisteo. The floor of this valley has been substantially eroded and contains a deeply entrenched and dendritic arroyo system. No evidence of the Camino Real remains.

The Galisteo North Road (LA 80011), Segments Nos. 5 thru 8, The East Alternate Roadway

Another alternate eastern descent in the lower northern plain of the Rio Galisteo valley was apparently used after the erosion of the original west roadway. This roadway branches off the main avenue below the La Bajada escarpment and proceeds south through a narrow gap in a dike ridge. It then follows the open plain joining the Rio Galisteo in about the same area as the west branch. This roadway was an incised and abandoned avenue in the 1935 SCS aerial imagery, but is now partially used by a modern two track road.

The Galisteo North Road (LA 80011), Segment No. 5

The roadway north of the dike is partly followed by a new two track. The old road is defined as a shallow swale four to six meters in width.

The Galisteo North Road (LA 80011), Segment No. 6

There is a narrow pass in an dike ridge through which this road passes. A section of the ridge slope appears to have been leveled and a few stones moved to form a curb in the pass area. This narrow pass is the only location along the dike formation where a road may pass. Even

so, this passage required the development of a short section of cut and fill construction. Large basalt blocks (50 cm to 1.5 m in size) were removed from a south slope of the pass and were used as a fill and a border on the lower side. This provided a level roadbed around a twenty meter section of the pass slope. This road section was first seen in November of 1989. It was revisited in September of 1990 to obtain photographs and was found to have been bulldozed as part of a ranch road improvement.

The Galisteo North Road (LA 80011), Segment No. 7

This 500 meter section of the eastern alternate Galisteo north road extends from the dike pass, south to the present railroad grade. Here, the road crosses an open grassland slope toward the Galisteo. The road, in this area, is defined by two contiguous tracks which consists of a corrugated swale 10 meters in width. The modern two track road is three meters wide and follows along the eastern track of the old road.

The Galisteo North Road (LA 80011), Segment No. 8

This section of the Galisteo eastern alternate road extends for a distance of 600 meters from the present railroad grade, south to the disturbed area above Galisteo Dam. A modern two-track road follows along the older roadbed in this area. This two track is well defined in the 1973 aerial imagery, but it has been abandoned recently. Road segment No. 8 is defined by a 10 meter wide shallow swale which crosses a gravel paved grassland slope.

A number of shallow depressions, five to six meters in diameter, are located along the side of the road, but these may post-date the road use. These depressions appear to have been excavated but their function, if any, is unknown.

Based on the projected alignment of the Segment No. 8 roadway, it appears to have joined the earlier western branch of the Camino in approxiately the same area north of Galisteo Wash. The Camino Real appears to have crossed the Galisteo Wash in the area of the present dam site. Sections of the trail are preserved on the south bank below and west of the dam and are described in the Los Alamito study area.

THE GALISTEO REGION LOS ALAMITOS STUDY AREA

The Los Alamitos study area includes a two kilometer section of the Camino Real Trail and associated sites which appear on a general east-west course along the south embankment of the Rio Galisteo. The western limit of the study area is the boundary of the Santo Domingo Grant and the Mesita De Juana Lopez Grant. The eastern limit of the study area is Galisteo Dam. This section of the Camino Real is designated as LA 80010.

Los Alamitos Road (LA 80010)

Los Alamitos Road Segment No. 1

This 400 meter section of the Camino Real trail follows a south valley, toward the Galisteo Wash, on a northeast-southwest orientation. The trail, which is well defined in the aerial imagery, crosses an open grassland flat and passes east of a prominent sandstone knoll. Inspection of this butte failed to reveal graffiti or any other trail associated features. The south end of this trail segment ends at a steep arroyo bank. The trail is defined by a shallow swale 8 to 10 meters wide. On the open grassland east of the sandstone knoll, there are two parallel swales each 4 to 6 meters wide and separated by 10 meters. These parallel avenues are also visible in the aerial imagery. The north end of this road segment, near the point where the trail turns to the east, is captured by an arroyo and is deeply eroded.

Los Alamitos Road Segment No. 2

This 200 meter long segment of the Camino Real has an east- west orientation along the

south bank of the Rio Galisteo. The road crosses an alluviated grassland plain of the south floor of the Galisteo valley. The road is defined by a wide (10-12 m) and shallow swale.

Los Alamitos Road Segment No. 3

This 100 meter segment of the Camino Real Trail is near the confluence of a south lateral arroyo and the bank of Galisteo wash. This road segment (illustrated as part of bridge site (LA 80003) was the old crossing of the south lateral arroyo. Here, the roadbed cut across an arroyo draining north into the Rio Galisteo. This arroyo crossing was made down an earth-cut rampway. The road is 10 meters in width. The west approach to the arroyo bank has been captured by a side arroyo and is deeply entrenched. Entrenchment of the arroyo destroyed the roadbed and caused its abandonment.There is also evidence of an alternate road- ramp down the south bank of the Galisteo Wash, adjacent to the arroyo crossing.

Los Alamitos Road Segment No. 4

This alternate 200 meter long section of the Camino Real was developed in conjunction with the south lateral arroyo bridge construction project. This bridge, designated as LA 80003, was apparently built in 1859 by the U.S. Army Topographic engineers as part of the Galisteo Wash Crossing improvement project. A road swale, 10 meters in width, approaches the bridge construction which spans a narrow 15 meter wide section of the arroyo. The west approach to the bridge passes between a low sandstone knoll and the gravel bench formation and onto the west foundation of the bridge. Only the south foundation or platform of the bridge structure remains intact. The remainder of the bridge is eroded. Large log beams, about 10 to 15 meters in length, apparently formed the bridge bed.

Los Alamitos Road Segment No. 5

This 200 meter segment of the Camino Real trail is located in the area of the Los Alamitos encampment site, LA 80002. This north-south section of the Camino Real was a former crossing of the Galisteo Wash and was the continuation of Road Segment No. 3. The trail proceeded to the south embankment of the Galisteo Wash where it entered the arroyo floor. Today this entrance to the Galisteo Wash is a steep bank, three meters high. The road, as it approaches the arroyo bank, is 15 to 17 meters wide and is defined by a shallow swale which fosters growths of cholla and grass. A forge area is present adjacent to the road near the arroyo bank. This south entrance- crossing of the Galisteo Wash was probably destroyed by erosion sometime in the middle 19th century, as it appears to have been replaced by the eastern alternate roadway (Road Segments No. 6 and No. 7).

Los Alamitos Road Segments Nos. 6 and 7

This 250 meter section of the Camino Real has an east -west orientation across the south floor of the Galisteo valley. Here, the road (segment No. 6) is defined by a conspicuous swale 10 meters wide and 50 cm in maximum depth. There is a narrow earth berm along a portion of the north roadside. Exposed soils and vigorous growths of grass and saltbrush also serve to define the road. This section of the Camino Real was apparently used after the abandonment of the Segment No. 5 crossing.

On the eastern edge of the Los Alamitos site, the Camino Real descends into a lateral south arroyo. This section of the road, designated as Segment No. 7, is six meters in width and passes between a rock outcrop and a steep bench slope. Passage down this slope required some rampway construction. Cobble stones and earth were removed from the roadbed and thrown up as a curbing on the north side. A few large sandstone boulders were also moved from the roadbed. A two meter high juniper tree has is growing in the roadbed area.

Below and east of the Segment No. 7 rampway, the Camino Real crossed a low arroyo and ascended onto the gravel benchlands to the east. Here, the road entered the area of Galisteo Dam where it has been destroyed by construction.

VEGA DE LOS TANOS STUDY AREA

Vega de Los Tanos LA 80015, Road Segment No. 1

Road Segment No. 1 is a one kilometer section of the trail that crosses an open grassland plain directly east of I -25 and extends to a powerline. Two parallel roads were observed in this area. Both tracks are 6 meters wide. The south parallel track continues to be used as a two track automobile road. The north parallel road has been long abandoned and is stabilized and re -vegetated.

Vega de Los Tanos LA 80015, Road Segments Nos. 2-5

A reconnaissance of a 1.4 kilometer section of the Camino Real directly east of State Highway 22 was completed. The trail corridor in this area is well defined and consists of two parallel tracks over the entire section. The road sections at arroyo crossings are extensively eroded. Erosion of the west track is the most substantial, suggesting that this avenue has the most antiquity. The use, however, of two parallel roads on the open plain between the arroyos indicates that the two lanes were in simultaneous use. The road segments observed in this area appear to have been long abandoned. The roads are deeply eroded at arroyo crossings and have two to four meter high juniper trees growing in the tracks. There is no evidence to suggest that this road section was ever used by automobiles.

Vega de Los Tanos LA 80015, Road Segment No. 2

This road segment stretches 300 meters east from State Highway 22 to an arroyo crossing. A single 12 meter wide swale with low 50 cm banks is visible at the highway crossing. These diverge into two eroded parallel tracks, 4 to 6 meters wide, as the road proceeds down the slope of an arroyo. Juniper trees, two to four meters high grow, in the road. Erosion of both parallel tracks is considerable as they approach the deeply cut arroyo. There is no evidence of a ramp-way construction at the arroyo crossing. The major entrenchment of this arroyo appears to postdate the road use.

Vega de Los Tanos LA 80015, Road Segment No. 3

This 150 meter section of the road extends down the north slope of an arroyo crossing. As the trail approaches the arroyo, it is defined by two closely parallel tracks. These diverge into three parallel tracks on the lower slope. The western track is eroded and entrenched and was probably abandoned during the use of the road. Both of the eastern tracks are defined swales and all are entrenched at the arroyo crossing. There is no evidence of a ramp-way on the arroyo floor.

Vega de Los Tanos LA 80015, Road Segment No. 4

This 700 meter segment of the road goes across a grassland plain between two south to north drainage areas. The area is open and level. There are two well-defined parallel swales in this area. Both are shallow paths, 8 meters in width, and are spaced ten meters apart. The roads are vegetatively differentiated by growths of snakeweed. The presence of two widely spaced parallel roads in this open plain suggest that this section of the road had two lanes, perhaps for north and south traffic, that were in simultaneous use.

Vega de Los Tanos LA 80015, Road Segment No. 5

This 300 meter section of double track road extends along the upper south slope of an arroyo drainage. Here, the west road track is captured and entrenched by an arroyo. The east track remains stable and is defined by a shallow swale eight meters in width. A line of juniper trees, 3 to 4 meters high, grow in the eroded west track.

THE LA BAJADA-LAS BOCAS ROADS THE MAJADA MESA STUDY AREA

There are two alternate avenues of the Camino Real Trail across the Majada Mesa. These roads extend from the area of La Bajada Village and proceed southwest across the grassland plains toward Santo Domingo Pueblo. The La Majada North alternate road leads to the Pre-Revolt Period Pueblo of La Bajada (LA:7) and appears to be the earlier Colonial Period roadway. The South alternate goes directly west from the mouth of Santa Fe canyon to Santo Domingo. It is the probable Post-Revolt avenue. Both roads were, however, used into the Territorial Period.

The Majada North and South alternate roads converge at the north escarpment edge of Galisteo Wash (approximate locus NE 1/4 of Section 16, TI5N, R6E), and proceed down the escarpment slope southwest to Santo Domingo Pueblo. Both the North and South Majada roads were apparently abandoned when a new graded automobile highway was built (ca. 1903 -1909) from La Bajada to the railroad village of Wallace (Post Office established 1882, Pearce 1965:177).

The La Majada north and south alternate roads are among the best preserved sections of the Camino Real in New Mexico. Both avenues are defined by wide and often deep swales which cross the grassland plains and have prominent definition in the aerial imagery. Neither of the roads appear to have been in use since at least the 1930's.

The La Majada North road, which links the La Bajada Pueblo (LA:7) to the Camino Real, appears to have been an early Colonial avenue. However, it was also was used in the Territorial Period. The La Majada South road, which leads directly from Santa Fe Canyon to Santo Domingo, appears to have been used primarily in the Territorial Period. A photograph taken in 1915 from the summit of La Bajada hill shows that the road in use was a graded highway between the La Majada North and South alternates (N.C. Nelson 1915 The excavation of La Bajada Pueblo, American Museum of Natural History, Field Notes on File Laboratory of Anthropology.) This photograph also shows some continued two- track use of the North aternate road. The South alternate is not visible in the photograph.

The Las Majada North Road (LA 80007)

The La Majada North road is an alternate avenue of the Camino Real which extends southwest from the area of La Bajada Pueblo (LA:7), southwest 6.1 kilometers, to its junction with the La Majada South road on the Galisteo Wash escarpment. The La Majada North road is one of the best defined sections of the Camino Real Trail in New Mexico. The formation and preservation of the road in this area was enhanced by the conditions of this open grassland plain. Vegetative differentiation of the trail, in this area, is limited, but topographic relief is substantial.

Wherever the road crosses ridge slopes it is deeply cut. In the Road Segment No. 2 area, for example, the trail is 12 meters in width and up to two meters in depth. Over most of the La Majada North road, there are two parallel road beds, 5 to 8 meters in width and 25 cm to 1.0 m in depth. These roads may represent north and south lanes for two -way traffic. A narrow pedestrian or horse trail, 2.0m wide and 25 cm to 50 cm in depth, is located along a 800 meter section of the trail in the Provenience Nos. 2 to 4 areas. This is one of few locations where a defined stock trail runs along side of the wagon road. Recognition of this stock trail in the La Majada area is probably due to excellent definition of the trail on the Majada Mesa grassland .

La Majada North Road (LA 80007) Segment No. 1

This 100 meter section of the Camino Real extends from the Pueblo of La Bajada (LA:7) toward the Santa Fe river valley. This section of the road proceeds in a northeast direction from the east block of La Bajada Pueblo, down a cobble-strewn bench slope to the Santa Fe valley floodplain. The trail in this area has been partially destroyed by the construction of a modern,

but now abandoned, bladed roadway. The old road runs diagonal to the bench and is preserved on the lower bench slope. It is defined by a disturbed path, 8 to 9 meters wide, in which are two narrow erosional channels. The road is cut slightly into the bench slope on the upper south side and has a narrow cobble berm on the lower north side.

La Majada North Road LA 80007, Segment No. 2

The Camino Real, as it proceeds for a distance of 200 meters west-southwest of La Bajada Pueblo, is defined by a very prominent cut in a hill slope above the pueblo. This road cut is emphasized in the aerial imagery by the white caliche substrata into which the roadbed intrudes. This extensive cut is 12 meters in width and up to two meters in depth. A narrow swale, 2 meters wide and 50cm in depth, parallels the road cut on the north. This narrow track is probably a path for pedestrian and mounted riders. This path is visible for approximately one kilometer along the side of the La Majada North roadway.

La Majada North Road LA 80007, Segment No. 3

This section of the Camino Real is on an open plain, It extends approximately 300 to 500 meters west-southwest of La Bajada Pueblo. In this section, the road is defined by two parallel swales. The eastern swale is six meters wide and 50 cm in depth. The adjacent west swale is a shallow two meter wide path. It is probable that this narrow path was used by horsemen and pedestrians, while the wider and deeper path was used by wagons.

La Majada North Road LA 80007, Segment No. 4

This section of the Camino Real extends northeast from the area of the La Tetilla Peak Highway for a distance of approximately 400 meters. Over much of this section, the Camino Real is defined by three parallel tracks. The south track is a wide shallow swale, 6 to 8 meters in width and 25 to 50 cm in depth. Another narrow and deep track to the north is 4 to 5 meters wide and 50 cm to 1.0 m in depth. Vet another narrow path, 2 meters wide and 25 cm in depth, parallels the road on the north. This narrow path-like feature may be a pedestrian or horse trail adjacent to the wagon roads.

La Majada North Road LA 80007, Segment No. 5

The Provenience No. 5 section of the La Majada North road extends for a distance of 300 meters southwest of the La Tetilla Highway. The Camino, in this section, is defined by a double swale. The north swale is 8 meters wide and up to 1.0m in depth. The parallel south swale is 5 meters in width and 25 cm. to 50 cm in depth.

La Majada North Road LA 80007, Segment No. 6

This 600 meter section of the Camino Real extends across the open grassland plain of Mesa Majada, approximately 1.25 kilometers northeast of State Highway 22. The trail, in this area, consists of a shallow swale, 15 meters in width. Narrow earth berms are present on the road edges. In the summer of 1990, a linear path of green grass defined the road swale.

La Majada North Road LA 80007, Segment No. 7

This 800 meter section of the Camino Real stretches across the open grassland plain of Mesa Majada. It is approximately 400 meters northeast of State Highway 22. The road is defined by a wide shallow swale, approximately 20 meters in width and 25 cm in depth. In some areas, two parallel swales are visible, but these blend into a wider zone of disturbed soils.

La Majada North Road LA 80007, Segment No. 8

This section of the Camino Real extends for a distance of 400 meters northeast of the State Highway 22. It crosses the open grassland plain of La Majada and is defined by two conspicuous parallel swales. The road swales are 5 and 6 meters wide and are separated by a berm which is five meters in width. The only vegetative differentiation noted in this area is the low density of snakeweed in the road. There is a slight angle change in the road between the Provenience No. 7 and 8 segments.

The La Majada South Road

The La Majada South road alternate extends west from the mouth of Santa Fe Canyon across the plains of La Majada Mesa towards Santo Domingo Pueblo. This road is the direct route from Santa Fe Canyon to Santo Domingo Pueblo. It joins the La Majada North alternate on the edge of the Galisteo Wash escarpment. The La Majada South road was clearly used by traffic which passed up the floor of Santa Fe Canyon.

The South alternate road is defined by a prominent scar on the grassland plains of La Majada Mesa. The road is a well defined and re - vegetated swale. Both single (6 to 8 meter wide) and double road tracks are present in the study area. There are very prominent cuts in two areas (Segments No. 1 and 3) where the road crosses low sandy ridges. In these areas, the road-cut is up to 20 meters wide and two to three meters in depth. These cuts were formed primarily by aeolian action which removed the disturbed sandy sediments from the road bed.

La Majada South Road LA 80008, Segment No. 1

The easternmost section of the La Majada South road, for a distance of 300 meters as it approached the mouth of Cañada De Santa Fe, is designated as road provenience No. 1. This section of the road is located on the south benchland of the Santa Fe drainage and is dissected by a series of arroyos. Three arroyos cross the La Majada South road. Two of these have cut into the road following its abandonment. One arroyo crossing, however, has a bypass avenue around and 20 meters east of the original road. This indicates that entrenchment coincided to the road use. The arroyos which cross the road have captured the roadbed runoff. This has resulted in a partial entrenchment of the road 6 meters in width and up to 2.0 meters in depth.

One section of the road near the entrance to Santa Fe Canyon is defined by an impressive 20 meter wide road-cut two to three meters in depth. This cut was made in a sandy hill slope and was apparently entrenched by aeolian action during the roadway use.

La Majada South Road LA 80008, Segment No. 2

This segment of the La Majada South road extends for a distance of approximately one kilometer across the open grassland plain of La Majada Mesa. The road in this area consists of single swale, 8 meters in width and from 50cm to 75cm in depth. The road is vegetatively differentiated by vigorous growths of grasses, snakeweed and rabbit brush; all of which have significantly lesser densities outside the roadway. Occasional small junipers also appear in the road swale which are not present on the surrounding plain.

La Majada South Road LA 80008, Segment No. 3

This section of the La Majada South road begins at the road crossing of the Fiber Optics Communication line and extends 200 meters to the east. The road crosses over a low sandy hill on an open grassland plain. The road has cut an impressive two meter deep and 20 meter wide path through the hill. This segment is one of the most pronounced road cuts known along the Camino Real. This road cut was apparently formed by aeolian action along the road during and following its use. The road, in this area, is a flat based swale which fosters growths of rabbit brush.

La Majada South Road LA 80009, Segment No. 4

This section of the La Majada South road extends west from the crossing of the Fiber Optics line for a distance of approximately 500 meters. Here, the road is defined by two parallel swales crossing the open grassland plain. Swales vary from five to twelve meters in width and are 50 cm in depth. On the west end of this segment, the road crosses a shallow alluviatec bottomland and blends into a 20 meter wide path.

La MaJada South Road LA 80009, Segment No . 5

This 200 meter trail segment consists of a single well-defined road swale. Here, the road crosses a low sandy rise. The road is 9 to 10 meters wide and is cut deeply (1.0m) into the sandy rise. The definition is largely topographic, although there is more grass and rabbit brush in the swale than in the surrounding plain.

La Majada South Road LA 80008, Segment No. 6

This road segment continues across the open grassland plain of La Majada Mesa for a distance of 600 meters. The road is defined by a single narrow swale that is 6 meters in width. The depth varies from shallow to 50 cm. A line of rabbit brush is present along the edges of the road and in other areas, the road is defined by a linear path of grass.

La Majada South Road Segment No. 7

This section of the La Madaja South Road extends for a distance of 300 meters directly east of the State Highway 22. The road is again represented by two parallel paths. The road swales vary from 4 to 8 meters in width and 25 cm to 75 cm in depth.

The Las Bocas Road

The Las Bocas study area includes that section of the Camino Real which passes through Cañada De Santa Fe (formerly called Cañon de las Bocas), from the mouth of the canyon near La Bajada village, to the village of La Cienega. During the early Colonial period, the Las Bocas road and the Galisteo road (via San Marcos Pueblo) were the principal avenues from Rio Abajo north to Santa Fe. Most of the wagon traffic from Santo Domingo to Santa Fe, however, used the Las Bocas Canyon road. There are numerous Colonial period references which indicate use of the Las Bocas road (De Vargas in 1692, Rivera in 1726, Tamaron in 1760, Lafora in 1776 and Dominguez in 1776). Use of the Las Bocas road by wagon traffic was, however, considerably reduced with the opening of the Juana Lopez road in the Mexican Period. The construction of a wagon down the La Bajada escarpment around 1860 also diverted additional traffic from the Las Bocas road. Difficulties in the canyon floor road maintenance, no doubt, encouraged the development of the alternate wagon roads. Despite the development of alternate wagon roads, the Las Bocas canyon road continued to have some traffic in the Territorial Period as indicated in the accounts of Simpson (1849), Whipple (1853), Mölhausen (1853) Davis (1854) and others.

This rather picturesque section of the Camino Real followed the Santa Fe canyon floor and wound its way across the stream in many locations. Whenever possible, the road crossed open benches which were elevated above the stream bed. Frequent fords across the rocky and boulder- strewn stream bed were, however, required which made wagon travel along this section of the Camino Real difficult. Floods often washed out the river crossings and cut or buried the road at side canyons, which required frequent road repair. The presence of large boulders in the canyon floor was a principal obstacle. Indeed, the poor condition of the road after 12 years of disuse was lamented by Diego De Vargas in 1692 (Espinosa 1940:77-79) .

The Las Bocas road has been abandoned for about one hundred years. Consequently, the

preservation of the road is poor. Most of the road in the Las Bocas canyon floor and lower bench slopes has been destroyed. There are, however, a number of road segments which have been located on level bench flats above the flood zone. These road segments were first recognized in an inspection of the aerial imagery (SCS 1935 Plate No.17972).

Description Of The Las Bocas Road

Las Bocas Road LA 80013, Segment No. 1

The Provenience No. 1 segment of the Camino Real-Las Bocas road is located on a north bench, approximately one kilometer from the lower western mouth of Santa Fe Canyon. Provenience No. 1 is a developed roadbed which ascends a cobble strewn bench slope. Access up the steep, but low, western bench required the construction of a path in the rocky slope. A road corridor which was 20 meters long, three meters wide and 1.5 meters in depth was cleared. Many of the cobbles which form the wall-like berms lateral to the road are large (30cm to 1.0 m) basalt blocks. This road development is one of the more impressive construction works along the Las Bocas road. The age of this constructed feature cannot be ascertained. The road, however, appears to have been abandoned for some time. The modern bladed road to La Bajada mine has cut the lower section of the old road, and has pushed a number of large rocks into the old roadbed. No artifacts were found in direct proximity to this road provenience.

Las Bocas Road LA 80013, Segment No. 2

This 300 meter road segment stretches across a bench flat on the north side Santa Fe Canyon. This road segment is defined by two parallel swales each, 4 to 5 meters in width and from 85 cm to 50 cm in depth. On the eastern end of the bench, the road parallels the modern dirt track to the La Bajada mine. There is no vegetative differentiation along this section of the road.

Las Bocas Road LA 80013, Segment No. 3

The Provenience No. 3 segment of the Las Bocas road descends a bench slope and crosses an arroyo to a level open terrace. This road is on the north canyon floor, approximately 350 meters west of the La Bajada mine. The modern road and ramp turn-out are constructed along the base of the steep talus slope. The old Las Bocas road descends a nearby bench slope without development. The road scar in this area is four meters wide and has two narrow ruts. This is one of the few Camino Real road segments where two track wheel ruts are visible.

The old Las Bocas road descends the bench, crosses a broad and shallow arroyo and continues east onto a open grassland flat. A platform like structure of basalt blocks is present in the roadbed on the eastern edge of the arroyo. This construction appears to be either a ramp or low bridge footing for the arroyo crossing. As the road crosses of open flat east of the arroyo it is first entrenched and then defined as a shallow swale that is 6 meters in width.

Las Bocas Road LA 80013, Segment No. 4

This 150 meter road segment is located on a lower bench on the north side of Santa Fe Canyon. It is directly west of a narrows in the canyon and approximately 200 meters east of the La Bajada mine. The area surrounding the La Bajada mine has been substantially disturbed by the dumping of tailings in the canyon floor. These tailings have buried the road over a section of approximately 600 meters. The road section which remains is defined by a six meter wide swale that is 50 cm in depth. The upper and eastern end of this section descends into the canyon floor stream bed and is eroded. This is one of the many places in Santa Fe Canyon where the Las Bocas road follows along the canyon floor and crosses the stream bed.

Las Bocas Road LA 80013, Segment No. 5

This 400 meter section of the Las Bocas road crosses an open grassland flat in the area below

Tsinat Ruins. The trail is defined by a shallow swale, 8 to 12 meters in width. In one area, two, nearly contiguous, parallel swales are visible, They are both four meters in width, but one is of lesser depth. The road in this area is without vegetative differentiation.

Las Bocas Road LA 80013, Segment No. 6

The Las Bocas road crossed to the south side of the canyon at the eastern end of Road Segment No. 5. This is near the confluence of Tsinat Canyon arroyo. The road then followed the stream bed and ascended onto a bench flat on the south side of the canyon. Provenience No. 6 is a road swale which crosses one of the south bench flats. The road is 6 meters in width and 50 cm to 1.0 m in depth.

Las Bocas Road LA 80013, Segment No. 7

This road segment is located on a north bench in Santa Fe Canyon, approximately one kilometer west of the Santa Fe Creek-Cienega Creek confluence. This road segment is defined by two parallel lines of boulders which were cleared across a bench point. A single stacked rock masonry room is also present on the bench point. This road segment was not found until the mesa south of the confluence was climbed and the road seen from above.

LA BAJADA MESA STUDY AREA

The La Bajada Mesa road is an alternate section of the Camino Real which led directly from Santa Fe across the open elevated plain of La Bajada mesa to the steep escarpment at La Bajada village. This road was the most direct route between Santa Fe and Santo Domingo. The road, however, traversed the steep and formidable slope of La Bajada. The La Bajada Mesa avenue is an old road. It was in use as early as 1776 (Adams and Chavez 1975;127), and was followed by Zebulon Pike in 1807. It was probably first developed as a stock trail because the steep escarpment, basalt ledges, benches and boulders prohibited wagon traffic. We do not know when the first wagon road construction was made on the escarpment. However, the route was open to wagon traffic during the early 1860's, following road construction by the U.S. Army.

The old wagon road descended the mesa edge in the precise location of the succeeding automobile highway. The route of the wagon road on the mesa above the escarpment, however, crossed the plains to the east of subsequent highway. The old road across La Bajada Mesa is well defined as an abandoned and re -vegetated avenue in the 1935 SCS aerial photography. A reconnaissance of the escarpment below the mesa top revealed that large sections of the old wagon road remain intact. Only a few sections were destroyed by the later highway construction. The wagon road descent of La Bajada Mesa was not surveyed for the lack of time, but sections of this developed road were seen in a brief reconnaissance.

The wagon road which descends the La Bajada Mesa is defined by numerous areas of construction. Construction along the road includes numerous areas of cleared boulders, a number of stone ramps and one very extensive cut through a basaltic ridge called "the notch". The escarpment wagon road constructions are the most extensive road works that are known along the Camino Real Trail. Most are probably U.S. Army 1860's construction, but some earlier Mexican and Colonial Period development may also be present. Investigation of the La Bajada escarpment road should have top priority if survey of the Camino Real is continued.

Description of La Bajada Mesa Road

La Bajada Mesa Road LA 80014, Segment No. 1

This 200 meter section of the La Bajada Mesa road is located on the escarpment edge of La Bajada Mesa. The old wagon road descends the La Bajada escarpment in the precise location of

the succeeding south branch automobile highway. This location is a broken area in the upper cliff of the escarpment which allowed for the construction of the road onto lower benches of the mesa slopes. Here the grade is one of the steepest and most formidable ones along the Camino Real. The construction of a cut rampway for the automobile road on the escarpment rim cliff destroyed the former wagon road. Sections of the wagon road descending the mesa do, however, appear to be intact and the automobile road and the former wagon road seem to have followed divergent routes.

The provenience No. 1 section of the La Bajada Mesa road extends from the escarpment rim northeast 200 meters to its crossing of the old automobile highway. The road, in this area, is defined by a cleared path (five meters in width) across the rocky surface of the mesa edge. Large basalt boulders, 50 cm to 1.0 m in size, have been cleared from the roadbed and stacked alongside the road. This section of the road is located on the mesa edge west of the old auto road.

La Bajada Mesa Road LA 80014, Segment No. 2

This section of the La Bajada Mesa road extends for a distance of 600 meters across an open grassland plain of the mesa The road in this area is defined by two wide and parallel tracks. The roads are seven and ten meters in width and eight meters apart. They are defined by shallow (25 cm) swales and are vegetatively similar to the surrounding landscape.

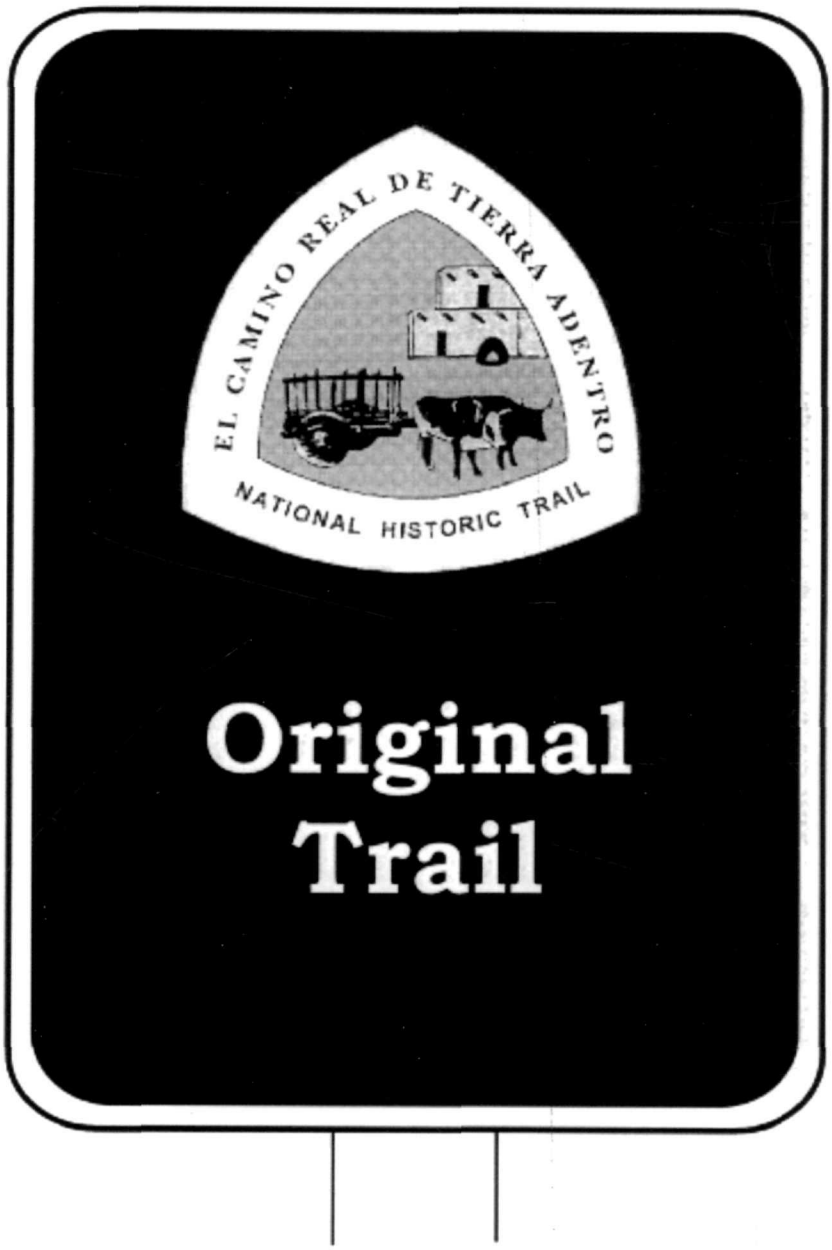
La Bajada Mesa Road LA 80014, Segment No. 3

The La Bajada Mesa road, along this 100 meter section, crosses a low ridge on the open mesa top. This ridge is an exposure of basalt and gravels approximately three meters high. There is an eroded road cut on the ridge edge which is a well-defined white line in the aerial imagery (SCA plate 17972). This eroded section is 20 meters in length and consists of three parallel roads. These roads are four to five meters in width. The west avenue has an eroded base and was probably abandoned while the road was in use.

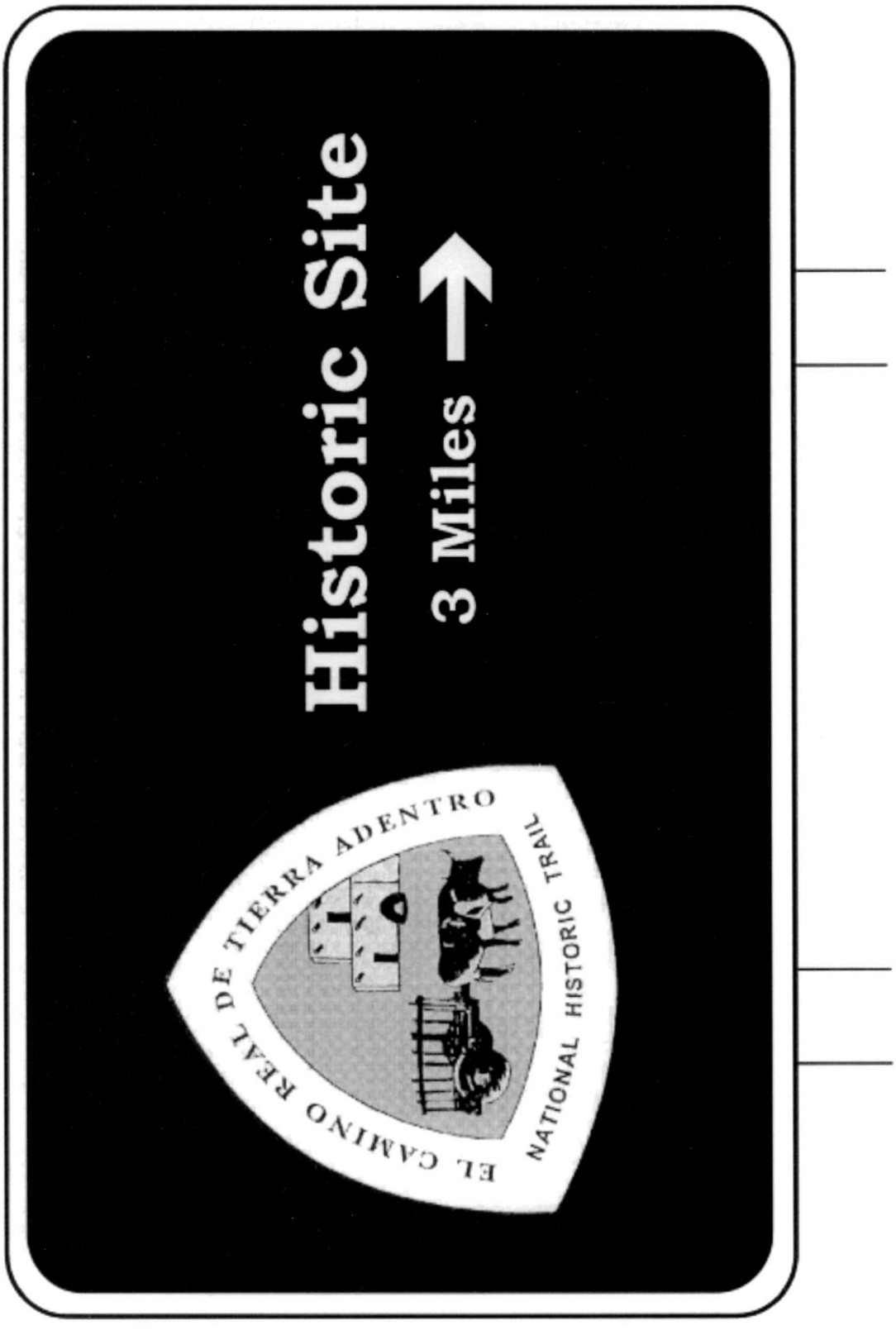
La Bajada Mesa Road LA 80014, Segment No. 4

This 200 meter section of the La Bajada Mesa road is defined by a single wide swale 15 meters in width and 50 cm in depth. This road diverges into three parallel roads at the north end of the segment. These parallel roads are clearly visible in the aerial imagery.

Appendix G:
TRAIL MARKINGS AND SIGNS



Recommended auto tour/original route sign incorporating uniform marker.



Recommended site directional sign on auto tour route.

Appendix H:
VISUAL RESOURCE MANAGEMENT CLASSES AND OBJECTIVES FOR BUREAU OF LAND MANAGEMENT–ADMINISTERED LANDS

The overall objective of visual resource management is to manage public lands in a manner that will protect the quality of the visual (scenic) values in accordance with Section 102(a)(8) of the Federal Land Policy and Management Act of 1976 (FLPMA). The Bureau of Land Management (BLM) Visual Resource Management (VRM) system is a methodical approach to inventorying and managing the scenic resources of the public lands.

The visual resource inventory process (BLM Manual Section H-8410-1) provides the agency with a means of determining visual values. The inventory consists of a scenic quality evaluation, a sensitivity level analysis, and a delineation of distance zones. Based on these factors, as well as legislative or administrative mandates, one of four VRM Classes is assigned to BLM-administered lands.

Class I, the most highly valued visually, is assigned to those areas where decisions have been made to maintain a natural landscape. This includes areas such as a national wilderness, the wild component of a Wild and Scenic River (WSR), Areas of Critical Environmental Concern (ACEC) designated for scenic values, and other congressionally and administratively designated areas where decisions have been made to preserve a natural landscape. Classes II, III, and IV are assigned to areas based on a combination of scenic quality, sensitivity level, and distance.

The specific objective(s) of each VRM Class provide(s) the standards for planning, designing and evaluating actions. The Contrast Rating System (BLM Manual Section 8431) provides a methodical means to evaluate activities and determine whether they conform with the approved VRM objectives. The degree of contrast is measured by assessing how much a proposed activity stands out when viewed from key observation points and compared with the predominant natural landscape elements of form, line, color and texture.

The VRM Classes and their corresponding management objectives are as follows:

Class I - To preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

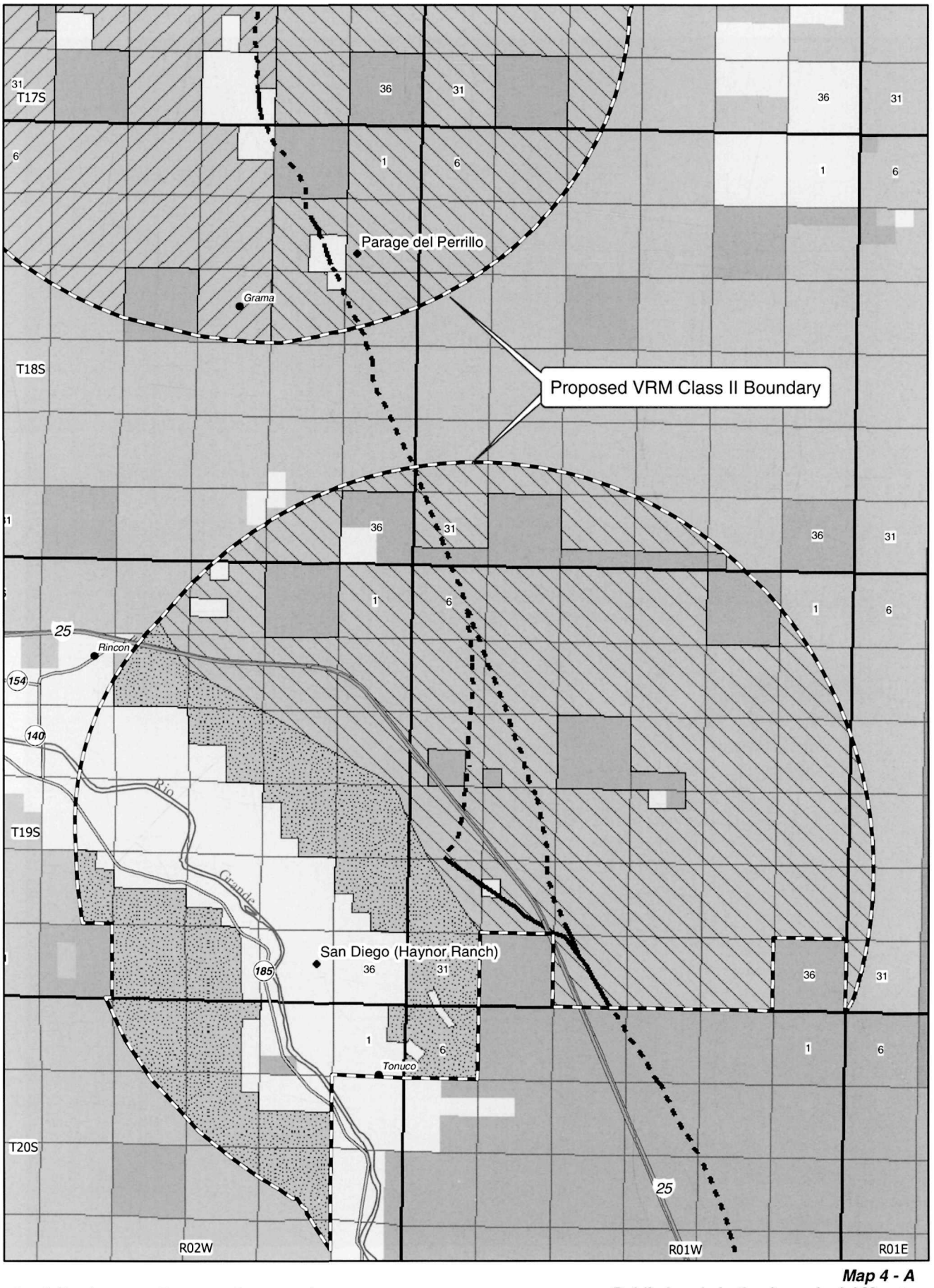
Class II - To retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Class III - To partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Class IV - To provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can

be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance and repeating the basic landscape elements.

The VRM System, therefore, provides a means to identify visual (scenic) values; establish objectives through the Resource Management Planning process or on a case-by-case basis for managing these values; and provide timely input into proposed surface-disturbing projects to ensure the assigned objectives are met.



Map 4 - A
Public Lands in the Jornada del Muerto
Proposed for VRM Class II (Alternative C)

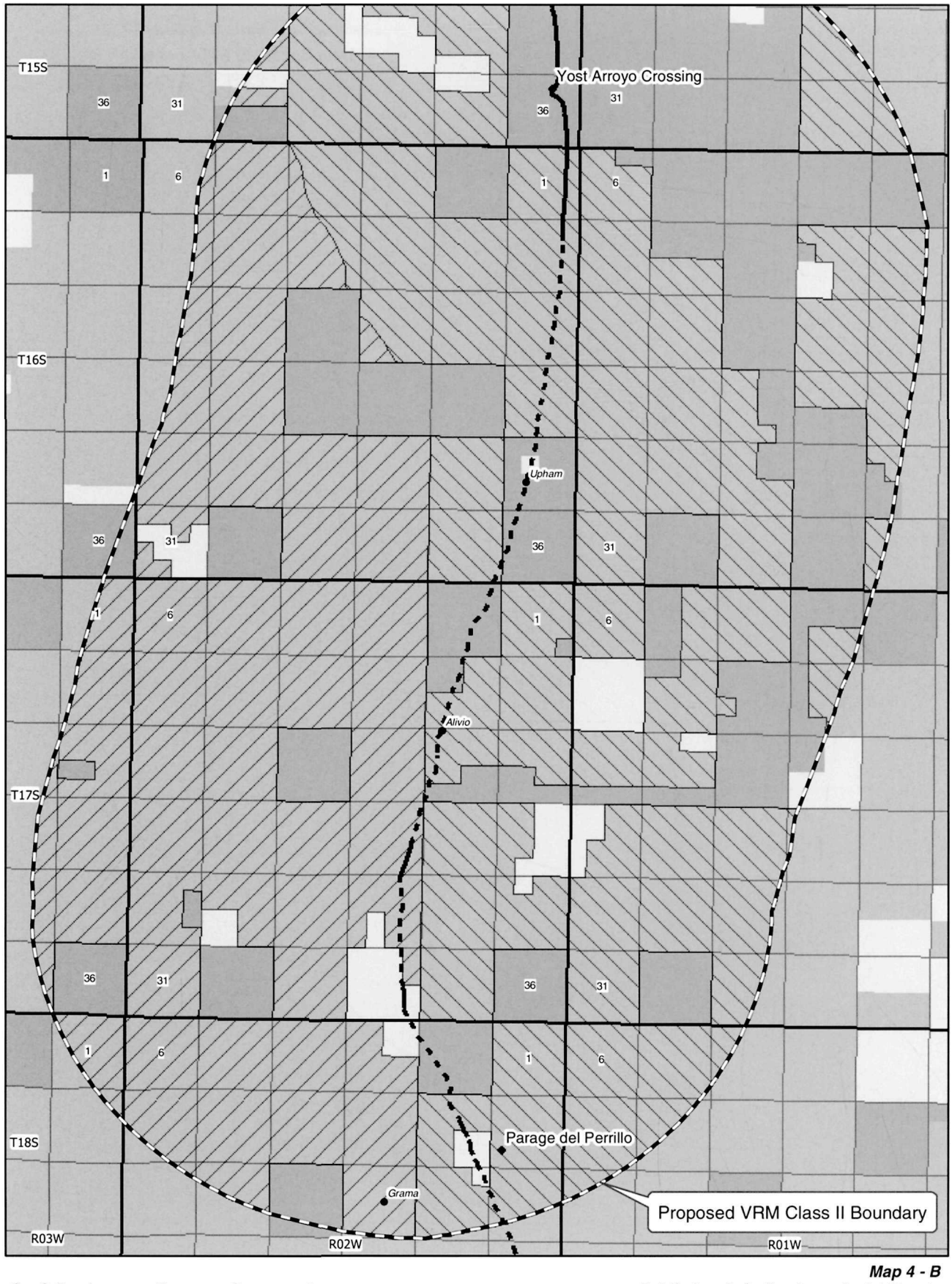
0 0.5 1 2 3 4 Miles

N

No warranty is made by the Bureau of Land Management or the National Park service as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by BLM. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

Legend

- Definite Location
- Probable Location
- Speculative Location
- Proposed VRM Class II Boundary
- CLASS II (Existing)
- CLASS III (Existing)
- CLASS IV (Existing)
- BLM
- Private
- State



Map 4 - B
Public Lands in the Jornada del Muerto
Proposed for VRM Class II (Alternative C)

0 0.5 1 2 3 4 Miles

N

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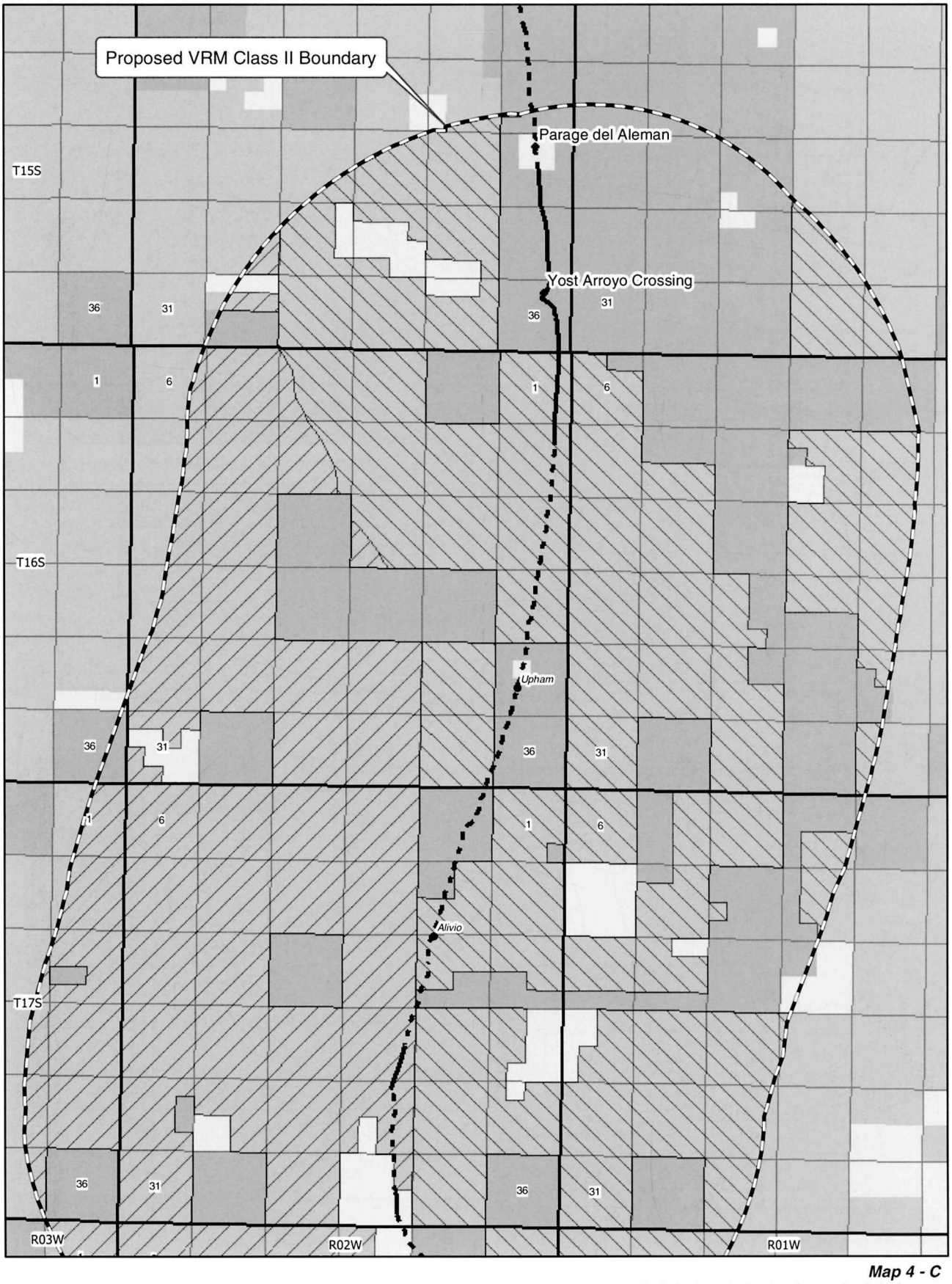
Legend

- Definite Location
- Probable Location
- Speculative Location
- Proposed VRM Class II Boundary
- CLASS II (Existing)
- CLASS III (Existing)
- CLASS IV (Existing)
- BLM
- Private
- State



Map 4 - C
Public Lands in the Jornada del Muerto
Proposed for VRM Class II (Alternative C)

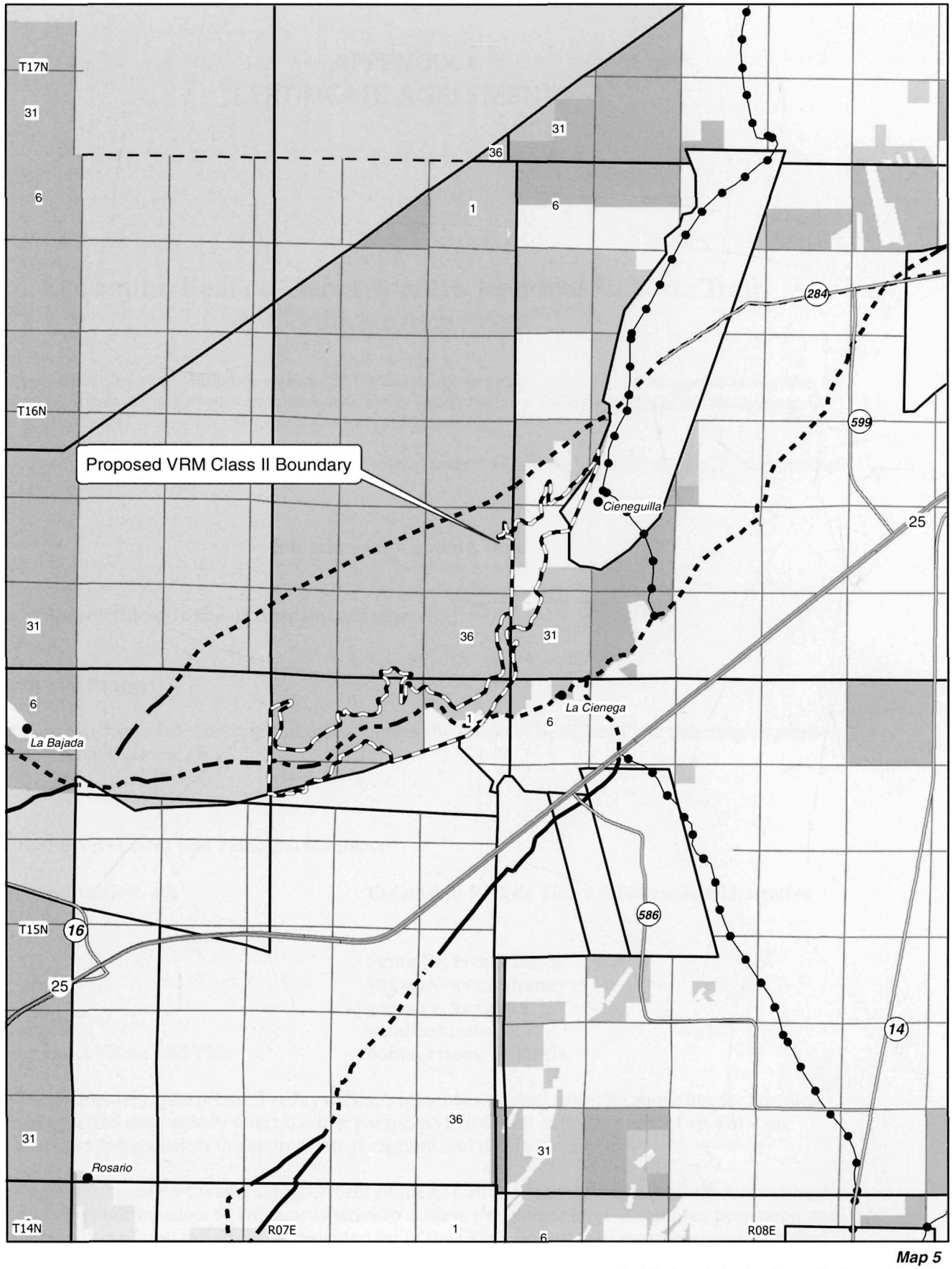
0 0.5 1 2 3 4 Miles

N

No warranty is made by the Bureau of Land Management or the National Park service as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by BLM. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

Legend

- Definite Location
- Probable Location
- Speculative Location
- Proposed VRM Class II Boundary
- CLASS II (Existing)
- CLASS III (Existing)
- CLASS IV (Existing)
- BLM
- Private
- State



Map 5
Public Lands in the Santa Fe River Canyon
Proposed for VRM Class II (Alternative C)

0 0.5 1 2 3 4 Miles

No warranty is made by the Bureau of Land Management or the National Park service as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by BLM. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

Legend

- Definite Location
- Probable Location
- Speculative Location
- Proposed VRM Class II Boundary
- BLM
- Private
- State
- DOD (US Army Corps of Engineers)
- Tribal
- Forest Service

APPENDIX I
CERTIFICATE AGREEMENTS

DRAFT

El Camino Real de Tierra Adentro National Historic Trail
Certificate Agreement

Number sequentially by state. Designate with an "S" for trail site or segement or "I" for an interpretive facility/site. An agreement for a location that includes an interpretive facility and a trail site can have both S and I in the number. For example MO-S-001, IL-I-013, TN-S-I-002.Certification Agreement.

Once document is complete go through and replace "owner/manager" or "owner" with the name of the organization or agency whenever appropriate.

Site name, city, county, state

Type of Property: (historic site or historic trail segment,)

Description of Property:

(This section provides a brief description that identifies the property being certified, ncluding, as possible, boundaries of the area.)

Parties to the Agreement and Principal Contacts

Agency, organization, etc	**El Camino Real de Tierra Adentro Administrative**
Office	
Address:	
	Santa Fe, New Mexico
? **phone:**	**505-xxx-xxxx phone**
? **fax**	**505-xxx-xxxx fax**
email address	**email address**
Partner contact Name and Title	**contact name and title**

Delete Complementary Interpretive Facility or Site/Segment as needed from the above header.For sites not owned by a trail state agency select the first paragraph below and delete the other five. For a site owned by a state agency, select the appropriate paragraph and delete the others.

This agreement is based on the mutual agreement of the El Camino Real de Tierra Adentro Administrative Office and the owner/manager to voluntarily strive to achieve the highest level of resource protection and visitor appreciation of trail resources as provided for in the Comprehensive Management and Use Plan for the El Camino Real de Tierra Adentro National Historic Trail for "...the identification and protection of the historic route and its historic remnants and artifacts for public use and enjoyment." {National Trails System Act 16 U.S.C. - 1241 et seq. Section 3(a)(3)}.

The owner/manager retains all legal rights to the property, and nothing in this agreement is to be construed as granting any legal authority to the El Camino Real de Tierra Adentro Administrative Office over the property or any action by the owner/manager.

The certification agreement is non-binding, and may be canceled by either party at any time by written notice. The El Camino Real de Tierra Adentro Administrative Office and the owner/manager agree, whenever possible, to identify issues or concerns to allow for resolution.

1. Technical and Financial Assistance

Within the scope of this agreement and the National Trails System Act, the El Camino Real de Tierra Adentro Administrative Office agrees to provide, based on funding and personnel limitations, technical assistance in the following areas:Select the appropriate terms from the following and delete the others. cultural and natural resource planning, management, and protection; archeology, ethnography, historical architecture, and historical landscape architecture; visitor use planning and developments; historical research; visitor management and protection; accessibility for persons with disabilities; exhibit and interpretive media design, planning, and production for El Camino Real de Tierra Adentro interpretation; and interpretive and other appropriate training.

Subject to availability of funding, tDelete the paragraph re: financial assistance for Category III facilities.he El Camino Real de Tierra Adentro Administrative Office may be able to provide limited financial (cost-share) assistance, where appropriate, for resource preservation, site development, and interpretive media and programs. Funding will require completion of a cooperative agreement or contract in compliance with applicable federal law and policy.

The El Camino Real de Tierra Adentro Administrative Office can provide the owner/manager with access to El Camino Real de Tierra Adentro Administrative Office produced publications, traveling exhibits, audiovisual programs, etc., as appropriate, and within existing authorities. Some items, such as brochures, may need to be provided on an actual cost or cost-share basis.

The El Camino Real de Tierra Adentro Administrative Office will make a reasonable effort to visit the site from time to time, or on request, to meet with the owner/manager to discussion concerns, projects, or issues related to this agreement or joint projects.

2. Agreement Provisions

a. Planning and Visitor Use

The El Camino Real de Tierra Adentro Administrative Office and the owner/manager agree, as appropriate, to jointly review, and update any existing plans and to develop and implement new plans for visitor use, resource protection and management, and interpretation in order to better meet the goals and objectives of the El Camino Real de Tierra Adentro National Historic Trail Comprehensive Management and Use Plan.

The owner/manager agrees to notify and invite the El Camino Real de Tierra Adentro Administrative Office to participate in all planning efforts, at the beginning of the planning process.
The El Camino Real de Tierra Adentro Administrative Office will notify and invite the owner/manager to participate in any trailwide planning efforts at the beginning of the planning process.

Existing facilities at historic sites must generally meet any applicable accessibility requirements that were in effect when they were built. New visitor-use facilities including trails, interpretive media, museum exhibits, buildings and so forth, must meet applicable Americans with Disabilities Act Accessibility

Guidelines (ADAAG) and any other relevant federal laws and policies related to physical accessibility for persons with disabilities,.

The owner/manager agrees to permit recreational visits to the historic site and/or trail corridorDelete the section between the brackets for non-privately owned sites., subject to such restrictions as may be necessary to manage and protect the owner's property, privacy, and other legal rights. Restrictions shall be without regard for race, color, religion, national origin, sex, age, or handicap.

b. Interpretation

The El Camino Real de Tierra Adentro Administrative Office and the owner/manager jointly agree to cooperate and concur in the development of new information and interpretive materials and will review existing materials to identify changes that may be needed to meet the objectives and standards for the El Camino Real de Tierra Adentro National Historic Trail.

The El Camino Real de Tierra Adentro Administrative Office is required to meet the requirements of Sections 504 and 508 of the Rehabilitation Act for programmatic accessibility of all national historic trail interpretive media and programs, and will provide assistance so that joint projects are in compliance with this requirement.
Select the appropriate Category of facility and delete the other paragraph.
c. Resource Management

If, during the execution of a particular project, the requirements of laws such as the National Environmental Policy Act of 1969, Endangered Species Act, or National Historic Preservation Act of 1966 are triggered, (usually as a result of substantial federal involvement such as federal funding or requirements for federal permits), the El Camino Real de Tierra Adentro Administrative Office shall work with the owner/manager to comply fully with those requirements.

The owner/manager agrees to provide the earliest possible notification of any actions or proposed activities, by the owner/manager or others, (such as, but not limited to, visitor use developments, highway projects, telecommunication towers, resource management actions, excavation, construction of new buildings, drilling and so forth) that could impact site resources, site integrity, subsurface artifacts, or the landscape surrounding the site so as to allow review and comment by the State Historic Preservation Officer and the El Camino Real de Tierra Adentro Administrative Office.

The El Camino Real de Tierra Adentro Administrative Office agrees to assist the owner/manager with the evaluation of existing conditions and activities and visitor use as a result of this agreement to avoid and/or mitigate impacts to resources.
Rewrite this as needed for privately owned sites.
The owner/manager agrees to cooperate in the documentation of the site for the purpose of evaluation for eligibility for, and nomination to, the National Register of Historic Places.

d. Site Recognition and Promotion

The El Camino Real de Tierra Adentro Administrative Office agrees to allow the owner/manager to use the official trail logo (TM) for approved posting purposes for the term of the agreement, and will provide the logo to the owner/manager. Additional uses of the marker, such as on highway directional signs, site brochures, and other non-commercial materials are encouraged, but must be approved in advance by the El Camino Real de Tierra Adentro Administrative Office.
The El Camino Real de Tierra Adentro Administrative Office will include the site and/or segment and location in appropriate publications, exhibits, web pages, and other media.

The owner/manager agrees to provide El Camino Real de Tierra Adentro Administrative Office-produced or -approved information and interpretive materials to the public, and to promote the El Camino Real de Tierra Adentro National Historic Trail interpretive, informational, and marketing programs through owner/manager- produced materials, as appropriate.

3. Informational Provisions for Private Landowners

a. State Liability Protection

New Mexico Statutes Annotated 17-4- 7. provides for protection of landowners from liability arising from recreational use of their lands by the public when no fees are charged. A copy of this statute is attached to this agreement.

Texas Statutes and Codes Title 4, 75.001-004 provides for protection of landowners from liability arising from recreational use of their lands by the public when no fees are charged. A copy of this statute is attached to this agreement.

b. Volunteers-in-Parks

Volunteers-in-Parks (VIP) status in accordance with Public Law 91 -357 (16 U.S.C. 18g-j) may be conferred by the El Camino Real de Tierra Adentro Administrative Office on approved individuals including the owner and specified family members, employees, or cooperating organization members if requested. Under volunteer status, a person will be considered a federal employee only for tort claims and injury compensation for approved national historic trail activities, or for trail maintenance or related trail management, as expressed in a standard El Camino Real de Tierra Adentro Administrative Office volunteer agreement. No person will be considered a volunteer until a volunteer agreement has been signed by all required parties.

Separate volunteer agreements may be developed with the owner, members of his/her immediate family, and other designated persons who will be involved in carrying out the routine provisions of this certification. Individuals or groups involved in Trail-related non-recurring resource management or maintenance must be covered by one-time volunteer agreements.

4. Term of Agreement

This agreement will remain in effect unless cancelled by either party, or the property ownership/management is transferred to another.

5. Signatures

On behalf of _____ I hereby agree to the certification of the_____ as an official component of El Camino Real de Tierra Adentro National Historic Trail

_____ _____

Name/Title Date

On behalf of the Secretary of the Interior, I certify the site(s) described in this agreement as an official component of the El Camino Real de Tierra Adentro National Historic Trail.

_____ _____

(Name/Title Date
El Camino Real de Tierra Adentro Administrative Office

Agreement No. 1443GA125001002

GENERAL AGREEMENT BETWEEN THE U.S. DEPARTMENT OF THE INTERIOR, NATIONAL PARK SERVICE AND THE STATE OF NEW MEXICO CONCERNING THE SANTA FE NATIONAL HISTORIC TRAIL

The General Agreement is entered into by and between the U.S. Department of the Interior, National Park Service ("Service"), and the State of New Mexico ("State").

Article I. Authorities

This General Agreement is developed under the following authorities:

A. The National Trails System Act (16 USC 1241, et seq.), as amended by Public Law 100-35 (101 Stat. 302, 16 USC 1244 (a)(15).

B. Intergovernmental Cooperation Act of 1968 (42 USC 4201 et seq.).

Article II. Purpose

The purpose of this General Agreement is to provide the basis for cooperation between the Service and the State to implement the Comprehensive Management and Use Plan for the Santa Fe National Historic Trail

Article III. Background

Public Law 100-35 (101 Stat. 320, 16 USC 1244 (a)15, amended the National Trails System Act ("the Act") to establish the Santa Fe National Historic Trail ("the Trail"). The Act places responsibility for administering the Trail with the Secretary of the Interior ("Secretary"). Only federal lands are to be administered as initial protection components of the Trail; but the Act authorizes the Secretary to encourage and to assist State, local, or private entities in establishing, administering, and protecting those segments of the Trail which cross non -federally owned lands. In furtherance of that objective, the Act allows Memoranda of Understanding between the Service and cooperating nonfederal agencies to be written for marking the trail, establishing rights-of- way, and developing and maintaining facilities. Pursuant to the Act, the Comprehensive Management and Use Plan for the Trail outlines objectives and practices to be observed in the management of the Trail and identifies significant potential Trail components, procedures for non-federal certification, and the process to mark the Trail. The Governor of the State of New Mexico and appropriate State agencies were consulted in the preparation and approval of the Comprehensive Management and Use Plan.

Article IV. Responsibilities

The State and the Service mutually desire that the Santa Fe National Historic Trail across the State of New Mexico be appropriately marked, administered and managed so as to accomplish the purposes of the National Trails System Act. Accordingly, the State and the Service agree to carry out the following responsibilities for this purpose.

A. The U.S. Department of the Interior, National Park Service and the State of New Mexico agree to:

1. Establish individual coordinators within each administering agency for Trail administration activities.

2. Adopt the Santa Fe National Historic Trail Comprehensive Management and Use Plan, dated May 1990, and manage the Trail's resources as appropriate and feasible.

3. Keep each other informed and consult periodically on management problems pertaining to the Trail.

4. Coordinate development of the Santa Fe NHT and its Auto Tour Route with the State's Santa Fe Trail Scenic Byway to maximize public benefits and minimize conflict and duplication of efforts.

5. Subject to the availability of funds and personnel, provide assistance at the request of either party for the planning and development of facilities, completion of environmental or other compliance requirements, acquisition of land, and the administration of the Trail. The parties understand and agree that this agreement does not obligate any federal or state funds and that they must execute additional written agreements to do so. Those additional agreements shall specify and control the uses of any obligated funds.

B. The Service agrees to:

1. Provide the State with an initial set of Trail markers in accordance with the marking program established in the Comprehensive Management and Use Plan and authorize highway department use of the logo for appropriate directional signs.

2. Publish a notice of the Trail route in the Federal Register.

3. Upon request, and as funds permit, provide technical assistance for planning access, protection, facilities, interpretation, and other aspects of management of the Trail.

4. Support efforts that promote the whole trail as a single, integrated system.

C. The State agrees to:

1. Mark the Santa Fe National Historic Trail with an initial set of markers furnished by the National Park Service (NPS) according to the marking process and signs identified in the Comprehensive Management and Use Plan.

2. Maintain the trail markers erected under item C.1.

3. Administer, manage, protect, and maintain State-owned Trail sites and segments in accordance with the purpose of the Trail and the Comprehensive Management and Use Plan.

4. Develop, operate, and maintain public access, interpretive and recreational opportunities, and visitor use facilities in accordance with the Comprehensive Management and Use Plan and relevant federal laws and service policies, and recommend appropriate State facilities to house NPS interpretive media or to receive NPS technical assistance.

5. Provide private landowners and nonfederal managing entities with cultural resource compliance assistance (i.e., National Historic Preservation Act of 1966, as amended, sections 106 and 110) and natural resource compliance assistance, including on-site technical evaluations and review of plans, designs, and mitigation measures.

6. Identify trail projects on appropriate programming documents (e.g., SCORP) and seek funding from State appropriations and federal sources such as the Land and Water Conservation Fund or historic

preservation grants (e.g., National Historic Landmark Program, Historic Preservation Fund) for acquiring, administering, managing, developing, operating, and maintaining State-owned Trail sites and segments or preserving privately-owned sites on the National register of Historic Places or designated as National Historic Landmark sites.

7. Seek such additional state legislative authority as may be required for public use of, and to obligate State funds for management of, State-owned rights-of-way, sites, or other lands in the trail corridor.

8. Promulgate such rules and regulations as may be necessary for proper administration and protection of State-owned or privately owned sites and segments.

9. Seek cooperative agreements with owners of those private lands within the Trail corridor adjoining high potential State-owned sites and segments where necessary to ensure adequate protection or public access.

10. Consider acquiring necessary interests in those lands identified in item C.9.

11. Work cooperatively to develop an interstate trail promotion task force to promote the whole Santa Fe National Historic Trail on a national and international basis.

12. Help plan and establish historic branch trails.

Article V. Standard Clauses

A. Civil Rights.

During the performance of this General Agreement, the cooperators agree to abide by the terms of Executive Order 11246 on nondiscrimination and will not discriminate against any person because of race, color, religion, age, sex, or national origin. The cooperators will take affirmative action to ensure that applicants are employed without regard to their race, color, religion, age, sex, or national origin. No otherwise qualified individual will be denied access to a program or activity solely on the basis of a handicap.

B. Officials Not to Benefit.

No member or delegate to Congress, or resident Commissioner, shall be admitted to any share or part of this agreement, or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this agreement if made with a corporation for its general benefit.

C. Promotions.

The State shall not publicize, or otherwise circulate, promotional material (such as advertisements, sales brochures, press releases, speeches, still and motion pictures, articles, manuscripts or other publications) which states or implies Governmental, Departmental, bureau or Government employee of a product, service or position which the State represents. No release of information relating to this agreement may state or imply that the Government approves of the State's work product, or considers the State's work product to be superior to other products or services.

D. Public Information Release.

The State must obtain prior government approval from the Superintendent, Long Distance Trails Group Office - Santa Fe, for any public information releases which refer to the Department of the

Interior, any bureau, park unit, or employee (by name or title), or this agreement. The specific text, layout, photographs, etc., of the proposed release must be submitted with the request for approval.

Article VI. Limitation

Nothing in this General Agreement will be construed as limiting or affecting in any way the authority or legal responsibilities of the Service or the State to perform beyond the respective authority of each or to require either party to expend funds in any context or other obligation for future payment of funds or services in excess of those available or authorized for expenditure.

Article VII. Amendment and Termination

Amendments to this General Agreement may be proposed by either party and shall become effective upon written approval by both parties.

This General Agreement will exist for a period of no longer than five years, at which time all parties to the General Agreement will evaluate its benefits and determine if the Agreement should be reaffirmed. It may be terminated or revised upon 60 days advance written notice given by one of the parties to the other, or it may be terminated earlier by mutual consent of both parties.

Article VIII. Execution

In witness whereof, the parties hereto have executed this General Agreement as of the last date written below:

_____	_____
Regional Director **Intermountain Region** **National Park Service**	**Governor** **State of New Mexico**

GLOSSARY

A
Refers to standards for various classes of land as designated by the Clean Air Act of 1978.

advisory council
A citizen group appointed by the Secretary of the Interior to advise on matters relating to the trail, including standards for the erection and maintenance of markers along the trail, and the administration of the trail.

AIRFA
The American Indian Religious Freedom Act.

air quality
Refers to standards for various classes of land as designated by the Clean Air Act of 1978.

all-terrain vehicle
A wheeled or tracked vehicle, other than a snowmobile or work vehicle, designed primarily for recreational use, or for the transportation of property or equipment exclusively on undeveloped road rights-of- way, marshland, open country, or other unprepared surfaces.

allotment
An area of land where one or more livestock operators graze their livestock. Allotments generally consist of BLM lands, but may also include other federally managed, state owned, and private lands. An allotment may include one or more separate pastures. Livestock numbers and periods of use are specified for each allotment.

amendment
The process for considering or making changes in the terms, conditions, and decisions of approved Resource Management Plans or Management Framework Plans using the prescribed provisions for resource management planning appropriate to the proposed action or circumstances. Usually only one or two issues are considered that involve only a portion of the planning area.

adaptive management
The continuous process of modifying management actions based on the results of inventory and monitoring.

Area of Critical Environmental Concern (ACEC)
Areas within public lands in which special management attention is required to (1) protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes; or to (2) protect life and safety from natural hazards.

arid region
A region in which precipitation is insufficient to support any but drought -adapted vegetation.

arroyo
A term applied in the arid and semiarid regions of the southwestern United States to the small, deep, flat -floored channel or gully of an ephemeral stream or of an intermittent stream, usually with vertical or steeply cut banks of unconsolidated material at least 2 feet high; it is usually dry, but may be transformed into a temporary watercourse or short-lived torrent after heavy rainfall.

authorized officer
The federal employee who has the delegated authority to make a specific decision.

auto-tour route
A designated route of all-weather highways that closely parallels the historic trail route.

backcountry byways:
Vehicle routes that traverse scenic corridors utilizing secondary or backcountry road systems. National backcountry byways are designated by the type of road and vehicle needed to travel the byway.

best management practices
A suite of techniques that guide, or may be applied to, management actions to aid in achieving desired outcomes. Best management practices are often developed in conjunction with land use plans, but they are not considered a land use plan decision unless the land use plan specifies that they are mandatory. They may be updated or modified without a plan amendment if they are not mandatory.

biodiversity
The diversity of living organisms considered at all levels of organization including genetics, species, and higher taxonomic levels, and the variety of habitats and ecosystems, as well as the processes occurring therein.

biological assessment
The gathering and evaluation of information on proposed endangered and threatened species and critical habitat and proposed critical habitat. Required when a management action potentially conflicts with endangered or threatened species, the biological assessment is the way in which federal agencies enter into formal consultation with the U.S. Fish and Wildlife Service and describe a proposed action and the consequences to the species the action would effect.

BLM
Bureau of Land Management.

candidate species
Any species included in the Federal Register notice of review that are being considered for listing as threatened or endangered by the U.S. Fish and Wildlife Service.

certification
A high-potential historic site or segment that is in private ownership and has an agreement with the trail administration to preserve the site or segment and to provide for some public access. Certified sites and segments are eligible for technical assistance and cost-sharing funds.

CEQ
Council on Environmental Quality.

closed
Generally denotes that an area is not available for a particular use or uses; refer to specific definitions found in law, regulations, or policy guidance for application to individual programs.

closed area or trail
Designated areas and trails where the use of off- road vehicles is permanently or temporarily prohibited. The use of off- road vehicles in closed areas may be allowed only with the approval of the authorized officer.

closed road
A road or segment that is restricted from certain types of use during certain seasons of the year. The prohibited use and the time period of closure is specified.

CMP/EIS
Comprehensive Management Plan/Environmental Impact Statement.

Code of Federal Regulations (CFR)
The official, legal tabulation of regulations directing federal government activities.

collaboration
A cooperative process in which interested parties, often with widely varied interests, work together to seek solutions with broad support for managing public and other lands. This may or may not involve an agency as a cooperating agency.

collaborative partnerships
Refers to people working together, sharing knowledge and resources, to achieve desired outcomes for public lands and communities within statutory and regulatory frameworks.

CMP
Comprehensive Management Plan.

conformance
That a proposed action shall be specifically provided for in the land use plan or, if not specifically mentioned, shall be clearly consistent with the goals, objectives, or standards of the approved land use plan.

consistency
The proposed land use plan does not conflict with officially approved plans, programs, and policies of North American Indian tribes, other federal agencies, and state, and local governments to the extent practical within federal law, regulation, and policy.

cooperating agency
Assists the lead federal agency in developing an Environmental Analysis or Environmental Impact Statement. The Council on Environmental Quality regulations implementing NEPA define a cooperating agency as any agency that has jurisdiction by law or special expertise for proposals covered by NEPA. Any North American Indian tribe or federal, state, or local government jurisdiction with such qualifications may become a cooperating agency by agreement with the lead agency.

Council on Environmental Quality (CEQ)
An advisory council to the President of the United States established by the National Environmental Policy Act of 1969. It reviews federal programs for their effect on the environment, conducts environmental studies, and advises the President on environmental matters.

cultural resources
Nonrenewable elements of the physical and human environment, including archeological remains (evidence of prehistoric or historic human activities) and sociocultural values traditionally held by ethnic groups (sacred places, traditionally utilized raw materials, etc.).

cultural site
Any location that includes prehistoric and/or historic evidence of human use, or that has important sociocultural value.

cumulative impact
The impact on the environment that results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (federal or non -federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

designated roads and trails
Specific roads and trails where some type of motorized vehicle use is allowed either seasonally or all year long.

desired condition
Description of those factors that should exist within ecosystems, both to maintain their survival and to meet social and economic needs.

diversity
The relative abundance of wildlife species, plant species, communities, habitats, or habitat features per unit of area.

easement
A right afforded a person or agency to make limited use of another's real property for access or other purposes.

Economic Study Area (ESA)
The area described in this planning effort comprising eight counties in New Mexico, one in Texas, and the State of Chihuahua, which forms the basis for the socioeconomic profile.

ecosystem
A complete, interacting system of living organisms and the land and water that make up their environment; the home places of all living things, including humans.

Environmental Assessment (EA
A concise public document that analyzes the environmental impacts of a proposed federal action and provides sufficient evidence to determine the level of significance of the impacts.

Environmental Impact Statement (EIS)
A detailed written statement required by the National Environmental Policy Act when an agency proposes a major federal action significantly affecting the quality of the human environment.

erosion
The wearing away of the land surface by running water, wind, ice, or other geological agents.

FHWA
Federal Highway Administration.

Federal Land Policy and Management Act of 1976 (FLPMA)
Public Law 94-579, of October 21, 1976, often referred to as the BLM's Organic Act, which provides the majority of the BLM's legislated authority, direction, policy, and basic management guidance.

Federal Protection Component
Those components on federally owned lands that meet national historic trail criteria.

Federal Register
A daily publication that reports Presidential and federal agency documents.

forage
All browse and herbaceous foods available to grazing animals that may be grazed or harvested for feeding.

Geographic Information System (GIS)
A computer system capable of storing, analyzing, and displaying data and describing places on the earth's surface.

goal
A broad statement of a desired outcome. Goals are usually not quantifiable and may not have established time frames for achievement.

groundwater
Water contained in pore spaces of consolidated and unconsolidated surface material.

habitat
A specific set of physical conditions that surround a species, group of species, or a large community. In wildlife management, the major constituents of habitat are considered to be food, water, cover, and living space.

high-potential route segment
Those segments of a trail which would afford high quality recreation experience in a portion of the route having greater than average scenic values or affording an opportunity to vicariously share the experience of the original users of a historic route.

high-potential historic site
Those historic sites related to the route, or sites in close proximity thereto, which provide opportunities to interpret the historical significance of the trail during the period of its major use. Criteria for consideration as high - potential historic sites include historic significance, presence of visible historic remnants, scenic quality, and relative freedom from intrusion.

IBWC
International Boundary and Water Commission.

impact
A modification of the existing environment caused by an action (such as construction or operation of facilities).

impacts (or effects
Environmental consequences (the scientific and analytical basis for comparison of alternatives) as a result of a proposed action. Effects may be either direct, which are caused by the action and occur at the same time and place, or indirect, which are caused by the action and are later in time or farther removed in distance but still reasonably foreseeable, or cumulative.

implementation decisions
Decisions that take action to implement land use plan decisions. They can generally be appealed to the Interior Board of Land Appeals.

implementation plan
A site-specific plan written to implement decisions made in a land use plan. An implementation plan usually selects and applies best management practices to meet land use plan objectives. Implementation plans are synonymous with activity plans. Examples of implementation plans include interdisciplinary management plans, habitat management plans, and allotment management plans.

INAH
Instituto Nacional de Anthropología e Historia. An Agency of the Nation of Mexico which is roughly equal to the National Park Service and Bureau of Land Management.

Indian tribe (North American Indian)
Any Indian group in the conterminous United States that the Secretary of the Interior recognizes as possessing tribal status.

indirect impacts
Secondary effects that occur in locations other than the initial action or later in time.

infrastructure:
The facilities, services, and equipment needed for a community to function, including roads, sewers, water lines, police and fire protection, and schools.

interdisciplinary team
A group of individuals with different training, representing the physical sciences, social sciences, and environmental design arts, assembled to solve a problem or perform a task. The members of the team proceed to a solution with frequent interaction so that each discipline may provide insights to any stage of the problem and disciplines may combine to provide new solutions. The number and disciplines of the members preparing the plan vary with circumstances. A member may represent one or more discipline.

Interior Board of Land Appeals
The board of the Department of the Interior Office of Hearings and Appeals that acts for the Secretary of the Interior in responding to appeals of decisions on the use and disposition of public lands and resources. Because the Interior Board of Land Appeals acts for and on behalf of the Secretary of the Interior, its decisions usually represent the department's final decision but are subject to the courts.

land use allocation
The identification in a land use plan of the activities and foreseeable development that are allowed, restricted, or excluded for all or part of the planning area, based on desired future conditions.

land use plan
A set of decisions that establish management direction for land within an administrative area, as prescribed under the planning provisions of FLPMA; an assimilation of land-use-plan-level decisions developed through the planning process, regardless of the scale at which the decisions were developed.

land use plan decision
Establishes desired outcomes and actions needed to achieve them. Decisions are reached using the BLM planning process. When they are presented to the public as proposed decisions, they can be protested to the BLM Director. They cannot be appealed to the Interior Board of Land Appeals.

land use planning base
The entire body of land use plan decisions resulting from Resource Management Plans, Management Framework Plans, planning analyses, the adoption of other agency plans, or any other type of plan in which land-use-plan-level decisions are reached.

leasable minerals
Those minerals or materials designated as leasable under the Mineral Leasing Act of 1920. They include coal, phosphate, asphalt, sulfur, potassium, and sodium minerals, and oil, gas, and geothermal.

lease
(1) A legal document that conveys to an operator the right to drill for oil and gas; and (2) the tract of land on which a lease has been obtained, where producing wells and production equipment are located.

limited areas or trails
Designated areas or trails where the use of off-road vehicles is subject to restrictions, such as limiting the number or types or vehicles allowed, dates and times of use (seasonal restrictions), limiting use to existing roads and trails, or limiting use to designated roads and trails. Under the designated roads and trails designation, use would be allowed only on roads and trails that are signed for use. Combinations of restrictions are possible, such as limiting use to certain types of vehicles during certain times of the year.

locatable minerals
Minerals subject to exploration, development, and disposal by staking mining claims as authorized by the Mining Law of 1872, as amended. This includes deposits of gold, silver, and other uncommon minerals not subject to lease or sale.

LWCF
Land and Water Conservation Fund.

management opportunities
A component of the analysis of the management situation; actions or management direc tions that could be taken to resolve issues or management concerns.

mineral
Any solid or fluid inorganic substance that can be extracted from the earth for profit.

mineral materials
Materials such as common varieties of sand, stone, gravel, pumice, pumicite, and clay that are not obtainable under the mining or leasing laws but that can be acquired under the Mineral Materials Act of 1947, as amended.

mineral rights
Mineral rights outstanding are third-party rights-an interest in minerals not owned by the person or party conveying the land to the United States. It is an exception in a deed that is the result of prior conveyance separating title of certain minerals from the surface estate.

mineral withdrawal
A formal order that withholds federal lands and minerals from entry under the Mining Law of 1872 and closes the area to mineral location (staking mining claims) and development.

mining claim
A parcel of land that a miner takes and holds for mining purposes, having acquired the right of possession by complying with the Mining Law and local laws and rules. A single mining claim may contain as many adjoining locations as the locator may make or buy. There are four categories of mining claims: lode, placer, mill site, and tunnel site.

mitigation measures
Methods or procedures that reduce or lessen the impacts of an action.

monitoring
The periodic observation and orderly collection of data on (1) changing conditions of public land related to management actions; and (2) the effects of implementing decisions.

monitoring
The process of tracking the implementation of land use plan decisions.

multijurisdictional planning
Collaborative planning in which the purpose is to address land use planning issues for an area, such as an entire watershed or other landscape unit, in which there is a mix of public and/or private landownerships and adjoining or overlapping tribal, state, local government, or other federal agency authorities.

multiple use
The management of public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people. Making the most judicious use of the lands for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions. The use of some lands for less than all of the resources. A combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific, and historical values. And harmonious and coordinated management of the various resources without permanent impairment of the productivity of the lands and the quality of the environment, with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or greatest unit output.

multiplier
The number of times new investment spending will be re-spent to produce a certain amount of new income.

NAGPRA
Native American Graves Protection and Repatriation Act.

NASA
National Aeronautics and Space Administration.

NEA
National Endowment for the Arts.

National Environmental Policy Act of 1969 (NEPA): An act that encourages productive and enjoyable harmony between humans and their environment and promotes efforts to prevent or eliminate damage to the environment; enriches the understanding or the ecological systems and natural resources important to the nation; and establishes the Council on Environmental Quality.

National Historic Landmark (NHL)
The National Historic Landmark program identifies, designates, and protects buildings, structures, sites, and objects of national significance. These properties commemorate and illustrate the history and culture of the United States.

NHT
National Historic Trail. National historic trails, are extended trails which follow as closely as possible and practicable the original trails or routes of travel of national historic significance. Designation of such trails or routes shall be continuous, but the established or developed trail, and the acquisition thereof, need not be continuous onsite. National historic trails shall have as their purpose the identification and protection of the historic route and its historic remnants and artifacts for public use and enjoyment. Only those selected land and water based components of a historic trail which are on federally owned lands and which meet the national historic trail criteria established in this Act are included as Federal protection components of a national historic trail. The appropriate Secretary may certify other lands as protected segments of an historic trail upon application from State or local governmental agencies or private interests involved if such segments meet the national historic trail criteria established in this Act and such criteria supplementary thereto as the appropriate Secretary may prescribe, and

are administered by such agencies or interests without expense to the United States.

NHTSA
National Historic Trails System Act, P.L. 90-543, 16 USC 1241-51.

NM
New Mexico.

NPS
National Park Service.

National Historic Preservation Act (NHPA)
The principal federal law dealing with historic preservation. It established a national policy of historic preservation, including encouraging preservation on the state and private levels. The act authorized the Secretary of the Interior to maintain a National Register of Historic Places.

National Landscape Conservation System (NLCS)
A system of congressional, Presidential, or other designated areas managed by the BLM, the components of which include National Monuments, National Conservation Areas, Wilderness Areas, Wilderness Study Areas, Wild and Scenic Rivers, National Historic Trails, National Scenic Trails, the California Desert Conservation Area, and the Headwaters Forest Reserve.

National Natural Landmarks (NNL)
Sites designated by the Secretary of the Interior as containing the best representative examples of geologic features and natural communities composing the nation's natural history. The purpose of the designation is to encourage preservation of such sites through well-informed management and use, and consideration of these sites in public and private land use planning. Designation has no legal effect on landownership, use, or management.

National Register of Historic Places (NRHP)
A register of districts, sites, buildings, structures, and objects, significant in American history, architecture, archeology, and culture, established by the Historic Preservation Act of 1966, and maintained by the Secretary of the Interior.

National Register potential
Status of a cultural resource, which is deemed qualified for the National Register of Historic Places prior to formal documentation and consultation; managed as if it were actually listed.

NWR
National Wildlife Refuge.

negligible impact
Impact that is small in magnitude and importance and is difficult or impossible to quantify relative to those occurring naturally or due to other actions.

non-point-source pollution
Unlike pollution from industrial and sewage treatment plants, pollution comes from many diffuse sources. Pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and even our underground sources of drinking water.

objective
A description of a desired condition for a resource. Objectives can be quantified and measured, and, where possible, have established time frames for achievement.

off-highway vehicle (off-road vehicle; OHV)
Any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding: (1) any non-amphibious registered motorboat; (2) any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; (3) any vehicle whose use is expressly authorized by the authorized officer, or otherwise officially approved; (4) vehicles in official use; and (5) any combat or combat-support vehicle when used in times of national defense emergencies.

open areas and trails
Designated areas and trails where off- road vehicles may be operated, subject to operating regulations and vehicle standards; or an area where all types of vehicle use is permitted at all times, subject to standards.

paleontological resources (fossils)
The physical remains of plants and animals preserved in soils and sedimentary rock formations. Paleontological resources are important for understanding past environments, environmental change, and the evolution of life.

Paraje
(general). Spanish, 'place, residence," but in NM the term has also become a place name, referring usually to a 'stopping place" or "campground" travelers. Many old settlements originally were parajes, such as Paraje de Belen and Paraje de Bernalillo. Josiah Gregg, in *Commerce of the Prairies* (1844), described the Paraje of Fra Cristobal as "like many others on the route, neither town nor village, but a simple isolated point on the river bank-a mere paraje, or camping ground." [Julyan]

physiographic province
A region defined by a unified geologic history and a characteristic geologic structure and climate that differs from adjoining regions.

plan
A document that contains a set of comprehensive, long-range decisions concerning the use and management of resources in a specific geographic area.

planning area
A geographical area for which land use and Resource Management Plans are developed and maintained.

planning criteria
The standards, rules, and other factors developed by managers and interdisciplinary teams for their use in forming judgments about decision-making, analysis, and data collection during planning. Planning criteria streamline and simplify the resource management planning actions.

planning analysis
A process using appropriate resource data and NEPA analysis to provide a basis for decisions in areas not yet covered by a Resource Management Plan.

preplan or project plan
Describes the purpose, location, issues to be resolved, participants' roles and responsibilities, budget, and schedule.

R&PP
Recreation and Public Purposes.

rangeland
Land used for grazing by livestock and big game animals on which vegetation is dominated by grasses, grass-like plants, forbs, or shrubs.

raptor
Birds of prey with sharp talons and strongly curved beaks, such as hawks, owls, vultures, and eagles.

record of decision
A document signed by a responsible official recording a decision that was preceded by the preparing of an Environmental Impact Statement.

Resource Management Plan (RMP)
A land use plan as prescribed by the Federal Land Policy and Management Act that establishes, for a given area of land, land-use allocations, coordination guidelines for multiple-use, objectives, and actions to be achieved.

right-of-way
A permit or an easement that authorizes the use of public lands for certain specified purposes, commonly for pipelines, roads, telephone lines, electric lines, reservoirs, etc.; also, the lands covered by such an easement or permit.

right-of-way corridor
A parcel of land that has been identified by law, Secretarial order, through a land use plan, or by other management decision as being the preferred location for existing and future right-of-way grants, and suitable to accommodate one type of right-of-way or one or more rights-of-way that are similar, identical, or compatible.

riparian area
A form of wetland transition between permanently saturated wetlands and upland areas. Riparian areas exhibit vegetation or physical characteristics that reflect the influence of permanent surface or subsurface water. Typical riparian areas include lands along, adjacent to, or contiguous with perennially and intermittently flowing rivers and streams, glacial potholes, and the shores of lakes and reservoirs with stable water levels. Excluded are ephemeral streams or washes that lack vegetation and depend on free water in the soil.

rock art
Petroglyphs (engraved designs) or pictographs (painted designs).

saleable minerals
Common-variety minerals on public lands, such as sand and gravel, which are used mainly for construction and are disposed of by sales or special permits to local governments.

scenic byways
Highway routes that have roadsides or corridors of special esthetic, cultural, or historical value. An essential part of the highway is its scenic corridor. The corridor may contain outstanding scenic vistas, unusual geologic features, or other natural elements.

scenic quality
The degree of harmony, contrast, and variety within a landscape.

Section 106 compliance
The requirement of Section 106 of the National Historic Preservation Act that any project funded, licensed, permitted, or assisted by the federal government be reviewed for impacts to significant historic properties, and that the State Historic Preservation Officer and the Advisory Council on Historic Preservation be allowed to comment on a project.

sediment yield
The amount of sediment produced in a watershed, expressed in tons, acre feet, or cubic yards, of sediment per unit of drainage area per year.

significant
An effect that is analyzed in the context of the proposed action to determine the degree or magnitude of importance of the effect, either beneficial or adverse. The degree of significance can be related to other actions with individually insignificant but cumulatively significant impacts.

site steward program
A program designed to preserve cultural sites through the use of volunteers, similar to a neighborhood watch program.

SLO
State Land Office.

special status species
Includes proposed species, listed species, and candidate species under the ESA; State-listed species; and BLM State Director-designated sensitive species.

species diversity
The number of, different kinds of, and relative abundance of, species present in a given area.

standard
A description of the physical and biological conditions or degree of function required for healthy, sustainable lands (e.g., land health standards).

Threatened and Endangered Species (T&E)
Any plant or animal species defined under the Endangered Species Act as likely to become endangered within the foreseeable future throughout all or a significant portion of its range; listings are published in the Federal Register.

TX
Texas

USDA
United States Department of Agriculture.

USFS
United States Forest Service (also listed as USDA Forest Service).

USFWS
United States Fish and Wildlife Service.

visual resources
The visible physical features of a landscape (topography, water, vegetation, animals, structures, and other features) that constitute the scenery of an area.

VRM
Visual Resources Management.

water quality
The chemical, physical, and biological characteristics of water with respect to its suitability for a particular use.

watershed
All lands that are enclosed by a continuous hydrologic drainage divide and lie upslope from a specified point on a stream.

wetlands
Areas that are inundated or saturated by surface or ground water often and long enough to support and under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions.

BIBLIOGRAPHY

Architectural Research Consultants, Inc.
1994 "El Viaje: A Planning Study for El Camino Real Interpretive Center." Report prepared for Museum of New Mexico State Monuments.

2001 "El Camino Real Historic Corridor Management Plan for the Rio Abajo." Museum of New Mexico State Monuments Division. May 2001.

Cather, Willa
1999 *Death Comes for the Archbishop.* Lincoln, Nebraska: University of Nebraska Press.

D'Azededo, Warren L., Ed.
1986 Handbook of North American Indians, Volume 11. Great Basin. Washington, D.C.: Smithsonian Institution.

Emory, Lieut.Col. William Hensley
1848 *Notes of a Military Reconnaissance from Fort Leavenworth in Missouri, to San Diego, California, including part of the Arkansas, Del Norte, and Gila Rivers.* Senate Document No. 7, 30th Congress, 1st Session, Ex. Doc. No. 41, Washington, D.C.

Fowler, John M.
n.d. *Historic Range Livestock Industry in New Mexico.* NP.

Hammond, George Peter and Agapito Rey, Eds.
1953 *Don Juan de Oñate, Colonizer of New Mexico, 1595-1628.* Coronado Cuarto Centennial Publications, 1540 - 1940, Vols. v and vi. Albuquerque, NM: University of New Mexico Press.

1966 *The Rediscovery of New Mexico, 1580-1594: The Explorations of Chamuscado, Espejo, Castaño de Sosa, Morlete, and Leyva de Bonilla and Humaña.* Coronado Cuarto Centennial Publications, 1540 -1940, Vol. III. Albuquerque, NM: University of New Mexico Press, 1966.

Jefferson, Jim
2001 *Nunt'z: The Ute People.* Southern Ute Tribe Cultural Series.

Jemison, Roy, Carol Raish, C. Raish, Eds.
2000 *Livestock Management in the American Southwest: Ecology, Society, and Economics.* Amsterdam, The Netherlands: Elsevier Science, 2000.

Marshall, Michael P.
1991 "El Camino Real de Tierra Adentro: An Archeological Investigation. The 1990 New Mexico Historic Preservation Division Survey." Prepared by El Camino Real Project and Cibola Research Consultants for the New Mexico Historic Preservation Division.

Moorhead, Max L.
1958 *New Mexico's Royal Road: Trade and Travel on the Chihuahua Trail.* University of Oklahoma Press, Norman.

Ortiz, Alfonso, Ed.
1979 *Southwest. Handbook of American Indians,* Vol. 9. General Editor, William C. Sturtevant. Washington, D.C.: Smithsonian Institution, 1979.

1983 *Southwest. Handbook of American Indians,* Vol. 10. General Editor, William C. Sturtevant. Washington, D.C.: Smithsonian Institution, 1983.

Palmer, Gabrielle G., Comp., June-el Piper and LouAnn Jacobson, Eds.
1993 *El Camino Real de Tierra Adentro, (Volume One).* Santa Fe: Bureau of Land management, Cultural Resources Series No. 11.

Palmer, Gabrielle G. and Stephen L. Fosberg, Comps., June-el Piper, Ed.
1999 *El Camino Real de Tierra Adentro, Volume Two.* Santa Fe: Bureau of Land management, Cultural Resources Series No. 13.

Pacheco, José De La Cruz and Sánchez, Joseph P, Coordinators.
2000 "Memorias del Coloquio Internatcional El Camino Real de Tierra Adentro." Instituto Nacional de Antropología e Historia (Mexico D.F.: 2000)

Sando, Joe S.
1992 *Pueblo Nations: Eight Centuries of Pueblo Indian History.* Santa Fe: clear Light Publishers, 1992.

1998 *Pueblo Profiles: Cultural Identity Through Centuries of Change.* Santa Fe: Clear Light Publishers, 1998.

Simmons, Marc
1991 *The Last Conquistador: Juan de Oñate and the Settling of the Far Southwest.* Norman: University of Oklahoma Press.

1983 "Carros y Carretas: Vehicular Traffic on the Camino Real." In *Hispanic Arts and Ethnohistory in the Southwest,* edited by Martha Weigle, pp. 325-334. Ancient City Press, Santa Fe.

U.S. Department of Agriculture, National Resource Conservation Service
2002 (http://plants.usda.gov/cgi_bin/topics.cgi)

U.S. Department of the Interior, Bureau of Land Management.

1985 Draft Resource Management Plan, Albuquerque District, Río Puerco Resource Area, March 1985.

1985 Draft Resource Management Plan, Las Cruces District, White Sands Resource Area, March 1985.

1988 Draft Resource Management Plan, Las Cruces District, Socorro Resource Area, January 1988.

1993 Resource Management Plan, Las Cruces District, Mimbres Resource Area, December 1993.

1995 *La Cienega Area of Critical Environmental Concern: Coordinated Resource Management Plan.* Prepared by Taos Resource Area and Albuquerque District Office. [Albuquerque].

U. S. Department of the Interior, National Park Service.
1985 *Trail of Tears: National Historic Trail Feasibility Study and Environmental Assessment.* Denver.

1987 *California and Pony Express Trails: Eligibility/Feasibility Study and Environmental Assessment for National Historic Trail Authorization.* Denver.

1990 *Santa Fe National Historic Trail Comprehensive Management and Use Plan.* Denver.

1995 "Historical Dictionary of Place Names Associated with *El Camino Real de Tierra Adentro.*" Project Director, Joseph P. Sánchez; Researchers, Bruce A. Erickson and Angélica Sanchez-Clark; Assistant Researchers, Chantal Cramaussel and Salvador Alvarez; Cartographical Consultant, Carolyn Finnance, Spanish Colonial Research Center. On file at NPS offices in Albuquerque and Santa Fe, New Mexico.

1996a "Toward a Definition of the Spanish *Camino Real: Cabañas*, Villas, Armies, and the Spanish Crown", Joseph P. Sánchez, Maria Luisa Pérez González, and Bruce A. Erickson, that is on file at the Spanish Colonial Research Center and the Long Distance Trails Group Office - Santa Fe.

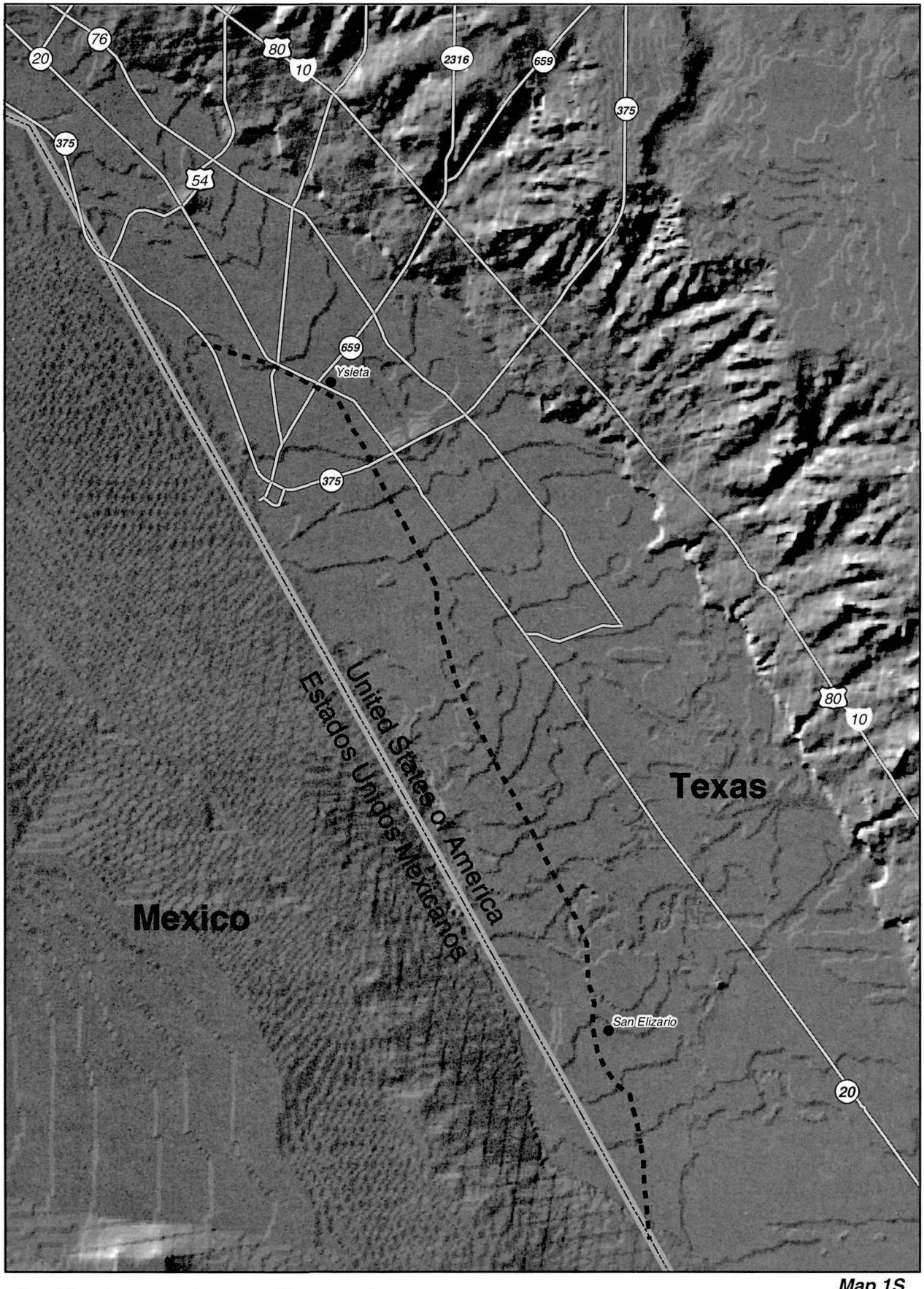
1996b El Paso Missions Special Resource Study, Texas.

1996c *Juan Bautista de Anza National Historic Trail Comprehensive Management and Use Plan / Final Environmental Impact Statement.* Pacific West Field Area, San Francisco, CA.

2000 "International Collaboration on Research, Conservation, and Dissemination of the Shared Cultural and Natural Heritage United States- Mexico Accomplishments 1994- 2000" National Park Service and Instituto Nacional de Antropología e Historia, 2000.

1991 National Park Service and Santa Fe Trail Association Certification Guide, Santa Fe National Historic Trail. Santa Fe, NM.

MAP SUPPLEMENT



0 0.5 1 2 3 4 Miles

Map 1S
El Camino Real de Tierra Adentro NHT

Legend

- Definite Location
- Probable Location
- Speculative Location

N

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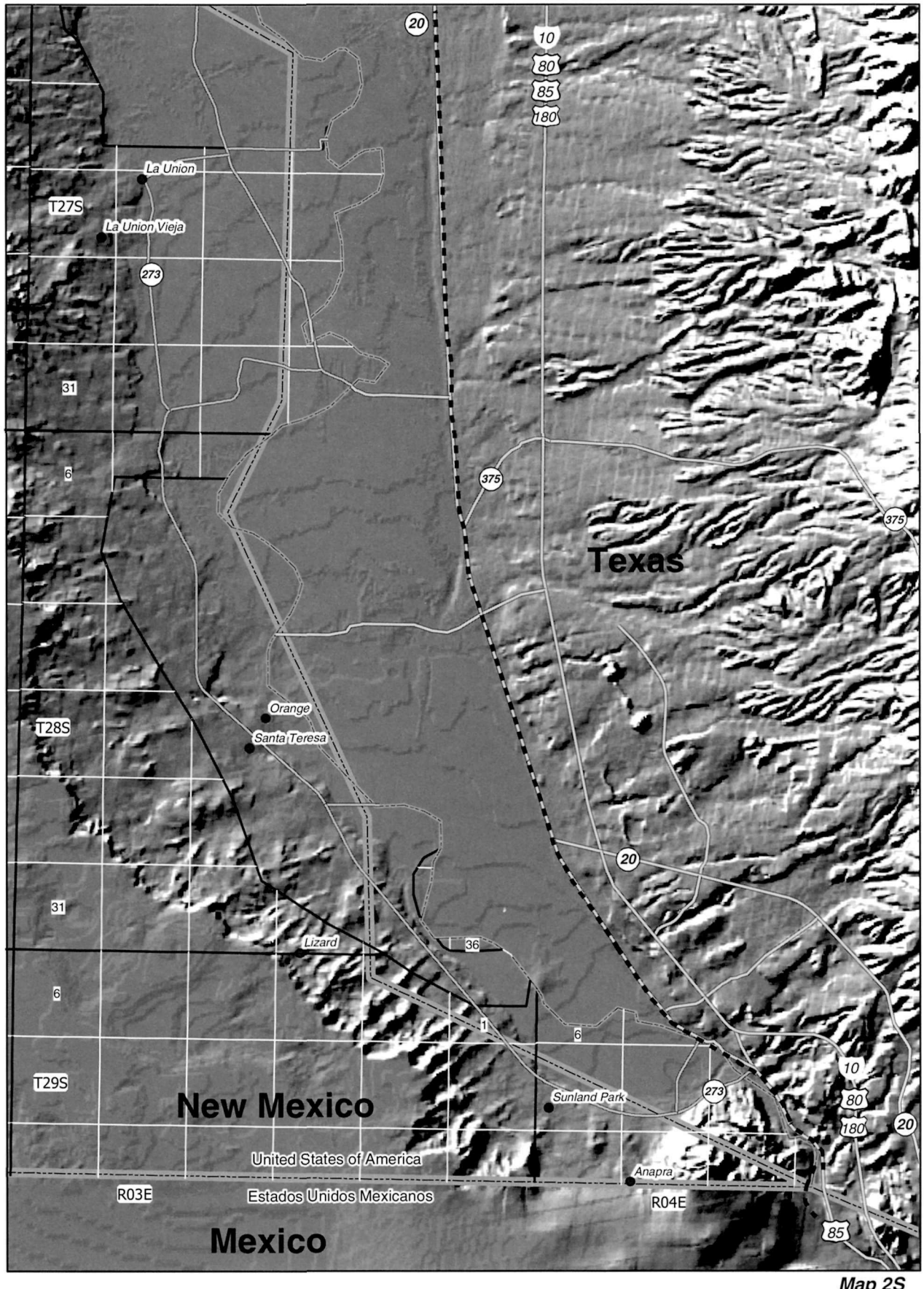

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Map 2S
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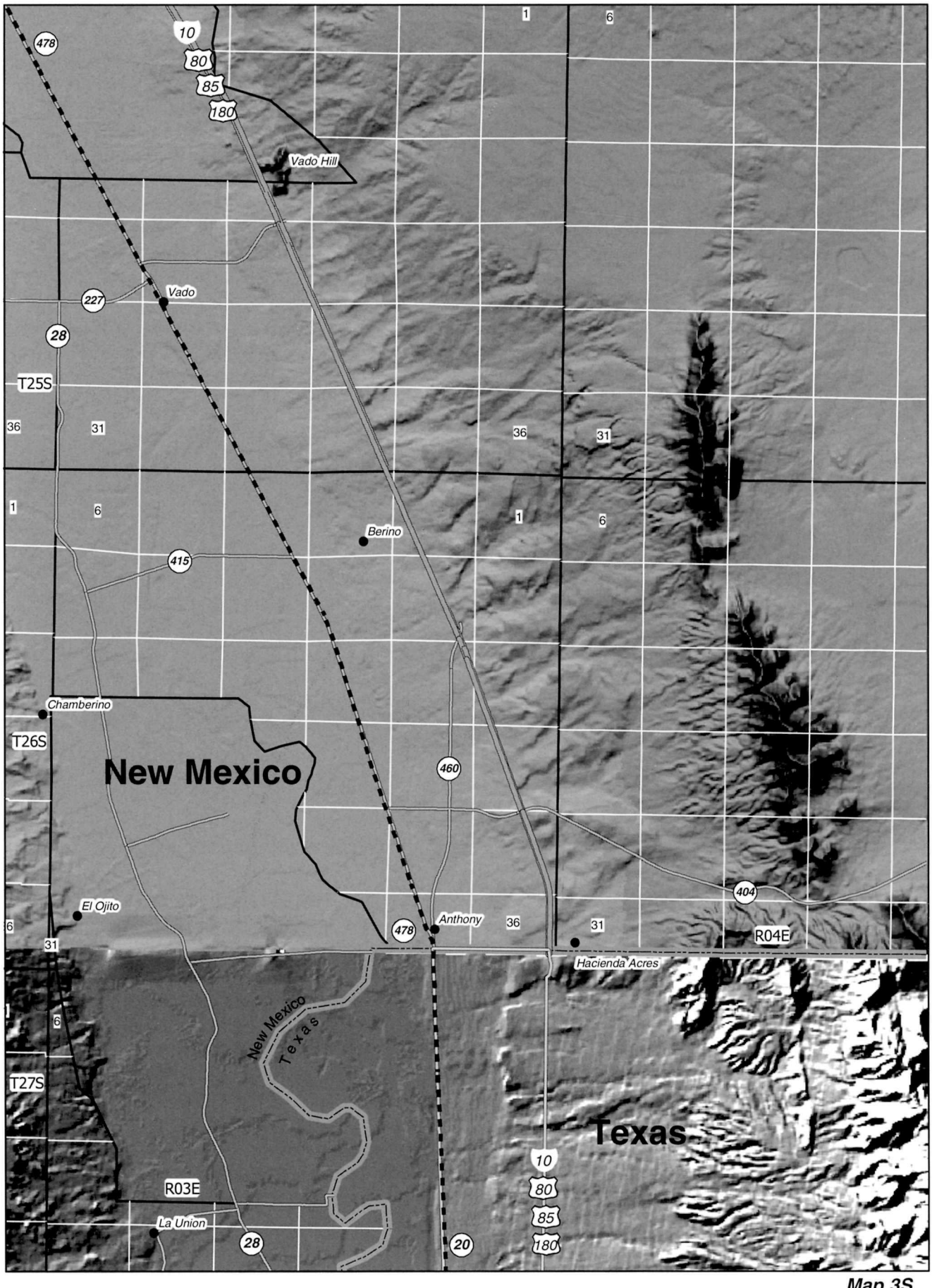

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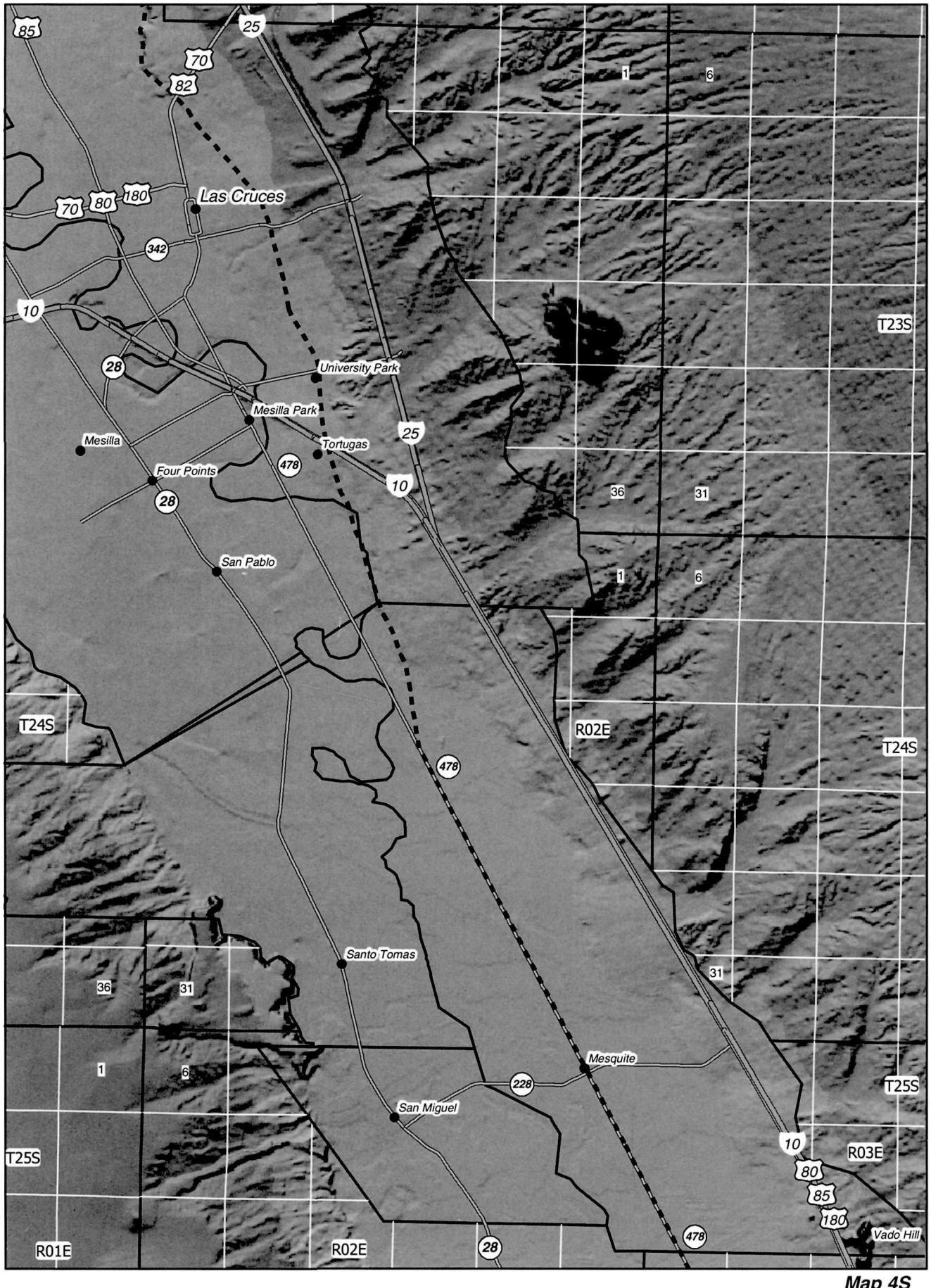

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Map 4S
El Camino Real de Tierra Adentro NHT

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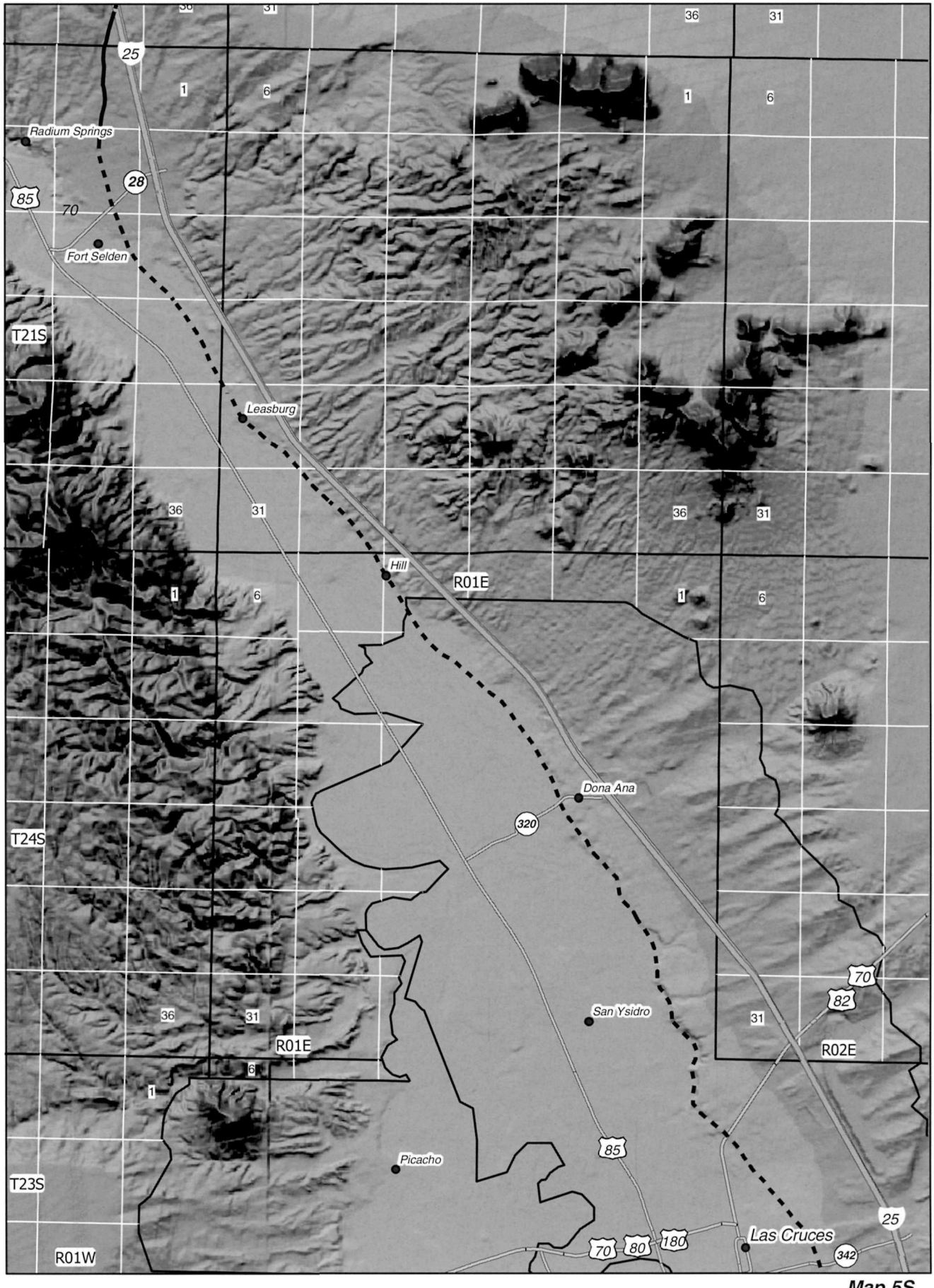

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Map 5S
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- Speculative Location

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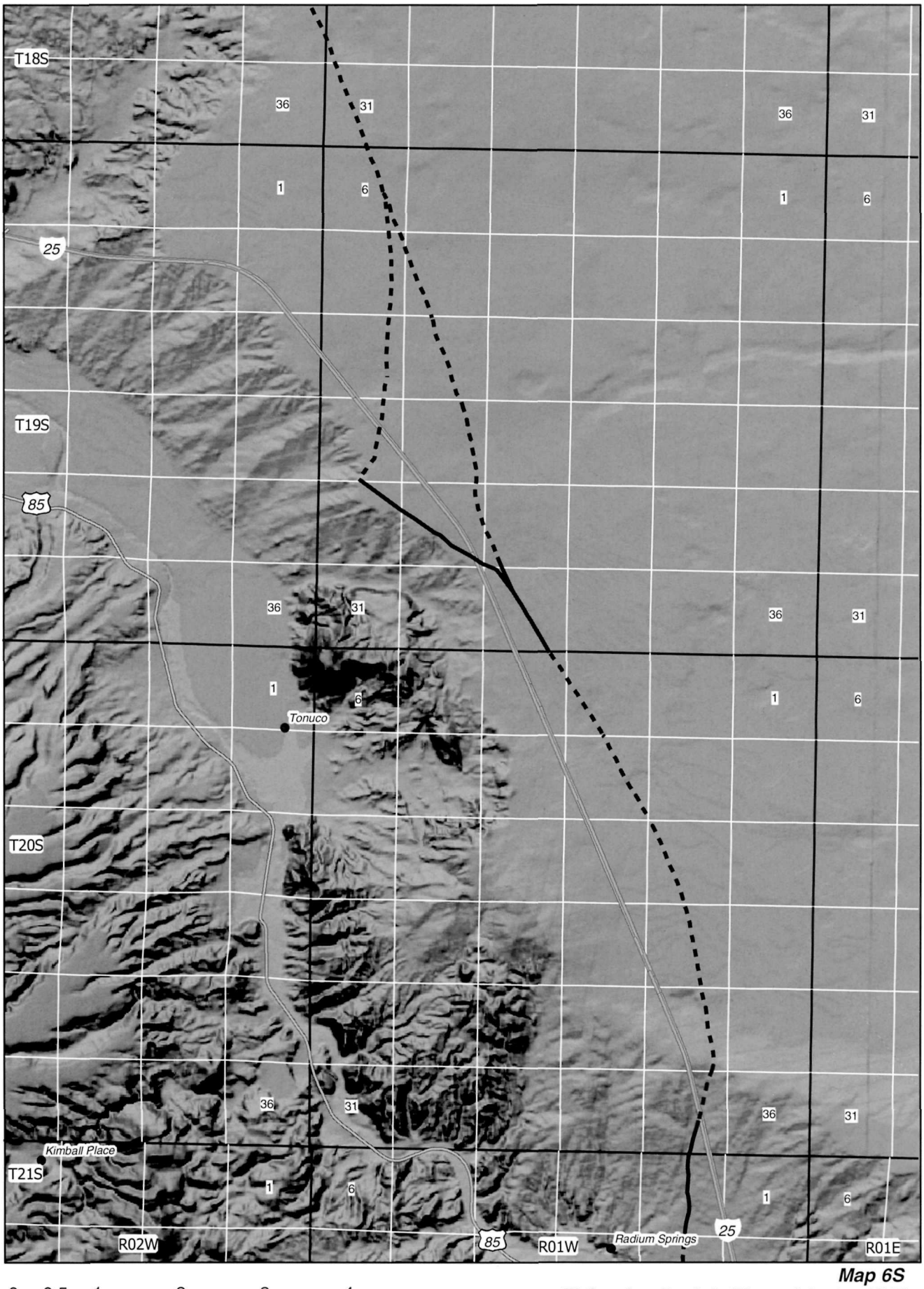

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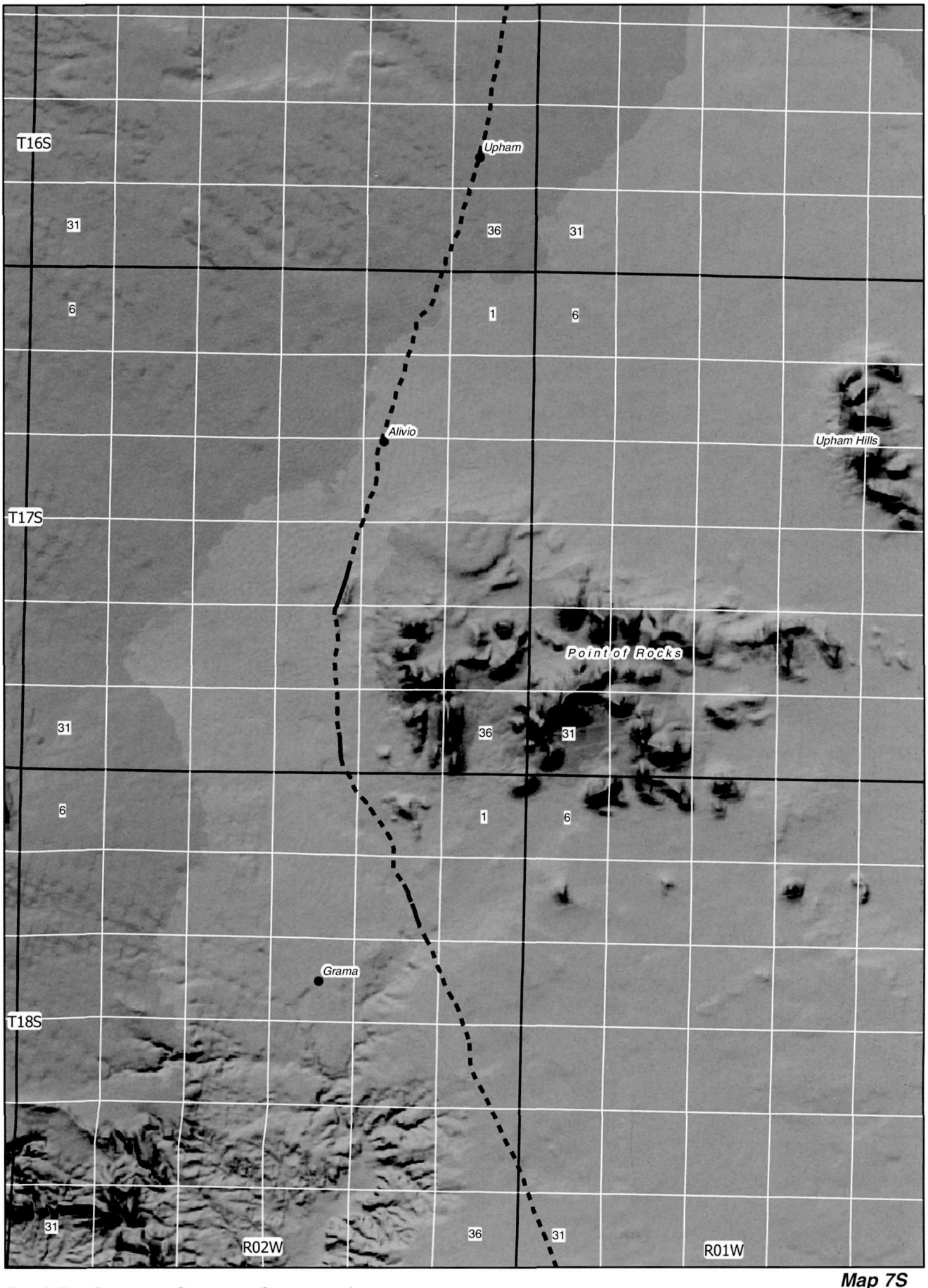

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Map 7S
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- Speculative Location

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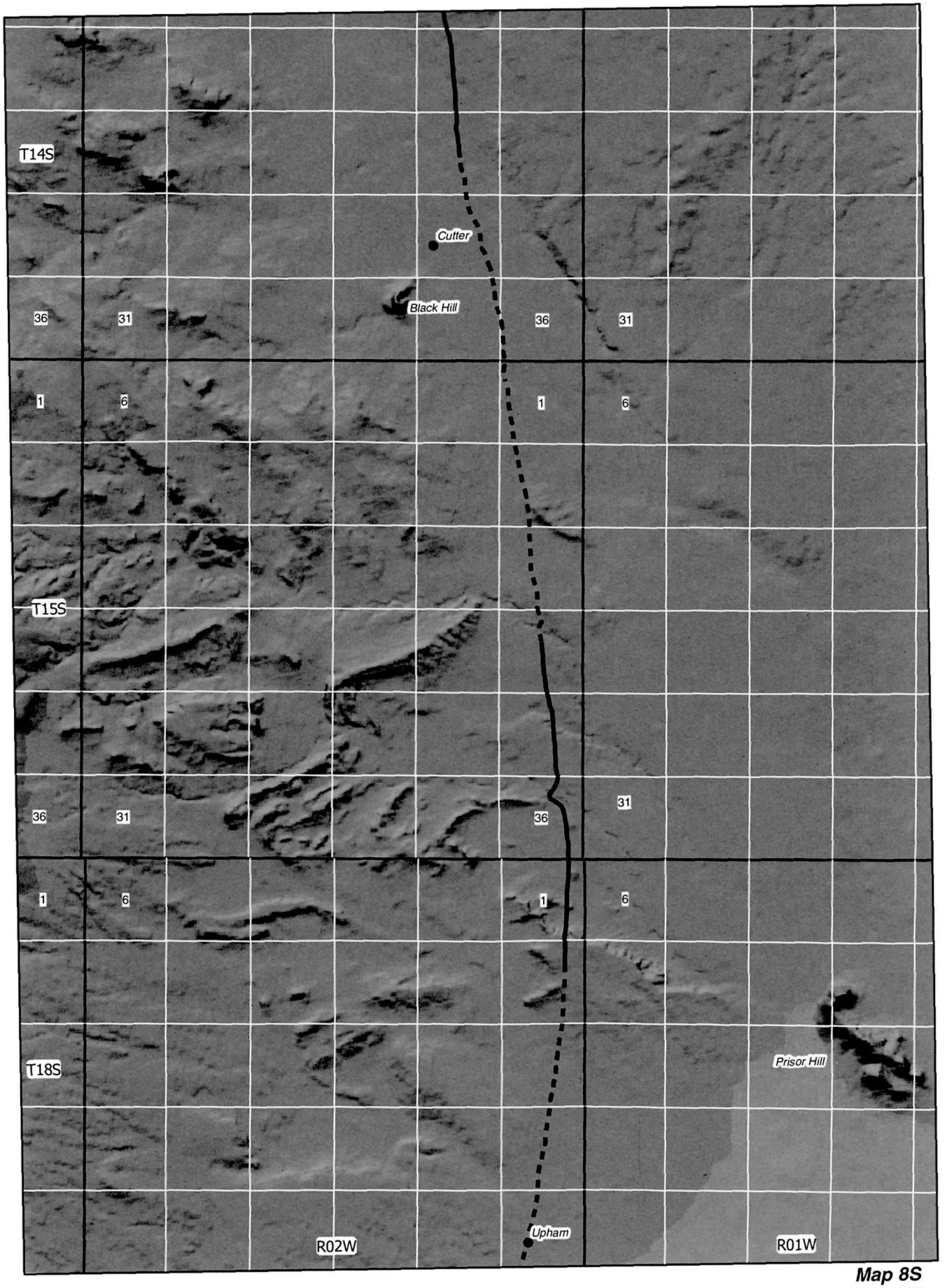

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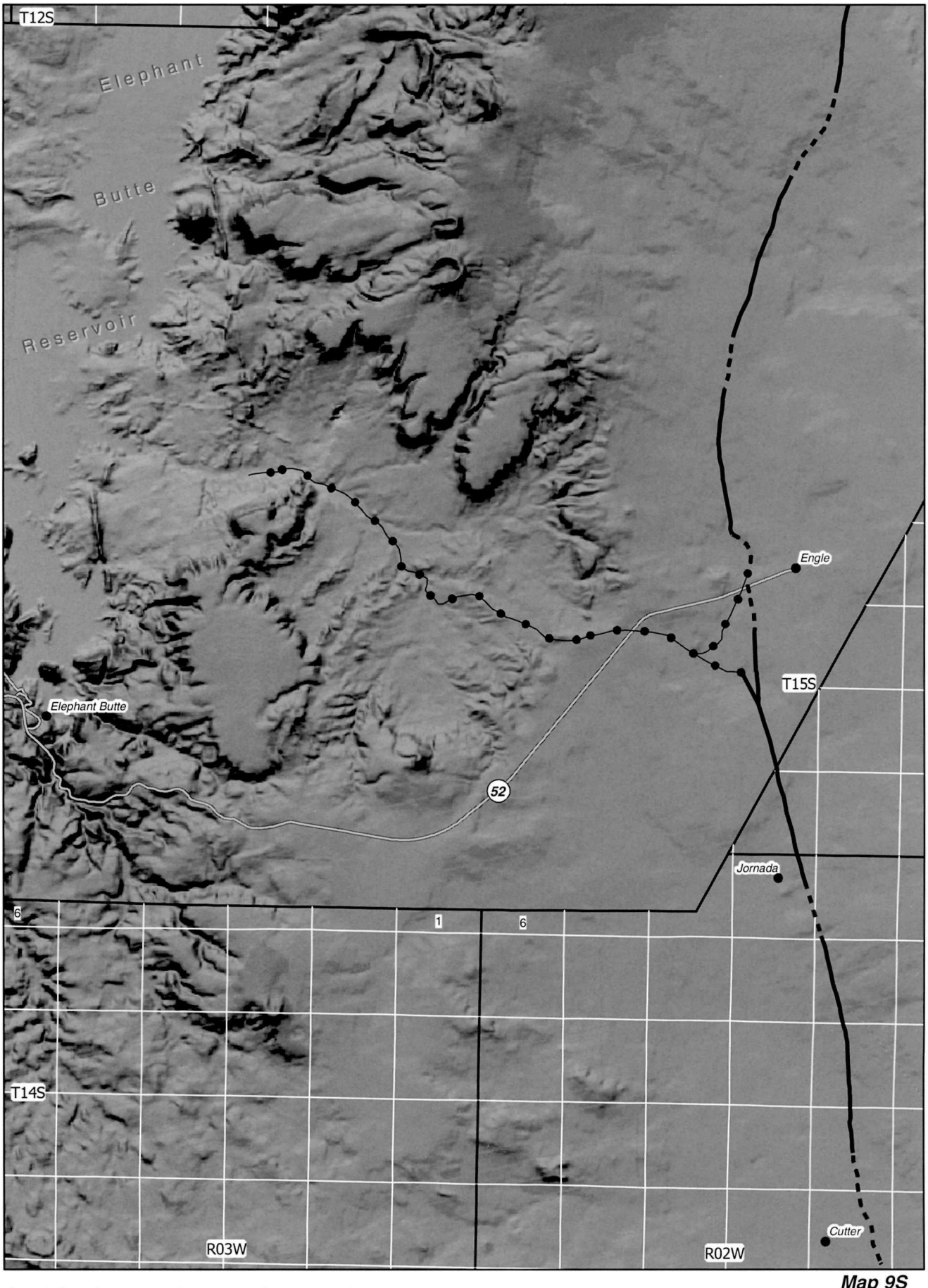

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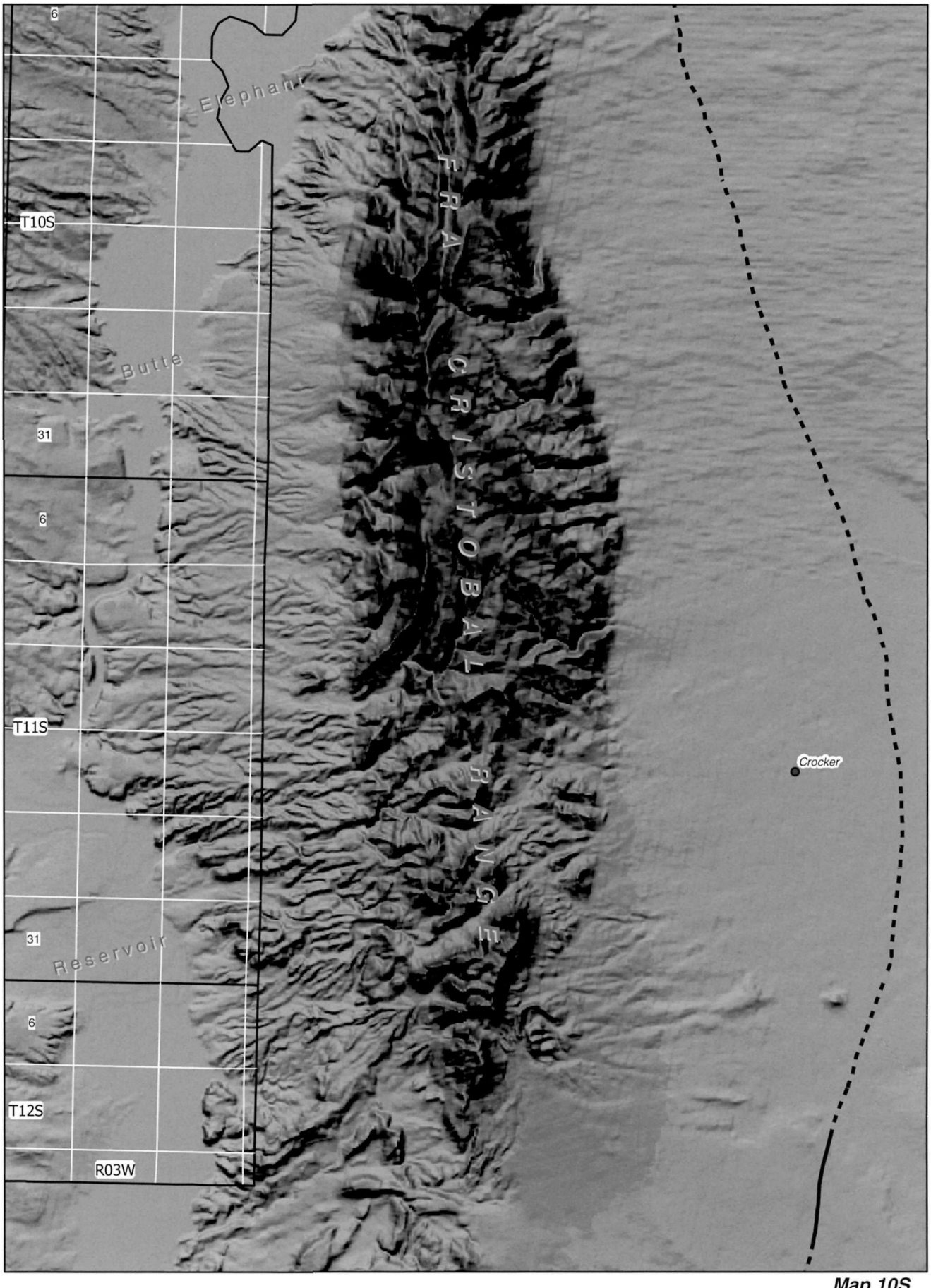

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Map 10S
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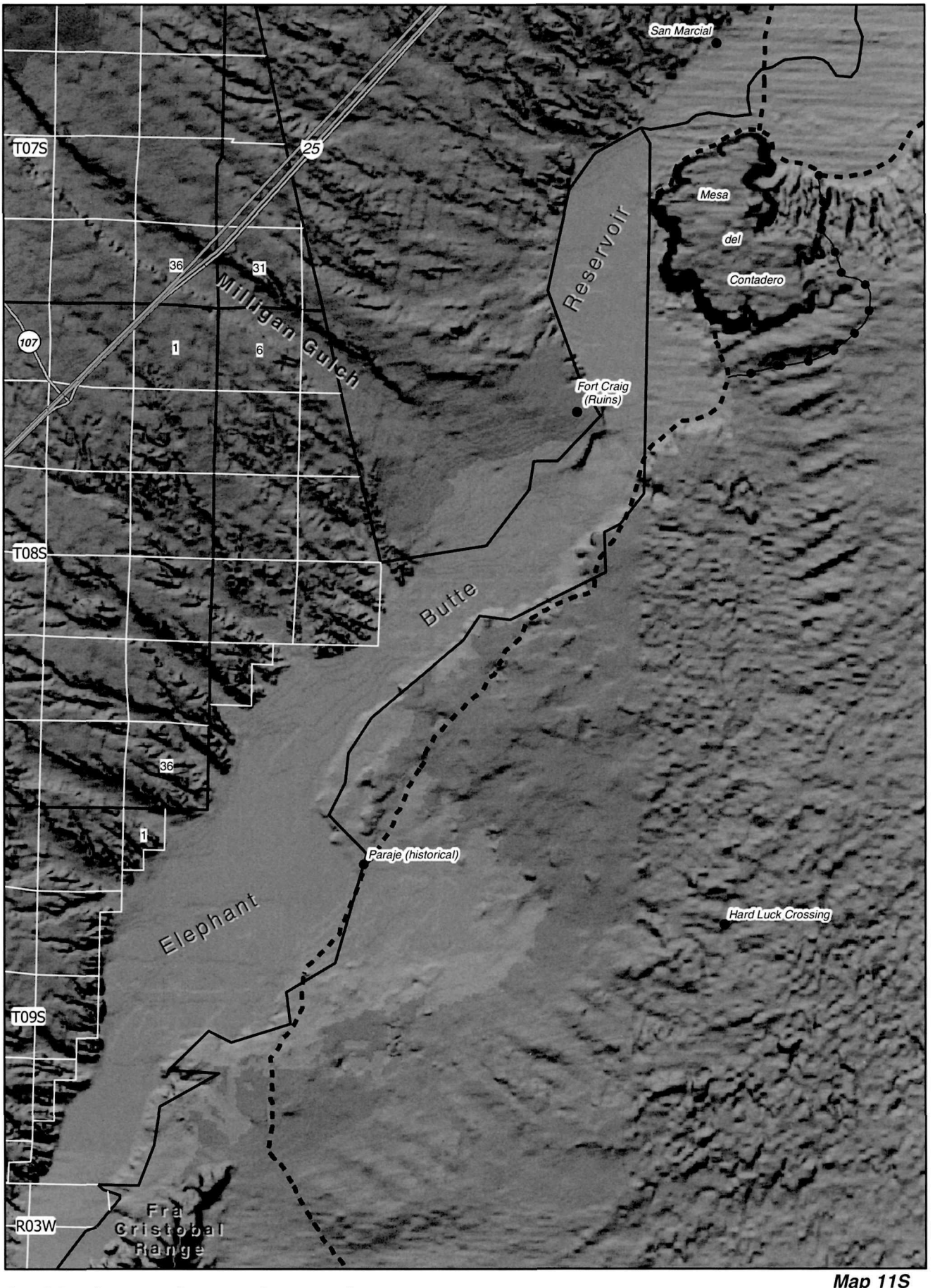

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Map 11S
El Camino Real de Tierra Adentro NHT

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- Definite Location
- Probable Location
- Speculative Location

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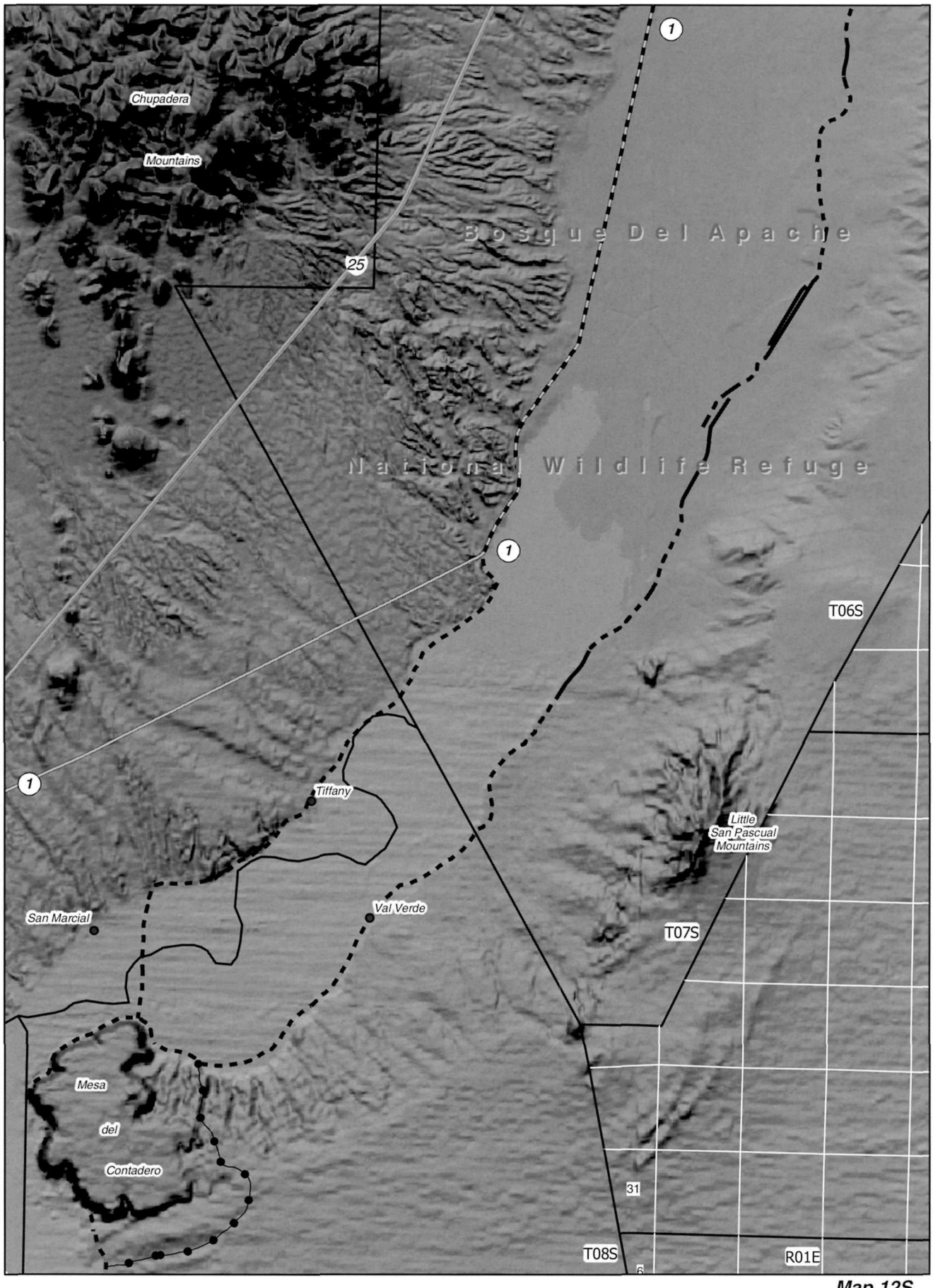

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Map 12S
El Camino Real de Tierra Adentro NHT

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- Definite Location
- Probable Location
- Speculative Location

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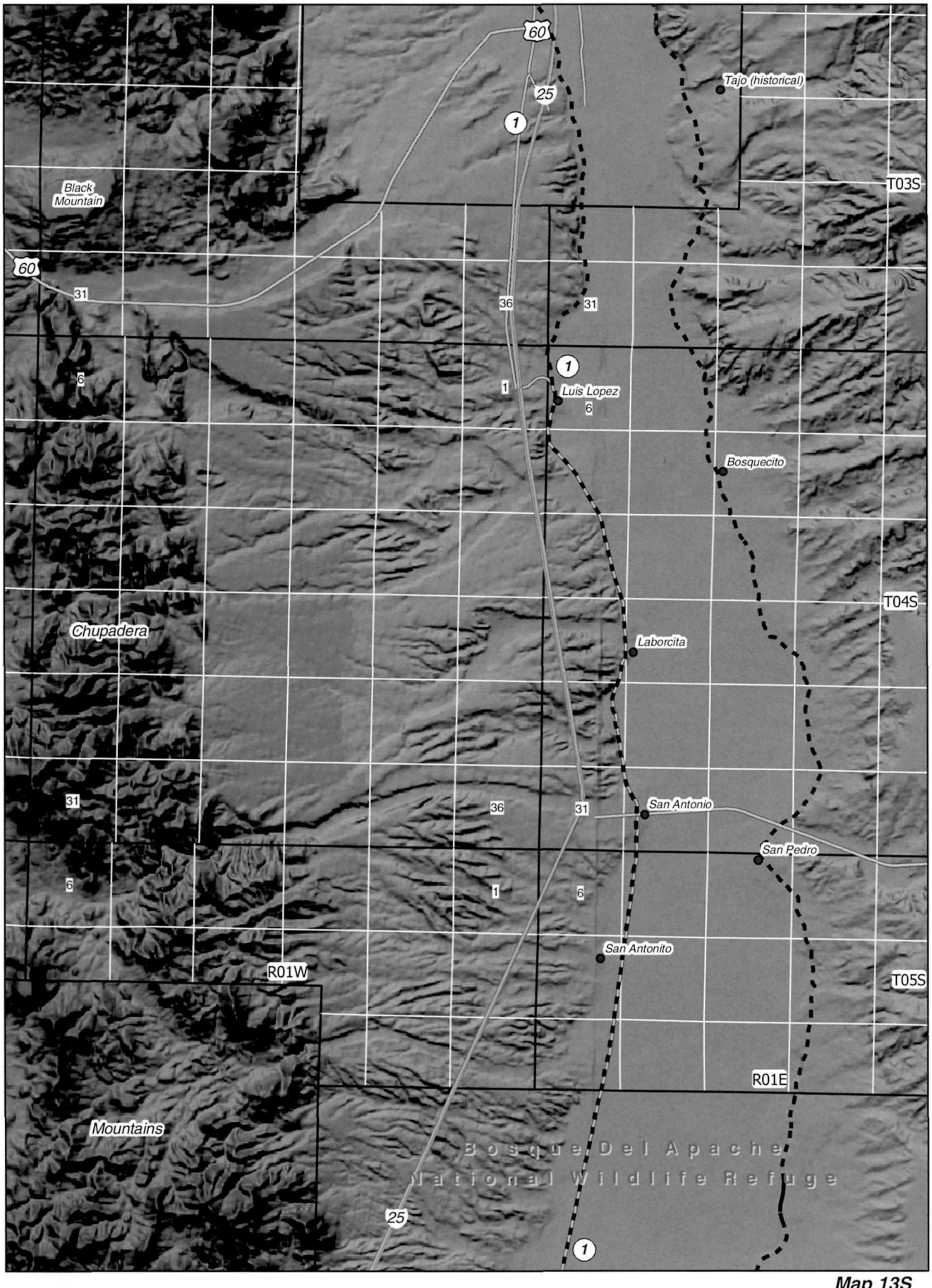

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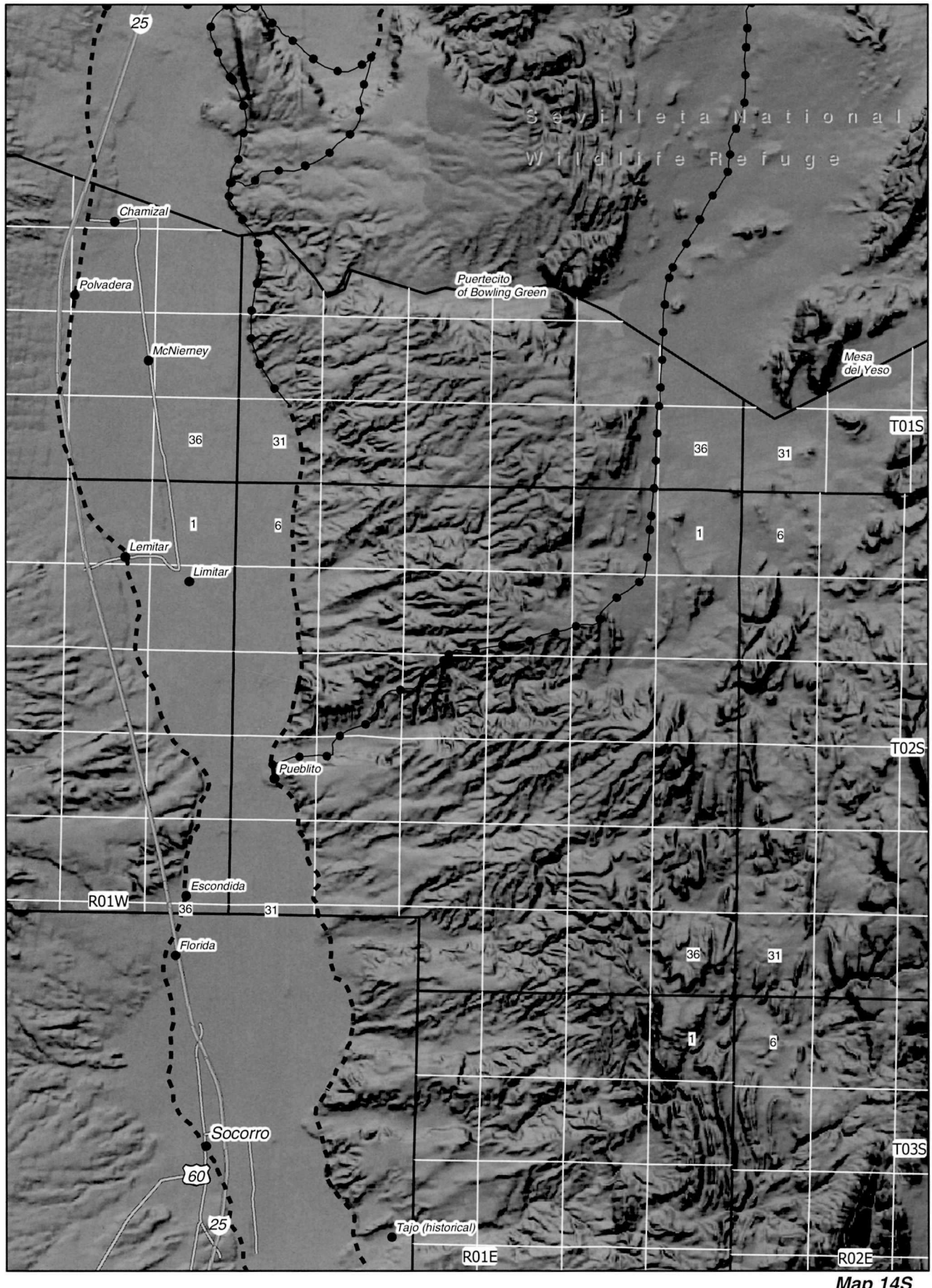
Map 13S
El Camino Real de Tierra Adentro NHT

Legend

- Definite Location
- Probable Location
- Speculative Location

N



0 0.5 1 2 3 4 Miles

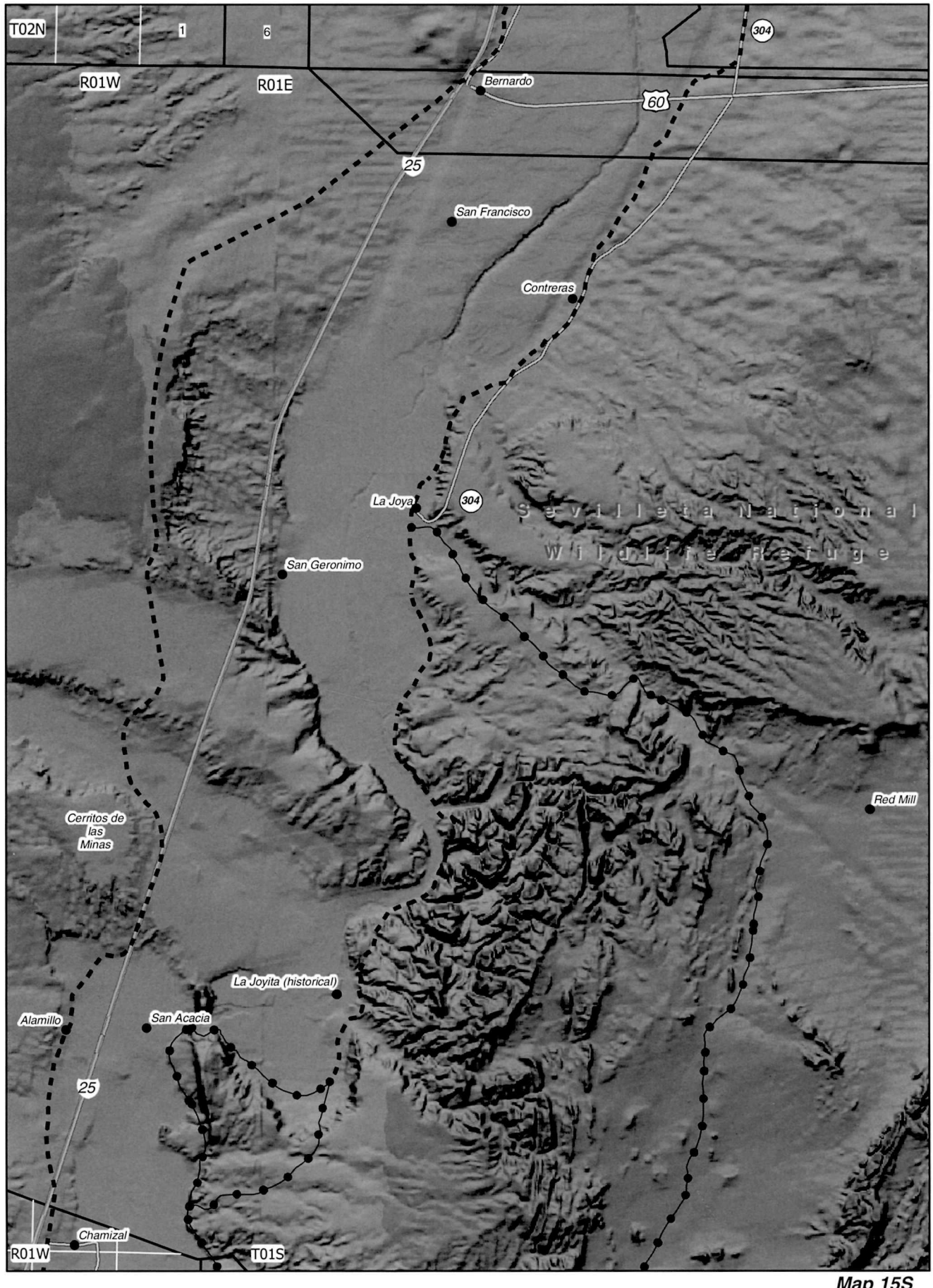
Map 14S
El Camino Real de Tierra Adentro NHT

Legend

- Definite Location
- Probable Location
- Speculative Location

N

No warranty is made by the Bureau of Land Management or the National Park service as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by BLM. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.



0 0.5 1 2 3 4 Miles

Map 15S
El Camino Real de Tierra Adentro NHT

Legend

- Definite Location
- Probable Location
- Speculative Location

N

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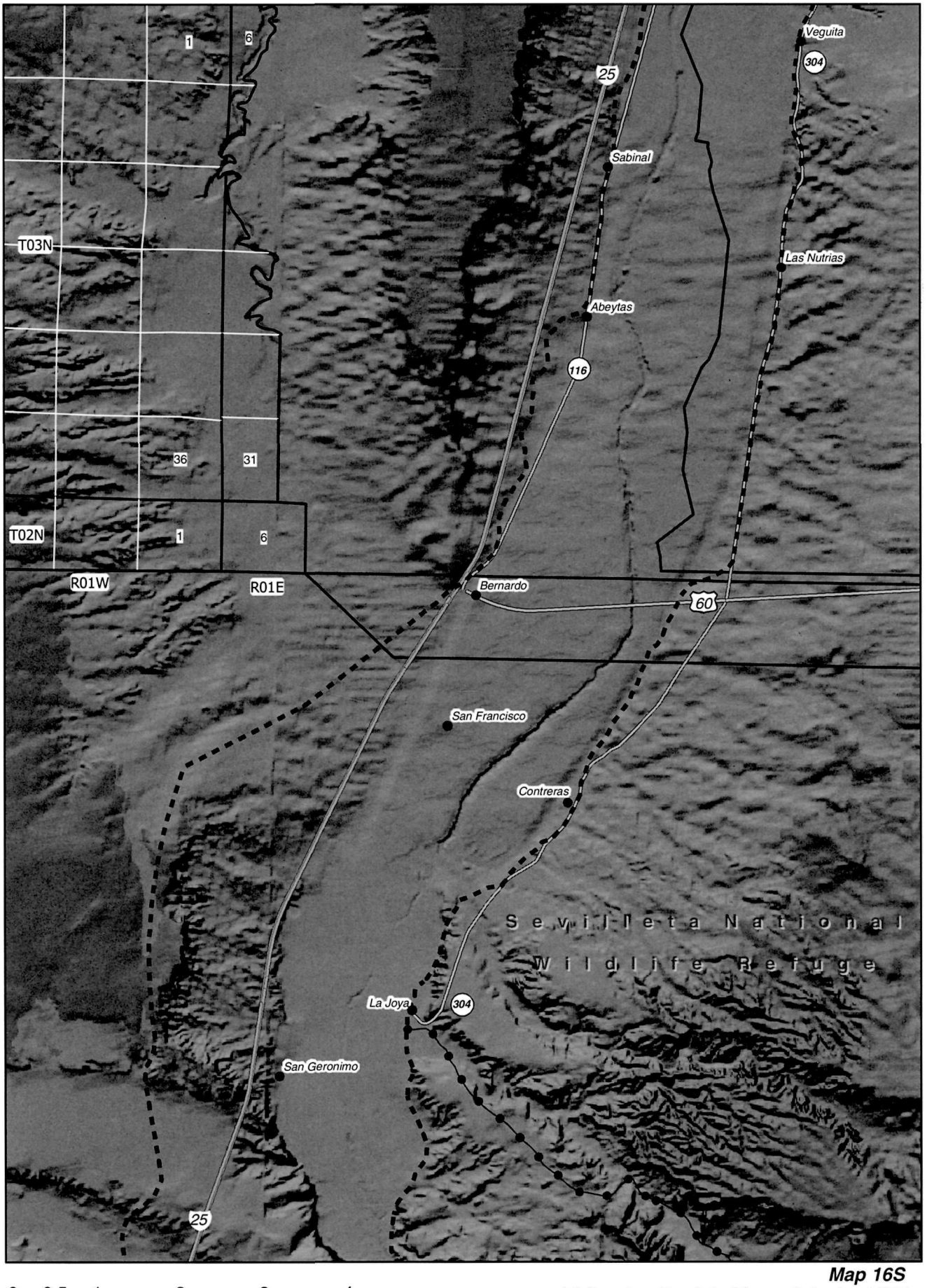

Map 16S
El Camino Real de Tierra Adentro NHT

0 0.5 1 2 3 4 Miles

Legend

- Definite Location
- Probable Location
- Speculative Location

N

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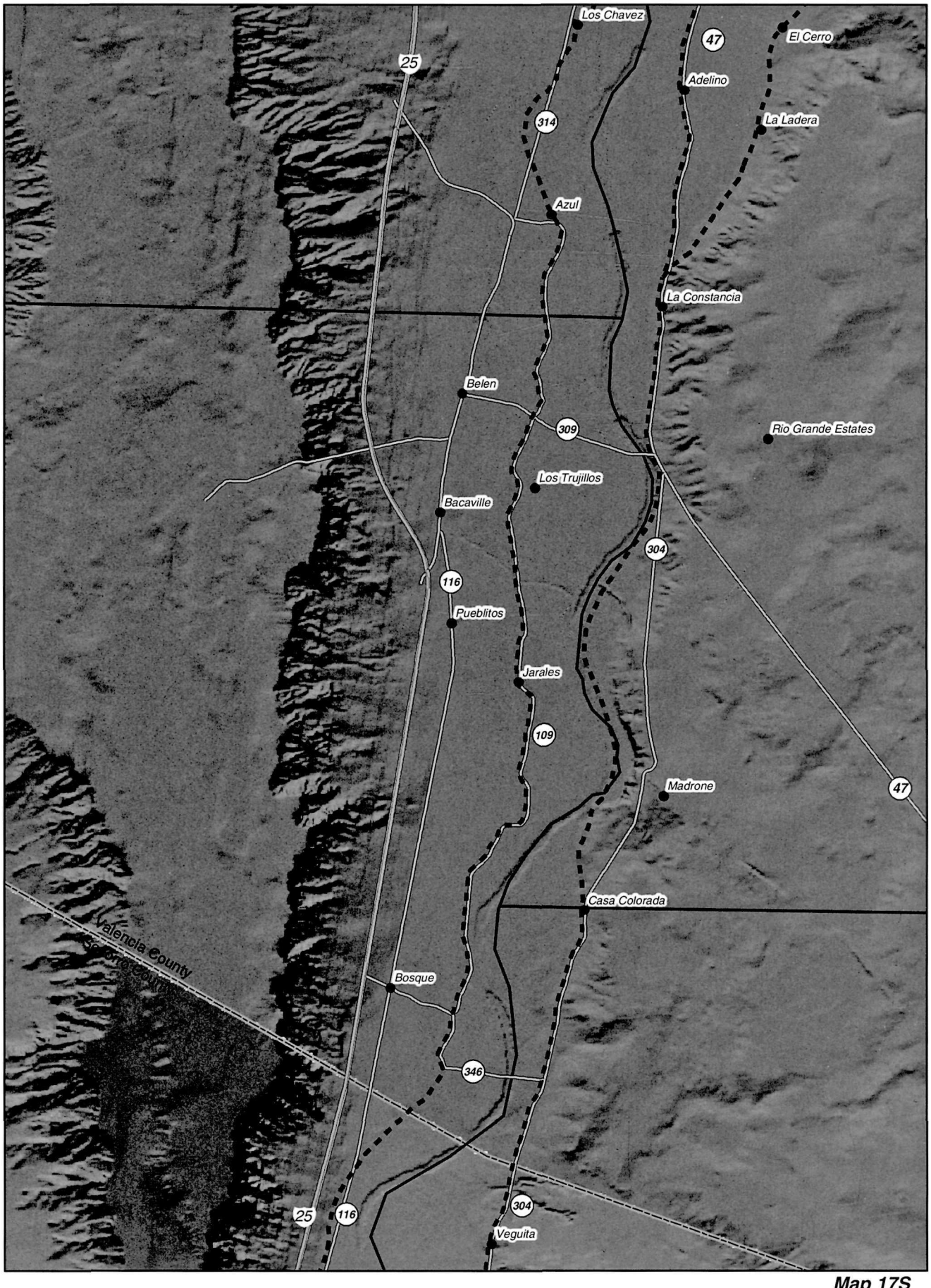

0 0.5 1 2 3 4 Miles

Map 17S
El Camino Real de Tierra Adentro NHT

Legend

- Definite Location
- Probable Location
- Speculative Location

N

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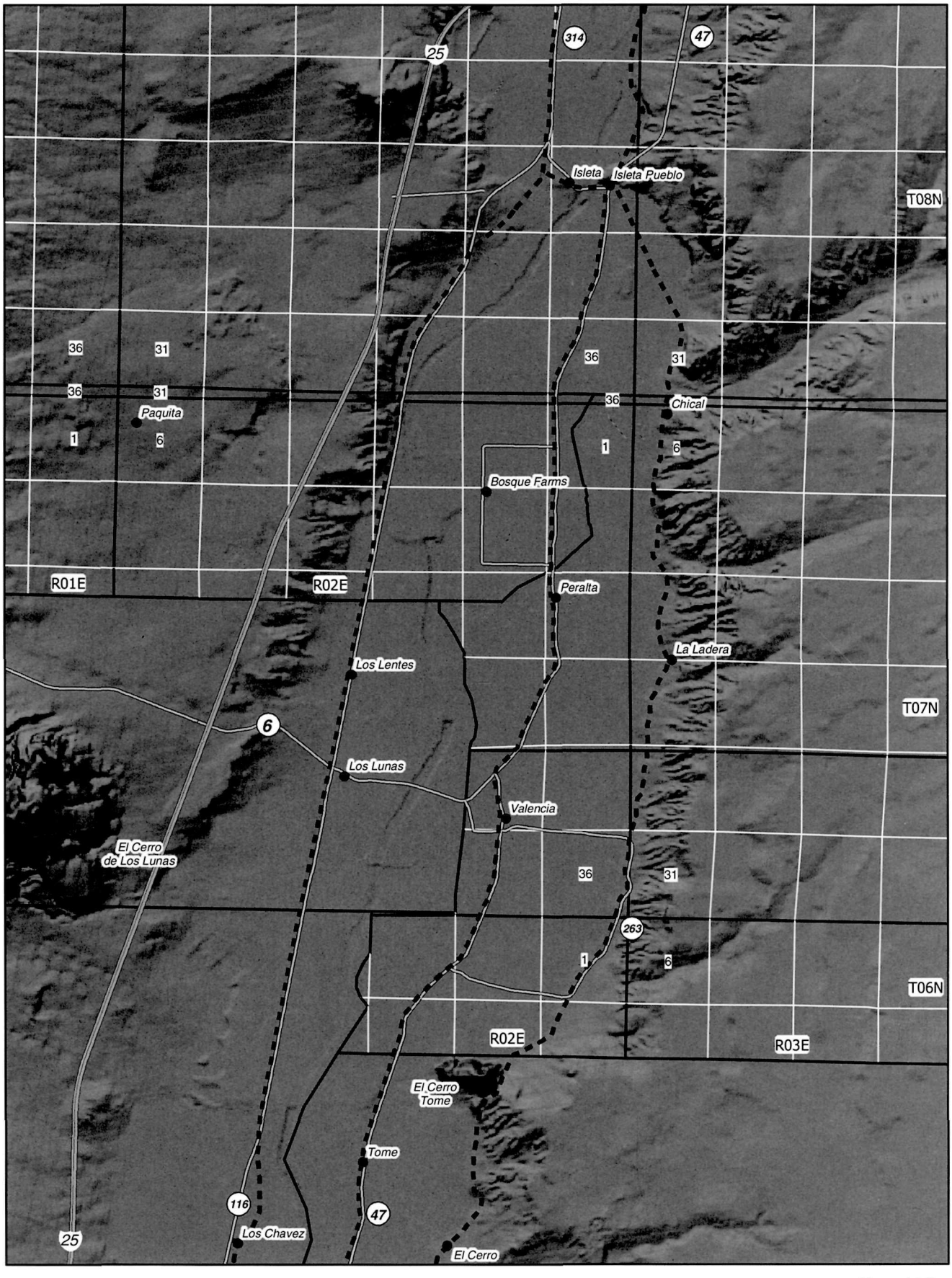

0 0.5 1 2 3 4 Miles

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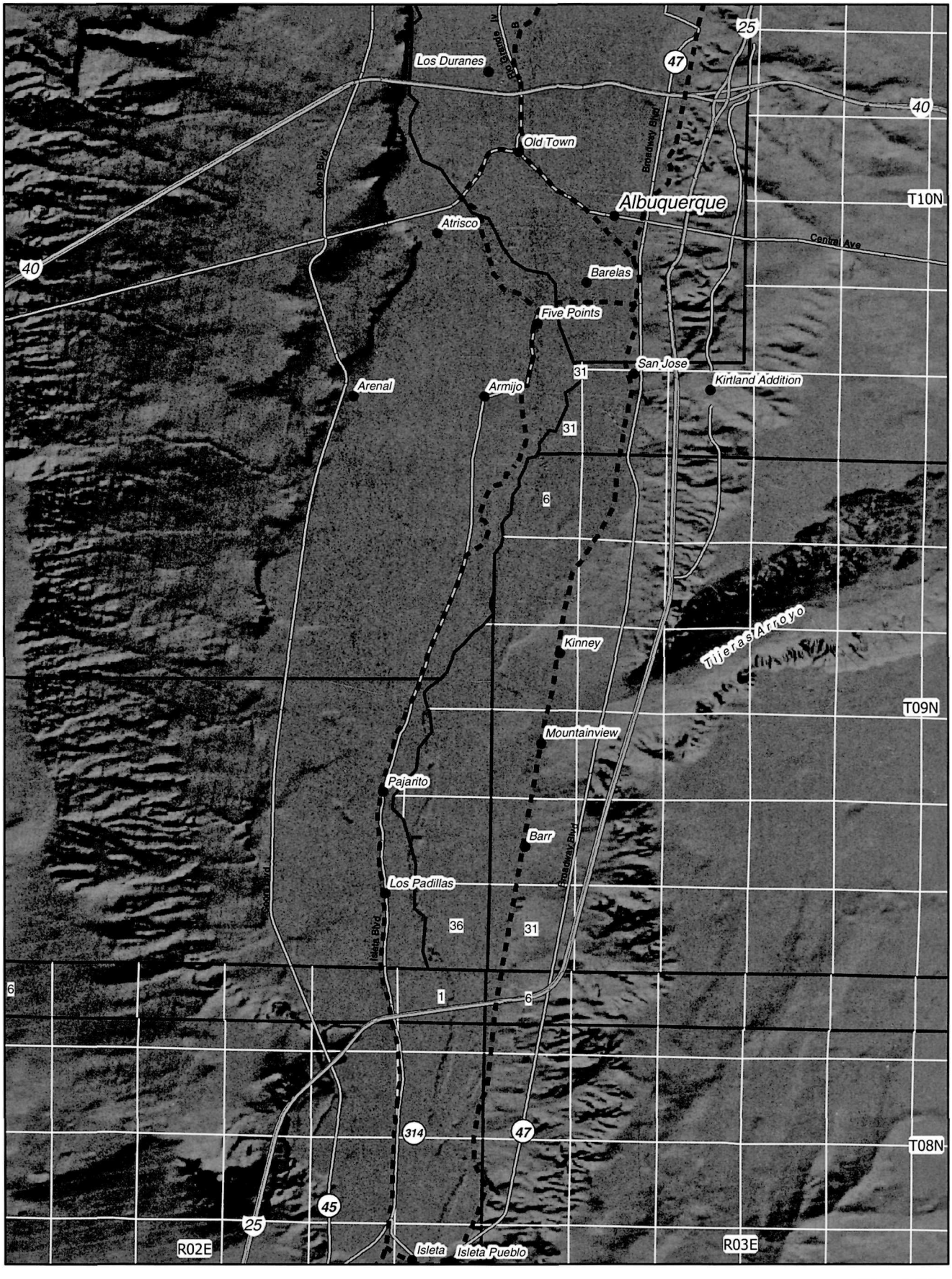
Map 18S
El Camino Real de Tierra Adentro NHT

Legend

- Definite Location
- Probable Location
- Speculative Location

N



0 0.5 1 2 3 4 Miles

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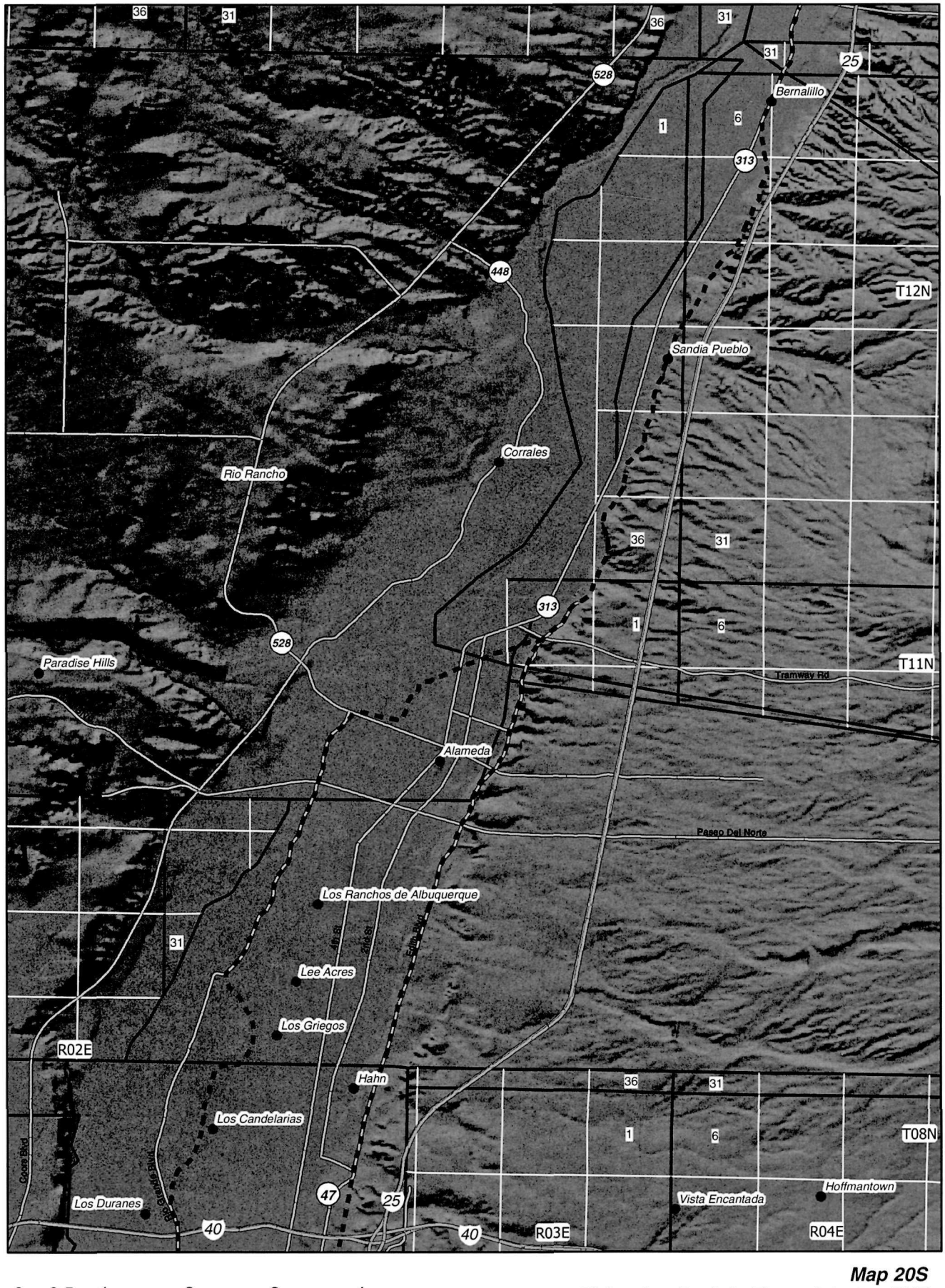
Map 19S
El Camino Real de Tierra Adentro NHT

Legend

- Definite Location
- Probable Location
- Speculative Location

N



0 0.5 1 2 3 4 Miles

Map 20S
El Camino Real de Tierra Adentro NHT

Legend

- Definite Location
- Probable Location
- Speculative Location

N

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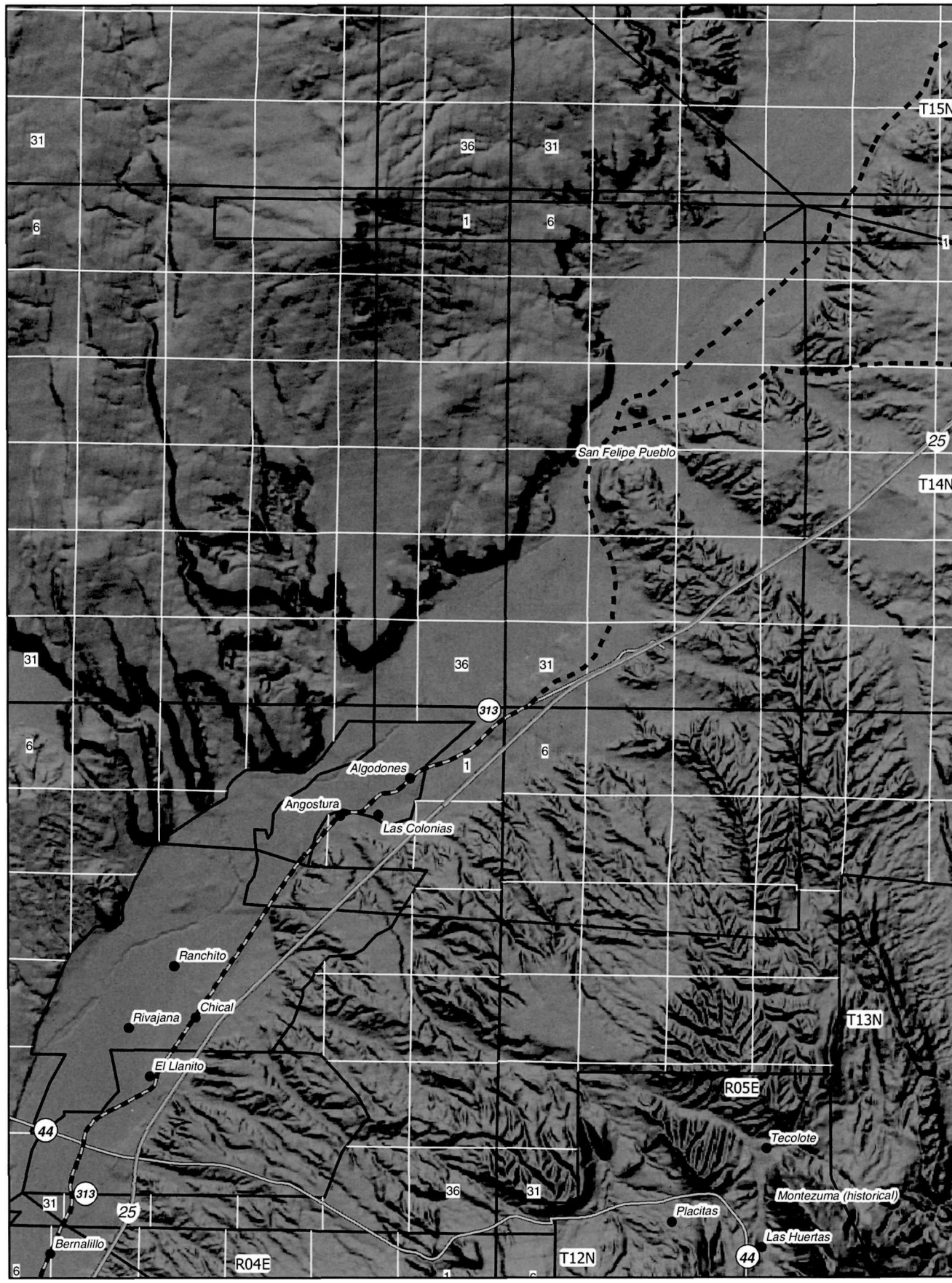

0 0.5 1 2 3 4 Miles

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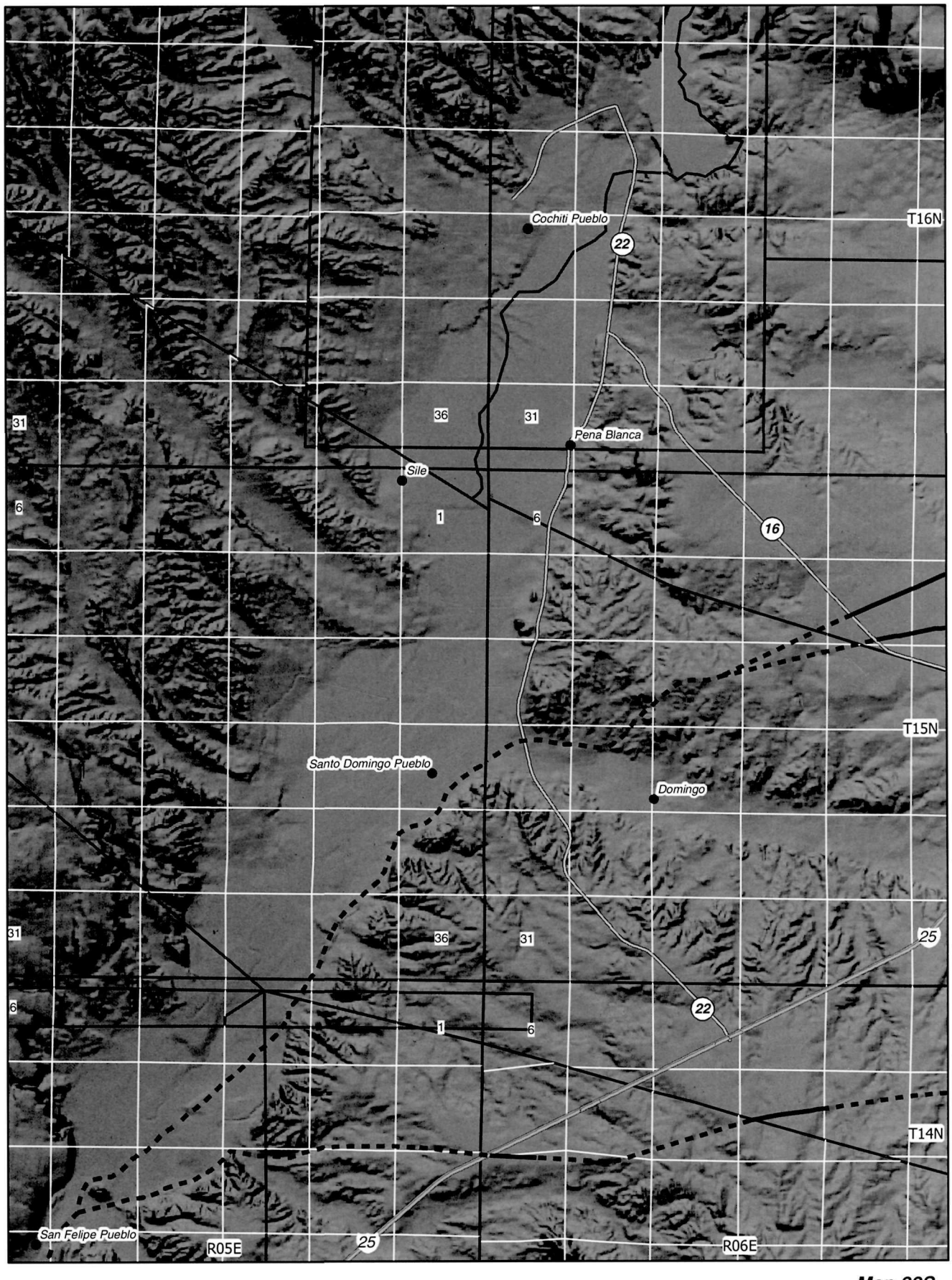
Map 21S
El Camino Real de Tierra Adentro NHT

Legend

- Definite Location
- Probable Location
- Speculative Location

N



0 0.5 1 2 3 4 Miles

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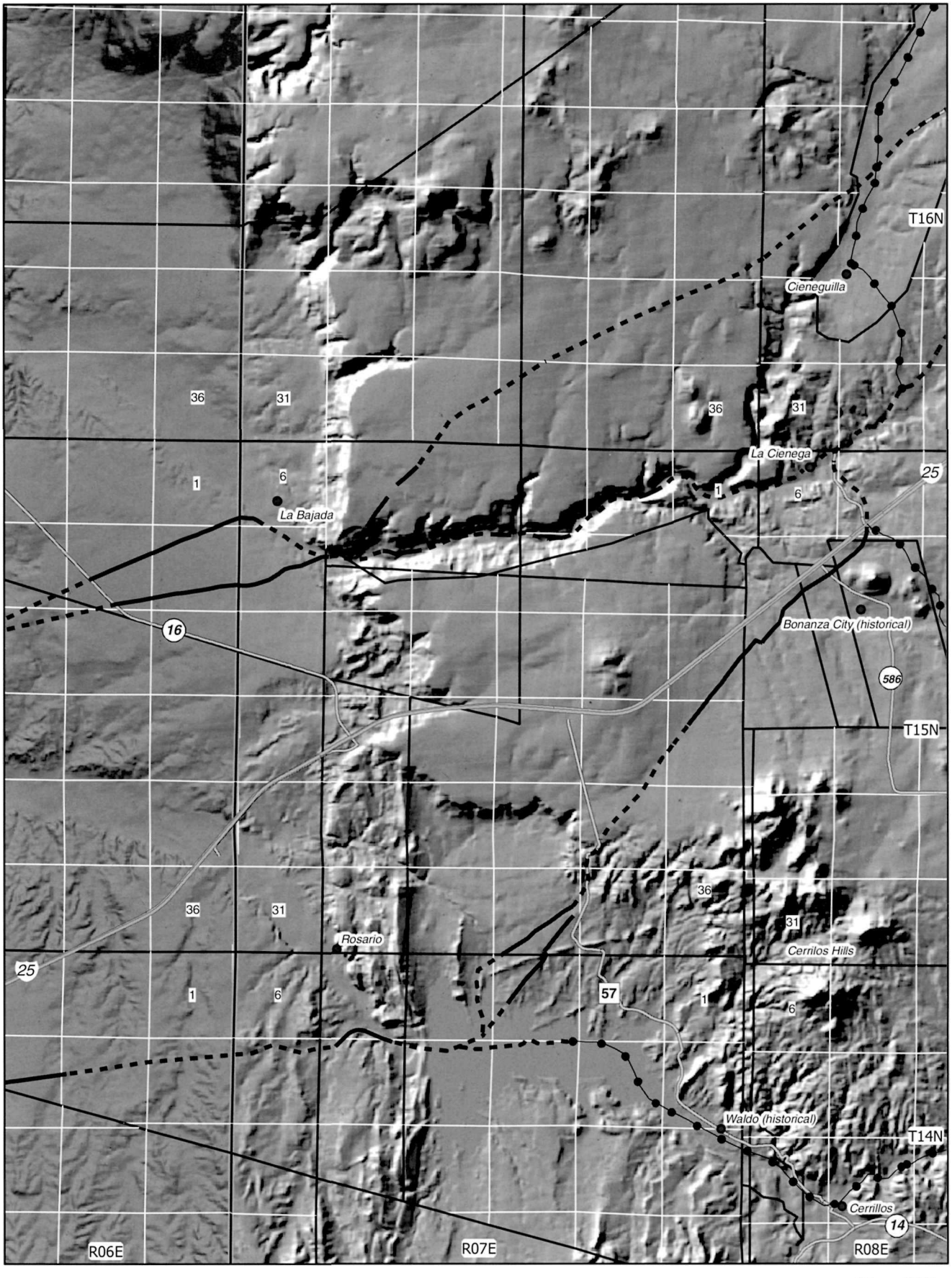
Map 22S
El Camino Real de Tierra Adentro NHT

Legend

- Definite Location
- Probable Location
- Speculative Location

N



0 0.5 1 2 3 4 Miles

Map 23S
El Camino Real de Tierra Adentro NHT

Legend

- Definite Location
- Probable Location
- Speculative Location

N

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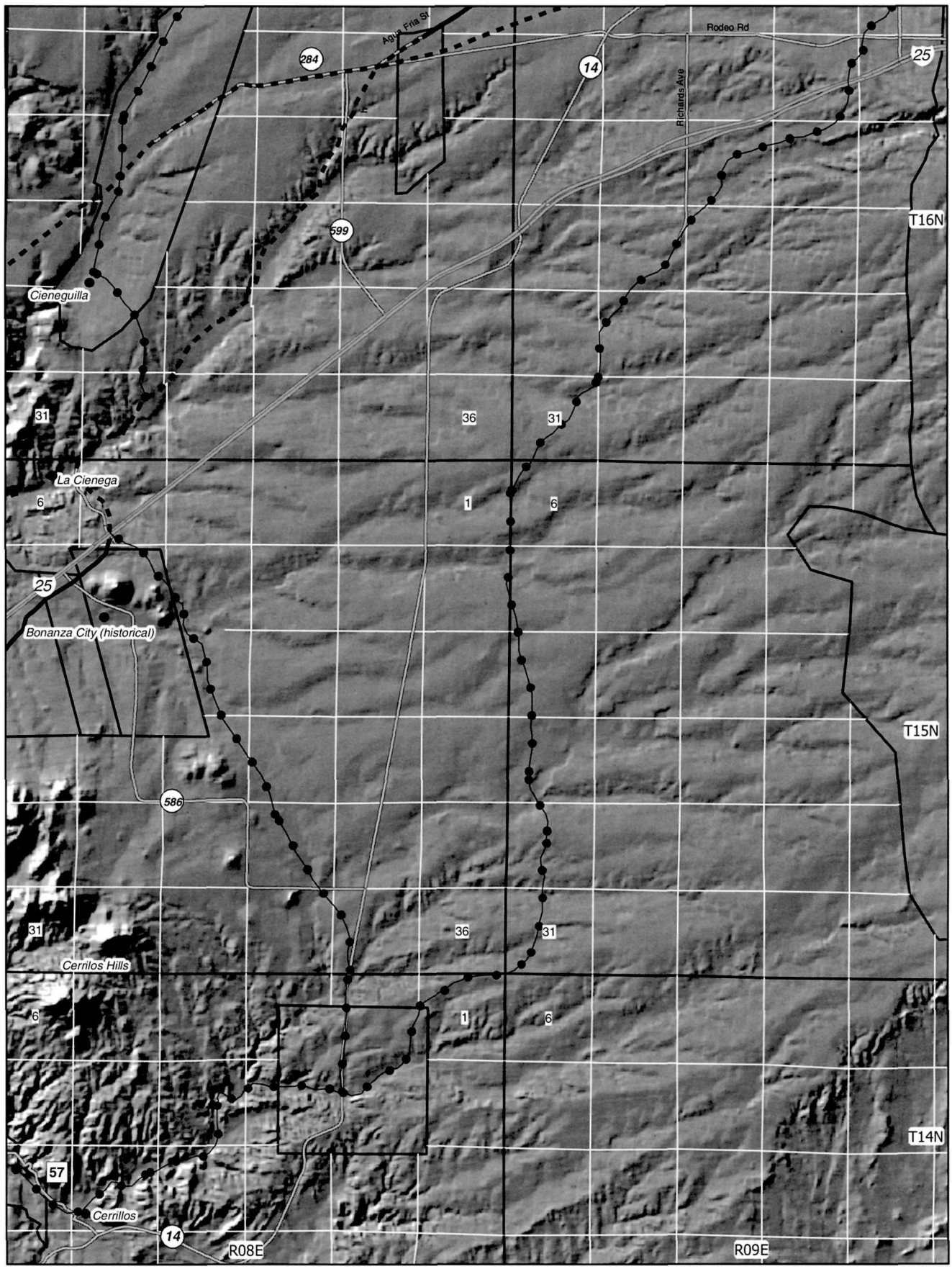

0 0.5 1 2 3 4 Miles

Map 24S
El Camino Real de Tierra Adentro NHT

Legend

- Definite Location
- Probable Location
- Speculative Location

N

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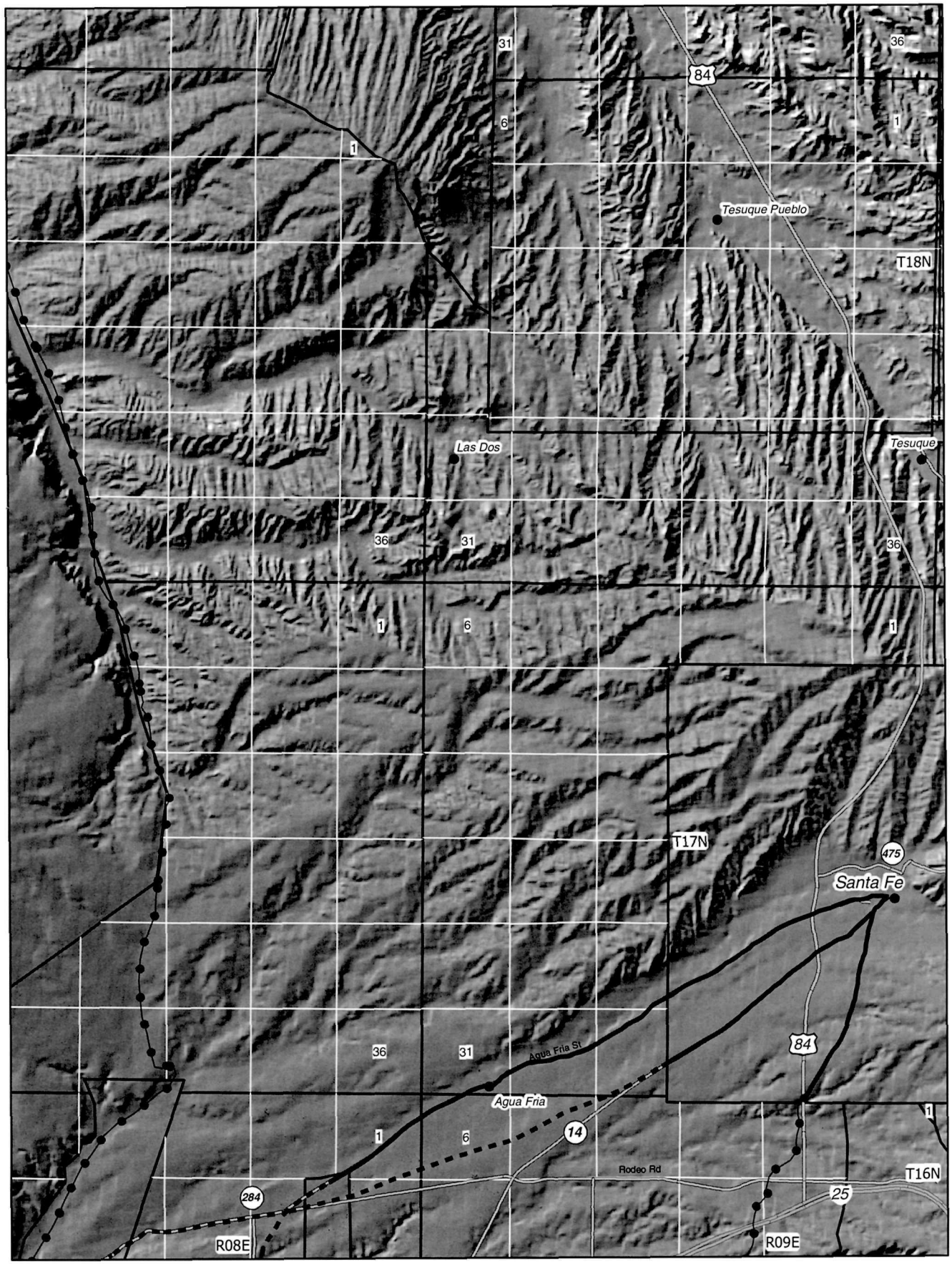

0 0.5 1 2 3 4 Miles

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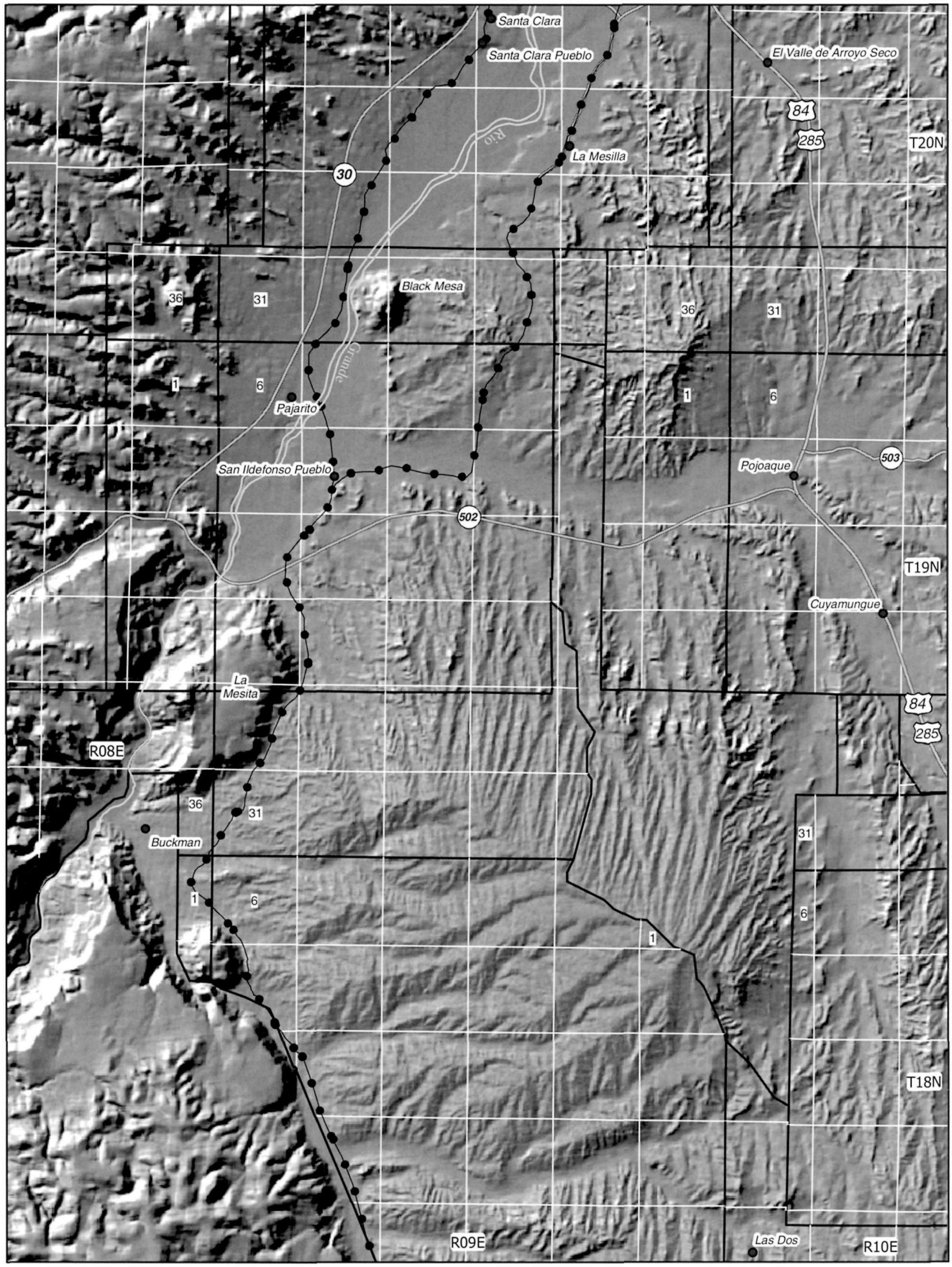
Map 25S
El Camino Real de Tierra Adentro NHT

Legend

- Definite Location
- Probable Location
- Speculative Location

N



0 0.5 1 2 3 4 Miles

Map 26S
El Camino Real de Tierra Adentro NHT

Legend

- Definite Location
- Probable Location
- Speculative Location

N

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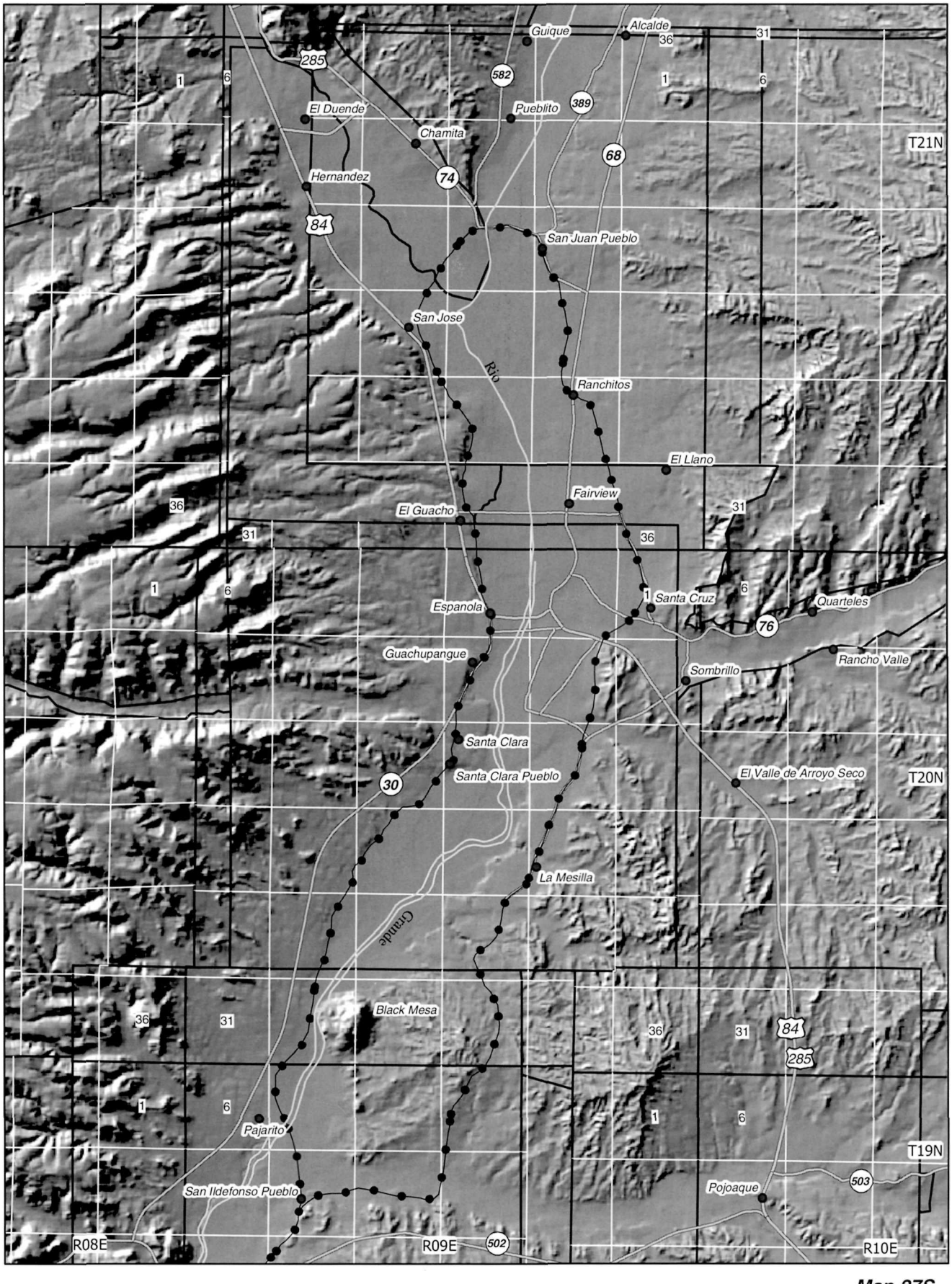

0 0.5 1 2 3 4 Miles

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Map 27S
El Camino Real de Tierra Adentro NHT

Legend

- Definite Location
- Probable Location
- Speculative Location

N

As the the nationís principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewartship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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