

# Appendix G: Historic Resources Reconnaissance Survey

---



**HISTORIC RESOURCES RECONNAISSANCE SURVEY  
EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS**



**Prepared by  
Ecological Communications Corporation**

**Prepared for  
Poznecki-Camarillo, Inc.  
The United States Department of State  
The Surface Transportation Board**

**November 2011**

**HISTORIC RESOURCES RECONNAISSANCE SURVEY  
EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS**

by  
**Thomas Eisenhour and Kurt Korfmacher**

Prepared for  
**Poznecki-Camarillo, Inc.,  
The United States Department of State  
and  
The Surface Transportation Board**

Prepared by  
**Ecological Communications Corporation  
Austin, Texas**



**November 2011**

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

**PROJECT INTRODUCTION AND DESCRIPTION**

Eagle Pass Railroad, LLC (EPRR) proposes to construct a 7.6-mile-long rail line in Maverick County, Texas, including an international bridge near Piedras Negras, Coahuila, Mexico and Eagle Pass, Texas, United States (see Attachment 1 for a project location map). The new rail line will consist of a single track within a proposed minimum right-of-way width of 150 feet. The proposed route begins at the Rio Grande north of the Piedras Negras-Eagle Pass city centers, crosses US 277, and connects to the existing Union Pacific Railroad near the Dos Republicas Coal Mine. The project would construct a 3,420-foot-long bridge over the Rio Grande floodplain with other bridges at US 277, the Maverick County Irrigation Canal, and several stream crossings. The proposed project would acquire a total of 230 acres of new right-of-way.

***Area of Potential Effect***

No programmatic agreement (PA) exists between the Surface Transportation Board (STB) and the Texas State Historic Preservation Officer (SHPO) stipulating the Area of Potential Effect (APE) for rail projects. However, a PA exists among the Federal Highway Administration (a sister division of the STB within the U.S. Department of Transportation), the Texas Department of Transportation, the Advisory Council on Historic Preservation, and the Texas SHPO. This PA stipulates the APE for new location road projects as 300 feet beyond the proposed right-of-way. Because railroads and roads have similar potential impacts to historic properties, an APE of 300 feet beyond the proposed right-of-way is recommended for this undertaking.

***Prefield***

Prior to undertaking field work, Ecological Communications Corporation (EComm) staff examined the Texas Historic Sites Atlas to identify previously identified historic resources within a Study Area of 1,300 feet of the project APE. EComm staff checked for properties listed in the National Register of Historic Places, designated as Recorded Texas Historic Landmarks, and State Archeological Landmarks. EComm staff also searched for Official Texas Historical Markers and examined entries in secondary sources to gain a general knowledge of the area's historical background and various histories of Maverick County, Texas.

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

Project historians consulted the Texas Historic Sites Atlas, historic county highway maps of Maverick County produced by the Texas Highway Department and housed at the State Archives of the Texas State Library, historic and contemporary aerial photography, and various references on the history of Maverick County and Eagle Pass.

**PREVIOUSLY IDENTIFIED RESOURCES WITHIN THE STUDY AREA**

*National Register of Historic Places (NRHP)*

There are no properties listed in or under nomination to the NRHP.

*State Archeological Landmarks (SAL)*

There are no non-archeological SAL within the Study Area.

*Recorded Texas Historic Landmarks (RTHL)*

There are no RTHL-listed properties within the Study Area.

*Official Texas Historical Markers (OTHM)/Local Historical Markers*

There are no OTHM within the Study Area.

**HISTORICAL BACKGROUND OF THE PROJECT AREA**

As noted above, project historians referenced various sources to gain an understanding of the historic forces behind Maverick County's development. Research identified the following historic contexts as significant to the development of Maverick County.

*Military Presence at Eagle Pass (1848-1960)*

U.S. military presence in the area began as early as 1848, when Lt. William H.C. Whiting's exploratory expedition passed through on its way back to San Antonio from El Paso. As part of its series of frontier forts to secure the U.S.-Mexican border in the wake of the Mexican-American War, the U.S. Army established Fort Duncan on the banks of the Rio Grande a year later in 1849.<sup>1</sup> The new military force inevitably spurred development of a small community around it, both to support the new facility and as a focal point for safety on the frontier. The route Whiting took became part of the "Lower El Paso Road,"

---

<sup>1</sup> Campbell, 2003: 195-197

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

and the fort became a popular stop on the California Gold Rush trail. The owner of the land (John Twohig) platted and named the town of Eagle Pass in 1850.<sup>2</sup>

Fort Duncan was occupied by the Confederates during the Civil War, and one of the last groups of Confederate soldiers to take the field fled to Mexico at the Eagle Pass crossing of the Rio Grande. The fort was abandoned in 1883, but reoccupied off and on from 1890 to 1916, when it became a training facility for American troops during World War I. By 1920 only a small detachment remained, and in 1935 the City of Eagle Pass took over the property and converted it into a park. The land briefly reverted back to government control during WW II, when it served as the officer's club for Eagle Pass Army Air Field.<sup>3</sup>

Eagle Pass Army Air Field was established in 1942 for use as a pilot training facility and it remained in active use through the war. In the 1950s it hosted an early-warning radar station, but has since been turned over for civilian use.<sup>4</sup>

***Railroad Development (1882-1969)***

The first and only railroad into Eagle Pass was a branch line of the Galveston, Harrisburg, and San Antonio (later Southern Pacific, now Union Pacific) which built a connection to the border town in 1882 from the main line between San Antonio and Del Rio.<sup>5</sup> The railroad did not have a huge impact on the growth of Eagle Pass, possibly due to the city's isolation and distance from more widely used travel and shipping corridors. Nonetheless, it did provide a connection to the outside world and provided a means of delivering goods and services to and from the border community. It was mainly used by area ranchers, farmers, and miners for shipping product. Early trains used coal from local mines for fuel, but switched to oil in the early twentieth century.<sup>6</sup> The line crosses an international rail bridge connecting Eagle Pass and Piedras Negras, and has been in constant service since its construction.

***Agriculture and Irrigation (1865-1970)***

Early agriculture was primarily limited to cattle ranching and small-scale subsistence farming along the Rio Grande. Following the Civil War, the area around Eagle Pass became a haven for cattle rustlers (both known and suspected), including notorious rustler-turned-lawman John King Fisher.<sup>7</sup> Most of the land

---

<sup>2</sup> Pingenot, 2011

<sup>3</sup> Texas State Historical Association, 2011.

<sup>4</sup> Leatherwood, 2011

<sup>5</sup> Reed, 1941: 203

<sup>6</sup> Pingenot, 2011a

<sup>7</sup> Adams, 2011

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

was owned by only a few individuals. After the arrival of the railroad, farming diversified somewhat and sheep ranching became popular. Single-owner dominance declined after 1890, and farm/ranch size increased over the following decades. In the first decade of the 20th century, ranching declined (particularly cattle), although most of the land in the county continued to be used for ranching. The opening of the Maverick County Irrigation Canal allowed feed crops to be grown and dairy farming to expand in the 1940s and 1950s.<sup>8</sup> Maverick County was described in 1941 as “an important vegetable-producing area” for vegetables and grains, with sheep and goats as the principal livestock.<sup>9</sup>

The earliest efforts at irrigation began in 1889 when rancher Patrick Thompson began work on a canal system to irrigate crops, but only three miles were completed before he ran out of funds. He attempted to raise funds and support to finish the canal, but died in 1910 before anything came of his efforts. Other farmers experimented in irrigation on a small scale in 1901, but it was not until 1904 that Louis Dulch proved that large-scale irrigation was possible when he cultivated onions and figs on 400 acres of cleared brush land. Over 1,000 acres were under irrigation by 1909, but irrigation remained small scale until 1926 when Captain W.A. Fitch and his son revived Thompson’s canal plan. The Maverick County Irrigation Canal opened in 1932 with heavy promotion by local developers and the city. By the 1940s 65,000 acres were under irrigated cultivation. The main canal stretched over 100 miles by 1970.<sup>10</sup>

***Mineral Extraction: Coal and Petroleum (1885-1958)***

The earliest visitors to the area noted the presence of coal in the local geography, and mined it for small scale and personal use. The neighboring Mexican city of Piedras Negras was named after the abundant coal seams in the region (the name translates as “black rocks”). Soldiers at Fort Duncan mined coal for use in the production of gunpowder during the fort’s early activity periods.<sup>11</sup> In 1885, F.H. Hartz opened a hillside mine near the Rio Grande which was the largest coal mine in Texas at the time. Hartz started another mine and the Maverick County Coal Company approximately 1.5 miles to the southeast after a fire in 1892 eventually shut down the first mine (see **Figure 1**).<sup>12</sup>

Louis F. Dolch, J.B. Dibrell and Emil Mosheim started the Eagle Pass Coal and Coke Company in 1893 and supplied railroad locomotives with coal until 1902 when the railroad switched their locomotives over to oil. The main mine was at the community of “Dolchberg,” three miles north of Eagle Pass, and known

---

<sup>8</sup> Ochoa, 2011

<sup>9</sup> Dallas Morning News, 1942: 484

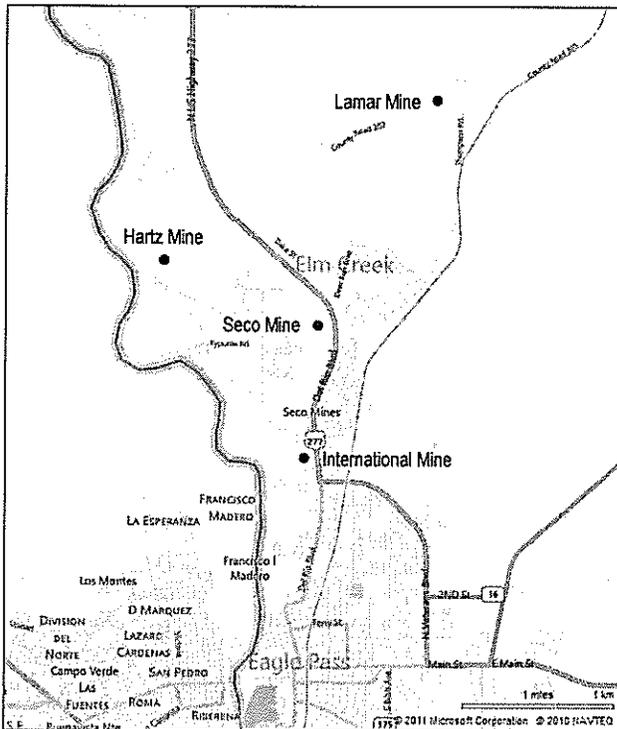
<sup>10</sup> Pingenot, 1971: 10-12

<sup>11</sup> Ochoa, 2011

<sup>12</sup> Calderon, 1984: 10

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

as the Seco Mine. The Maverick County Coal Company later became part of the Olmos Coal, Coke, and Oil Company, started in 1903 at the small town of Olmos to the northeast of Eagle Pass. At Olmos, the company sunk another shaft which became known as the Lamar Mine, after the mine's chief engineer.<sup>13</sup>



**Figure 1:** Historic coal mines near Eagle Pass

Eagle Pass Coal and Coke Company became the International Coal Mine Company in 1907 after Dolch's death. Political unrest in Mexico in 1913 prompted many Mexican miners in neighboring Piedras Negras to flee across the border, where they found jobs at the American mines.<sup>14</sup> Oil discoveries across the state in the early twentieth century led to a drop in coal demand, but the two operating companies continued to explore ways to increase yield and profits. The Lamar Mine had the state's only automatic coal washer by the 'teens and the company provided workers' housing with individual water taps. The Seco Mine briefly experimented with electric cutting machines in 1923, but abandoned their use after only a few months due to the machines' complexity and a lack of qualified operators.<sup>15</sup> The old

Maverick County Coal Company primary shaft shut down in 1912, but the Lamar Mine at Olmos continued producing until 1925.<sup>16</sup>

Coal mining in the Eagle Pass region was generally small-scale, even at its peak in the first decade of the twentieth century. Digging was done by hand, using explosives to loosen the coal ore and picks to break it up further. Mule-drawn ore cars brought the ore to the surface. The mines were humid, and water collection was a constant problem. Work would cease periodically so collected water could be manually

<sup>13</sup> Pingnot, 1971: 7-8; Calderon, 1984: 10

<sup>14</sup> Calderon, 1984: 7

<sup>15</sup> Ibid., p. 17-18

<sup>16</sup> Pingnot, 1971: 10

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

pumped out of flooded areas.<sup>17</sup> In terms of volume, the region's coal beds were not the most productive of the state's coal industry.<sup>18</sup>

Commercial coal mining in the region essentially ended in 1928, when the International Coal Mine Company's operations at the Seco Mine finally shut down.<sup>19</sup> Olmos itself disappeared from the map by the 1940s, but the Seco Mine spawned a small community due to the International Coal Mine Company's allowance of the sale of individual houses.<sup>20</sup> Most of the ex-miners found work in the expanding agricultural fields, helping to grow that subset of the local economy.

Oil and gas production was not a significant part of the county's economy during the historic period. In 1950, Maverick County was not listed by the State Comptroller office as an oil producing county; in 1958, industry association records show that only 29,111 barrels were produced, far below the nearly 54,000,000 barrels produced that year in Ector County.<sup>21</sup>

#### **NATIONAL REGISTER OF HISTORIC PLACES EVALUATION CRITERIA**

In order to be considered for listing in the NRHP, buildings, structures, objects, sites, and districts must meet standards of historic significance defined by the Keeper of the National Register (36 CFR 60). Each property must be evaluated within the framework of its historic context and it must retain characteristics that make it a good representative of properties associated with that aspect of the past. The NRHP Criteria for Evaluation state that:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, setting, design, materials, workmanship, feeling, and association, and:

- A. Are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. Are associated with the lives of persons significant in our past; or
- C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a

---

<sup>17</sup> Calderon, 1984: 14-15

<sup>18</sup> Railroad Commission of Texas, 2011

<sup>19</sup> Calderon, 1984: 9

<sup>20</sup> *Ibid.*, p. 32

<sup>21</sup> Pingenot, 1971: 20

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

significant and distinguishable entity whose components may lack individual distinction;  
or

- D. Have yielded or may be likely to yield information important in prehistory or history.<sup>22</sup>

***Criterion A***

A resource that is representative of an important trend or event may be eligible for the NRHP under Criterion A. This broad definition provides flexibility when determining the kinds of significant historical associations. However, a property is not eligible for inclusion in the NRHP simply because it was built during an important era in history or if it fulfilled its historic role. In order for a property to be eligible for Criterion A, it must be significant under one or more defined historic context(s), convey a sense of the past, and remain recognizable to the period in which it was first constructed or achieved significance.

***Criterion B***

Criterion B applies to properties associated with individuals whose specific contributions to history can be identified and documented. However, it is important to determine not only what contributions are associated with the individual and how they compare with those of other persons, but also how the property represents or is linked to that individual and his or her accomplishments. The extent and duration of that association is particularly important for determining NRHP eligibility. Moreover, the significance of that person must be associated with the contextual themes defined in this report. Properties significant under NRHP Criterion B should be those most closely associated with a person who has made important contributions to the past, be associated with the person during the time he or she achieved significance, and convey a strong sense of the past and remain recognizable to the period in which the person achieved significance.

***Criterion C***

Properties eligible for the NRHP under Criterion C derive significance from the physical qualities of their design, construction, and/or craftsmanship, including such elements as architecture, landscape architecture, engineering, and art. To be eligible under Criterion C, a property must embody distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic value; or represent a significant and distinguishable entity whose components may lack individual distinction (a historic district). A property significant under Criterion C is one that clearly represents a

---

<sup>22</sup> McClelland, 1997

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

noteworthy example of a defined property type, dates from the period of significance of one or more historic context(s), and exhibits the character-defining features of its property type. Therefore, a property must retain a high degree of physical integrity, as well as having a relation to the historic context.

***Criterion D***

Criterion D is applied most often to archeological resources, but it also may be used to evaluate the significance of extant buildings and structures. Properties significant under this Criterion are those that have the ability to yield important historic information, such as a rare type of construction. In order for these types of properties to be eligible under Criterion D, they must themselves be, or must have been, the principal source of the important information, such as how construction expertise affected the evolution of local building development. Due to the nature of the reconnaissance level survey, evaluation under Criterion D is generally excluded unless historians feel a particular property warrants additional investigation or consideration.

***Criteria Considerations***

On occasion, certain types of resources are also evaluated that are not normally considered eligible for the NRHP. These resources include religious properties, structures moved from original locations, birthplaces and graves, cemeteries, reconstructed buildings, commemorative properties, and properties achieving significance within the last fifty years. These properties can qualify for inclusion in the NRHP if they meet specific Criteria Considerations, in addition to meeting the regular requirements.

- A. A religious property deriving primary significance from architectural or artistic distinction or historical importance; or
- B. A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
- C. A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his or her productive life; or
- D. A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

- E. A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or
- F. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or
- G. A property achieving significance within the past 50 years if it is of exceptional importance.<sup>23</sup>

***Seven Aspects of Integrity***

In addition to being significant under one or more of the Criteria listed above, a NRHP site must also retain historic integrity of those features necessary to convey its significance (U.S. Department of the Interior 1998:3). The Keeper of the National Register has identified and defined seven aspects of integrity by which potential candidates for the NRHP must be measured (U.S. Department of the Interior 1998:44-45):

- *Location* is the place where the historic property was constructed or the place where the historic event occurred.
- *Design* is the combination of elements that create the form, plan, space, structure, and style of a property.
- *Setting* is the physical environment of a historic property.
- *Materials* are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- *Workmanship* is the physical evidence of the crafts of a particular culture of people during any given period in history or prehistory.
- *Feeling* is a property's expression of the aesthetic or historic sense of a particular period of time.
- *Association* is the direct link between an important historic event, person, or period and a historic property.<sup>24</sup>

Determining which of these aspects of integrity are most important to a particular property requires knowing why, where and when the property is significant (U.S. Department of the Interior, 1998:48). For Criteria A or B eligibility, the aspects of *location*, *feeling*, *setting*, and *association* take on greater

---

<sup>23</sup> *Ibid.*, p. 25.

<sup>24</sup> *Ibid.*, p. 44.

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

importance in determining a property's integrity. To be eligible under these criteria, a property must be able to clearly convey its significant associations with the historic context. This often requires that a property's overall environment remain relatively unaltered from its period of significance. Properties eligible for the NRHP under Criterion C must retain a high degree of physical integrity, as well as retain some relation to the historic context. The most important aspects of integrity for Criterion C eligibility are *location, design, materials, workmanship, and feeling*.

At a minimum, a property eligible under Criteria A or B must retain its basic original form that identifies its property type and must be generally recognizable to its period of significance. However, the significance of properties under Criteria A or B is not derived mainly from their design or construction value. Therefore, a greater amount of alteration to a building's historic physical features is allowable when compared to the more stringent standards set for Criterion C eligibility. Some minor alterations to the physical fabric of the building do not necessarily preclude Criterion C eligibility, although they may result in some loss of integrity. Such acceptable alterations could include replacement of roof materials or replacement of a minority of exterior doors and windows within the original fenestration pattern of the building. In some cases, non-historic outbuildings or landscape features could also be considered acceptable modifications to the property, if they are visually unobtrusive and compatible in design and scale with the original building and its setting. Major changes to a building's roofline, form, or overall massing are generally considered unacceptable, and would render a building not eligible under NRHP Criteria A, B, and C.

### ***Rural Historic Landscapes***

The Department of the Interior defines a rural historic landscape as "a geographical area that historically has been used by people, or shaped or modified by human activity, occupancy, or intervention, and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features." They commonly reflect the lives of those engaged in agricultural pursuits such as farming, ranching, or fishing, but not necessarily so. Rural historic landscapes are defined by eleven characteristics:<sup>25</sup>

- *Land use and activities* are the major human forces that shape and organize rural communities.
- *Patterns of spatial organization* define the relationships among major physical components, predominant landforms, and natural features.

---

<sup>25</sup> McClelland, *et.al.*, 1999

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

- *Responses to the natural environment* are reflected in the siting of buildings, construction materials, and the location of clusters of buildings and structures, as well as traditions in land use, construction methods, and social customs.
- *Cultural traditions* in the form of religious beliefs, social customs, ethnic identity, and trades and skills may be evident today in both physical features and uses of the land.
- *Circulation networks* are systems for transporting people, goods, and raw materials from one point to another, varying in size from footpaths to railroad lines.
- *Boundary demarcations* delineate areas of ownership and land use through the use of fences, walls, tree lines, hedge rows, drainage or irrigation ditches, roadways, creeks, and rivers.
- *Vegetation related to land use* includes not only crops, trees, or shrubs planted for agricultural and ornamental purposes, but also trees that have grown up incidentally along fence lines, beside roads, or in abandoned fields.
- *Buildings, structures, and objects* are the various types of buildings, structures, and objects serve human needs related to the occupation and use of the land.
- *Clusters* are groupings of like features resulting from function, social tradition, climate, or other influences, cultural or natural.
- *Archeological sites* may provide valuable information about the ways the land has been used, patterns of social history, or the methods and extent of activities such as shipping, milling, lumbering, or quarrying.
- *Small-scale elements* such as foot bridges, sign posts, or hay bales add to the historic setting of a rural landscape, and may be characteristic of a region.

Rural historic landscapes follow the same general guidelines for evaluation as other properties under the Criteria, although due to their complex nature they are commonly significant under more than one of the Criteria and may have to meet one or more of the Criteria Considerations depending on the composition of contributing elements. Rural historic landscapes must also retain sufficient integrity to convey their significance. While no landscape will appear exactly as it did during the historic period due to their variable and mutable nature, the landscape must retain the general character and feeling of the historic period. Which aspects of integrity must be retained will vary depending on the reasons behind the landscape's significance, but in general the aspects of *setting*, *feeling*, and *association* are particularly important.

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

**SURVEY FINDINGS**

*Overall Observations*

A survey of the project area was performed on April 19, 2011, by an individual who meets the *Secretary of the Interior's Professional Qualifications Standards* for Historic Architecture. The survey identified five historic-age<sup>26</sup> properties, including:

- Three properties related to agriculture;
- One property related to transportation; and
- One property of unknown use.

A tabular inventory of all surveyed resources can be found below (**Table 1**) and each identified resource has been keyed to a Resource Location Map, found in **Attachment 1**. Contextual views maybe be found in **Attachment 2**, and photographs of the surveyed resources, arranged by Map I.D. number, are located in **Attachment 3**.

Table 1: Inventory of Surveyed Properties					
Property ID	Function/Use	Style/Form	Date	Comments	NRHP Eligible
1	TRANSPORTATION/ railroad	No Style	1882		Not Eligible
2	AGRICULTURE/ ranching	No Style	c. 1960		Not Eligible
3	AGRICULTURE/ ranching	No Style	c. 1960		Not Eligible
4	AGRICULTURE/ irrigation canal	Unlined Canal	1932	Maverick County Irrigation Canal	Eligible (Criterion A)
5	VACANT/ vacant	No Style	c. 1960		Not Eligible

*Agricultural Resources*

Agricultural resources include a variety of buildings, objects, and structures with varying roles in the production of crops and livestock. The form of individual elements, as well as the arrangement of the buildings, fields, fence lines, and vehicular access, often reflects the type of farming or ranching originally practiced. Agricultural resources may be eligible under Criterion A if they have known associations with a historic event, trend, or ethnic group, or under Criterion B for association with a significant person or family. To be considered eligible in the area of Agriculture, they must show a clear association with historic agricultural methods and retain sufficient integrity to convey how such methods

---

<sup>26</sup> Constructed before 1966, based on a scheduled construction contract letting date of 2015.

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

were used. Agricultural resources are usually evaluated under Criterion C for the architecture of the primary residence or building. Survey efforts identified three agricultural resources in the APE.

Subtype: Ranches

In contrast to the cultivation practices of a farmstead, the main focus of a ranch is animal husbandry. In Texas, this is usually cattle, sheep, goats, or horses (or a mix). As such, more attention is given to livestock housing and support, with limited farming facilities. In addition to the main residence, important outbuildings and structures will include stables, barns, feed storage, corrals, windmills, water tanks, and fencing. Ranches also require large fields for grazing and exercise, with additional land sometimes set aside from supplemental feed crop cultivation depending on the size of the operation. Ranches can range in size from a couple of acres to thousands of acres, depending on the number and type of animals. Larger ranches may support multiple groupings of outbuildings, and may have residences for ranch hands in addition to the main house. Architectural styles will vary widely depending on region and age, but as ranching is generally more lucrative than farming, high style architecture is more likely than on a farmstead.

Survey efforts identified two sites containing facilities for feeding and/or watering livestock (Property I.D. #2 and #3), although neither was in use. Due to a lack of buildings, these properties do not possess sufficient integrity of design, setting, materials, workmanship, feeling, and association to convey their significance under Criterion A. Neither property has known association with persons of historic importance, and does not rise to the level of design significance required under Criterion C. As such, they are recommended **Not Eligible** for listing in the NRHP.

Irrigation Systems

An irrigation system is a singular structure composed of a mix of separate, inter-operating components all designed to deliver water from a source to agricultural fields, commonly in arid environments or locations without a stable water supply near arable farmland. Although utilitarian in style, some components of an irrigation system (buildings, primarily) may have architectural merit in addition to engineering merit. Character-defining features of irrigation systems include a pump house or diversion structure at the source, primary canals, lateral canals, check dams, control gates, standpipes, valves, and drains. Canals may be earthen, concrete-lined, or fully encased in underground pipes. Due to the nature of irrigation systems and the need for water conservation, they are commonly upgraded with new technology that may not retain historic integrity. Irrigation systems are treated as an entire system rather than a mix of singular components; while it is generally not feasible to examine the entire extent of a system outside of the

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

project APE, a general feel for the overall integrity of the system is necessary to adequately evaluate it based on irrigation features identified in the APE. Irrigation systems are most commonly considered under Criterion A for their role in agriculture, but may also be considered under Criterion B if the builder was of sufficient prominence, and under Criterion C if the historic components of the system are intact or if it involved the use of unusual, experimental, or ground-breaking technology with sufficient integrity to exhibit the technique(s).

Survey efforts identified one irrigation system with components present in the APE, Property I.D. #4. The component is the main channel of the Maverick County Irrigation Canal. The Maverick County Water Control and Improvement District No. 1 (MCWCID #1), established in 1929, covers about 80,000 acres extending from the Texas Maverick-Kinney county line southeastward along the Rio Grande for approximately 55 miles to below the town of El Indio. The District operates entirely by gravity flow and does not use pumps to move the water. The head gates of the District's Main Canal are located at the Rio Grande in Kinney County approximately 14 miles southeast of the city of Del Rio and about 18 miles northwest of the town of Quemado. The city of Eagle Pass, Texas is the largest municipality within the District.

The District's Main Canal conveys water from the Rio Grande over a distance of about 32 miles to the canal's terminus at the AEP/Central Power and Light Hydroelectric Power Plant, which is located about nine miles north-northwest of Eagle Pass. The Canal Extension conveys water from the end of the Main Canal near the Power Plant southeastward to the lower end of the District below the town of El Indio, a canal distance of approximately 57 miles. Water is diverted from the Main Canal and the lower Canal Extension into a system of lateral canals that feed individual farms. There are approximately 90 miles of main canals, 200 miles of primary lateral canals in the District, with about another 250 miles of sub lateral canals and farm ditches. Water flowing in the Main Canal that is not needed for irrigation purposes in the upper part of the District and that is not diverted into the Canal Extension for use in the lower part of the District, is passed through the Power Plant used to generate hydropower and then returned to the Rio Grande. The average quantity of water diverted from the Rio Grande between the year 1986 and 1998 was approximately 88,356 acre-feet per year for irrigation.

There are two reservoirs; a 200 acre-foot reservoir located in the El Indio area near the end of Lateral 70A, and a 60 acre-foot reservoir located near the end of lateral 71. The reservoirs are used for storage of

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

allocated water and as an outlet to the sub-lateral system. The District serves approximately 45,000 acres of irrigable farmland, of which approximately 38,500 acres are currently being farmed.<sup>27</sup>

This system has not been comprehensively surveyed and evaluated for NRHP eligibility. For the purposes of this study, the canal should be considered as **eligible** for NRHP listing under Criterion A in the area of Agriculture for its role in the development of Eagle Pass and local agriculture. The system may also be eligible under Criterion C in the area of Engineering. A full survey governing the eligibility of the canal and its integrity is beyond the scope of the current project.

### **RURAL HISTORIC LANDSCAPE EVALUATION**

The project area is in a rural setting northwest of Eagle Pass in Maverick County; therefore, it should be evaluated as a potential rural historic district. According to the *National Register Bulletin: Guidelines for Evaluating and Documenting Rural Historic Landscapes (#30)*, a rural historic landscape is a “geographical area that historically has been used by people or shaped or modified by human activity, occupancy, or intervention and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features.”<sup>28</sup>. Historically, the project area has experienced human activity in the form of ranching and mining.

#### *Characteristics of the Rural Landscape*

“Landscape characteristics are the tangible evidence of the activities and habits of the people who occupied, developed, used, and shaped the land to serve human needs; they may reflect the beliefs, attitudes, traditions, and values, of these people.”<sup>29</sup> The National Register bulletin lists eleven characteristics found in rural landscapes:

1. Land Uses and Activities
2. Patterns of Spatial Organization
3. Response to the Natural Environment
4. Cultural Traditions
5. Circulation Networks
6. Boundary Demarcations
7. Vegetation Related to Land Use

---

<sup>27</sup> “Border Environment Cooperation Commission, Maverick County Water Control & Improvement District No. 1 (Eagle Pass, Texas), Water Conservation Improvement Project.” Available at [http://www.cocef.org/aproyectos/ExComMaverick2004\\_03ing.htm](http://www.cocef.org/aproyectos/ExComMaverick2004_03ing.htm) (accessed 1 November 2011).

<sup>28</sup> McClelland, *et. al.*, 1999: 2.

<sup>29</sup> *Ibid.*, 3.

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

8. Buildings, Structures, and Objects
9. Clusters
10. Archeological Sites
11. Small-scale Elements

The first four characteristics are considered processes, and each of these processes has historically been related to ranching and mineral extraction within the project area. The remaining seven characteristics are considered components. Overall, while the project area displays evidence of human habitation, what remains is scant and scattered. Mining resources are non-existent, mineral extraction resources are limited to common petroleum-related properties, and the ranching resources are undistinguished and lack general significance under a relevant historic context. Based on the lack of a concentration of resources and tangible features in the project area, a lack of distinguishing characteristics identifiable with the historic period, and the existence of more prominent oil-related comparative properties surrounding the communities, the project area is **not recommended** as a rural historic landscape.

#### **POTENTIAL FOR ADVERSE EFFECT**

Under Section 106 of the NHPA [800.16(i)], an effect is any alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register. In practical terms, if a historic property is located within a project APE, then it is considered affected, and must be analyzed for adverse effect. An adverse effect, per §800.5(a)(1), is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

Examples of adverse effects include, but are not limited to, any of the following:<sup>30</sup>

1. Physical destruction of or damage to all or part of the property;
2. Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary of the Interiors's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;
3. Removal of the property from its historic location;

---

<sup>30</sup> §800.5(a)(2)

4. Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
5. Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features.

If analysis concludes project action would have an adverse effect on one or more historic properties, then per §800.6, the federal agency involved or its duly appointed representative (in this case, the FHWA and TxDOT, respectively) must explore options to avoid, minimize, or mitigate harm to the affected historic properties. Consulting parties, including SHPO, affected Native American tribes (and the Tribal SHPO), other affected federal or state agencies, and any other duly recognized public or private entities must have the opportunity to review and comment on the findings of adverse effect and any proposed measures to avoid, minimize, or otherwise mitigate harm. Upon review and resolution of any disagreement among the parties, the lead agency and consulting parties may sign a MOU covering the adverse effects and their resolution (if any).

#### *Determination of Effect*

The historical survey identified one potentially NRHP-eligible historic property in the project APE, the Maverick County Water Control & Improvement District No. 1 main canal (Property ID #4). Due to the size and nature of the canal system, the NRHP eligibility of the irrigation district as a whole has as yet to be determined. However, the project would have **no adverse effect** to the irrigation system should it be determined eligible for the following reasons:

1. As shown in **Figure 2**, the proposed railroad bridge would not alter the canal or impede its function, resulting in no change to the canal's integrity of design, materials, workmanship, or association.
2. As agreed in a July 26, 2004 letter of consensus between the Texas Department of Transportation and the Texas Historical Commission regarding South Texas irrigation systems, transportation projects involving irrigation resources that do not alter the overall function of the system, nor pose effects to the character defining features of the system, or to its overall historic integrity are considered as having no adverse effect to the irrigation system as a whole.

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

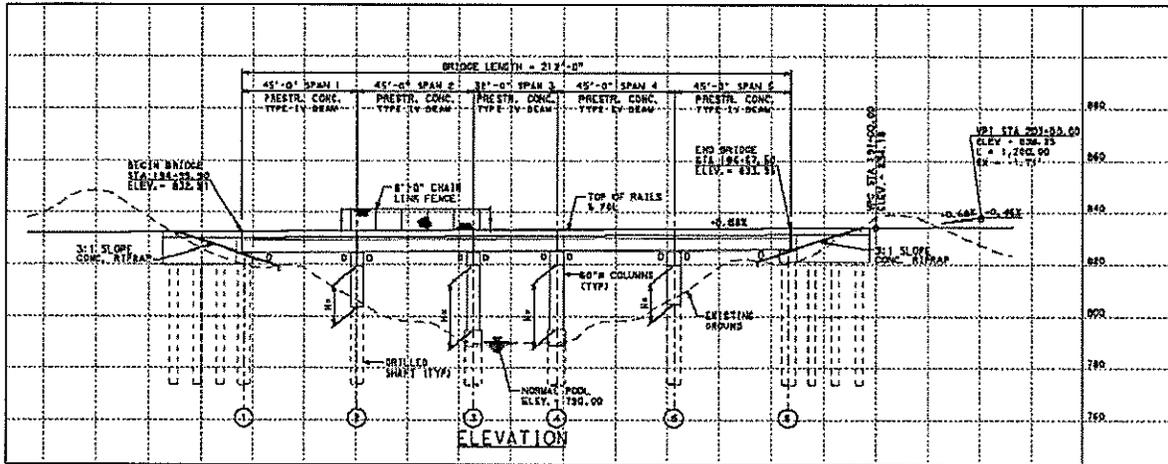


Figure 2: Elevation of bridge at canal.

Although the survey was not scoped to investigate the entire irrigation system, for purposes of this project, this canal is determined to be a contributing feature of an NRHP-eligible irrigation system. The proposed construction improvements limited to the canal crossing would not directly impact the canal nor impede its function as part of the larger irrigation system. The proposed bridge would not impact the integrity of the canal. As such, the proposed undertaking would have **No Adverse Effect** on the irrigation system as a whole.

As the proposed project would have no adverse effect on the recommended NRHP-eligible canal, it would have no adverse effect on historic properties in the project area.

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

REFERENCES CITED

Adams, Paul

- 2011 *Handbook of Texas Online*, s.v. "Fisher, John King."  
<http://www.tshaonline.org/handbook/online/articles/ffi20> (accessed July 11, 2011).

Calderon, Roberto R.

- 1984 *South Texas Coal Mining: a Community History*. National Endowment for the Humanities, Washington, D.C.

Campbell, Randolph B.

- 2003 *Gone to Texas: A History of the Lone Star State*. Oxford University Press, New York.

Dallas Morning News

- 1941 *Texas Almanac and Industrial Guide*. A.H. Belo Corporation, Dallas.  
1952 *Texas Almanac and Industrial Guide*. A.H. Belo Corporation, Dallas.  
1961 *Texas Almanac and Industrial Guide*. A.H. Belo Corporation, Dallas.  
1972 *Texas Almanac and Industrial Guide*. A.H. Belo Corporation, Dallas.

Humble Oil Company

- 1925 *Highways of Texas*. Humble Oil and Refining Company, Houston.

Leatherwood, Art

- 2011 *Handbook of Texas Online*, s.v. "Eagle Pass Army Airfield."  
<http://www.tshaonline.org/handbook/online/articles/qbe01> (accessed July 11, 2011).

McClelland, Linda F.

- 1997 *How to Complete the National Register Registration Form*. National Register of Historic Places No. 16. National Park Service, Washington D.C.

McClelland, Linda F., J.T. Keller, G.P. Keller, and R.Z. Melnick

- 1999 *Guidelines for Evaluating and Documenting Rural Historic Landscapes*. National Park Service, Washington D.C.

Ochoa, Ruben E.

- 2011 *Handbook of Texas Online*, s.v. "Maverick County."  
<http://www.tshaonline.org/handbook/online/articles/hcm06> (accessed July 11, 2011).

Pingenot, Ben E.

- 1971 *Historical Highlights of Eagle Pass and Maverick County*. Eagle Pass Chamber of Commerce, Eagle Pass, TX.  
2011 *Handbook of Texas Online*, s.v. "Eagle Pass, Texas."  
<http://www.tshaonline.org/handbook/online/articles/hee01> (accessed July 11, 2011).

Railroad Commission of Texas

- 2011 *Historical Coal Mining in Texas*.  
<http://www.rrc.state.tx.us/forms/maps/historical/historicalcoal.php> (accessed July 12, 2011).

Reed, S.G.

EAGLE PASS RAILROAD  
MAVERICK COUNTY, TEXAS

---

1941 *A History of the Texas Railroads and of Transportation Conditions under Spain and Mexico and The Republic and The State.* St. Clair Publishing Company, Houston. Reprint: Arno Press Inc., New York, 1981.

Shrimpton, Rebecca

2002 *How to Apply the National Register Criteria for Evaluation.* National Register of Historic Places No. 15. National Park Service, Washington, D.C.

Texas State Highway Department

1936 General Highway Map, Maverick County, Texas. Texas Highway Department, Austin.

1961 General Highway Map, Maverick County, Texas. Texas Highway Department, Austin.

Texas State Historical Association

2011 *Handbook of Texas Online*, s.v. "Fort Duncan."

<http://www.tshaonline.org/handbook/online/articles/qbf17> (accessed July 11, 2011).

Zlatkovich, Charles P.

1981 *Texas Railroads.* Bureau of Business Research, The University of Texas, Austin.

**Note from OEA: The attachments to Appendix G have been omitted from this Web site posting because they provide site-specific locations of potentially sensitive archeological sites. Requests to review the full report can be submitted to the Board's Office of Environmental Analysis.**