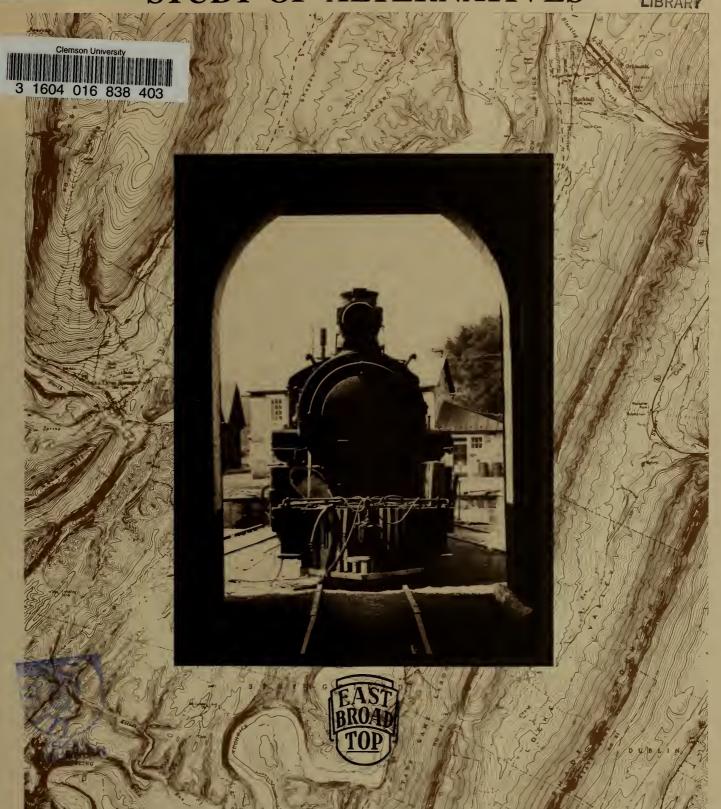
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Study of Alternatives, East...

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OF ALTERNATIVES



EAST BROAD TOP RAILROAD

AMERICA'S INDUSTRIAL HERITAGE PROJECT-SOUTHWESTERN PENNSYLVAN



The America's Industrial Heritage Project (AIHP) is under the direction of the Southwestern Pennsylvania Heritage Preservation Commission. The commission, established in the Department of the Interior and composed of regional representatives from industry, government, and area organizations, is responsible for overseeing the various programs and activities related to the AIHP, for directing its future course, and for fostering communication and coordination between the various levels of government and the private sector. The commission, seated in January 1990, was established to solicit input from area experts regarding the region's industrial heritage to further define, develop, and implement recommendations to preserve theme-related resources and promote tourism. The National Park Service serves as lead agency and staff to the commission and assists it in its public involvement activities. The commission is under the elected chairmanship of John Bennett of Bedford, Pennsylvania.

This East Broad Top Railroad Study of Alternatives is being prepared by a National Park Service planning team for the commission. The study will serve as a starting point for the commission's consideration, discussion, and analysis concerning possible actions that can be undertaken to protect the East Broad Top Railroad National Historic Landmark. Implementation of any part of this study is contingent upon agreement between the commission and the owner.

Publication of this document should not be construed as representing either approval or disapproval of the secretary of the interior. The purpose of this document is to provide information to Congress for further consideration of the area

STUDY OF ALTERNATIVES

DRAFT DECEMBER 1990



EAST BROAD TOP RAILROAD NATIONAL HISTORIC LANDMARK



AMERICA'S INDUSTRIAL HERITAGE PROJECT-PENNSYLVANIA SOUTHWESTERN PENNSYLVANIA HERITAGE PRESERVATION COMMISSION

prepared by

UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

SUMMARY

The America's Industrial Heritage Project (AIHP), which involves nine counties in southwestern Pennsylvania, is an effort to preserve, protect, and interpret the remains of the area's iron, coal, steelmaking, and transportation industries and the social and labor history of the area. The area and the related resources played an important role in the history of America's industrial growth, and the resources should be preserved and interpreted for visitors. The AIHP focuses on protecting selected sites related to the region's industrial heritage and using the sites to help strengthen the local economic base through the promotion of tourism.

The East Broad Top Railroad National Historic Landmark, in the nine-county AIHP area, relates to the AIHP's transportation theme. Recent studies undertaken by the National Park Service have concluded that the East Broad Top Railroad (the EBT) is the best remaining example in the nation of a regional narrow-gauge railroad system. In the opinion of the NPS study team, the EBT system – complete with railroad facilities and associated industries – is probably the only opportunity in the nation to tell a comprehensive railroad industry story. The EBT is a nationally significant, historic industrial workplace – in essence, an intact industrial system. However, the landmark is seriously threatened through deterioration, lack of operating capital, and legal threats to the right-of-way. The AIHP is interested in protecting and preserving the railroad, although it is privately owned, and in making it accessible for visitors to learn more about this significant resource. (For a discussion about how the EBT fits in with other AIHP resources, see appendix A.) This study, which suggests five different resource protection and visitor use alternatives and four options for management, will serve as a starting point for the consideration, discussion, and analysis concerning possible actions that can be undertaken to protect the railroad/landmark.

Under alternative 1, the visitor would have a chance to tour the machine shop complex, see the heart of the EBT in Rockhill, and enjoy a 5-mile train ride from Orbisonia to Colgate Grove. Visitors would learn about the shop complex and depot as components of an industrial workplace, and the railroad's operation would be interpreted. Alternative 2 encompasses alternative 1 but offers a 19-mile train ride from Orbisonia to Robertsdale and some interpretive media in Mount Union and Robertsdale. Visitors would learn about the operational and economic history of the EBT, the contribution and interaction of selected related industries along the right-of-way, and the technology involved in transferring goods from the EBT to the Pennsylvania Railroad.

Alternative 3 encompasses basically the same resources and story as alternative 2, but instead of a train ride visitors would use the entire 31.2-mile right-of-way as a recreation hiking/biking trail. Alternative 4 includes a 10.8-mile train ride from Rockhill to Mount Union and a recreation hiking/biking trail from Rockhill to Wood. Visitors would learn how the EBT functioned as a system and how it connected with the national story of railroading.

Alternative 5, the most encompassing alternative, involves a 29.8-mile train ride from Mount Union to Robertsdale. Visitors would learn the detailed story of the EBT and its role in the national story of railroading and transportation and about life in coal company towns.

The study also proposes several management options. These include continuing existing ownership and management, establishing corporation management, establishing public ownership or foundation management, and National Park Service acquisition with commonwealth of Pennsylvania provision of an adjacent state heritage park.

In accordance with Park Service policies, a preferred alternative has not been identified in this study. Future implementation of any alternative or combination of alternatives will depend on the coordinated efforts of the owner, various units of the government, and the people of the Broad Top region.



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INTRODUCTION

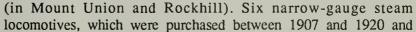


SIGNIFICANCE OF THE EAST BROAD TOP RAILROAD

The East Broad Top Railroad National Historic Landmark in Orbisonia Pennsylvania, (hereafter referred to as the EBT) is the oldest surviving narrow-gauge railroad east of the Rocky Mountains (see Region map). It has been described as an "incomparable national treasure, comprising a site, a set of historic buildings and facilities, a community and a spirit that are – taken together – unique in this country. . . . Nowhere in North America does such a complete and original industrial historic site exist." The EBT was designated as a national historic landmark in 1964 and is nationally significant in the fields of commerce and transportation.

The EBT is the best remaining example in the nation of a regional narrow-gauge railroad system. The EBT system probably offers the only opportunity in the nation to tell a comprehensive railroad industry story. The railroad is also a nationally significant, historic industrial workplace where relics from the technological age of steam can still be seen, heard, and smelled.

The landmark's significant features include the shop complex and railroad yard in Rockhill, which date between 1880 and 1910 and contain the original steam-powered, belt-driven machinery used to repair and build rolling stock² and house the locomotives. This shop complex/railroad yard is reputedly, without any close competition, the most complete historic railroad yard in North America. Many of these structures have not been used since 1956. Another significant feature is the relatively intact right-of-way with track, tunnels, bridges, and much of the original rolling stock – at least 250 known pieces built in the Rockhill shop are still on the right-of-way





^{1.} Locomotive & Railway Preservation, "On the East Broad Top: No. 14 Steams Again" by Bill Withuhn, July-August 1988, pg. 15.

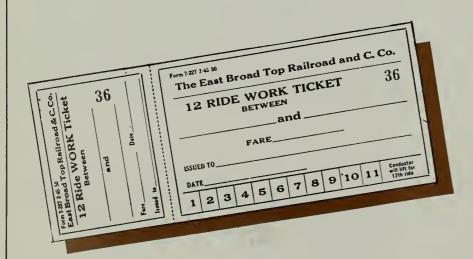
^{2.} The wheeled vehicles owned and used by a railroad or motor carrier.

were made for the EBT, were used on the line until the railroad was abandoned in 1956; all are still in Rockhill. Four of these locomotives are fully operational today. Structures that were built to support the railroad operation are also extant, including stations, coal yards, hotels, and tank houses. Also existing are the remnants of industries that used the railroad for shipment of products to market, including coal mines, iron furnaces, and brick refractories. Several communities on the right-of-way, built by the railroad to house industrial workers, are part of the cultural landscape³ surrounding the railroad (see Railroad-Related Resources map). An intact industrial system thus exists, with sources of raw materials, conversion of raw materials into finished products, a transportation system, access to outside markets, and communities that contributed to the system's financial success all being represented.

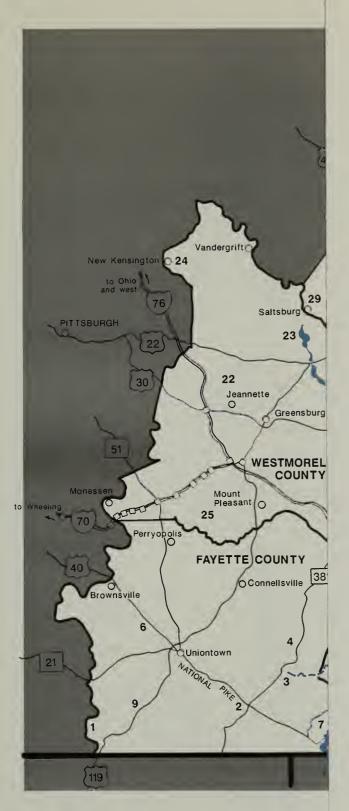
There are only three National Park Service sites that commemorate our nation's railroading heritage. Allegheny Portage Railroad National Historic Site in Pennsylvania, which is also a national historic landmark, features traces of the first railroad crossing of the Allegheny Mountains, dating from 1834 to 1857. Physical remains include the trace, culverts, foundations of enginehouses, stone sleepers, and a stone tavern that once served railroad passengers. Golden Spike National Historic Site in Utah celebrates the completion of the first transcontinental railroad built in the United States (in 1869). Reproduction engines of the Central Pacific and Union Pacific Railroads are on the site. Steamtown National Historic Site in Pennsylvania features the former Lackawanna Railroad facilities and has interpretive displays of engines and rolling stock that are representative of the region and the steam era. The site represents the broad theme of railroading and contains a roundhouse, yard, and track that are used to interpret railroading.

The EBT, in contrast, complements these other railroad sites but is unique in the completeness and integrity of its physical resources and in the story it can tell of a regional, narrow-gauge steam operation. The EBT's shops, track, locomotives, and rolling stock are anchored in their context and are original to the site.

There are no known nationally significant recreational or natural resources within the EBT landmark. However, the natural resources contribute to the scenic landscape and are important to maintaining the character of the railroad and its surrounding countryside. As discussed later in this document, the extent of this scenic landscape is unknown at this time.



^{3.} A cultural landscape is defined as a geographic area, including both natural and cultural resources, and the wildlife or domestic animals therein, that has been influenced by or reflects human activity or was the background for an event or person significant in human history (NPS 1984, pg. 66).





- FRIENDSHIP HILL NATIONAL HISTORIC SITE FORT NECESSITY NATIONAL BATTLEFIELD OHIOPYLE STATE PARK FALLINGWATER NATIONAL HISTORIC LANDMARK

- LAUREL RIDGE STATE PARK SEARIGHTS TOLLHOUSE YOUGHIOGHENY LAKE NATIONAL RECREATION AREA
- LAUREL HIGHLANDS HIKING TRAIL
- COAL AND COKE HERITAGE COMPLEX

- SOMERSET COUNTY

 10 ADDISON TOLLHOUSE

 11 SOMERSET HISTORICAL CENTER
- SPRINGS MUSEUM
- 13 LAUREL HILL STATE PARK
 14 WINDBER COAL HERITAGE CENTER

BEDFORD C

- 15 SHAWNE 16 SCHELLS 17 BLUE KN
- 18 BEDFOR
- OLD BED FORT BE

FULTON CO 20 BURNT C 21 COWANS

- FORT LIC 28 LINN RU
- WESTMORE 22 BUSHY F 23 LOYALH. 24 ALCOA A 25 WEST O' 26 KEYSTO

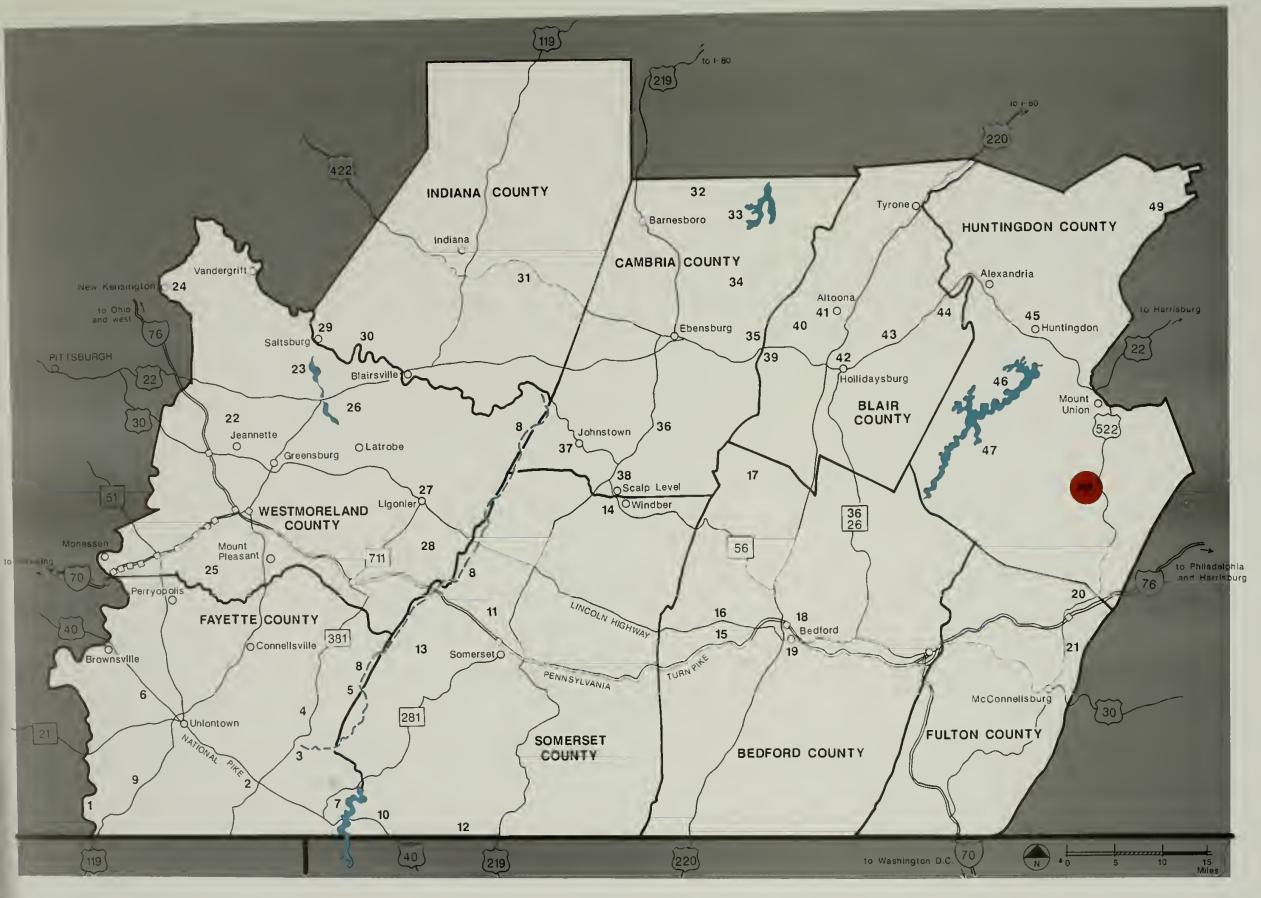


REGION EAST BROAD TOP RAILROAD NATIONAL HISTORIC LANDMARK



AMERICA'S

SOUTHWESTERN PENNSYLVANIA UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE



FAYETTE COUNTY

- FRIENDSHIP HILL NATIONAL HISTORIC SITE FORT NECESSITY NATIONAL BATTLEFIELD
- OHIOPYLE STATE PARK
- LAUREL RIDGE STATE PARK
- FALLINGWATER NATIONAL HISTORIC LANDMARK
- SEARIGHTS TOLLHOUSE
- YDUGHIOGHENY LAKE NATIONAL RECREATION AREA
- 8 LAUREL HIGHLANDS HIKING TRAIL 9 COAL AND COKE HERITAGE COMPLEX

SOMERSET COUNTY

- 10 ADDISON TOLLHOUSE
- 11 SOMERSET HISTORICAL CENTER 12 SPRINGS MUSEUM
- 13 LAUREL HILL STATE PARK
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- 15 SHAWNEE STATE PARK
- 16 SCHELLSBURG NATIONAL HISTORIC DISTRICT
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- 19 OLD BEDFORD VILLAGE FORT BEDFORD

FULTON COUNTY

- 20 BURNT CABINS GRIST MILL 21 COWANS GAP STATE PARK
- **WESTMORELAND COUNTY**
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REGION EAST BROAD TOP RAILROAD NATIONAL HISTORIC LANDMARK



AMERICA'S INDUSTRIAL

SOUTHWESTERN PENNSYLVANIA UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE



EAST BROAD TOP RAILROAD

National Historic Landmark

STRIP MINE - COAL

DEEP MINE - COAL

IRON ORE MINE

IRON FURNACE

П

REFRACTORY

V

QUARRY



LOGGING

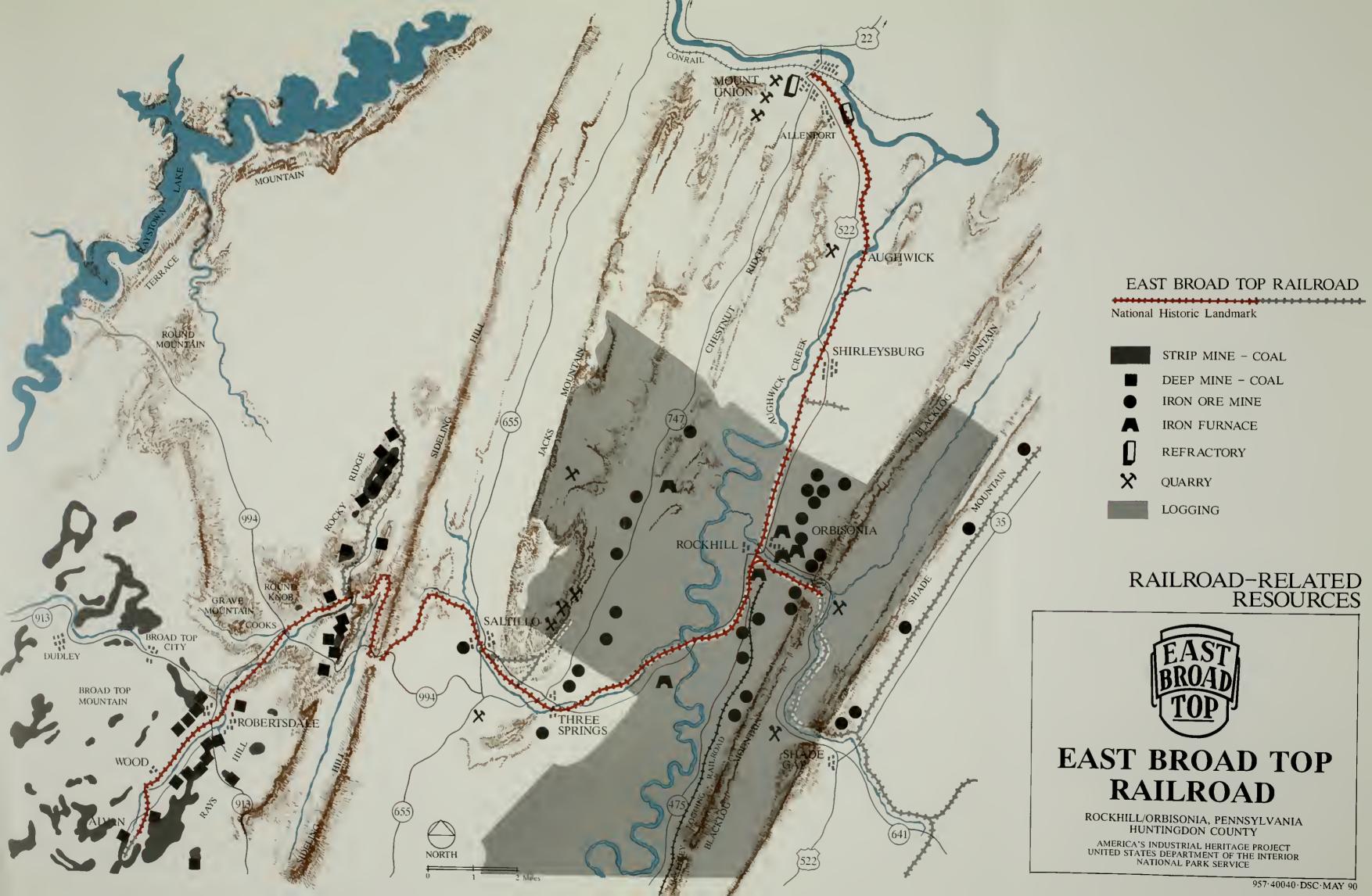
RAILROAD-RELATED RESOURCES



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

AMERICA'S INDUSTRIAL HERITAGE PROJECT UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE



INTRUSIONS AND THREATS TO THE EBT

The EBT landmark is seriously threatened. Cumulative deterioration to the infrastructure on the right-of-way, including bridges and tunnels, poses a potential loss of significant amounts of original historic fabric. Several sections of tracks have been washed out in storms or destroyed by logging road cuts. Several buildings and structures in the Rockhill railroad yard need rehabilitation and general repair.

The Rockhill machine shop complex and EBT records are in extreme danger of being lost through fire. The records are currently stored on the second floor of the Orbisonia depot, which is vulnerable to fire. Over 100 years of oil, grease, and coal dust have accumulated in the shops, making them prime candidates for possible destruction by fire.



Legal challenges to the right-of-way are another threat to the historic resource. Landowners along the right-of-way have filed abandonment claims on portions of the right-of-way within their property boundaries. Up to the time of this study, the owner has successfully defended his claim to the right-of-way. It may be that the longer the right-of-way is unused, and the more the tunnels and bridges deteriorate, the weaker the owner's claim will be on the right-of-way.

Several pieces of original EBT rolling stock, specifically passenger cars and locomotives, are currently being maintained. However, other rolling stock (at least 250 pieces that include coal cars and box cars) have not been maintained since 1956 and are in various states of deterioration.

Current intrusions on both the landmark and the historic scene at the Rockhill railroad yard are remarkably few. In Rockhill, the Shade Gap Electric Railway, featuring tourist rides on historic trolleys, is in the landmark boundary and uses the EBT's Shade Gap Spur. This operation is headquartered both in historic EBT buildings and in modern trolley barns just east of the main EBT tracks in Rockhill. Several modern commercial buildings have been built on the southern edge of the historic EBT railroad yard in Mount Union, as well as alongside the EBT right-of-way heading south, out of town.

^{4.} A recent Pennsylvania Department of Transportation (PENNDOT) project (1983-1987) for a new overpass for US 522 north of Shirleysburg underscored the vulnerability of unused portions of the EBT line. PENNDOT first proposed locating one of the piers next to the old EBT line so that reuse of the line would have been precluded. It appears that the national historic landmark status was instrumental in causing PENNDOT to modify its design so that the pier location, while still in the EBT right-of-way, provides adequate clearance for future reuse of the line.

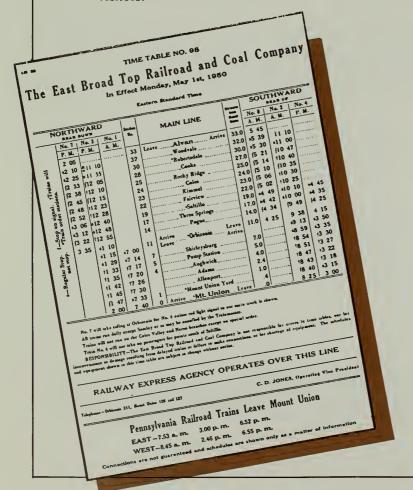
VISION, PURPOSE, AND GOALS OF THE STUDY

The study team envisions the East Broad Top Railroad National Historic Landmark as a nationally significant cultural resource – an area where the railroad and its surrounding cultural and natural landscape will be protected from deterioration and ultimate loss. Visitors will benefit from the aesthetic gratification and relaxation in a cultural and natural setting, the sensory experience of a steam locomotive operation, and the opportunity to understand the EBT as a railroad industrial workplace and the context within which it functioned. For the sake of visitor safety and protection of the historic resources, access to certain areas would be controlled and measures would be taken to protect the landmark's significant features from fire and other irreversible damage.

Thus the purpose of this study is to provide a blueprint for ensuring that the integrity of the East Broad Top Railroad National Historic Landmark is preserved for future generations and to provide for visitor understanding and enjoyment of the EBT as a turn-of-the-century railroad industrial workplace and the context within which it operated.

In accord with this vision and purpose, the following goals have been established for the study:

- Mitigate threats to the EBT resource.
- Provide for visitor experiences through a variety of interpretive, educational, and recreational activities. The significance of the EBT should be interpreted, with or without a train ride, to national and local visitors.



- Protect the resource and provide for visitor use through professional, full-time management of the EBT.
- Identify roles for all constituencies interested in telling the railroad story through the EBT's preservation, possible operation, and interpretation.

BASIC STORY CONCEPTS TO BE TOLD

The following story concepts would serve as the framework for interpretation of the EBT. All of the interpretation – from the smallest detail of how a tool worked to the largest picture of how the EBT fit into the national transportation system – would be based on the ideas listed below.

The EBT provides the best remaining example in the nation of a regional narrow-gauge railroad system, is an integral component of the overall transportation theme of the AIHP, and provides the opportunity to interpret the interrelationship between transportation and the development of industrial America between the 1870s and the 1950s.

- The Resource The EBT is the most complete and original steam-era railroad in North America.
- Regional Context The EBT system and late 19th and early 20th century cultural landscape of the Aughwick Valley and Broad Top Mountain provide all the story elements to tell of the EBT's impact on the industrialization of Huntingdon County and Pennsylvania.
- National Context The EBT system and late 19th and early 20th century cultural landscape of the Aughwick Valley and Broad Top Mountain provide all the story elements to tell how railroads affected American transportation. The EBT's access to and transport of raw resources (primarily coal) led to the industrial and social development of the valley and mountain, a process indicative of American industrialization.
- Railroad Technology The EBT, with its original rolling stock, shops, and machinery, is an intact remnant of a past technological era that no longer exists.
- Operation The EBT is an operational system of work and employment, of transportation for communities, and of industry.
- Working Life The EBT offers a slice of turn-of-the-century industry when American working life was defined by skill and craft.



THE EBT RESOURCE

REGIONAL CONTEXT

The area encompassed by this study (the study area) lies in the Aughwick Valley and on the Broad Top Mountain in central Huntingdon County, between the boroughs of Mount Union and Wood, Pennsylvania. The study area includes not only these communities, but also the boroughs of Orbisonia, Rockhill, Saltillo, Shirleysburg, and Three Springs, and the townships of Clay, Cromwell, Shirley, Todd, and Wood. The county is centrally located within the commonwealth's transportation network, with three major highway routes (US 22, US 522, and PA 26) and quick access to the Pennsylvania Turnpike across the county line. US 22, which dissects the AIHP region, borders the study area to the north and provides east-west travel to Harrisburg, Philadelphia, Altoona, and Pittsburgh. US 522 parallels the EBT right-of-way from Mount Union to Orbisonia and links with the Pennsylvania Turnpike to the south. PA 26 is a north-south link from Huntington to State College and Interstate 80 to the north, and Everett and US 30 to the south. Several state highways, including PA 994, PA 655, and PA 913, access other communities that once relied on the railroad for passenger service and commerce. The Pennsylvania Turnpike provides easy access to Interstate 70 at Breezewood, with links to Baltimore and Washington, D.C. Approximately 930,000 people live within a one-hour, 50-mile drive of the EBT. Almost 5.8 million people live within a 100-mile, two-hour drive of the EBT.

Conrail's main line runs east-west through Mount Union and, as part of the historic Pennsylvania Railroad, served as the main transporter of EBT resources to market. Amtrak is accessible at Huntingdon, and direct rail service is possible to Pittsburgh and Philadelphia. Two commercial airports are within an hour's drive of Huntingdon County: Blair County Airport at Martinsburg and the Centre County Airport near State College. The Mifflin County Airport near Lewistown has no regularly scheduled commercial traffic.

The primary recreational attraction in Huntingdon County is Raystown Lake, 15 miles from Mount Union. Between 1968 and 1978, the Army Corps of Engineers built a dam on the Raystown Branch of the Juniata River and created a 8,300-acre, 30-mile reservoir. The recreational area provides 13 public use areas, with two major concession-operated resort complexes. Activities include boating, fishing, swimming, camping, waterskiing, hunting, and picnicking. The resorts offer other attractions as well, such as boat rentals, miniature golf, restaurants, and camp stores. The lake attracts over one

Other outdoor recreational opportunities are available in the county's state parks – Greenwood Furnace, Whipple Dam, and Trough Creek – as well as in Stone Valley Recreation Area (operated by Penn State University). Hunting and fishing opportunities abound in the county. The Pennsylvania Fish Commission stocks many of the streams and lakes, and

million visitors annually.



thousands of acres of state game lands are available. The county offers many scenic drives as well as festivals, fairs, and carnivals.

Manufacturing is the leading industry in Huntingdon County. The stone, clay, glass, and concrete industries employ more than one-third of the work force, followed by the apparel and footwear manufacturing, electronics, and paper industries. Most industry is in Huntingdon and Mount Union and in Smithfield and Shirley townships. Workers in the East Broad Top area are precision production workers, with a smattering of workers in the management and professional fields. Agriculture, most notably dairy products, has always provided income in the county and is especially important in the EBT area. Recently tourism has become a growing part of the local economy, due to Raystown Lake. The EBT area is not growing economically. Property values are depressed, and the region is in need of substantial economic development. Efforts to improve the economy through increases in tourism centered on the EBT may provide an important mechanism for generating such economic growth.

BRIEF HISTORY OF THE EBT⁵

The history of the EBT is intimately bound up in the search for and development of mineral resources in south-central Pennsylvania. While coal was the most important freight cargo in the first half of the 20th century, the railroad originated as part of an integrated iron manufacturing complex. The iron industry already had an 85-year history in the area by the time the EBT was formed in 1871, and the first 35 years of the EBT's existence are called the iron age in recognition of the principal industry. Similarly, the succeeding years up to 1956 are called the coal age. In both of these periods, other commodities such as lumber, stone, and farm products contributed to the traffic of the railroad. By the 1950s the EBT was recognized as a unique resource and artifact worthy of preservation, and fortunately Nick Kovalchick bought and preserved the line when freight operations ended in 1956 (see appendix B for a chronology of the EBT).

The first iron furnace in the area was the Bedford furnace, built within the present boundaries of Orbisonia Borough about 1786 – the first iron furnace in the Juniata River Valley. The same company added a forge nearby in 1792. Although the Bedford furnace operation itself lasted only a brief time, its example attracted other ironworks to the area, making the Juniata valley region the principal iron-producing district in the United States by 1850. Orbisonia was one of the centers of the iron industry, with five furnaces active at one time or another before the Civil War. One of the most important of these was the Rockhill furnace, which was completed in 1831 and operated steadily until 1857. During the late 1850s the cost of using charcoal (made from increasingly scarce wood) as fuel drove production costs up. In other regions furnaces substituted coke made from anthracite coal, but transportation costs for importing the coke were prohibitive to the Orbisonia area, as increasingly were costs for shipping out the finished product. Known iron ore deposits in nearby mines were also running low, and ore had to be brought from more distant sources. Although the Rockhill furnace

^{5.} A word about nomenclature. The historic name of Woodvale, established by the EBT, has evolved to the Village of Wood, which is also the name of the township. When speaking of EBT history, the name Woodvale will be used; present-day references will be to Wood. Rockhill Furnace was the historic name of the community located next to Orbisonia. Current usage is Rockhill; Rockhill furnace will be used only in conjunction with the furnace itself.

^{6.} The following summary of the early history of the EBT region and the organization of the railroad is drawn from Rainey and Kyper 1982, pp. 13-39.

was reactivated during the Civil War, solving the transportation problem was the key to the furnace's long-term survival.

Like the iron industry, coal mining has a long history in the region. Broad Top Mountain coal had been used at least since the time of the Revolution, initially locally and later for export, but transportation was a key problem. Flat-bottomed boats on the Juniata River and wagon travel on dusty roads were the first means of travel. The Pennsylvania Main Line Canal was completed through the area in 1830, but real improvement came in 1850 when the Pennsylvania Central Railroad was built up the Juniata valley through Mount Union and Huntingdon and was completed to Pittsburgh in 1852. Although all of these improvements helped the iron furnaces around Orbisonia and the coal mines of Broad Top Mountain,

there remained a long overland haul to reach the Juniata valley.

Completion of the standard-gauge Huntingdon & Broad Top Mountain Railroad in 1857 opened up

the west side of Broad Top

Mountain for coal development. The east side of the mountain, towards Orbisonia, remained isolated and was slower to develop.

Railroads had been proposed for the east side since 1848. Among these was the East Broad Top Railroad and Coal Company, incorporated by an act signed by the governor on April 16, 1856. Although the original project was never carried out, the charter was kept alive and served as the vehicle for



development that brought Orbisonia iron interests and east side Broad Top coal interests together in late 1870. At a stockholders meeting in Philadelphia on July 3, 1871, the revived company was officially organized to build the railroad. In a related move, the same group incorporated the Rockhill Iron & Coal Company (RI&C) in March 1872 to consolidate their combined iron and coal holdings. At a special EBT board meeting on June 6, 1872, the decision was made to build the railroad to the narrow track gauge of 36" (compared to the move common "standard" gauge of 4' 8½") in the interest of economy, making the EBT one of the very early lines to be built to 36" gauge.

^{7.} The Pennsylvania Central was renamed the Pennsylvania Railroad in the 1870s.

^{8.} The three then-operating 36" gauge railroads in the United States had opened only the preceding fall.

Construction started in September 1872 at Mount Union and followed an easy route south along Aughwick Creek, reaching Rockhill on August 16, 1873. South and west from there to the coalfields was more difficult, involving two tunnels and stiff grades. The end of the line was the RI&C company town of Robertsdale, along the coal belt, which was finally reached on September 19, 1874. The railroad was then just under 30 miles long. Meanwhile the RI&C built two large furnaces in the company town of Rockhill Furnace, across Blacklog Creek from Orbisonia. Construction began in 1873, and the furnaces went into blast in January 1876.

The combination of the EBT and the RI&C made a fully integrated industrial complex focused on iron production. Coal came from the mines on the east side of Broad Top Mountain. At Rockhill it was converted to coke in ovens. Iron ore was of two types. Fossil ore was mined around Saltillo to the west on the EBT and along Blacklog Mountain and Shade Mountain to the east of Rockhill on an RI&C tramway that later became the EBT Shade Gap Branch. Hematite ore, used in smaller quantities in the standard furnace mix, was generally hauled in by wagon. Limestone, the third ingredient in the process, came from Grove's Quarry, which was also served by the RI&C tramway. The finished product, pig iron, was shipped out to the Pennsylvania Railroad connection at Mount Union. In addition to the iron-related traffic, many carloads of coal were shipped to the Mount Union interchange. Other traffic included forest products, bark for several large tanneries, and farm products. In the last years, ore from the Great Lakes region was shipped in to supplement the local supply.

The Rockhill furnaces produced steadily from 1876 to 1893. In that year a labor dispute closed the iron operation, and the depression of the mid 1890s kept it closed. It was finally reopened in 1902 under lease to a new company, the Rockhill Furnace Company. The iron age ended for good in 1908 during the short depression following the Knickerbocker Trust collapse of October 1907, and within a few years the furnaces and coke ovens had been sold and dismantled.

Throughout the years of the iron traffic, the number of coal shipments to Mount Union for interchange had grown greatly. With the final closing of the Rockhill furnaces, coal became the primary focus of both the EBT and the RI&C. There were also other coal mines shipping over the EBT. One factor helping the coal traffic was the construction in Mount Union of several factories that manufactured fire bricks. These factories relied on coal shipped over the EBT to fire their kilns.

In 1920 a change of ownership brought a reorganization to the EBT and RI&C companies. A new company, Rockhill Coal & Iron (RC&I), was formed and took over the assets of the old RI&C. The EBT's stock was all deposited with the new RC&I. The new company installed a new coal flotation cleaning system at Mount Union in 1925, which was a great improvement over the old hand cleaning method. This improved the quality as well as the economy of the work and secured the company's place in the specialty coal market. Indeed, the clean coal it supplied proved crucial to the survival of the RC&I and the EBT during the depression.

The 1920s also saw the last hurrah of the lumber industry along the EBT. The largest operators were the McKelveys, who were newcomers to the area. Between 1922 and 1928 they operated a logging railroad from Orbisonia south along Blacklog Mountain. To transfer lumber from the narrow-gauge cars to standard-gauge cars, the EBT built an electric gantry crane at Mount Union. This later became famous when the EBT devised

^{9.} The description of the EBT in the iron age draws heavily on "The EBT in the Iron Age" (Rainey 1990).

^{10.} The following is again based on Rainey 1990.

a way of using it to put standard-gauge interchange cars onto narrow-gauge trucks for service over the line, beginning in 1933. This is called the "timber transfer."

Railfans discovered the EBT in the 1930s. The first excursion was organized by the National Railway Historical Society on May 3, 1936. By 1951 the EBT was the last narrow-gauge railroad east of the Rockies, and you could count the common carrier narrow-gauge lines west of the Rockies on one hand. In all, seven excursions were held for railfans during the EBT's common carrier days, the last on June 24, 1951.

The Rockhill Coal & Iron Company was reorganized as the Rockhill Coal Company in 1938, but by the early 1950s it was in trouble again. In an industry increasingly dominated by giant corporations, the company could not afford to modernize and compete. Coupled with this was the dropping demand for coal; some traditional customers went to other fuel sources, simply cut back, or closed. In 1953 the EBT reduced the number of trains it ran each day by discontinuing the mail trains, a service that had run steadily since 1873. By the fall of 1954 standard-gauge cars loaded with unsold coal stood idle in the Mount Union yards. Passenger service was dropped in August of that year, on the same day that the last

deep mine closed, leaving only strip mines in operation. By 1955 most branches had been abandoned, and the main line was almost the same as it was in 1874. By the end of the year the decision was made to abandon the railroad and mines (but not the right-of-way). Interstate Commerce Commission permission was received February 16, 1956, and state authorization came the following April 3. The last main line run was three days later.

On May 1, 1956, the Rockhill Coal Company property and rights, including the stock of the EBT, were sold to the Kovalchick Salvage Company, the largest scrap dealer in Pennsylvania. But instead of scrapping the railroad, the new owner kept it basically intact. Coal lands were leased out, and mining operations were resumed by 1957 while the railroad was preserved in a disused state, essentially frozen in 1956. Meanwhile, Orbisonia was planning its bicentennial celebration for 1960, and Mr. Nick Kovalchick agreed to run a special steam train. A locomotive was put back into operating condition, and short (3½ miles) excursions from Orbisonia were officially resumed August 13, 1960. In 1961 service was extended from Orbisonia to the old picnic grounds at Colgate Grove (5 miles from Orbisonia), where a wye was installed to turn the locomotives, thus beginning the modern tourist operation that continues today. Some coal cars were sold to other railroads, some structures were lost by fire or sold, but the EBT remains today a 1920s coal railroad, preserved complete and intact.

DESCRIPTION OF THE EBT RESOURCE/EXISTING CONDITIONS

For purposes of giving the reader a basis for comparing the following alternatives, a description of the existing conditions is given.

The EBT and Related Communities and Resources along the Line

The East Broad Top Railroad main line is 33 miles long. Built in the 1870s to service local extractive industries and related production facilities, the line outlasted many similar local small operations and was one of the last such lines in existence at the time that operations came to an end in 1956. In addition to the right-of-way, the EBT retains a railroad yard in Rockhill that contains the buildings and associated equipment that were used to build rolling stock, house and repair locomotives, and maintain the entire operation. This railroad yard, described in more detail below, dates between 1880 and 1910 and is reputedly, without any close competition, the most complete historic railroad yard in North America. Many of these structures have not been used since 1956.

At Mount Union, which served as the northern terminus of the EBT and where links were made with the Pennsylvania Railroad main line, stands a railroad yard, enginehouse, and remnants of other associated structures. Although the Mount Union yard remains with the original sidings, most of the associated structures are either gone or deteriorated beyond repair. Remnants of the Chance sand flotation cleaning plant are barely visible through the undergrowth and foliage, and the timber transfer (used to switch cars from standard-gauge to narrow-gauge trucks) is no longer standing. Closely associated resources are Mount Union's refractory brick industries, which were serviced by the EBT. The extant Harbison-Walker Refractory on Mount Union's west side (on a tract adjoining Lafayette Street) was established in 1899 and operated until 1986. Between 1910



and 1930 the plant was the world's largest supplier of silica bricks. A North American Refractories Company plant (NARCO) (east of Pennsylvania Avenue and west of the Juniata River) was established in 1911 and operated until late 1989; it is currently being dismantled. A third facility, dismantled in 1958, was operated by the General Refractories Company (once at the end of East Market Street). An associated transportation feature is the extant Pennsylvania Railroad freight station, a gable-roofed, two-story frame building.

The railroad right-of-way from the Mount Union yard to Colgate Grove (7 miles south of Mount Union) is currently unused. There is a single track on a 50- to 60-foot right-of-way – typical of the entire line. The major structure on that segment is a four-arch concrete bridge over Aughwick Creek, 2 miles south of Mount Union. The right-of-way passes to the west of the borough of Shirleysburg, originally settled in 1754 as Fort Shirley, a French & Indian War fort. A picnic area and wye are at Colgate Grove, the terminus of the current EBT tourist ride operation.

The portion of the right-of-way from Colgate Grove to Orbisonia currently used by the EBT for the tourist operation is well maintained. There is one major bridge on this segment, and the EBT maintains some small overpasses for access to adjacent properties. Communities served by the EBT between Mount Union and Rockhill include Allenport, Shirleysburg, and Orbisonia.

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The EBT becomes a mountain railroad south of Orbisonia. The 21-mile section of right-of-way from Orbisonia to Wood has not been used since 1956. Nearly all track remains in place. A few remote places of this section of track have been destroyed by flooding or logging road cuts. This portion of the EBT crosses rugged terrain as it climbs up onto Broad Top Mountain. The route includes two tunnels (described below) and two major bridges, with the deck truss bridge at Pogue being the largest and longest on the line. Several of the former EBT branches connected to this section of the line. Over the years, there have been six branches and several spurs on the EBT line. Near Jordan Junction was the Booher Branch, which carried the miners' train (special cars for the miners) to many coal mines. Concrete remnants of the ganister rock NARCO tipple and quarry still remain on the Narco Branch, between Three Springs and Saltillo. The Coles Valley and Rocky Ridge branches led torturous routes to various coal mines.

Communities served by the EBT on this section of the right-of-way included Rocky Ridge, Three Springs, Saltillo, Coles, Cooks, Robertsdale, Woodvale, and Alvan. Coal was mined at Alvan, Woodvale, and Robertsdale on the main line. Associated features on the right-of-way include a depot and hotel in Saltillo, a water tank and station agent's house in Coles, and a station in Rocky Ridge. Three Springs contains an EBT warehouse.

Several EBT-associated structures remain in Robertsdale, including a ca. 1900 concrete block railroad station, which is currently being renovated, a two and one-half story concrete block RI&C office building, a concrete block post office, and a sandstone block company store. Wood has an EBT shop and mule barn. Both Robertsdale and Wood have remnants of shaft coal mines that once served the EBT; punch mines are along the Joller Spur, and strip mines still exist outside Wood. The EBT line ends in Wood; track has been removed from the last mile of the right-of-way into Alvan.



Robertsdale and Wood are excellent examples of coal company towns that were built in Pennsylvania during the late 19th century; Robertsdale was founded in 1873 Wood(vale) in 1891. They were typical of communities built and controlled by private coal companies in nearly every respect, from their architecture to the type of life led by their inhabitants. Both towns have been sheltered from modern development, and their historic physical framework has remained largely intact. Although the coal mines that supported the communities have been closed for over 30 years and a number of structures have fallen into

disrepair or have been destroyed, the relative isolation of Robertsdale and Wood has allowed the preservation of much of their architecture. Both towns offer a look at a past way of life.

Robertsdale has survived the demise of the coal industry. Efforts are currently underway to document the borough's architectural history and its industrial heritage. The National Park Service's Historic American Building Survey began documenting Robertsdale's architecture in 1989, through survey and recordation. An effort is also underway by the Pennsylvania Historical and Museum Commission to nominate portions of Robertsdale as a national historic district (on the National Register of Historic Places). Possible tourism promotion projects include the restoration of the company square in Robertsdale, as well as the establishment of a miner's museum. In October 1989 the Robertsdale Lions club sponsored the first East Broad Top Coal Miners' exhibit.

Bridges and Tunnels

There are 16 bridges and two tunnels on the EBT right-of-way. Generally, the bridges where the EBT still operates are in fair to good condition. The bridges on the portion of the railroad that is abandoned are in poor to fair condition. Those elements in poor condition are the timber ties, which are severely decayed, and areas of the steel girders and connectors, which in many instances are severely corroded. Most of the bridges can be rehabilitated; however, some of the less significant bridges may require replacement if they are to be used.

The 830-foot Sideling Hill tunnel and the 1,235-foot Wray's Hill tunnel are in poor to fair condition. Both tunnels have portions of timber lining that are decayed and failed in some locations. Further failures have occurred in some roof areas of the tunnels, particularly at the west end of the Wray's Hill tunnel where rock that has fallen to the floor of the tunnels has blocked drainage of water; the water is leaking into the tunnels

through joints in the overburden. The ties in both tunnels are also decayed, although the stone floors are in relatively good condition.

More details about the bridges and tunnels are in appendix C. Inspection forms indicating the condition of each structure and more detailed findings are available from the Park Service's Denver Service Center.

The Heart of the EBT - Rockhill/Orbisonia

The Orbisonia depot, which is actually in Rockhill and dates from 1903, is a two-story frame structure. The building is well maintained, serves as the station for the visitor rides and includes a gift shop, snack bar, rest

rooms, and the company offices on the second floor. Stored in the station are records of the Rockhill Iron and Coal Company, owners and builders of the EBT. The records, including tax, title, general ledger, and tonnage records, are relatively intact although they have not been organized or catalogued. The Orbisonia station is separated from the Rockhill railroad yard by PA 994 (Meadow Street). This building and the archives in it are vulnerable to fire.

The railroad yard at Rockhill includes all the equipment necessary to build and maintain rolling stock, as well as a brick and fieldstone, eight-stall, roundhouse/turntable complex (see following map and appendix D). All of the buildings remain and contain all of the steam-generated/belt-driven machinery, including power line shafts, belting and pulleys, machinery, and tools. Most of the buildings are frame structures with wood siding. There are numerous walls that are noticeably out of plumb, and serious structural problems may be developing. None of the buildings have sprinkler systems, which are especially necessary because the wooden buildings are saturated with machine oil.

A closely-associated EBT resource in Rockhill is the Rockhill furnace and coke ovens. The remains of this iron furnace are severely deteriorated and are hidden by trees and undergrowth.

Structures in the Rockhill yard include the following:

roundhouse/adjoining bus garage paint shop ash pit turntable

blacksmith shop electric shop track scale pattern house

lumber shed water column

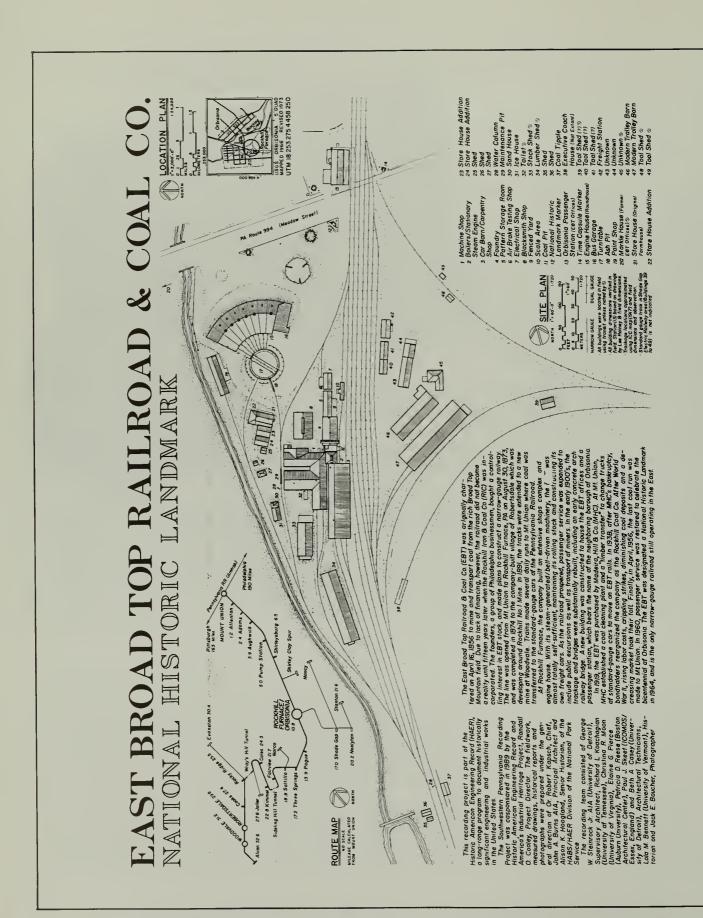
foundry

five sheds coal pit sand house ice house maintenance pit

garage
hose house
stock shed
coal tipple

dam and reservoir

machine shop/car shop/carpentry shop/boilers/stationary steam engine complex store house (original farmhouse) and three additions



On the east side of the EBT tracks at Rockhill are the following structures:

freight station five tool sheds (three presumed)

three structures of unknown function two modern trolley barns (Shade Gap Electric Railway)

On the beginning of the EBT's Shade Gap Branch out of Rockhill is the Railways to Yesterday Inc.'s Shade Gap Electric Railway, which has operated on the site since 1963. Featured are rides on historic trolleys and artifact and photo displays. All of the car barns and exhibitry associated with this operation are east of the main EBT tracks in Rockhill; expansion is planned. The trolleys run over dual-gauge track for a 2-mile, 20-minute trip. The attraction is operated by a nonprofit, tax-exempt group from Allentown, Pennsylvania. Only 3/4 mile of the Shade Gap Branch remains intact with track.

The Locomotives and Rolling Stock

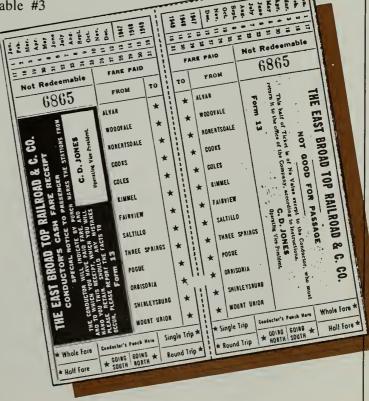
The EBT has six narrow-gauge locomotives and one standard-gauge locomotive on the property as of spring 1990. The locomotives include narrow-gauge #12, 2-8-2, Baldwin Mikado (1911); #14, 2-8-2, Baldwin Mikado (1912); #15, 2-8-2, Baldwin Mikado (1914); #16, 2-8-2, Baldwin Mikado (1916); #17, 2-8-2, Baldwin Mikado (1918); and #18, 2-8-2, Baldwin Mikado (1920), all built for the EBT. Numbers 12, 14, 15, and 17 are in operable condition, with #14 being in the best mechanical shape, and see service as needed between Orbisonia and Colgate Grove. Number 12 is the smallest, #14 and #15 are alike and slightly larger, and #16, #17, and #18 are the largest on the roster. All four locomotives are being maintained to a point of serviceability consistent with the company's means and not allowing for any far-reaching improvement programs

that might better secure their mechanical and operating future. The railroad's only remaining standard-gauge switcher, an inoperable #3

0-0-6 Baldwin (1923) that operated historically primarily in the Mount Union yard, is stored in a ca. 1910 concrete block enginehouse in Mount Union. Mr. Kovalchick started a locomotive repair program a few years ago.

A unique aspect of the EBT is the amount of original rolling stock still in existence (see appendix E). Most of the rolling stock, over 250 coal cars, wood boxcars, steel boxcars, and other

^{11.} Any mechanical study of these locomotives will have to focus first on the boilers, which must be analyzed in a manner consistent with sound locomotive practice. Because the EBT is governed by state boiler laws, which do not address the peculiar needs of locomotive boilers, a conflict may arise that can only be resolved by the establishment of repair and maintenance procedures that guarantee the highest safety factor regardless of who has jurisdiction of the boilers. Anything less would be irresponsible from a safety and historical standpoint and must not be considered in any long-range plan for preservation and operation.



equipment are believed to be in the Mount Union railroad yard, although some are in or near Rockhill. None of these pieces have been used or maintained since 1956. All of the rolling stock, with the exception of the private car and the passenger coaches purchased from the abandoned Boston, Revere Beach & Lynn, were built on the site in the EBT shops. Numerous types and numbers of freight cars, original to the EBT, are also on site, although an exact count and knowledge of their physical condition is not known.



The passenger equipment currently used by the EBT has been maintained, like the locomotives, as needed to continue in service. Because of this there is a need to implement an expanded repair and maintenance program for this equipment as well as to limit the amount of service seen by these cars. The current management is addressing the last point in two ways – one is to limit train operation to weekends only and the other is to construct new passenger cars that will be used to relieve the other cars in turn.

Mr. Kovalchick is currently having reproduction passenger cars made to use on his train ride, in an effort to meet safety standards and preserve the historic cars. Mr. Kovalchick's other resource protection efforts focus on the right-of-way and repair and maintenance of the locomotives and the 5 miles of track used for special excursions and train rides in the summer.

Current Visitor Use

Currently, visitors can see the Rockhill shop complex and Orbisonia depot. Although on a limited schedule (mostly during summer weekends and for intermittent excursion rides based on funding and demand), visitors can also ride the train 5 miles from the depot to Colgate Grove. (See appendix F for a record of the EBT's ridership.) There is no information about the operation or history of the railroad, other than what might be gleaned from a railroad employee if he/she is around, and thus no way for visitors to fully appreciate the significance of the railroad and the shop complex. A gift shop and restrooms are available in the depot; parking areas are also provided.

The Railways to Yesterday trolley ride, adjacent to the shop complex and described above, is another recreational opportunity available at the site.



The following pictures were taken by Jack E. Boucher of the National Park Service's Historic American Buildings Survey/Historic American Engineering Record. Captions for most of the photos, although edited for presentation in this document, were provided by Mr. Boucher and Philip J. Padgett of the Friends of the East Broad Top organization.



EBT LOCOMOTIVE #17, RUNNING LIGHT, NORTHBOUND ON THE NARROW-GAUGE RAILROAD'S MAIN LINE. Built in March 1918 by the Baldwin Locomotive Works in Philadelphia, Pennsylvania, the 163,500-pound steam locomotive is the second largest of the EBT's six Baldwin Mikados.



LOOKING SOUTH ACROSS MEADOW STREET FROM THE ORBISONIA DEPOT TOWARD THE ROCKHILL SHOP COMPLEX.



A THREE-WAY STUB SWITCH IN THE EBT YARD IN ROCKHILL. The three tracks lead north into the railroad's shop complex and locomotive roundhouse. The car is a steel hopper used to haul coal. The car was being rebuilt at the time the railroad ended freight operations in 1956 and has been outside, nearly completed, ever since.



THE FORGE AND MASSIVE ANVIL IN THE EBT'S BLACKSMITH SHOP. Almost all of the tools used in the EBT shops were made on site, many starting here, beaten and bent into shape by hand.



in 1956, with rows of tools, drills, and cutting bits. A vintage workmen's compensation poster remains in its frame on a corner wall. Most of the tools seen were made on site in the railroad's blacksmith shop. A SCENE IN THE SHOPS OF THE EBT. In a little extension off the machine shop is the tool crib, left almost exactly as the day work stopped



in turn was belted directly to the main shaft that ran all the overhead-belt-driven machinery in the railroad's shop complex. The 12" x 20" stationary engine, which operated at 112 revolutions per minute, was assembled by the EBT workers, who used parts from an undetermined ANOTHER SCENE IN THE EBT SHOPS. Steam from two 100-horsepower Babcock & Wilcox boilers powered this stationary steam engine, which source.



IN THE FOREGROUND, PART OF A 17.6-KILOWATT WESTINGHOUSE DIRECT CURRENT GENERATOR. From a room off the shop boiler area, this generator supplied electrical power for lighting the shops, the roundhouse, and other areas. Also shown is the distribution switch panel.



A WHEEL LATHE IN THE MACHINE SHOP. This massive 66-inch lathe was used to turn locomotive driving wheels and car wheels to restore their flanges and treads to round. The machine shop has no overhead crane, and all the work was manhandled from place to place. The small turntable in the cement floor directly in front of the lathe helped in manually turning wheelsets end for end.



EBT #15 STANDS OVER THE ASH PIT ON THE LEAD TRACK TO THE TURNTABLE IN ROCKHILL. Number 15 was built by the Baldwin Locomotive Company in Philadelphia, Pennsylvania, in February 1914. Weighing 150,150 pounds, it is a mid-size example of the EBT's fleet of six Baldwin Mikados. In the background behind #15 is the blacksmith shop, with the twin stacks of the shop boilers rising behind it. The steel boxcar, left of the locomotive, was converted to passenger service when the line reopened to haul tourists in 1960.



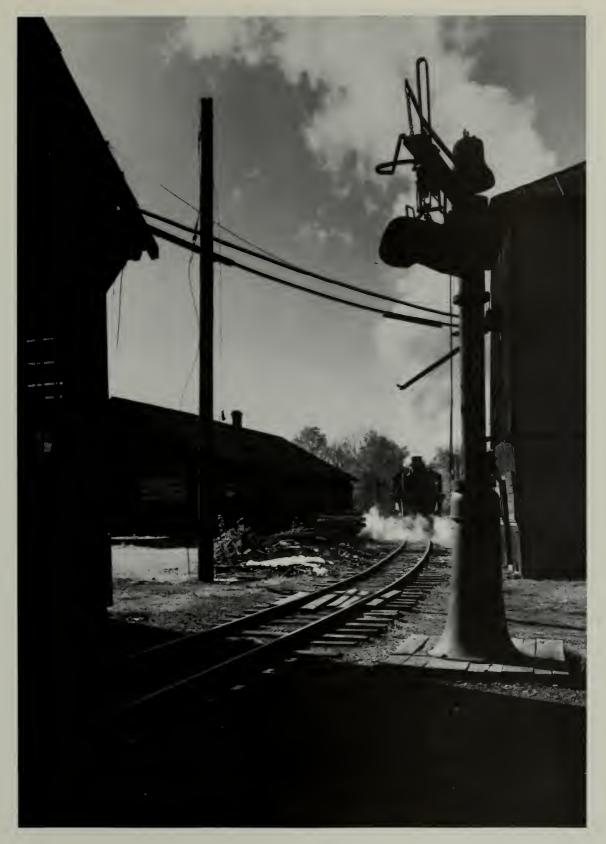
FRAMED BY THE ARCHED PORTAL TO A STALL IN THE BRICK ROUNDHOUSE, EBT'S #15 SITS ON THE TURNTABLE BRIDGE IN THE RAILROAD YARD AT ROCKHILL. To the left of #15 is one of the two eight-wheel cabooses and a portion of the shop complex. Directly behind #15 is the late 18th century farmhouse, which was on the farm property that the EBT purchased in the 1870s for its main yard and shop complex site.



TWO EBT LOCOMOTIVES IN THE ROUNDHOUSE AT ROCKHILL.



A WATER COLUMN ON THE LEAD TRACK TO THE EBT ROUNDHOUSE IN ROCKHILL. A corner of the boiler shop is on the left, and behind the column is the carpenter shop. The water column would swing over the track 90 degrees to line up with the tender's water hatch.



NUMBER 17 BACKS AWAY FROM THE ROUNDHOUSE TOWARD THE COALING DOCK AT THE SOUTH END OF THE YARD COMPLEX. In silhouette is the thin pipe used to deliver specially dried fine sand from the sand house, which is in the right of the photograph. To get sand, a fireman would stand on the locomotive's running board and pull a chain; releasing the chain would stop the flow. The insulated pipes running across the track carried steam from the boiler shop to the sand house, which was essential for heating the sand and keeping it dry and loose. The dry sand was used for added traction on grades and starting on slippery rails.

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LOCOMOTIVE #15 ON THE LEAD TRACK TO THE ROUNDHOUSE IN ROCKHILL. The back wall of the railroad's boiler shop is on the left. A concrete inspection pit is between the rails in the foreground. Beside #15 is one of three water columns in the yard, which were used to water the locomotives. The columns were gravity-fed from a reservoir southeast of the yard.



MANY STUB SWITCHES REMAIN IN USE IN THE EBT'S YARD. An 18th century standard, these were replaced in later years on main line EBT tracks by blade switches, which are universally used today. This photo looks directly down on the point where the single track coming from the top of the picture divides into two tracks. The top rail is embraced in an iron bridle just above the wooden crosstie. The bridle connects to a vertical lever on the switchstand adjacent to the track. By heaving on the lever, the railroad crew can move the top rail's alignment from one to the other of the lower rails.



passenger cars 14 and 15 were acquired from the Boston Revere Beach & Lynn Railroad in 1916. They were converted by the EBT to a combination passenger-baggage configuration. Typically, one of these cars was coupled on the end of an EBT coal train instead of a caboose to provide passenger, baggage, and U.S. mail accommodations in mixed train service. EBT'S #12 CROSSES BLACKLOG CREEK NEAR ORBISONIA AS IT STEAMS NORTH WITH A PASSENGER TRAIN TO COLGATE GROVE. Behind #12, used

PLANNING EFFORTS

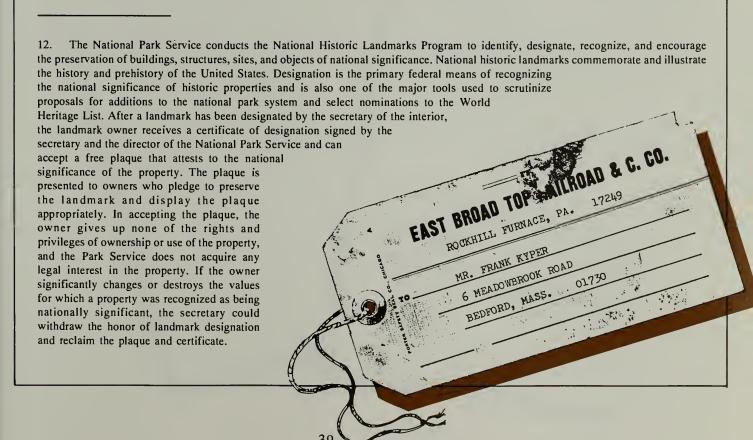
FACTORS AFFECTING PLANNING EFFORTS

As the planning process for the EBT began, Park Service, commonwealth, county, and subject-matter experts discussed certain factors that related to the study goals, and a good understanding of these factors is helpful to effectively evaluate the alternatives. Some of these factors have been described – threats to the resource and right-of-way, intrusions on the historic character of the site, and the study team's opinion about the significance of the resource. Other factors also had to be considered during the planning process.

Joseph Kovalchick, president of the railroad since 1977, has faithfully maintained the historic character of the line and the buildings, but the railroad has never made a net return as a tourist hauler. The railroad has been in the Kovalchick family since 1956, when Joseph Kovalchick's father, Nick, purchased the line just months after it was abandoned. Nick Kovalchick reopened 5 miles of the line in 1960 for tourist service during the summer months, a service that was still provided in 1989 but on a reduced schedule. Although time and economics are taking their toll on the railroad, Joseph Kovalchick and his wife Judy are determined to see the railroad survive. The Kovalchicks are genuinely interested in working with Huntingdon County, the commonwealth of Pennsylvania, and the National Park Service to ensure the integrity and survival of the national landmark.

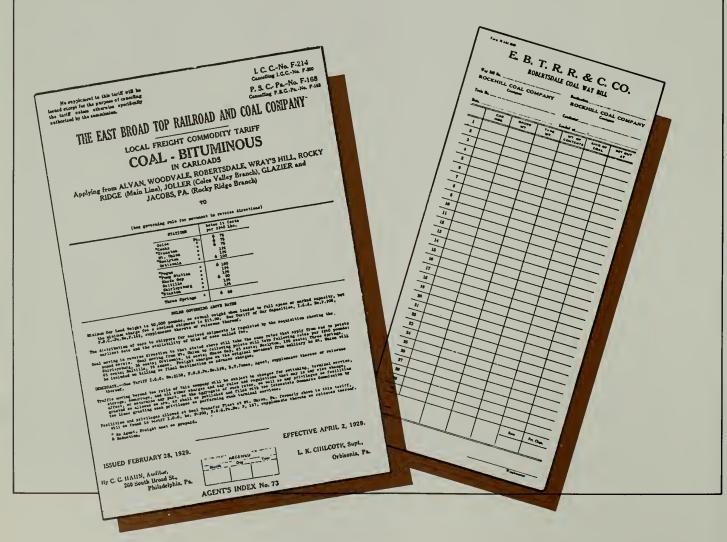
It is probably not feasible to return the entire machine shop equipment to an operating condition because of safety and resource protection considerations. Fire danger is high, and the lathes and other large machine tools in the shops cannot be safely operated because of the deteriorating condition of the steam-driven belts and other factors. However, curatorial management of the machinery may dictate maintaining the machinery in operating order. It may be possible to set up one or two of the machines for demonstration purposes.

For the purposes of this study, the EBT National Historic Landmark ¹² is considered to be the core of the study area. The landmark is composed of the 32½ miles of main track from Mount Union to Alvan. Even though



the legal railroad right-of-way is 50-60 feet total, the landmark right-of-way extends 60 feet from the middle of the track, on either side. This 120-foot zone constitutes the landmark along the railroad's length, except at Rockhill. There, the landmark boundaries are expanded to include the railroad yard and facilities and the 1½ miles of the Shade Gap Spur from its origin at Rockhill east to the point of intersection of Blacklog Creek with US 522. The 120-foot right-of-way zone constitutes the boundaries on this 1½-mile stretch as well. According to the landmark nomination, "These boundaries enclose all the remaining track of the East Broad Top Railroad, the various stations and service buildings remaining on the line, as well as the Rockhill . . . yard and facilities" (see appendix G for a detailed description of the landmark).

The landmark nomination is clearly in need of a boundary review study. It does not clearly define the boundary in Mount Union and other communities, and the boundary does not include all of the railroad-associated property. For this reason, in terms of protection and interpretation, the study team considered not only the landmark but the broader region of EBT operation and influence. The railroad resource may be geographically broader than currently defined in the landmark, which is also considered to be inadequate in terms of context, comparison with similar properties, and identification of railroad-related artifacts and properties, including site-associated rolling stock, passenger cars, and locomotives. Additional research sources include extant EBT records and potential oral histories of EBT workers and users. These resources may be used to determine the railroad's historic context and the extent of associated artifacts and properties. This may be done through an expanded landmark nomination or individual National Register of Historic Places nominations.



Because the landmark nomination does not provide guidance or criteria concerning the significance of individual elements of the EBT resource, the study team identified the following features as the most significant for the purposes of prioritizing protection treatments. This prioritization directly supports the features of the railroad that are important for visitor use and interpretation.

- Rockhill: roundhouse, machine shop complex, carpenter shop, foundry, blacksmith shop, pattern shop, depot
- Right-of-way: the legal right-of-way, Aughwick Creek concrete bridge, Pogue deck truss bridge, and original rail
- Other: six narrow-gauge locomotives, passenger cars, representative pieces of freight rolling stock

An expanded landmark nomination should further evaluate this concern.

The landscape of the Aughwick Valley and Broad Top Mountain surrounding the EBT is typical of south-central Pennsylvania. It is situated within the Ridge and Valley physiographic province. The landscape is dominated by mountains and steep hills with narrow ridgetops, and broad level areas are along the rivers and floodplains. A "cultural landscape" is also associated with the EBT; this landscape is believed to be the relatively intact landscape that existed at the peak of the railroad's operation. The EBT's cultural landscape is worthy of protection because of the context it provides for the historic railroad. Aughwick Valley and Broad Top Mountain provided the EBT with its reason to exist, namely raw resources, freight, and passengers. A study or analysis of the cultural landscape should be conducted to determine the meaning, significance, and relationship of the agricultural setting and the industrial settlements surrounding the EBT. Important cultural landscapes identified by the study could be included in an expanded landmark or national register nomination.

A passenger operation on the railroad is highly desirable in the context of the visitor experience. Feasibility and marketing studies will be needed to determine whether a future tourist railroad operation at the EBT is viable (see appendix H for a listing of other railroad excursions in Pennsylvania). A marketing study of EBT ridership was conducted by consultants to the Huntingdon County Planning and Development Office during summer 1990 (Richard C. Sutter & Associates 1990b). The study found that the EBT is not simply a local or regional attraction. Half the ridership comes from within 70 miles of the site, another third from within 180 miles, and the remainder from places as far as Arizona and England. In fact, 19 states were represented in the relatively small sample of visitors who were surveyed. A summary of the draft survey's findings is in appendix I.

Public consensus, both on the local and national level, will be sought to support protection and public use of the EBT. This implies support for protecting the railroad resources, financial support through visitation and use of any viable railroad operation, and political support of decisions made to ensure the EBT's survival.

PLANNING OBJECTIVES

The next consideration is how to accomplish the vision and goals – the objectives of the study. Achievement of the following objectives is predicated on continued discussions, cooperation, and action by the commission and the owner of the EBT:

- Provide a strategy for fire and security protection for the shop complex and depot as soon as possible.
- Examine the existing landmark boundary to determine if it adequately addresses the protection of key EBT-associated resources.
- Develop a strategy to identify, evaluate, establish the significance of, and protect associated EBT resources inside and outside the landmark boundary. (Levels of protection are determined through the process of establishing significance.)
- Provide a basis for an interpretive program that addresses the comprehensive story of the EBT railroad system and region and that integrates the EBT story into the AIHP transportation theme.
- Develop alternative ways to address the ownership, protection, and operation of the railroad.
- Study the feasibility of various railroad operation scenarios.
- Develop a strategy to protect the EBT right-of-way.
- Develop a strategy for addressing public involvement with and support for the planning effort.





ALTERNATIVES FOR RESOURCE PROTECTION AND VISITOR USE

Because the EBT is in private ownership, no steps can be made to protect or preserve the railroad, make it more accessible to visitors, or include it as part of the AIHP without prior consent of the owner, Mr. Joe Kovalchick. With his permission, the Park Service planning team has developed the following alternatives and management options for the future of the East Broad Top Railroad National Historic Landmark – different uses of and ways to protect the resource, different ways to tell people about the resource, and options for its management. In accordance with Park Service policies, a preferred alternative has not been identified; rather, the study is intended to provide an objective range of alternatives for the protection, visitor use, and management of the EBT landmark. Future implementation of any alternative or combination of alternatives will depend on the coordinated efforts of the owner, various units of the government, and the people of the Broad Top region.

The maps in the following alternatives section (and in the appendix) are <u>rough concepts only</u>; they will be refined later in the planning process.

As the alternatives were developed, the planning team found several actions, listed below, that would be necessary under any of the alternatives:

- The Orbisonia depot and selected structures in the Rockhill shop complex would have a sprinkler system installed for fire protection. Specific structures in the shop complex would be rehabilitated, as necessary, determined by an evaluation. Security would also be provided for the Rockhill shop complex and depot.
- Later feasibility and marketing studies are absolutely essential and will confirm the length and frequency of potential train rides for visitors.
- Sensitivity to resource protection and provisions for preventing theft and vandalism would be incorporated into designing the self-guided and guided tours.
- The EBT archives would be protected. (The EBT owner and AIHP managers have discussed the possibility of moving the EBT archives to the Indiana University of Pennsylvania for access and safekeeping.)
- The site character of the Rockhill facilities would be retained and protected from intrusion through control of any new development. The setting of the railroad yard and facilities exhibits very little physical change since the 1920s. Inside the shops, tools, machinery, and spare parts remain where they were placed decades ago. The amount of integrity evidenced at Rockhill represents both an authentic workplace and the craft of skilled workers, and it should not be compromised.
- The Rockhill site would be cleaned up as necessary to ensure public safety.
- The right-of-way would be protected from any new developments, crossings, roads, other encroachments, etc., through inspection and legal procedures.
- The national historic landmark nomination would be rewritten and expanded, which could lead to a boundary change.
- Mr. Kovalchick is currently having reproduction passenger cars made to use on his train ride in an effort to meet safety standards and to preserve the historic cars. This activity would be encouraged. At this time, the EBT locomotives and passenger cars are protected by storage, limited use, selective maintenance, and construction of reproduction passenger cars. However, if future development of the train ride experience is expanded, particularly south towards Robertsdale, the wear and tear on the

original historic locomotives associated with the site must be evaluated; the locomotives and passenger cars are an important part of the landmark.

- After doing an immediate survey/assessment of the rolling stock, the pieces that best represent the scope and history of the EBT operation would be rehabilitated and preserved for interpretation purposes. Minimal preservation work would be done on the remaining rolling stock. An immediate stabilization process should be initiated for the pieces chosen for preservation to address the corrosion problem on the gauge metal components of the cars to ensure that these pieces will be available for rehabilitation and interpretation. To ensure continued operation of the locomotives, a repair program such as the one Mr. Kovalchick started a few years ago must be continued and expanded. This has in the past and will in the immediate future cost much more than the operating revenues alone can sustain, but if operation is to continue this expanded repair program is absolutely necessary.
- The role of the Railways to Yesterday trolley operation, located on the EBT site in Rockhill, has been discussed. Decisions will be made in the future concerning how or if this operation can be integrated into the EBT interpretive themes and alternatives. This is an important issue given the proximity and planned expansion of this separate operation to the historic core area of the EBT shop complex.
- The main railroad yard complex at Rockhill is the only site within the EBT landmark boundary known to contain hazardous material. Asbestos was used to insulate the boilers and steam pipes in the machine shop and is currently in a damaged and exposed condition. Asbestos was also used to insulate the main boilers on all of the locomotives. Additional contaminated sites may or may not exist. Possible other contaminants from historic railroad operations could include TCE in industrial solvents, lead-based paints in bridges, PCBs in transformers, and toxic wood preservatives used for treating railroad ties. If the state or federal government were to acquire any of the properties associated with the railroad (as is possible under management options C and D [described later in this document]), a survey for possible hazardous materials and identification of responsible parties would be needed before acquisition. Any cleanup efforts would need to comply with EPA and state regulations. The coal mine remnants in Robertsdale will also be surveyed for hazardous materials; if hazardous materials are found, they will also be removed before the public is allowed into the area.
- Construction work on the railroad bed, bridges, and tunnels would likely be necessary under alternatives 2 through 5 to bring parts of the line back into running condition. Any new construction activity would be preceded by surveys and planning to prevent impacts to wetlands, floodplains, or possible archeological sites.
- Depending upon the Park Service's role, if any, in the preservation of the railroad, compliance with the National Historic Preservation Act and the National Environmental Policy Act would be required. Mobile sources of air pollution, such as locomotives, are generally not required to obtain air quality permits under the Clean Air Act. However, if the Park Service was involved in an expanded train ride program, an analysis of the types of coal to be used in the locomotives would be beneficial for minimizing stack emissions. For the coal that will be used in the locomotives, the Air Quality Division at the NPS Denver Service Center recommends a maximum sulphur content of 0.5 percent. Stacks would also be fitted with spark arrestors to prevent the possibility of fires being started from emitted embers.
- If federal funds are involved in any rehabilitation of the landmark, all work must comply with The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (NPS 1983).

- Other federal agencies, state and local governments, and other interest groups, including state historic preservation officers and the Advisory Council on Historic Preservation, will be given opportunities to become informed about and comment on anticipated NPS actions at the earliest practicable time. The Park Service will also encourage the continuing informal exchange of views with concerned local communities on cultural resource matters (NPS Management Policies 5:4).
- The paint shop, most of the roundhouse, and part of the turntable are within the 100-year floodplain; protection from a 100-year flood should be considered in future planning.

ALTERNATIVE 1 - SHOPS AND STEAM

Visitor Use Scenario

With appropriate safety precautions, the Orbisonia depot and Rockhill shop complex would be made accessible for visitors – a "museum experience" where visitors would see the rolling stock, roundhouse, turntable, carpenter shop, machine shop, blacksmith shop, pattern shop, and the railroad yard and the coal hoppers that were constructed by the railroad to serve the Broad Top Mountain mines (see Alternative 1 map).

Visitors would find the Orbisonia depot and the tracks, yard, shops, and coal cars of the EBT looking very much as they did in the 1920s. An EBT locomotive would haul several passenger cars on the regularly scheduled 5-mile, 50-minute round-trip train rides to Colgate Grove, going though the scenic Aughwick Valley with its cultivated farmlands and distant rolling hills. The train ride would parallel US 522, and the scenery would be much the same as that seen from an automobile. At Colgate Grove riders could eat snacks or lunches or relax at several picnic tables under pavilions during the hour-long layover before their return to the depot. Special excursions might also be possible. An engine would be available for viewing, or possibly a demonstration of firing up the locomotive (a live steam demonstration).

Visitors could also visit the EBT shop complex. The shops, with their intact machinery, have been largely untouched since the 1950s. Tools and other industrial equipment, used to repair and maintain locomotives and rolling stock, are scattered and stacked around the shop complex, offering not only the sight of an early 1900s industrial workplace that was driven by steam and skilled craftsmen, but also the smell and feel of a railroad operation. Self-guiding tours of the shop complex and guided tours inside several shop buildings would be available. Some shop buildings could be opened for visitor viewing at scheduled times, and some daily shop activities related to the railroad maintenance/operation could be open for viewing at nonscheduled times. The roundhouse, turntable, carpenter shop, blacksmith shop, foundry, and machine shop complex would be open only in the presence of an employee or tour guide; all other shops and structures would be locked and viewed only from the exterior. The visitor experience would be much the same as under existing conditions. See appendix J for a more detailed map of the Rockhill/Orbisonia area under this alternative. EBT rolling stock would be used to screen the visual impact of the Shade Gap Electric Railway.

Visitor Services and Interpretation

The primary visitor service/interpretation actions under this alternative would occur in the Orbisonia depot and Rockhill shop complex. Visitors would be directed into the depot and parking area by appropriate signs. Inside the depot visitors would receive site orientation, trip planning, and train ride information through appropriate graphic displays and a staffed information desk. Orientation information would show visitors where they are in relation to the entire EBT railroad, present the railroad's purpose, and highlight significant resources.

Site orientation would also be provided through an unobtrusive informational sign outside the depot, for after-hours use. As visitors cross Meadow Street and enter the shop complex, a wayside exhibit would offer an overview of the significance and function of the shops. A publication and/or audio device would provide information on specific features in the complex that visitors would see on the self-guiding trail. Additional interpretation and information would be offered through the informal guided tours of selected shop buildings and through contact with EBT railroad employees. The shop complex and depot would be accessible to visitors with disabilities.

Story to Be Told

The visitor would learn the relationship and role of the shop complex and depot as components of an industrial workplace; the emphasis would be on the railroad's operational aspects. Railroad administrative and maintenance activities took place in Rockhill/Orbisonia – the heart of the EBT. Carloads of coal from Broad Top Mountain mines were assembled into trains at the Rockhill yard. These trains then traveled north to the interchange with the Pennsylvania Railroad at Mount Union.

Strategy for Protecting the Resource

Railroad structures on the right-of-way used for the train ride between Orbisonia and Colgate Grove would be rehabilitated and maintained. Railroad structures on right-of-way not used for the train ride would be documented (photography and measured drawings) and then allowed to deteriorate, including the Baldwin #3 engine in Mount Union.

Parking and Other Development

Parking would be in existing areas, and a trail would be developed through the shop complex area; no other new facilities would be necessary. Improvements for accessibility for visitors with disabilities would be made, and interpretive media would be available.

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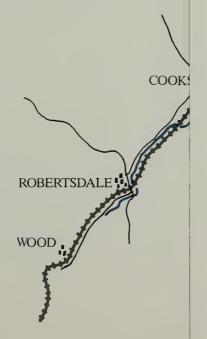
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EAST BROAD TOP RAILROAD

TRAIN RIDE

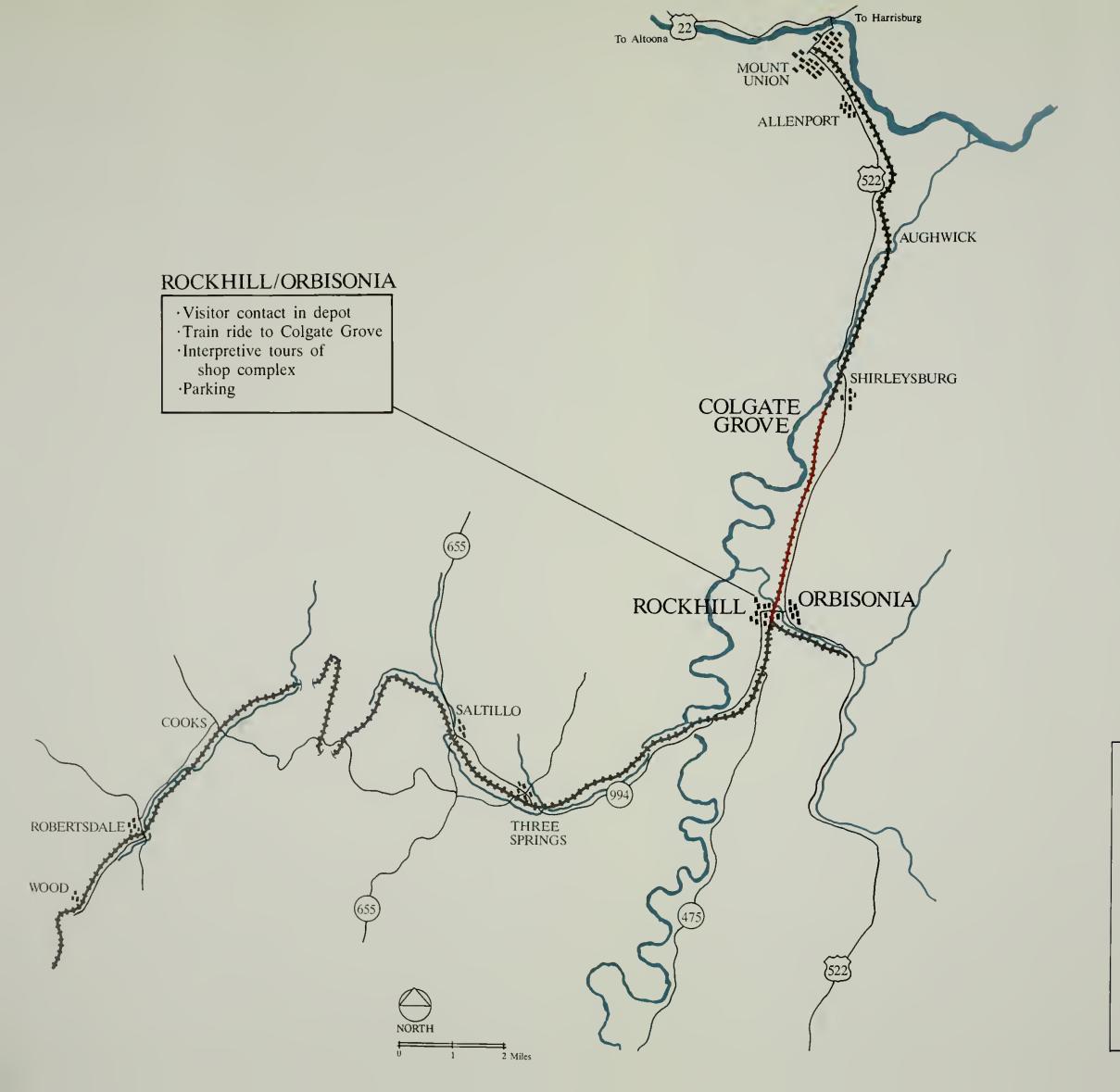


SHOPS AND STEAM ALTERNATIVE 1



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY



EAST BROAD TOP RAILROAD

TRAIN RIDE

SHOPS AND STEAM ALTERNATIVE 1



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

ALTERNATIVE 2 - MINING THE MOUNTAIN

Visitor Use Scenario

As described under alternative 1, visitors would see the Rockhill and Orbisonia facilities (the depot and the shop complex) as the primary visitor activity. The train ride would be much longer than in alternative 1, some EBT-related resources would be made available in Mount Union, and visitors could and would be encouraged to drive on existing roads to various EBT-related industries in the neighboring communities along the right-of-way (see Alternative 2 map).

Visitors to Mount Union could see EBT resources at the railroad yard. Parking would be provided to see the concrete block EBT enginehouse and the Baldwin #3 0-6-0 locomotive and cleared track area. Visitors could walk on the cleared tracks or trail alongside the tracks to see remnants of the coal processing plant and the site of the timber transfer. Vista clearing would be done so visitors could see the site of the NARCO refractory. Examples of EBT rolling stock would be on the tracks, including coal cars, hoppers, etc.

In Orbisonia/Rockhill, the visitor experience would be the same as described in alternative 1 – the depot, the shops, and the tours. However, under this alternative there would be also be a short self-guiding trail to the remnants of the Rockhill furnace and coke ovens.

The 19-mile, three-hour round-trip train ride from Orbisonia to Robertsdale would provide a much different visitor experience than the train ride to Colgate Grove. Visitors would see the Rockhill shop complex, a coaling tower, Jordan Junction (where coal was once mined on the Booher Branch), and the deck truss bridge at Pogue. After the community of Three Springs, the scenery would change. The track would start an upgrade climb, passing the Narco Branch (where ganister rock was once mined) and an old hotel and EBT depot in Saltillo. Although Robertsdale would be only 6 miles away, the train would travel 11 miles to climb the difference in grade (from 778 feet to 1,810 feet). Beyond Saltillo the train would go through the 830-foot long Sideling Hill tunnel, pass two old flag stops at Kimmel and Coles, and chug over a muleshoe turn for a scenic view of trees and mountain. Before the even longer Wray's Hill tunnel, the train would pass the Coles Valley Branch, where coal was dug for the EBT. After passing the Rocky Ridge Branch, which also served coal mines, and Cooks, the train would arrive in the coal company town of Robertsdale.

At Robertsdale, there would be restroom facilities and a visitor contact station/staging area for orientation/information. It would be preferable to offer these services in an existing building in the company square (such as the Robertsdale station) rather than in a new facility. The company square consists of a depot, post office, company office, and company store; rehabilitation and adaptive reuse of these buildings should be considered. While waiting to return to Orbisonia, visitors could walk through Robertsdale and see related EBT resources such as the company square, and historic coal mine remnants. Railroad cars would be used to screen the visual intrusion of the parking lot. Efforts would be made to encourage owners of EBT-related property in Robertsdale to provide services, tours, and accommodations for the train riders. Adaptive reuse and rehabilitation of associated properties would also be encouraged, as well as interpretation of these properties. A strong commitment would be needed from the residents of Robertsdale to support this alternative.

Appendix J contains more detailed maps of the Mount Union, Rockhill/Orbisonia, and Robertsdale areas under this alternative.

Visitor Services and Interpretation

The primary visitor service/interpretation actions under this alternative would occur in the Orbisonia depot and Rockhill shop complex, and in Robertsdale. Mount Union and other EBT-related sites would serve as secondary interpretive sites.

In Mount Union, visitors to the EBT railroad yard would be provided orientation through an informational sign. An unstaffed kiosk near the parking lot would provide an overview of the yard's history, layout, and function and information to help visitors plan their visit for other EBT sites and the train ride. Wayside exhibits along the self-guiding interpretive trail would offer interpretation concerning the enginehouse and standard-gauge engine and the remnants of the coal preparation plant, timber transfer, and refractory.

As described in alternative 1, visitors would be directed by appropriate signs to the Orbisonia depot for site orientation, trip planning, and train ride information. Also, the shop complex, wayside exhibit, self-guiding trail, and informal tours would offer information about the significance and function of the shops. Remnants of the Rockhill furnace complex would be interpreted through a wayside exhibit(s).

In Robertsdale, visitors arriving by car or train would receive site orientation, trip planning, and train ride information at the visitor contact station/staging area through appropriate graphic aids, an information sign, and a staffed information desk; staging space for the train ride would also be provided. A small exhibit space would offer an overview of EBT-related coal mining in Robertsdale and on Broad Top Mountain, focusing on history and function. Waysides, publications, and/or an audio device would offer interpretation for the self-guiding trail to Robertsdale's historic coal mines. Development of community-led tours through the neighborhoods with coal company town architecture would be encouraged.

Interpretation might also be offered on the train ride between Rockhill and Robertsdale through publications/mile guides, loudspeakers, or on-board interpreters.

For visitors who choose to drive the length or portions of the right-of-way from Mount Union to Wood, the driver's guide publication and/or audio device, available in Mount Union, Rockhill, and Robertsdale, would explain features and EBT-related industries along the right-of-way (possibly the quarries, the branch lines, and the tunnels). An informational sign and wayside exhibit would provide orientation and interpretation at interpretive turnouts at the Aughwick Creek concrete arch and Pogue deck truss bridges and EBT-related features in Saltillo and Wood.

Story to Be Told

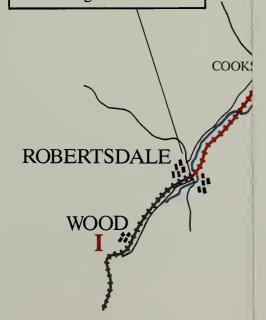
Visitors would learn about the operational and economic history of the EBT, including the shop complex and depot as components of an industrial workplace; the contribution and interaction of selected associated industries along the right-of-way, and the technology, haulage, and transfer to the Pennsylvania Railroad in Mount Union. Visitors would also learn how Saltillo, Robertsdale, and Woodvale served as collection points for resources hauled by the railroad and how these resources were transported to interstate markets by way of an interchange with the Pennsylvania Railroad at Mount Union. Emphasis would be placed on the story of coal mining on Broad Top Mountain.

ROCKHILL/

- · Visitor conta
- · Train ride tel
- · Interpretive t shop comp
- · Interpretive t Rockhill fu remnants
- Parking

ROBERTSDALE

- · Visitor contact facility
- · Train ride terminus
- · Interpretive trail to coal mines
- Possible rehabilitation & adaptive reuse of depot, store, post office, and/or office
- Parking



EAST BROAD TOP RAILROAD TRAIN RIDE

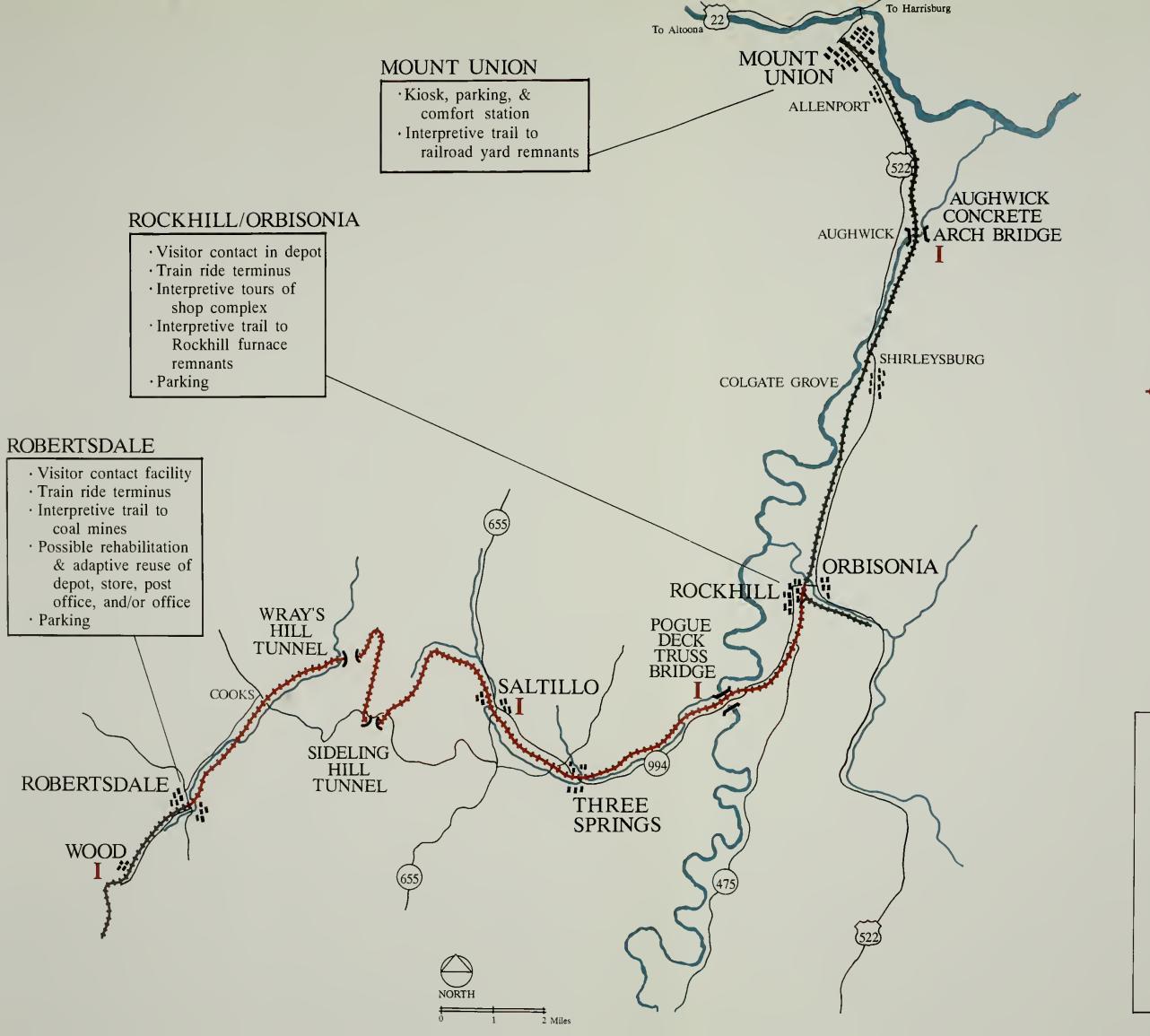
I INTERPRETIVE TURNOUT

MINING THE MOUNTAIN ALTERNATIVE 2



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY



EAST BROAD TOP RAILROAD
TRAIN RIDE

I INTERPRETIVE TURNOUT

MINING THE MOUNTAIN ALTERNATIVE 2



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

Strategy for Protecting the Resource

Railroad-associated structures and segments along the right-of-way made accessible to visitors would be rehabilitated and maintained, including the enginehouse and Baldwin engine at Mount Union and the Pogue and Aughwick bridges. Structures for railroad use would be rehabilitated and maintained; other structures along the right-of-way would be documented and allowed to deteriorate, although owners would be encouraged to rehabilitate or adaptively reuse some of these structures.

Parking and Other Development

Parking would be provided at Mount Union, Saltillo, Robertsdale, Wood, and the Aughwick and Pogue bridges, and improved at Rockhill/Orbisonia. Vegetation would be cleared from the rights-of-way where visitor access is offered. A visitor contact facility/staging area and trail through the mine remnants would be provided in Robertsdale. In addition to the trail through the shop complex, as described in alternative 1, there would be a self-guiding trail to the furnace remnants at Rockhill. Improvements for accessibility for visitors with disabilities would be made, and interpretive media would be available.

ALTERNATIVE 3 - A WALK THROUGH TIME

Visitor Use Scenario

Under alternative 3, visitors would enjoy many of the same activities they did in alternative 2. They would be able to visit the Mount Union railroad yard, tour the Rockhill shop complex and Orbisonia depot, see the Rockhill furnace remnants and coal tipple, and drive to various EBT-related resources along the entire line.

Although there would be no train ride under this alternative (steam locomotive demonstrations would be held at Rockhill), other recreational/educational opportunities would be available under alternative 3 – such as using the entire 31.2 miles of the EBT right-of-way as a trail (see Alternative 3 map). This hiking/biking trail could be divided into segments of varying lengths and scenic/educational emphasis. For example, the trail segment from Robertsdale to Wood could focus on the EBT coal story, the segment from Cooks to Wray's Hill Tunnel could focus on the EBT tunnels and the scenic values of Broad Top Mountain, and the segment from Mount Union to Orbisonia could focus on the scenic values of Aughwick Valley. Trail segments between Mount Union and Orbisonia would feature open vistas to distant ridgetops, with agricultural land in the foreground and low-grade terrain (the right-of-way follows straightaways and gentle curves). From Orbisonia to Robertsdale and Wood, the hikers and cyclists would be enclosed in wooded areas, not open vistas. The grades would be steeper as Broad Top Mountain is approached. The right-of-way follows many curves and several switchbacks.

The trail would be approximately 8 feet wide and use the existing right-of-way without impacting the existing historic fabric, including the rails. The trail could also tie into other regional trails that pass through Huntingdon County. Portions of the trail might be rerouted off the right-of-way, if necessary, to offer higher quality scenic or recreational experiences.

A rest stop should be provided at approximately every mile along the right-of-way. Encouragement should be provided for private concessions to offer bicycle rentals for use on the trails. Because of the linear nature of the proposed trails, thought should be given to providing a shuttle service (volunteer or paid drivers) who would shuttle hikers' and bikers' automobiles to trailheads. (Appendix K discusses the Rails-to-Trails Conservancy, which could aid in the development of these trails.)

Using selected segments of the trail for recreational uses other than hiking and biking, such as cross-country skiing, handcars, velocipedes, or other compatible uses that would not adversely affect the historic fabric, should also be considered.

Visitor activities in Robertsdale would include seeing the company square and going on the tour to the coal mine remnants.

The support of local communities would be integral to the success of these trails. Visitors enjoying the EBT resources would require lodging, camping, restaurants, and picnic areas. Local businesses would need to supply many of these services. Adaptive reuse, rehabilitation, and interpretation of EBT-associated properties would also be encouraged under this alternative.

Appendix J contains more detailed maps of the Mount Union, Rockhill/Orbisonia, and Robertsdale areas under this alternative.

Visitor Services and Interpretation

The primary visitor service/interpretation actions under this alternative would occur in the Orbisonia depot and Rockhill shop complex and along the right-of-way trail. Mount Union, Robertsdale, and other EBT-related sites would serve as secondary interpretive sites.

Visitor services and interpretation at the Mount Union railroad yard would be as described under alternative 2 – an informational sign and unstaffed kiosk with information, wayside exhibits, and a formal self-guiding trail through the yard.

Visitor services and interpretation at the Orbisonia depot and Rockhill shop complex would also be as described in alternative 2, with site orientation, information, and graphic displays at the depot, the trail and tours to the shop complex, and the trail to the Rockhill furnace remnants.

In Robertsdale, visitors would be provided orientation through an informational sign. An unstaffed kiosk near the trailhead parking lot would provide an overview of EBT-related coal mining in Robertsdale and on Broad Top Mountain. This kiosk would also offer information to help visitors plan their visit to other EBT sites and the hiking/biking trail as well. Waysides, publications, and/or an audio-device would offer interpretation for the self-guiding trail to Robertsdale's historic coal mines. Development of community-led tours of the town should be considered, as described in alternative 2.

Trailhead parking, water, and comfort stations would be provided at Mount Union, Rockhill, Saltillo (possibly at the depot), and Robertsdale (possibly at the company square). Each trailhead for the hiking/biking trail would have orientation/information signs providing trail maps, safety notices, trail rules, and other needed data. The sign would also provide details on EBT-related features to see on that segment of trail. Signs would also be

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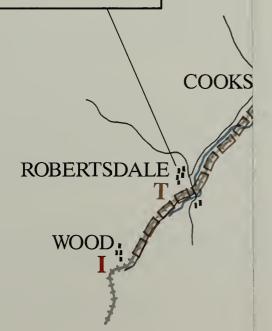
- ·Visit
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- ·Park

SALTILLO

· Trailhead parking comfort station

ROBERTSDALE

- · Kiosk & trailhead parking
- ·Interpretive trail to coal mines



EAST BROAD TOP RAILROAD

RIGHT-OF-WAY TRAIL

I INTERPRETIVE TURNOUT

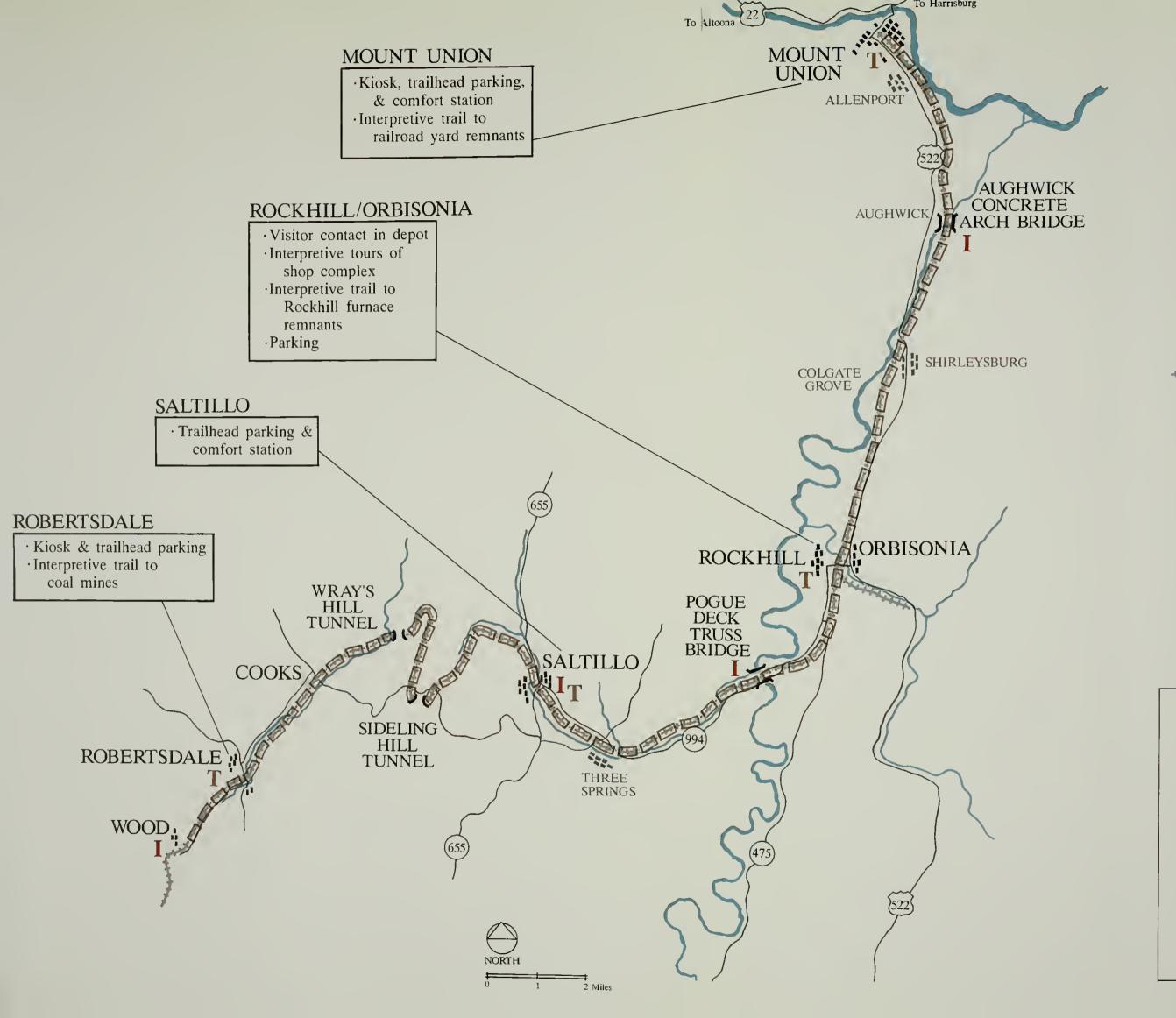
T TRAILHEAD

A WALK THROUGH TIME ALTERNATIVE 3



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY



EAST BROAD TOP RAILROAD

RIGHT-OF-WAY TRAIL

I INTERPRETIVE TURNOUT

T TRAILHEAD

A WALK THROUGH TIME ALTERNATIVE 3



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

on the right-of-way trail to interpret resource features. The entire length of the right-of-way could be interpreted through interpretive media.

As described in alternative 2, the driver's guide would provide interpretation of various EBT-related resources along the right-of-way. Interpretive turnouts and accompanying signs and waysides would be provided at the Aughwick and Pogue bridges, the hotel and depot in Saltillo, and at the EBT shop buildings and mule barn in Wood.

Story to Be Told

Visitors would learn about the operational and economic history of the EBT, including the shop complex and depot as components of an industrial workplace; the contribution and interaction of selected associated industries along the right-of-way; and the technology, haulage, and transfer to the Pennsylvania Railroad in Mount Union. Woodvale and Saltillo served as collection points for resources hauled by the railroad. These resources were transported to interstate markets by way of an interchange with the Pennsylvania Railroad at Mount Union.

Strategy for Protecting the Resource

Railroad-associated structures along the right-of-way made accessible to visitors would be rehabilitated and maintained as in alternative 2. Structures and segments along the right-of-way that are not used for hiking/biking or other recreational or interpretive purposes would be documented and allowed to deteriorate. Trail development and recreational uses of the right-of-way would not adversely affect the historic fabric or deter future rail use. If the Park Service is involved (i.e., federal funds), all actions would comply with the National Historic Preservation Act.

Scenic easements¹³ on identified scenic areas along the trails would also be sought. Such easements would allow uses such as agriculture but prohibit certain development or construction activities in order to preserve a specific vista. The easements could specify that a "scene" be preserved rather than prohibiting activities from taking place. ¹⁴ Scenic areas would be identified in a future study; easements might prescribe an appropriate level of maintenance, require monitoring, and offer technical assistance to the owner.

Parking and Other Development

Parking and interpretation at several sites would be provided as in alternative 2. Parking at Mount Union would have an additional 20 spaces. Some vista clearing would be done in the areas of some of the associated industrial and commercial EBT-related resources and along the right-of-way trails. Trail development on the right-of-way would occur. Comfort stations would be at trailheads in Mount Union, Rockhill/Orbisonia, Saltillo,

^{13.} Easements convey only some of the rights in property from one person to another. They may be positive, giving a right of access, or negative, restricting specific activities on the land. Easements are extremely flexible and can be drafted to fit the specific characteristics of the land as well as concerns of the owner. Costs for purchasing easements will vary widely, depending on how much potential uses of the land are limited and the local trends in development. (Federal Register, vol. 48, no. 92, 5/11/83, pg. 21126).

^{14.} Scenic value refers to the worth placed on a natural or cultural landscape as determined by a viewer's or evaluator's perception of it. Often this perception has a tendency to be subjective rather than objective. Scenic value can apply to the entire landscape or the interrelationships of individual components.

and Robertsdale. There would be an unstaffed kiosk in Robertsdale. Improvements for accessibility for visitors with disabilities would be made, and interpretive media would be available.

ALTERNATIVE 4 - THE PENNSY CONNECTION

Visitor Use Scenario

Under this alternative, primary visitor activities would be split between Rockhill/Orbisonia and Mount Union (see Alternative 4 map). At Rockhill/Orbisonia the visitor experience would be similar to that described under alternatives 2 and 3. At the Mount Union EBT railroad yard, the other primary interpretive focus under this alternative, visitors would be introduced to the industrial heritage of the Aughwick Valley and Broad Top Mountain. Visitors would be directed to a visitor contact station/excursion staging area for site orientation. The EBT enginehouse and Baldwin #3 0-6-0 would be displayed, as well as examples of EBT rolling stock. The track area would be cleared. The opportunity would exist for some local organizations to provide tours of the NARCO refractory and other resources of interest in Mount Union. The possibility may exist for an EBT link with Amtrak in Mount Union, which would tie together two different railroad experiences.

Another opportunity would be for visitors in Mount Union to board the almost 11-mile, 2½-hour (including layover) round-trip EBT train ride to Orbisonia, where they could tour the shops and depot before returning to Mount Union. (Visitors arriving at Orbisonia first could board the train from the depot for a round-trip ride to Mount Union.) Modern intrusions would be screened from view. As train passengers leave Mount Union they would see the remnants of the Mount Union yard and pass through an extant boney pile before reaching the small community of Allenport. The train would parallel US 522 as it passed through fields and crossed Aughwick Creek on the concrete arch bridge before entering some woods. At Shirleysburg the train would pass through an old cemetery and continue through the rural scenery of the Aughwick Valley, with its cultivated farmlands and distant rolling hills. After passing Colgate Grove, the train would again parallel US 522 and cross Blacklog Creek before coming into Orbisonia.

A hiking/biking trail with varied scenic/educational emphasis, as described under alternative 3, would also be available under this alternative; however, the trail would only use the right-of-way between Orbisonia and Wood, i.e., the right-of-way not used for the train operation. As described under alternative 3, the historic fabric of the right-of-way would be protected, portions of the trails could be rerouted off the right-of-way, if necessary, to offer higher quality scenic or recreational experiences, and the trail could tie into other regional trails. From Orbisonia to Robertsdale and Wood, hikers and cyclists would be enclosed in wooded areas; the grades would become steeper as passes are reached and crossed, and there would be many curves and switchbacks. Trailheads would be available at Rockhill, Saltillo, and Robertsdale.

Short trails – from Robertsdale to Wood with a focus on the EBT coal story and/or from Cooks to Wray's Hill Tunnel with a focus on the EBT tunnels and the scenic values of Broad Top Mountain – could also be considered instead of using the entire Orbisonia to Wood right-of-way. As under alternative 3, using selected segments of the trail for recreational uses other than hiking and biking, such as cross-country skiing, handcars, velocipedes, or other compatible uses that would not adversely affect historic fabric should also be considered.

SALTILLO

·Trailhead parking & comfort station

ROBERTSDALE

· Kiosk & trailhead parking
· Interpretive trail to
coal mines

COC

ROBERTSDALE T

EAST BROAD TOP RAILROAD

TRAIN RIDE

RIGHT-OF-WAY TRAIL

I INTERPRETIVE TURNOUT

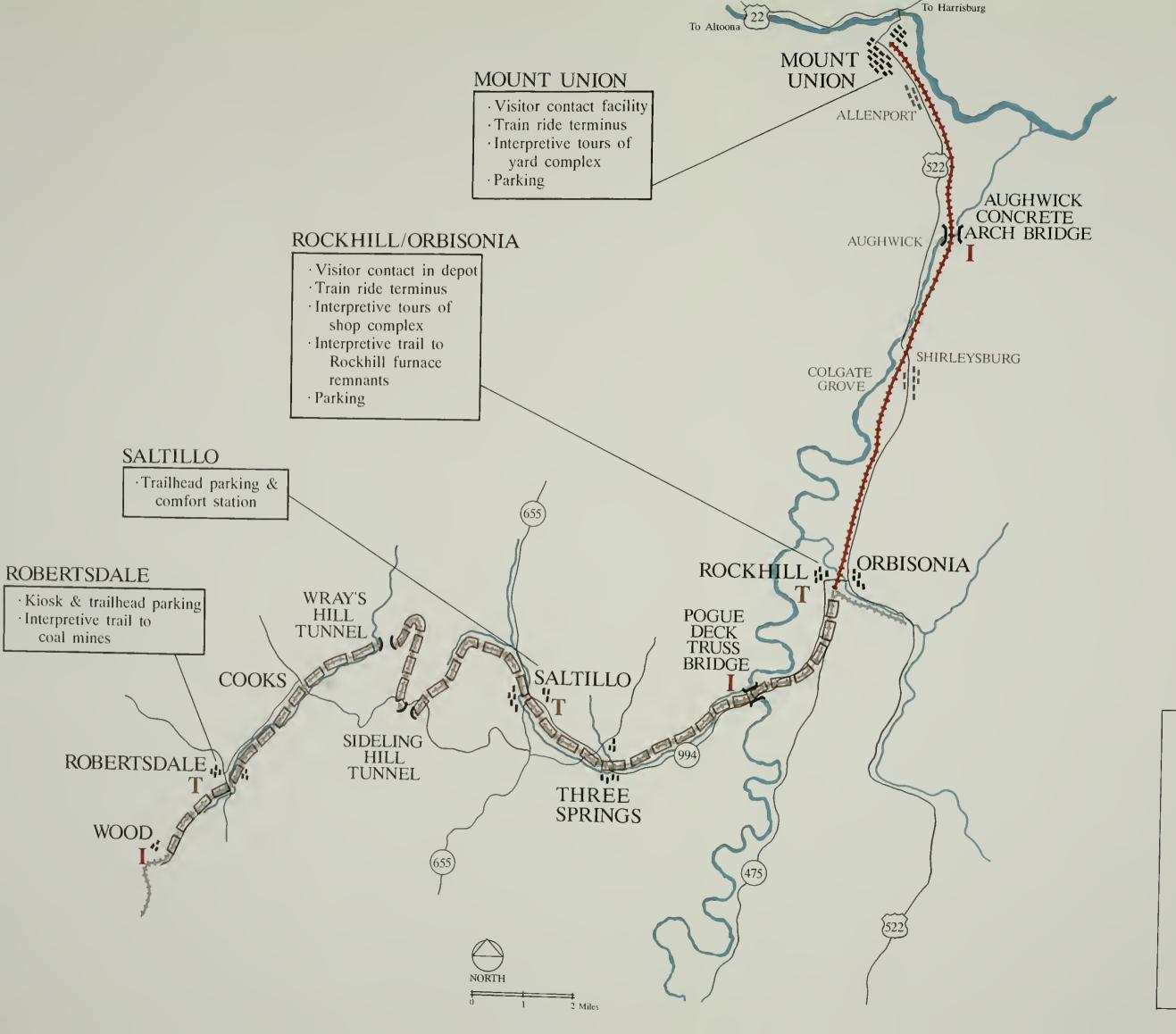
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THE PENNSY CONNECTION ALTERNATIVE 4



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY



EAST BROAD TOP RAILROAD
TRAIN RIDE

RIGHT-OF-WAY TRAIL

I INTERPRETIVE TURNOUT

T TRAILHEAD

THE PENNSY CONNECTION ALTERNATIVE 4



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

Visitor activities in Robertsdale would be as in alternative 3 – seeing the company square and going on the tour to the coal mine remnants.

Adaptive reuse, rehabilitation, and interpretation of EBT-associated properties would also be encouraged under this alternative.

Appendix J contains more detailed maps of the Mount Union, Rockhill/Orbisonia, and Robertsdale areas under this alternative.

Visitor Services and Interpretation

The primary visitor service/interpretation actions under this alternative would occur in the Orbisonia depot and Rockhill shop complex, and in Mount Union. Robertsdale, the right-of-way trail, and other EBT-related sites would serve as secondary interpretive sites.

In Mount Union, visitors would receive site orientation, trip planning, and train ride information at the visitor contact station/staging area through appropriate graphic aids, an information sign, and a staffed information desk; staging space for the train ride would also be provided. A small exhibit space would interpret the EBT's link with the Pennsylvania Railroad and outside markets and the EBT as an operational system. The yard's layout and function would be interpreted through an informational sign, and a formal self-guiding interpretive trail would allow visitors to see the yard. Wayside exhibits would interpret the enginehouse and standard-gauge engine and remnants of the coal preparation plant, timber transfer, and refractory.

As in alternatives 1, 2, and 3, visitors to Rockhill/Orbisonia would be directed into the Orbisonia depot for site orientation, trip planning, and train ride information. The shop complex tours and trail and the trail to the furnace remnants would be as described in alternatives 2 and 3.

The visitor services and interpretation at Robertsdale would be as described in alternative 3 – the unstaffed kiosk that would provide an overview of EBT-related coal mining and information about other EBT sites and the hiking-biking trail and the self-guiding trail to the historic coal mine remnants. Development of community-led tours of the town should also be considered.

Interpretation might also be offered on the train ride between Rockhill and Mount Union through publications/mile guides, audio loudspeakers, or on-board interpreters.

There would be trailheads, water, parking, and comfort stations at Orbisonia, Saltillo (possibly at the depot), and Robertsdale (possibly at company square). Trail-related required visitor services would be the same as described under alternative 3. Each trailhead for the right-of-way trail would have orientation/information signs providing trail maps, safety notices, trail rules, and other needed data and details on EBT-related features to see on that segment of trail. Signs that interpret resource features would also be placed on the right-of-way trail.

As described in alternatives 2 and 3, the driver's guide would provide interpretation of various EBT-related resources along the right-of-way. Interpretive turnouts and accompanying signs and waysides would be provided at the Aughwick and Pogue bridges and at the EBT shop buildings and mule barn in Wood.

Story to Be Told

Visitors would learn how the EBT functioned as a system within the Aughwick Valley and Broad Top Mountain with connections to the larger story of railroading at Mount Union. Mount Union would serve as the focus for the railroad economic story – its link to the Pennsylvania Railroad and outside market, the varieties of commodities carried, the transfer of goods from narrow gauge to standard gauge, the Mount Union refractories, etc. Mount Union is where the story of the EBT begins. The Juniata River had been established as a transportation corridor by its former canal system; the Pennsylvania Railroad provided access to interstate markets. The EBT was established to access coal reserves in the Broad Top Mountain area, which was 30 miles to the south. The railroad and coal company operated a coal processing plant that separated various grades of coal from transport. Large brick refractories were built in Mount Union, and the EBT brought the coal and clay. Rockhill would serve as a focus for telling the story of the railroad operation itself, the shops and depot. There would also be information at Robertsdale and Wood on the coal industry as it related to the EBT.

Strategy for Protecting the Resource

As in alternatives 2 and 3, railroad-related structures along portions of the right-of-way made accessible to visitors for hiking/biking recreation would be rehabilitated and maintained, including the enginehouse at Mount Union, Pogue bridge, Aughwick bridge, and selected buildings in the Rockhill shop complex. Structures and track for railroad use along the line from Mount Union to Rockhill would be rehabilitated and maintained. Other structures and segments along the right-of-way that are not used for trail or train ride purposes would be documented and allowed to deteriorate.

Scenic easements on identified scenic areas along the trails would also be sought. Such easements would prohibit certain development or construction activities to allow the preservation of a specific vista (refer to footnote 13). The easements could specify that a "scene" be preserved rather than prohibiting activities from taking place. Scenic areas would be identified in a future study; easements might prescribe an appropriate level of maintenance, require monitoring, and offer technical assistance to the owner.

A historic resource study (research of the history of the EBT railroad) would also be done to support the desired level of information to be given to the visitors and to support desired levels of resource protection.

Parking and Other Development

There would be a kiosk at Robertsdale, and the parking, trails and trailheads, comfort stations, and vegetation and vista clearing from Orbisonia to Robertsdale would be as under alternative 3. The Mount Union yard would be cleared for viewing the refractory site and interpreting the timber transfer, coal preparation plant, etc. on the interpretive trail. A visitor contact facility and parking would be built at Mount Union. Improvements for accessibility for visitors with disabilities would be made, and interpretive media would be available.

ALTERNATIVE 5 - ALL ABOARD!

Visitor Use Scenario

Under this alternative, visitors could take a train ride from Mount Union to Robertsdale, with a stop at Rockhill/Orbisonia to see the shop complex. General site orientation would be available at Mount Union, Rockhill/Orbisonia, and Robertsdale (see Alternative 5 map). Visitors could also drive to various related resources along the right-of-way. On-site information about the coal towns and associated industries along the right-of-way would be available. A variety of experiences would be provided by local communities. The EBT would act as the common thread to tie these resources together. Again, a future connection with Amtrak should be considered.

The Mount Union EBT yard would be one of the primary visitor focuses under this alternative. Visitors would be directed to park at the new visitor contact station/excursion staging area, where they would receive site orientation and/or interpretation. The EBT enginehouse and Baldwin #3 0-6-0 would be on display, as well as examples of EBT rolling stock. The cleared track area and sites of the timber transfer and the coal preparation plant would be visible.

Ideally under this alternative, visitors could board the train at Mount Union, stop off in Rockhill/Orbisonia and see the shop complex, continue on to Robertsdale, and then ride back to Mount Union. Other possibilities include going from Mount Union to Rockhill/Orbisonia and back to Mount Union or from Rockhill/Orbisonia to Robertsdale and back – to offer a variety of boarding opportunities, varied scenery, length of rides, etc. The ride could be three to six hours, depending on layovers and length of ride options. A train ride of this length would also offer visitors an understanding of the EBT's operation, historic function, and economic and social role in the region, as well as its representation within the national railroad system. A future study of feasibility and scheduling complexities would need to be done before any such scheduling decisions could be made.

The visitor experience at Rockhill/Orbisonia would be as described in alternatives 2-4 except that there would be a new visitor contact facility for orientation and accommodation of the expected increased number of visitors. This facility could be in a nearby existing building that would be adaptively reused for this purpose. The staging area for the train ride would continue to be at the Orbisonia depot.

At Robertsdale, there would also be a visitor contact facility/staging area (or possibly adaptive reuse of a building in the company square) along with the interpretive trail to the historic coal mine remnants.

Hiking/biking trails (except for interpretive tour trails) would not be available under this alternative because the entire right-of-way from Mount Union to Robertsdale would be used for railroad operation.

This alternative would be dependent on communities along the EBT to take an active role in the protection of their EBT-associated resources. The communities must support the regional and national aspects of the EBT story to offer visitors a wide variety of experiences.

Operations and development included in this alternative could be phased (Orbisonia to Mount Union, then Orbisonia to Robertsdale, etc.) for better manageability.

Appendix J contains more detailed maps of the Mount Union, Rockhill/Orbisonia, and Robertsdale areas under this alternative.

Visitor Services and Interpretation

The primary visitor service/interpretation actions under this alternative would occur in the Orbisonia depot and Rockhill shop complex, Mount Union, and Robertsdale. Other EBT-related sites would serve as secondary interpretive sites.

Visitor services and interpretation in Mount Union would be more detailed, but much as described in alternative 4. There would be a visitor contact station/staging area and staffed information desk, formal self-guiding interpretive trail through the yard, and wayside exhibits that interpret railroading in Mount Union, the EBT's link with the Pennsylvania Railroad and outside markets, the enginehouse, remnants of the coal preparation plant and timber transfer, and the refractory. The opportunity would also exist for some local organizations to provide tours of the NARCO refractory and other resources of interest in Mount Union.

As in alternatives 1-4, visitors would be directed to the Orbisonia depot and parking area by appropriate signs. However, a visitor contact station would provide site orientation, trip planning, and train ride information through appropriate graphic displays and a staffed information desk. Orientation information would show visitors where they are in relation to the entire EBT railroad, present the railroad's purpose, and highlight significant resources. Site orientation would also be provided through an unobtrusive informational sign placed outside the depot, for after-hours use. The visitor contact station would have exhibits on the EBT system and on the national story of railroading and transportation. An interpretive film would offer visitors the opportunity to grasp the significance of the EBT and the essence of its past operation and to understand the interrelationships of the EBT story, its routes, its workers, its communities, and its survival. The shop complex tours and trail and the trail to the Rockhill furnace remnants would be as described in alternatives 2-4.

In Robertsdale, visitors would receive site orientation, trip planning, and train ride information at the visitor contact station/staging area through appropriate graphic aids, an information sign, and a staffed information desk; staging space for the train ride would also be provided. A small exhibit space would offer an overview of EBT-related coal mining in Robertsdale and on Broad Top Mountain, focusing on history and function. Waysides, publications, and/or an audio-device would offer interpretation for the self-guiding trail to Robertsdale's historic coal mine remnants. Development of community-led tours of the town should be considered.

Regardless of how visitors arrived in the communities along the right-of-way, either by automobile or train, much more interpretation would be offered regarding EBT-related resources than under the other alternatives. Parking would be made available at each site, with interpretation offered through a variety of interpretive media. The stories connected with company towns, mining lifestyles, and associated industries, such as coal mining and timbering, would be interpreted and site-associated in greater detail than under the other alternatives. Additional visitor activities in these communities might occur in the form of seeing EBT-related resources that have been adaptively reused, such as museums, restaurants, retail stores, etc.

This alternative would also be dependent upon communities along the EBT to take an active role in the interpretation of their EBT-associated resources. The communities must support the regional and national aspects of the EBT story to offer visitors a wide variety of interpretation, services, and use experiences.

The driver's guide, as described in alternatives 2-4, would also be available under this alternative to interpret the various EBT-related resources along the right-of-way. Wayside exhibits and signs at the interpretive turnouts (the two bridges, Saltillo, and Wood) would be as described in alternatives 2 and 3.

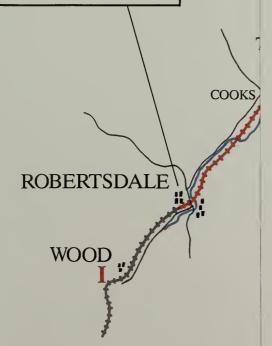
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ROBERTSDALE

- · Visitor contact facility
- ·Train ride terminus
- ·Interpretive trail to coal mines
- Possible rehabilitation
 & adaptive reuse of depot, store, post office, and/or office
- ·Parking



EAST BROAD TOP RAILROAD

TRAIN RIDE

I INTERPRETIVE TURNOUT

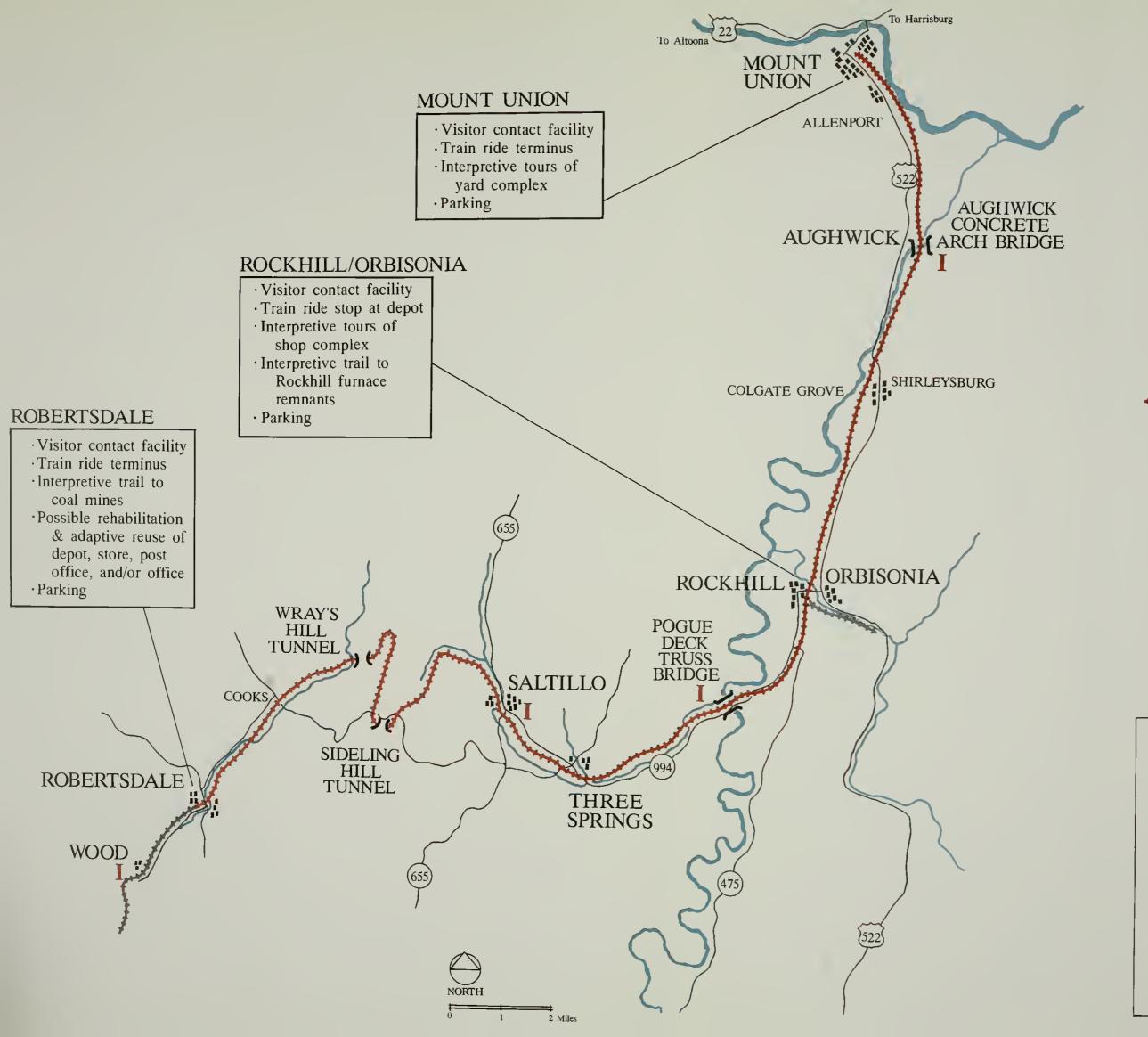
ALL ABOARD! ALTERNATIVE 5



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

AMERICA'S INDUSTRIAL HERITAGE PROJECT UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

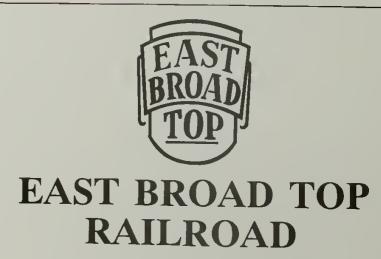


EAST BROAD TOP RAILROAD

TRAIN RIDE

I INTERPRETIVE TURNOUT

ALL ABOARD! ALTERNATIVE 5



ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

AMERICA'S INDUSTRIAL HERITAGE PROJECT UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

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Interpretation might also be offered on the train ride between Mount Union and Robertsdale through publications/mile guides, loudspeakers, or on-board interpreters.

Story to Be Told

Visitors would learn the story of the EBT system – Mount Union to Wood – and the EBT's role in the human history of Aughwick Valley, Broad Top Mountain, and the national story of railroading and transportation. More detailed on-site information about the coal towns of Saltillo, Robertsdale, and Wood would offer additional learning opportunities under this alternative. The lifestyles of the people in the communities along the right-of-way would be described in detail, including coal strikes, labor issues, company towns, and local support of the railroad.

Strategy for Protecting the Resource

All railroad-related structures on the entire right-of-way would be rehabilitated and maintained for train use. Some adaptive reuse of railroad-associated structures in the communities along the right-of-way would be encouraged. The Mount Union enginehouse would be rehabilitated as in alternatives 2-4, and the Baldwin #3 0-6-0 locomotive would be protected and used as a static display.

The environs of the railroad would be essential to the preservation of the line. The corridor along the EBT right-of-way includes tracts of wooded and agricultural land, farm complexes, towns, and industrial complexes and sites. These features would serve as a setting for the railroad, and many of them, in their own development, are believed to be directly related to the line. National register, if not national historic landmark coverage could be extended to these resources by way of a multiple resource nomination (for example railroad structures, community buildings, iron furnaces, refractories, and coal mines), creating a precedent-setting rural agricultural and industrial historic district. Although land development does not appear to be threatening to most of the associated resources at the present time, establishing protection measures now would be relatively cost-effective and could provide an invaluable historic resource and cultural landscape for the future. The significance and relationship of associated resources to the EBT needs to be determined through further study and documentation.

Easements (or other appropriate methods) for protecting identified scenic and cultural landscape resources would also be sought. Landowners would be compensated, based upon the value of the easement secured. Historic preservation easements are substantially the same as scenic easements but also require that any work done on historic structures be done in accordance with NPS standards (NPS-28 Cultural Resources Management Guidelines). Easements requiring landowners to comply with these standards are most effective when educational and technical assistance is offered. Easements might prescribe an appropriate level of maintenance, require monitoring, and offer technical assistance to the owner. Historic preservation easements would be identified in a future study. This future study would identify, evaluate, and determine the appropriate management options for cultural landscapes, including historic landscapes and historic rural landscapes. ¹⁵ The report would include four sections: administration data, documentary data, field survey data, and analysis and recommendations.

^{15.} A historic landscape is important for form, layout, or its designer, or for all three. Significant persons or events are not the primary reason for its preservation, although both may be relevant. With historic landscapes, as with historic structures, attention to detail is of importance (NPS 1984, p. 66)

TABLE 1: SUMMARY COMPARISON OF ALTERNATIVES

character of the Rockhill facilities, cleaning up the Rockhill site as necessary to ensure public safety, protecting and providing security for the archives, shop complex and When reading this summary comparison table, the reader is encouraged to remember that some actions are common to all alternatives - retaining and protecting the site depot, legally protecting the right-of-way, making improvements for visitors with disabilities, preserving some of the rolling stock, rewriting and expanding the national historic landmark nomination, etc. (see "Alternatives for Resource Protection and Visitor Use" section). These common actions are not included in the following table.

Alternative 5	Activities at Rockhill/ Orbisonia, Mount Union, and Robertsdale, with additional resources interpreted at Wood and Saltillo. Automobile tour would be as described under alternatives 2-4. Train ride from Mount Union to	EBT system and role in the human history of Aughwick Valley and Broad Top Mountain; its role within national story of railroading and transportation.	Structures associated with train use on entire right-of-way would be rehabilitated and maintained. Some adaptive reuse of selected structures in various communities.
Alternative 4	Visitor focus would be split between Mount Union and Rockhill/Orbisonia. Trails from Rockhill to Wood and automobile tour would be as under alternative 3. Train ride from Orbisonia to Mount Union.	EBT as a system within the region, with connections to larger railroading story at Mount Union.	Railroad-associated structures on right-of-way used for train ride would be rehabilitated and maintained. Structures and segments not used for trail or train purposes would be
Alternative 3	Same as alternative 2 with the addition of hiking/biking trails on some or all portions of the right-of-way. Possible other recreational uses of right-of-way. No train ride.	Same as alternative 2.	Selected recreational-use-associated segments and structures would be rehabilitated and maintained. Structures and segments not used for
Alternative 2	Depot and Rockhill shop complex open to public; visitors could also drive to Mount Union, Saltillo, Robertsdale, and Wood where on-site information about the resources in those areas would be provided. Train ride from Orbisonia to Robertsdale.	Same as alternative I plus the operational and economic history of EBT, including selected associated industries and emphasizing coal mining.	Railroad-associated structures on the right-of-way used for train ride would be rehabilitated and maintained; other structures would be documented and then allowed to deteriorate.
Alternative 1	Much as existing - depot and Rockhill shop complex open to public. Train ride from Orbisonia to Colgate Grove; steam demonstra- tion and possible excursions.	Relationship of shop complex and depot as components of an industrial workplace; railroad operation.	Railroad-associated structures along segment of right-of-way used for train ride would be rehabilitated and maintained. Railroad-associated structures along the unused
	Visitor Activities	Story to Be Told	Resource Protection

	New Facilities or Development	Management Options Available*	Preliminary Cost Estimates**
portion of the right- of-way would be documented and then allowed to deteriorate.	Trail through Rockhill shops with access for visitors with disabilities.	Options A through D.	\$ 8,681,490
Security would be provided for Baldwin #3 engine.	New parking/ interpretation areas at Mount Union, Rockhill, Saltillo, Robertsdale, Wood, and the Pogue and Aughwick bridges. Adaptive use/new visitor facility at Robertsdale. Vegetation cleared from selected portions of right-of- way for visitor access. Trail at Rockhill as in alternative 1. Improvements for visitors with disabilities.	Options A through D.	\$ 30,063,001
recreational uses would be documented and allowed to deteriorate. Security would be provided for Baldwin #3 engine. Easements would be sought for scenic areas along trails.	Same as alternative 2, with additional parking provided at trailheads. Right-of- way trail development and vista clearing in some areas along trails. Improvements for visitors with disabilities.	Options A through D.	\$ 19,291,684
documented and allowed to deteriorate. Security would be provided for Baldwin #3 engine. Easements would be sought for scenic areas. Historic resource study would be done.	Parking and interpretive trails would be the same as alternative 2. Right-of-way trail between Orbisonia and Robertsdale would be same as alternative 3. New visitor facilities at Mount Union. Improvements for visitors with disabilities.	Options A through D.	\$ 25,608,367
Security would be provided for Baldwin #3 engine. Easements would be sought for protecting scenic/cultural landscape resource study and scenic/cultural landscape study would be done.	Parking and interpretive trails would be the same as under alternative 2. New parking, clearing, and visitor facilities at Mount Union and Robertsdale. New visitor facility or adaptive reuse of existing facility at Rockhill/Orbisonia. Improvements for visitors with disabilities.	Options A through D.	\$ 39,181,730

* See next page

^{**} In addition, regardless of the alternative selected, operational costs (maintenance, administration, staffing, utilities, etc.) would be expected to range between \$1.5 and \$2.5 million per year. (See "EBT Development Cost Estimates for the Alternatives" section.)

A historic resource study (research of the history of the EBT railroad) would be prepared to support the desired level of information to be given to the visitors and to support desired levels of protection. A scenic/cultural landscape report would also be prepared.				
Parking and Other Development				
Parking, vegetation and vista clearing at selected sites, and clearing of the Mount Union railroad yard would be as under alternative 4. Visitor contact facilities would be needed at Mount Union and Robertsdale; a new visitor facility (or adaptive reuse of existing facility) would be needed at Rockhill/Orbisonia. Improvements for accessibility for visitors with disabilities would be made, and interpretive media would be available.				

POSSIBLE MANAGEMENT OPTIONS APPLICABLE TO ALL ALTERNATIVES

There are numerous possibilities for choosing a method of managing the EBT resource under any of the above-mentioned alternatives. Any one of the management options described below, or variations thereof, may be applied to any of the alternatives. However, some individual options may be better suited for funding and managing specific alternatives.

OPTION A - CONTINUE EXISTING OWNERSHIP AND MANAGEMENT

Description

Under management option A, the railroad would remain in private ownership and continue to be operated as a for-profit business. A cooperative agreement would be signed between the owner and the Southwestern Pennsylvania Heritage Preservation Commission (HPC). This cooperative agreement would provide the vehicle whereby the HPC could use federal project funds to assist in the restoration and interpretation of key components of the national historic landmark. Public funds through the HPC would be targeted to the installation of a fire prevention system, rehabilitation of structures, rehabilitation of historic railroad-related structures and equipment at the site, and design and construction of interpretive media to tell the EBT story to the visitor. These improvements would be made according to an appropriate development phasing schedule selected for the site prior to finalizing the agreement.

In exchange for the infusion of federal HPC monies, under this option the owner, under the cooperative agreement, would commit to the following:

Granting a first right of refusal to the HPC for the future sale of any and all land, structures, and historic rolling stock within the landmark that is currently under the control of the owner.

Developing an interim operation plan.

Operating the railroad according to an agreement (e.g., to operate the railroad at a certain general schedule, during a certain period, over a specific amount of the EBT right-of-way). This agreement would be commensurate with the amount and phasing of the public investment.

Donating a facade easement for the shop complex and depot at Rockhill/Orbisonia.

Hiring a full-time railroad operational manager.

Donating scenic or agricultural easements on farmlands owned by the landowner along the EBT right-of-way to Huntingdon County for protection and management.

Under the conditions set by Public Law 100-698, which established the HPC, a minimum of 50 percent nonfederal funds must be identified to match all future investment by the HPC. Public Law 100-698 also limits the HPC's ability to own property. (Any transfer of land to the HPC if a first right of refusal were exercised would occur only until an appropriate management entity was identified by the HPC.) A value of the previously listed conditions to be included in the cooperative agreement and appropriations obtained by Congress would be ascertained and applied to the nonfederal match for the project.

Impacts

The cooperative agreement between the landowner and the HPC would of necessity lay the groundwork for more specific legal binding agreements by both parties that would describe in detail expected levels for performance. This option would retain private for-profit ownership of the EBT in the family that has traditionally run the railroad for some 40 years. It would also provide, through public support, the capital investment necessary to protect and enhance the landmark.

However, because the railroad would remain in private ownership, the HPC could not guarantee the quality of the visitor experience or dictate the exact level and type of interpretive exhibits, media, etc. Nor would the maintenance or preservation of the EBT landmark be guaranteed, except those performance aspects covered within the framework of the cooperative agreement. The first right to refusal would offer little protection to the public investment because there would be no advance guarantee that public monies for the property would be available on short notice. Scenic and facade easements would offer some measure of public protection for public investment in historic structures within the landmark. Under this option, there would be no day-to-day monitoring of the operation by the HPC, however periodic monitoring could be built into the cooperative agreement.

OPTION B - EBT RAILROAD CORPORATION MANAGEMENT

Description

Management option B would involve the current owner of the EBT railroad changing the corporate structure of the railroad operation from a for-profit status into a new nonprofit corporation called the EBT Railroad Corporation. The purpose of the new nonprofit corporation would be to protect, preserve, and enhance the EBT landmark. Under this option, the owner would turn the general control of railroad operations to the corporation. The EBT Railroad Corporation would allow the separation of EBT railroad operations from the owner's other financial investments, both in and outside the Broad Top region. The corporation would be expected to take title to all property, structures, and historic rolling stock within the landmark boundaries; nonlandmark lands, such as coal and forest lands, would remain in Mr. Kovalchick's ownership. The establishment of the nonprofit foundation would attract both public and private support for investment in the EBT. The nonprofit corporation would be managed by a board of directors that is appointed by the owner. The EBT Railroad Corporation would be expected to enter into a cooperative agreement with the HPC, the commonwealth of Pennsylvania, and other entities to secure public funding/support for capital improvement projects. This agreement could include provisions similar to the cooperative agreement discussed in option A that would allow for the exchange of public investment in preservation and interpretation of certain aspects of the landmark in return for services, land, property, or anything for which a value can be assigned to serve as collateral for the public investment.

The EBT Railroad Corporation board of directors would be expected to oversee the operation of the railroad. The extent of future operations would be contingent on marketing and feasibility studies to be conducted at a later date. If the corporation solicits public funds, terms of operation may be articulated in the cooperative agreement.

Impacts

Because the owner would name the EBT Railroad Corporation board of directors and the EBT would remain under the control of a private corporation, continued operation, maintenance, and protection of the landmark would not be guaranteed; neither would the degree or type of interpretive program produced for visitors. However, these factors could be mitigated to some extent if public funding entities such as the HPC or the commonwealth of Pennsylvania entered into written cooperative agreements with the EBT Railroad Corporation. Terms of the agreement, such as those listed in option A, could exchange public investment in preservation and enhancement of the landmark for corporation commitments for operation, maintenance, and use of the EBT. Management of the EBT by a nonprofit corporation would also broaden the ability of the railroad management to seek foundation and other support given its tax deductible status.

Public investment in the EBT could take place under this option without the initial public expense of purchasing the property. The financial viability and capability of the EBT Railroad Corporation to manage the railroad would be determined to a large degree by the composition of the corporation board of directors and the personnel hired by the corporation to manage the railroad. The financial conditions regarding the establishment of the corporation and the transfer from a for-profit to a nonprofit entity are also key to the success of this option.

OPTION C - PUBLIC OWNERSHIP/FOUNDATION MANAGEMENT

Description

Option C would involve the acquisition of all property, structures, and historic rolling stock of the EBT landmark by a public entity. The public entity, whether the HPC or the commonwealth of Pennsylvania, would then turn the management and ongoing daily operation and protection of the railroad over to a nonprofit foundation that would be set up by the public entity. All nonlandmark lands, such as coal and forest lands, would remain in Mr. Kovalchick's ownership. Public monies would be required to purchase the railroad from the current owner and to preserve and enhance the railroad operation. Additionally, public monies would be used to provide additional interpretive exhibits and media at the site.

Impacts

The preservation and protection of the landmark would be ensured due to public ownership. The extent of public investment, however, would determine the level of the visitor experience, the extent of the actual train operations, and the capability to expand interpretive programs. As compared with management options A and B, this option would involve the expense of acquiring the property. The public sector would be responsible for all aspects of the project but would rely upon a private foundation for operation of the site. The foundation would be new and have unproven capability to manage a site as complex as the EBT.

OPTION D – EAST BROAD TOP RAILROAD NATIONAL HISTORICAL PARK AND EAST BROAD TOP REGION STATE HERITAGE PARK

Description

Option D would involve the acquisition of the entire EBT landmark by the National Park Service and its management and operation as a national historical park. To complement the national historical park, a state heritage park would be established within the East Broad Top region surrounding the park (or former landmark boundary) to provide protection of the scenic and historic setting and to provide a partnership in the celebration and commemoration of the people and culture of the Aughwick Valley and the East Broad Top region.

As part of its site responsibilities, the National Park Service might choose to not operate the railroad itself but to enter into a concession contract arrangement with an operator. The railroad operator could be the existing owner, if stipulated in leaseback provisions as a negotiable item in the sale of the property.

Impacts

Protection of the landmark and the key aspects of the East Broad Top region would be ensured under this option. In addition, the comprehensive story of the people, the resources, and the history of the region would be told to the national visitor. The partnership approach between the National Park Service, the commonwealth of Pennsylvania, and the site manager/operator would be a cost-effective way to achieve public ownership and stewardship of a nationally significant resource. Acquisition costs, as well as site development and preservation costs, would be borne by the federal government. Some reduction in these costs would be expected if leaseback or other arrangements were made with the current owner.

The state heritage park concept presented in this option could also be applied to options A, B, and C; it is not dependent on the management concept embodied in option D. For further information on the Pennsylvania Heritage Parks program, see appendix K.

ENVIRONMENTAL IMPACTS OF THE ALTERNATIVES

INTRODUCTION

The primary resources that would be affected by implementing any of the alternatives are the cultural resources associated with the railroad – such as the depot, the machine shops, the locomotives, and the roundhouse. These have been previously described. The protection of these resources of the national historical landmark is the primary concern of this study. However, other resources of concern have also been identified. These include wildlife, floodplains, wetlands, local economies, and visitor use. This environmental section provides background information on these other resources and presents the impacts on all resources that would occur from implementing each of the alternatives.

The EBT right-of-way essentially runs through the two parallel valleys of Aughwick and Great Trough creeks, crossing the hill country in between by way of long switchbacks and two tunnels. The right-of-way averages 50 to 60 feet wide, starts near the Juniata River at an elevation of 600 feet, and ends 1300 feet higher on East Broad Top Mountain. Natural vegetation along the way is primarily mixed hardwood forest with ashes, oaks, basswood, sycamore, black cherry, or tuliptree being dominants depending on locale.

Generally, the area is typical of the Valley and Ridge province of the Appalachians east of the Allegheny Front. Although there are no natural or scenic features of national significance in the area, the rural agricultural and wooded mountain terrain provide a historically intact setting for the railroad.

There are no known populations of federally listed threatened or endangered species in the vicinity of the right-of-way. The Allegheny woodrat is a federal candidate (C2)¹⁶ species and a state threatened species that occurs near the right-of-way on the Shade Gap Spur, just west of the village of Shade Gap. No other state-listed species occur in the vicinity.

The right-of-way between Three Springs and Robertsdale passes near, but not through, state game lands 99 and 121. In general, the right-of-way passes through good deer habitat and through or by some wetlands used by waterfowl. The track passes through one 3-acre wetland near Pogue and adjacent to ten 1- to 5-acre wetlands, particularly when running through the valleys of Aughwick, Three Springs, and Great Trough creeks. Most of these wetlands, however, are forest-covered and are only temporarily flooded after major flood events. Some of the wetlands were probably created by the construction of the railroad bed.

The track crosses major streams and their floodplains 12 times. Starting at Mount Union and moving south, the creek crossings are as follows: Aughwick, Blacklog, Aughwick (a second crossing), Three Springs (three times), North Branch of Three Springs, Great Trough, Yellow Branch of Great Trough, and Great Trough (three more crossings). Additionally, the track parallels portions of Aughwick, Three Springs, and Great Trough creeks within their respective 100-year floodplains.

IMPACTS COMMON TO ALL ALTERNATIVES

There are some impacts that would be common to all of the alternatives. The Orbisonia depot and selected structures in the Rockhill shop complex would be protected from fire and vandalism, and the EBT archives would also be protected. Resource protection and visitor safety would be greatly enhanced. By controlling new

^{16.} A candidate (C2) species is one that may be proposed for listing as threatened or endangered in the future, but there is currently insufficient data to support listing.

development, the historic character of the Rockhill facilities and the right-of-way would be preserved and protected. The rewritten landmark nomination would encompass resources that are integral to the EBT story, and those resources would likely be afforded a higher degree of protection. Representative rolling stock would be documented, interpreted, and preserved as significant parts of the EBT story.

ALTERNATIVE 1 - SHOPS AND STEAM

Impacts on Cultural Resources

Selected historic railroad structures and rolling stock at the Rockhill yard and along the right-of-way from Rockhill to Colgate Grove would be rehabilitated. Structures of primary concern in the Rockhill yard include the machine shop complex, sand house, lumber shed, blacksmith shop, foundry, and stores. Historic railroad structures and rolling stock along the rest of the right-of-way would be allowed to deteriorate, including the Baldwin locomotive in Mount Union. Further deterioration and/or loss of these features, including tunnels and bridges, could significantly change the values for which the EBT was recognized, and a loss of the landmark designation might occur.

Impacts on Wildlife

No impacts would be expected because the train operation would remain basically unchanged.

Impacts on Local Economies

Visitor numbers would rise because of the change in train scheduling from a weekend operation to a daily operation. A parallel rise in existing levels of visitor expenditures and sales tax revenues would occur.

Impacts on Visitor Use

High quality orientation, information, and interpretation of the depot and shop complex would provide the public a safe and enjoyable visit and ensure an understanding of the role of the Rockhill shops in the historic railroad operation. The sights, sounds, and smell of the shops in an industrial workplace would be an extra attraction. Visitor orientation would occur in a historic depot in Orbisonia.

Visitor use would occur in one area, but visitors would have opportunities for both structured opportunities and solitude in wandering around the Rockhill yard.

The train ride to Colgate Grove would offer visitors the opportunity to experience a steam locomotive ride through scenic rural countryside. The sounds and smells associated with such a steam train operation would be an extra attraction.

ALTERNATIVE 2 - MINING THE MOUNTAIN

Impacts on Cultural Resources

Selected historic railroad structures and rolling stock at the Rockhill yard and along the right-of-way from Rockhill to Robertsdale would be rehabilitated and maintained. Right-of-way structures along this section that would be rehabilitated and maintained would include bridges and tunnels. Historic railroad structures and rolling stock along the rest of the right-of-way would be allowed to deteriorate, with the exceptions of the Baldwin locomotive in Mount Union and the Aughwick concrete bridge, which would be protected. Several areas would be cleared of vegetation, including the Rockhill furnace and portions of the Mount Union yard. Further deterioration and/or loss of these features, including bridges, could significantly change the values for which the EBT was recognized, and a loss of the landmark designation might occur.

Impacts on Wildlife

No impacts to the Allegheny woodrat would occur because there would be no train operation on the Shade Gap Spur. Assuming that one train would make a round trip between Rockhill and Robertsdale each day of operation, reactions of individual deer would likely be minimal after habituation to the train. Train rides during the fall color season might partially overlap with deer hunting season, which could be a safety concern for passengers. Possible disturbance to waterfowl in wetland areas would be minimal because most of the wetland areas are only occasionally flooded.

Impacts on Local Economies

Lengthening the train ride, changing the character of the ride from pastoral to hill country with tunnels, and the new destination of Robertsdale would all tend to increase the number of visitors in the area. Increased tourist expenditures and sales tax revenues in Mount Union, Rockhill, Orbisonia, Robertsdale, and possibly in Three Springs, Shirleysburg, and Saltillo would likely result. More overnight visitors to the area would also be probable.

Impacts on Visitor Use

High quality orientation, information, and interpretation of the depot and shop complex, as in alternative 1, with an opportunity to travel the length of the EBT via automobile to visit other EBT-related commercial and industrial sites would ensure a better understanding of the EBT as a working railroad system. The sights, sounds, and smell of an industrial workplace at Rockhill would be an extra attraction. Visitor orientation would occur in a historic depot in Orbisonia and in a historic coal town served by the EBT.

Visitor use would occur in more than one area, and there would be opportunity to explore the EBT right-of-way as desired. Both structured opportunities and solitude would be available with such dispersed use.

The train ride to Robertsdale would offer visitors a steam locomotive experience through a scenic mountain region and an understanding of the relationship between the coal regions of Broad Top Mountain and the EBT as a transportation system. The sounds and smells associated with such a steam operation would offer visitors a sensory remembrance of a past technological age.

Because the EBT resource is linear in nature, visitors would often have to double back on their route to leave the area after driving the length of the right-of-way.

ALTERNATIVE 3 - A WALK THROUGH TIME

Impacts on Cultural Resources

Selected historic railroad structures and rolling stock at the Rockhill yard would be rehabilitated. Right-of-way structures to be rehabilitated would include the bridges and tunnels. The Baldwin locomotive and EBT enginehouse in Mount Union would be protected. Some scenic resources associated with the history of the railroad would be protected through the acquisition of easements. Some vegetation clearing around specific cultural resources would occur.

Impacts on Wildlife

No impacts to the Allegheny woodrat would occur because there would be no train operation. Likewise, no disturbance to deer or waterfowl would occur from train operations. The right-of-way, cleared of vegetation, would be more convenient to use for recreation. Impacts to deer and waterfowl from increased recreational use of the right-of-way would be minimal.

Impacts on Local Economies

Changes in visitor numbers under this alternative are debatable. On the one hand, the absence of a train ride might reduce the number of visitors to the area. On the other hand, the new interpretive waysides along the entire right-of-way and the promotion for recreational uses such as hiking and biking might increase visitor numbers. It is unlikely that the number of overnight visits would change from current levels.

Impacts on Visitor Use

As under alternative 2, visitors would have access to high quality orientation, information, and interpretation of the depot and shop complex, with an opportunity to travel the length of the EBT via automobile to visit other EBT-related commercial and industrial sites. The sights, sounds, and smell of an industrial workplace at Rockhill would be of additional interest to visitors. Visitor orientation would occur in the historic depot in Orbisonia.

No train ride would be offered in this alternative; visitors would be denied a live steam locomotive experience.

Visitors would have many more recreational opportunities than under alternatives 1 and 2. The entire length of the EBT right-of-way would be opened for hiking and biking, either in groups or in solitude. Visitors could experience relatively easy hiking/biking in the rural, agricultural setting of the northern section of the right-of-way, or more strenuous activity in the mountainous, wooded setting of the southern section of the right-of-way. The trail would also offer waysides and interpretation of EBT-related resources for visitor

understanding of the EBT railroad system. Activities such as cross-country skiing, handcars, and velocipedes, which might also be offered, could add variety to the opportunities available.

Because the EBT resource is linear in nature, visitors would often have to double back on their route to leave the area after driving the length of the right-of-way.

ALTERNATIVE 4 – THE PENNSY CONNECTION

Impacts on Cultural Resources

Selected historic railroad structures and rolling stock at the Rockhill yard and along the right-of-way from Rockhill to Mount Union would be rehabilitated and maintained, including bridges. The Baldwin locomotive would be protected and the enginehouse would be rehabilitated. Historic railroad structures along the rest of the right-of-way would be allowed to deteriorate. Some scenic resources associated with the railroad would be protected through the acquisition of easements. Some vegetation clearing around specific cultural resources would occur. Further deterioration and/or loss of these features, including tunnels and bridges, could significantly change the values for which the EBT was recognized, and a loss of the landmark designation might occur.

Impacts on Wildlife

No impacts to the Allegheny woodrat would occur because there would be no train operation on the Shade Gap Spur. Disturbances to deer and waterfowl would be minimal because the right-of-way between Orbisonia and Mount Union passes primarily through agricultural lands and there are few wetlands. Impacts to deer and waterfowl from increased recreational use of the right-of-way would be minimal.

Impacts on Local Economies

Lengthening the train ride and highlighting the new Mount Union destination, which is very close to US 22 would tend to increase the number of visitors in the Aughwick Valley. Increased visitor expenditures and sales tax revenues in Rockhill, Orbisonia, Mount Union, and possibly in Shirleysburg, Three Springs, Saltillo, and Robertsdale would likely result. More overnight visitors to the area would be possible.

Impacts on Visitor Use

Visitors would have access to high quality orientation, information, and interpretation of the depot and shop complex, as in alternative 1, with an opportunity to travel the length of the EBT via automobile to visit other EBT-related commercial and industrial sites. This would ensure a better understanding of the EBT as a working railroad system. The sights, sounds, and smell of an industrial workplace at Rockhill would offer an understanding of a past technological age. Visitor orientation would occur in a historic depot in Orbisonia and in the historic EBT yard in Mount Union.

Visitor use would occur in more than one area, with the opportunity to explore the EBT right-of-way as desired. Both structured opportunities and solitude would be available with such dispersed use.

The train ride to Mount Union would offer visitors a steam locomotive experience through a scenic, rural, agricultural region and an understanding of the relationship between the standard gauge Pennsylvania Railroad and the narrow gauge EBT as a regional transportation system. Clearing of the Mount Union yard would offer visitors an understanding of the yard's function and operation. The sounds and smells associated with such a steam operation would be part of its visitor appeal.

Visitors would have more recreational opportunities than under alternatives 1 and 2. A segment of the EBT right-of-way (from Orbisonia to Robertsdale) would be opened for hiking and biking, either in groups or in solitude. Visitors could experience short sections of relatively level hiking/biking activity or longer sections of relatively strenuous activity in the mountainous, wooded setting of the more southern section of the right-of-way. The trail would also offer waysides and interpretation of EBT-related resources for visitor understanding of the EBT railroad system. Activities such as cross-country skiing, handcars, and velocipedes, which might also be offered, could add variety to the opportunities available.

Because the EBT resource is linear in nature, visitors would often have to double back on their route to leave the area after driving the length of the right-of-way.

ALTERNATIVE 5 - ALL ABOARD!

Impacts on Cultural Resources

Features and structures significant to the landmark would be rehabilitated. Some scenic and cultural resources associated with the railroad would be protected through the acquisition of easements. Some vegetation clearing around specific cultural resources would occur.

Impacts on Wildlife

No impacts to the Allegheny woodrat would occur because there would be no train operation on the Shade Gap Spur. Possible disturbances to deer and waterfowl would be similar to alternative 2.

Impacts on Local Economies

Lengthening the train ride to the entire historic main line, changing the character of the ride to include both hill country and the Aughwick Valley, the proximity of the terminus of the train ride to US 22, and the new destination points of Mount Union and Robertsdale/Wood would all tend to increase the number of visitors in the area. Increased visitor expenditures and sales tax revenues in Rockhill, Orbisonia, Robertsdale, Mount Union, and possibly in Three Springs, Saltillo, Wood, and Shirleysburg would likely result. More overnight visitors to the area would be probable due to the length of the train ride.

Impacts on Visitor Use

High quality orientation, information, and interpretation of the depot and shop complex, as in alternative 1, with an opportunity to travel the length of the EBT via automobile to visit other EBT-related commercial and industrial sites would ensure a better understanding of the EBT as a working railroad system. The sights, sounds, and smell of an industrial workplace at Rockhill would be an extra attraction. Visitor orientation would occur in a historic depot in Orbisonia, in a historic coal town, and in the historic EBT yard in Mount Union.

Visitor use would occur in more than one area, with the opportunity to explore the EBT right-of-way as desired. Both structured opportunities and solitude would be available with such dispersed use. An increased level of interpretation would ensure visitor understanding of the EBT's significance and role in the national story of railroading and transportation.

The train ride between Mount Union and Robertsdale would offer visitors a steam locomotive experience through both a scenic, rural, agricultural region and a mountainous, wooded region. Visitors would have an understanding of the EBT as a regional transportation system by accessing resources on Broad Top Mountain and connections to the national railroad system at Mount Union. The sounds and smells associated with such a steam operation would promote an understanding of the technological age of steam.

No recreational trail experience would be available under this alternative.

Because the EBT resource is linear in nature, visitors would often have to double back on their route to leave the area after driving the length of the right-of-way.

EBT DEVELOPMENT COST ESTIMATES FOR THE ALTERNATIVES

The following costs for the various alternatives are very rough estimates and are meant to be used for comparison purposes only. To arrive at these costs, the following assumptions were made as to how the site might be developed if that alternative was to be implemented:

- Several buildings and structures in the Rockhill shop complex have settled over the years. The complex needs to be examined, and determinations need to be made regarding rehabilitation and utility needs. The following structures cited are the most visibly apparent concerns: the sandhouse, machine shop, blacksmith shop, foundry, lumbershed, and stores. The costs for rehabilitating and providing fire protection for these buildings are included.
- Costs for rehabilitating the track for the various train ride proposals have been included in the following costs estimates; however, operational costs for labor, supplies, and miscellaneous expenses have not been included (appendix L contains these estimates).
- The entire Rockhill shop complex will be assessed for hazardous materials if any federal or state funding is involved. The cost of such an assessment is not included in the costs for each alternative.
- The Historical American Engineering Record has recorded portions of the EBT resource through various ways. All of the bridges on the EBT right-of-way have been documented through 35 mm photography. Both of the tunnels and Aughwick Creek bridge have been documented through large format photography. The Rockhill shops have been documented through large format photography. The machine shop complex has been recorded through measured drawings. Work remaining to be done includes making measured drawings of the blacksmith shop, depot, roundhouse, stores, and foundry. Measured drawings of the Aughwick Creek concrete bridge and Pogue deck truss bridge are also needed. The estimated cost of recording provided in the alternatives is only for the two bridges.
- Discussion has occurred between the EBT owner and the AIHP regarding the possibility of moving the EBT archives from the Orbisonia station to the Indiana University of Pennsylvania in Indiana, Pennsylvania, for access and safekeeping. The cost of this move has not been estimated or added to the cost of each alternative.
- Security will be provided for the Orbisonia depot and Rockhill shop complex. The cost of this protection is not included in the estimates as they are not development costs.
- Several alternatives identify the inclusion of scenic and/or cultural landscape easements to be purchased for protection of the EBT's setting. The costs of these easements have not been estimated or included in the total cost of the alternatives.
- The costs associated with rehabilitating the Baldwin # 3 0-6-0 standard-gauge switcher for display have not been determined. The engine is currently stored in an EBT enginehouse in Mount Union. The costs associated with either an immediate survey or long-range preservation program for the EBT rolling stock have not been determined or included in these estimates.
- · Costs for possible acquisition or transfer of ownership of the EBT railroad are not included.

All of the following costs are rough "class C" NPS estimates – to be used only for comparing the alternatives; these costs may vary considerably from the final cost, depending on the managing entity. There are many unknown factors that affect costing out the alternatives, including an ambiguous landmark boundary, property ownership, support of local communities, short- and long-term management, and funding sources (i.e., public

funds vs. private funds). All or any of these factors will affect the final cost of protecting and potentially operating the EBT under any of the alternative concepts.

Preliminary Cost Estimates

Alternative 1 \$ 8,681,490

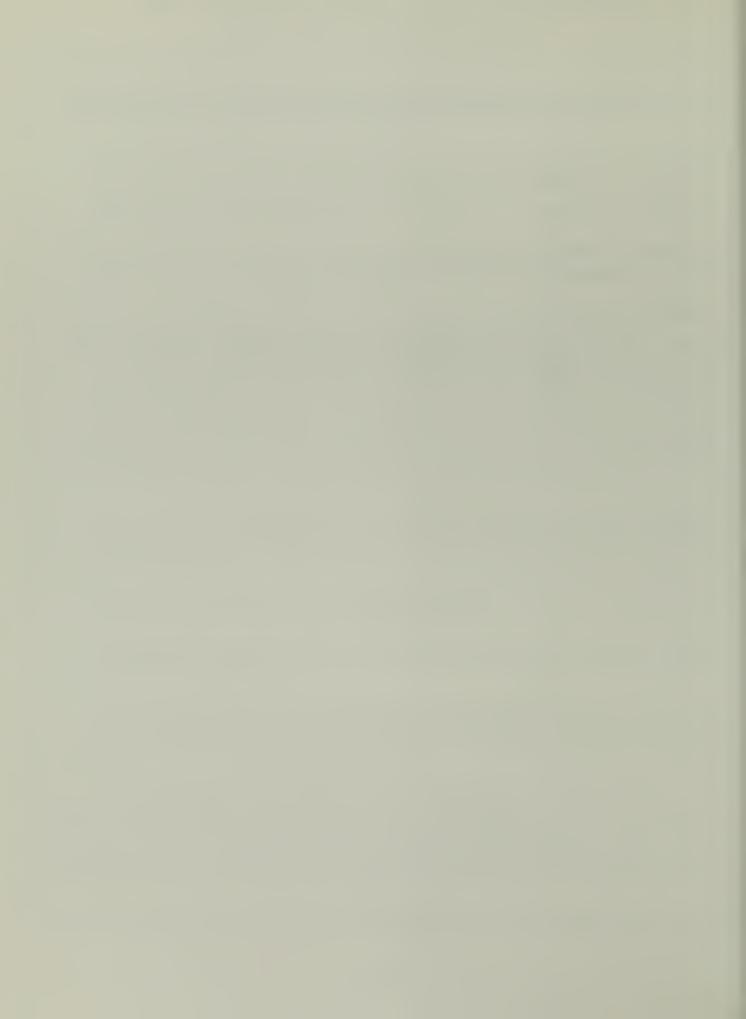
Alternative 2 \$ 30,063,001

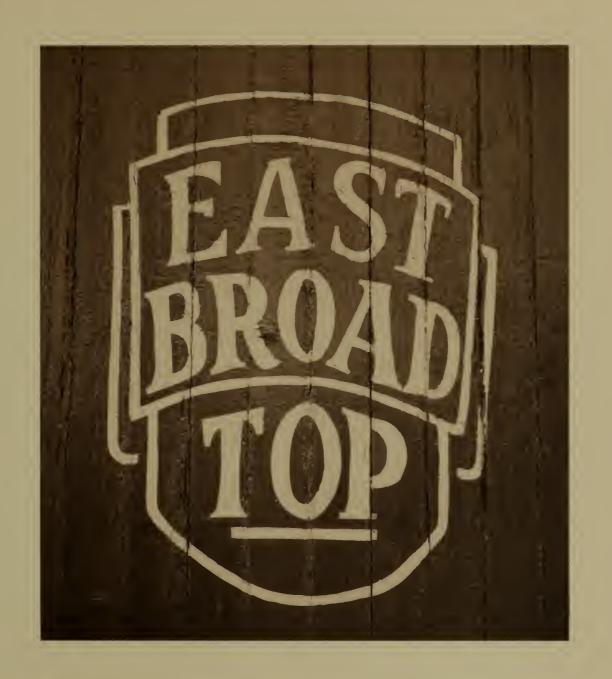
Alternative 3 \$ 19,291,684

Alternative 4 \$ 25,608,367

Alternative 5 \$ 39,181,730

In addition, regardless of the alternative selected, operational costs (maintenance, administration, staffing, utilities, etc.) would be expected to range between \$1.5 and \$2.5 million per year.







APPENDIX A: RELATIONSHIP OF EBT TO AMERICA'S INDUSTRIAL HERITAGE PROJECT

The primary focus of the AIHP is on the development, enhancement, and interpretation of iron/steelmaking, coal, and transportation and the labor and social history themes within the nine-county AIHP area. Early on in AIHP planning, Altoona, Pennsylvania, was identified as the focal point around which the story of rail transportation could revolve. However, other resources in the nine-county area are integral components of the rail transportation theme of the AIHP. Two such resources are the Allegheny Portage Railroad National Historic Site (a unit of the Park Service) and Horseshoe Curve (a national historic landmark). A third resource is the East Broad Top Railroad, which is privately owned. The EBT also relates to the AIHP's secondary theme of support industries, including refractory industries, timber, and iron ore production. The National Park Service and the commission are interested in protecting and preserving the East Broad Top and in making the railroad accessible for visitors to learn more about this significant resource; the Park Service and the commission also view the EBT as an important transportation resource within the AIHP.

The EBT was more than a transportation system; its right-of-way tied together coal mining areas and coal company towns in the Broad Top coal area in Huntingdon, Bedford, and Fulton counties. The EBT provides a unique opportunity to tell a complete story of coke and coal production and transportation in a single area. This opportunity relates to several AIHP objectives detailed in the 1987 Action Plan, including transportation, coal and coke production, and provision for economic development and tourism. The EBT project is further complemented by other AIHP projects in the surrounding area, including the following:

The Pennsylvania Railroad's history and development will be interpreted by the Railroaders Memorial Museum in Altoona and at the Altoona railroad shop complex. This complex was constructed by the Pennsylvania Railroad to build, service, and test locomotives and cars, and the site will be interpreted for its importance to American railroading and locomotive technology. Today, the shop complex serves the Conrail system.

Mount Union, the northern terminus of the EBT, is a place where many transportation systems noted in the AIHP Action Plan come together. The Pennsylvania Main Line Canal ran through Mount Union. The EBT served as a regional railroad system and linked with the Pennsylvania Railroad at Mount Union. Mount Union is at the intersection of US 22 and US 522, right on the proposed Southwestern Pennsylvania Industrial Heritage (AIHP) tour route and US 22 (the William Penn National Heritage Highway route).

Horseshoe Curve National Historic Landmark, which will include excursion trains between Altoona and Johnstown and the construction of a new visitor center and interpretive exhibits.

The Mount Etna iron furnace complex contains the story of an early 19th century iron complex. Preservation and management options are being explored.

There are many coal and iron industries identified in the AIHP Action Plan as possessing potential for preservation and interpretation. Robertsdale (on the EBT line), with its company town architecture, would provide an excellent opportunity for interpretation of cultural and social history and lifestyles in early 20th century company towns and would complement the commemoration of the coal story in Windber and Scalp Level (which are in Somerset and Cambria counties). Preservation of the Paradise furnace at Trough Creek State Park, Huntingdon County, and the coke ovens at Riddlesburg, Bedford County, also provide opportunities to demonstrate and interpret important industries related to coal and iron.

APPENDIX B: SUMMARY CHRONOLOGY EAST BROAD TOP RAILROAD

ca. 1786 Bedford Furnace built.

ca. 1800 First Broad Top Mountain coal marketed.

early 1831 Rockhill furnace no. 1 opened.

6/6/1850 First Pennsylvania Railroad run into Mount Union.

2/ /1856 Huntington & Broad Top Mountain Railroad opened.

4/16/1856 East Broad Top Railroad and Coal Co. incorporated.

1867 Orbison house built.

ca. 1870 Rockhill Iron & Coal Co. formed.

7/31/1871 East Broad Top Railroad and Coal Co. incorporated.

1871 East Broad Top Coal and Iron Co. established.

6/6/1872 Decision to build East Broad Top Railroad to gauge of 36".

9/10/1872 Rockhill Iron & Coal Co. incorporated (3/1872?).

9/16/1872 East Broad Top Railroad construction begun at Mount Union.

early 1873 First locomotives arrive: nos. 1, "E.D. Roberts," and 2, "R.D. Wood."

8/30/1873 Mount Union-Rockhill Furnace section of line opened – 11 miles.

1873 Robertsdale founded by Rockhill Iron and Coal Co. Named after Allernon and

Edward Roberts.

9/23/1874 First East Broad Top Railroad train Mount Union - Robertsdale – 30 miles.

10/15-18/1874 Official East Broad Top Railroad opening celebrations.

11/4/1874 First regular East Broad Top Railroad train.

1/1876 Rockhill furnace no. 2 opens.

6/9/1876 First fatality on East Broad Top Railroad.

6/17/1879 First fatal East Broad Top Railroad accident.

1882 Construction begun on Rockhill Furnace roundhouse.

2/23/1884 Shade Gap Railroad incorporated.

1885	East Broad Top Railroad and Rockhill Iron and Coal Co. default on bond payments.
1/1/1885	Shade Gap Railroad opened.
1890	Locomotive no. 1 sold.
1891	Woodvale founded by Rockhill Iron and Coal Co. Named after Richard Wood.
ca. 1895	Locomotives nos. 4 and 5 taken out of service.
2/ /1900	First silica brick factory opened in Mount Union.
8/ /1900	Locomotives no. 6 "Addie" and " Thomas" disposed of.
12/ /1901	Locomotive 2nd no. 4, "Cromwell," acquired.
1902	Locomotive 2nd no. 6 acquired.
10/27/1903	R. S. Seibert elected president of both East Broad Top Railroad and Rockhill Iron and Coal companies.
late 1906	Orbisonia station completed.
1907	Pennsylvania Railroad bypass around Mount Union opened.
9/1907	Car no. 20, "Orbisonia," acquired from Big Level & Kinzua Railroad.
3/1908	Famous runaway caboose incident.
ca. 1909	Shed roof over platform added to Orbisonia depot.
11/8/1909	Shade Gap Branch opened to Neelyton.
ca. 1909	Rockhill iron furnaces close.
12/1911	Locomotive no. 12, first EBT 2-8-2 built by Baldwin.
1912	East Broad Top Railroad begins hauling ganister in commercial quantities.
10/1912	Locomotive no. 14 built.
5/23/1913	R.S. Seibert dies.
12/22/1913	Shade Gap and Rocky Ridge railroads combined with East Broad Top Railroad.
2/1914	Locomotive no. 15 built.
1914	Robertsdale depot constructed; United States enters World War I.
1915	Aetna powder plant construction started.
1916	Coles Valley Branch opened.

1916 Peak East Broad Top Railroad mileage: 53 miles of main and branch lines. Railroad extended to Alvan. 1916 Six ex-Boston, Revere Beach & Lynn Railroad passenger cars acquired by East Broad Top Railroad - nos. 8, 9, 10, 11, 14, 15. 1/1-6/22/1918 East Broad Top Railroad under United States Railway Administration control. Locomotive no. 17 built. 3/1918 Rockhill Iron & Coal Co. combined with Shantung Coal Co. to create Rockhill 1920 Coal & Iron Co. 1920 Cabooses nos. 27 and 28 built. 8/1920 Locomotive no. 18 built. 1922 Locomotive 2nd no. 3 disposed of. 1923 East Broad Top Railroad acquires last new locomotive: 3rd no. 3. 1924 Timber transfer completed at Mount Union. 10/1/1925 Rockhill Iron and Coal Co. opens sand flotation coal cleaning plant at Mount Union. Motorcar no. M-1 put into service. Passenger car no. 8 equipped with roller 1/6/1927 bearings to serve as trailer. 7/1927 Motorcar no. M-2 put into service. 1928 Rockhill Iron and Coal Co. bankrupt. ca. 1928 Motorcar no. M-3 put into service. mid 1929 East Broad Top Transit Co. organized. M-2 retired. 12/1929 ca. 4/10/1933 Operation of standard-gauge freight cars in interchange on narrow-gauge trucks begun. East Broad Top Transit Co. Orbisonia garage burned. 7/1933 12/31/1934 Locomotive 2nd no. 4, "Cromwell," retired.

mid 1935 Regular train service on Shade Gap Branch discontinued.

5/3/1936 First organized railfan trip over East Broad Top Railroad.

Rockhill Coal Co. formed as successor to R. C. &I. Co. 8/24/1938

8/30/1938 Rockhill Coal & Iron Co. assets foreclosed and sold at auction.

9/1/1938 Rockhill Coal Co. incorporated. Evanston Branch abandoned. 1940 Stanton Spur and Rocky Ridge Branch abandoned. 1940 5/9/1940 Second organized railfan trip over East Broad Top Railroad. United States entered World War II. 12/8/1941 early 1942 Narco Branch constructed. 8/1942 Passenger car no. 11 sold to U.S. Navy. 1/24/1943 Shade Gap - Branch to Neelyton abandoned. 4/30/1943 Locomotives nos. 2nd 5 and 11 restored. 12/22/1943 Shade Gap Railroad consolidated into East Broad Top Railroad. 10/6/1946 First postwar railfan trip. early 1948 Shade Gap Branch cut back to Black Log. 6/24/1951 Seventh, and final, East Broad Top Railroad railfan trip of common carrier era. 1953 Huntingdon and Broad Top Mountain Railroad abandoned. 1954 Passenger car no. 24 sold to ALCOA 8/15/1954 Passenger service discontinued. 1955 Coles Valley Branch dismantled. 11/30/1955 East Broad Top Railroad files for abandonment. 2/16/1956 Authority to abandon East Broad Top Railroad granted by ICC. 3/23/1956 Last day of two-train operation. 4/2/1956 Federal Public Utilities Commission grants authorization to abandon East Broad Top Railroad. 4/6/1956 Last revenue East Broad Top Railroad freight train: locomotive no. 17. 4/13/1956 Locomotive no. 3 operated for last time. 5/1/1956 Rockhill Coal Co. assets including East Broad Top Railroad sold to Kovalchick Salvage Co. ca. 1957 Narco and Black Log branches dismantled. 1/10/1958 Rockhill Coal Co. fully consolidated in Kovalchick Salvage Co.

1959 Two flat cars sold to "Tweetsie" - East Tennessee & Western North Carolina

Railroad

6/6/1960 Locomotive no. 12 reoperated.

8/13/1960 East Broad Top Railroad reopened as tourist railroad.

1961 Service extended to Colgate Grove.

7/6/1963 Shade Gap Electric Railway Railways to Yesterday opened.

1963 Proposal to locate Pennsylvania State Railroad Museum at Mount Union.

8/15/1964 East Broad Top Railroad designated as national historic landmark.

1968 Fifteen hopper cars sold to White Pass & Yukon Railroad.

early 1982 Four hopper cars sold to Durango & Silverton Narrow Gauge Railroad.

1986 Robertsdale depot sold.

1987 Saltillo tank burned.

1988 East Broad Top Railroad operating schedule reduced.

6/1989 NPS task directive authorizing East Broad Top Railroad study of alternatives

issued.

APPENDIX C: BRIDGE AND TUNNEL EVALUATION

Bridge and Tunnel Preliminary Inspection

East Broad Top Railroad Huntingdon and Bedford Counties, Pennsylvania

September/October 1989

INTRODUCTION

As part of a study to determine alternatives for preserving the historic East Broad Top (EBT) Railroad, a preliminary inspection of the bridges and tunnels was undertaken to assess the structural condition of these structures. Along the 32½ miles of the main line track, there are 16 bridges and two tunnels. Although the tunnels date back to the origin of the EBT Railroad in 1874 (the concrete portals were added after the turn of the century), most of the existing bridges were constructed at the turn of the century, probably as replacements for earlier timber structures. Access to records and/or plans that might indicate construction dates as well as other significant information, was not possible.

Currently, only the 5-mile portion of the railroad from Orbisonia to Colgate Grove is operational. The remaining portion of the railroad was abandoned in 1956, when the ownership of the railroad changed. Consequently, little maintenance has been provided on the abandoned portion of the main line track.

EXISTING CONDITIONS

The tunnels and bridges were inspected by structural engineer Terry Wong of the National Park Service, Denver Service Center, on September 26-28, 1989. The locations of the structures are shown on the following map, on which the structures are identified and numbered arbitrarily from north to south. Table C-1 consists of data concerning the 16 bridges, which includes the bridge type, construction date, number of spans, and total span length. (Construction dates and span information was obtained from the Historic American Engineering Record bridge inventory). The Sideling Hill tunnel (830 feet long, structure number 12) and the Wray's Hill Tunnel (1,228 feet long, structure number 13) are included on table C-1.

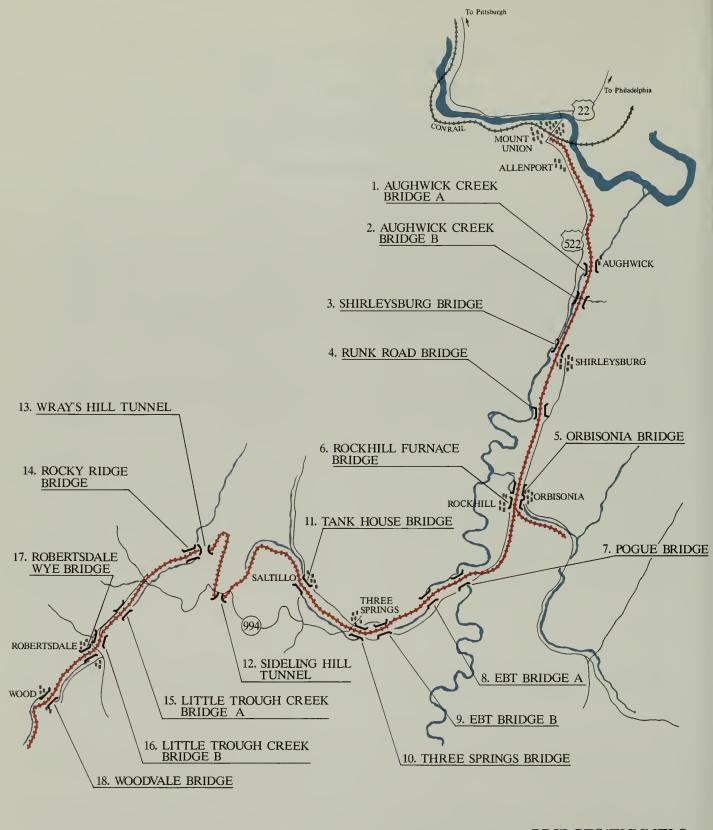
Bridges

Generally, the bridges where the EBT railroad still operates (Orbisonia to Colgate Grove) are in good condition. The bridges on the abandoned portions of the line are in poor to fair condition. Specifically, the condition of individual elements at the abandoned bridges are as follows:

Rails - most rails are in fair condition, although some are corroded and fractured.

Ties - all the timber ties that remain are severely decayed, and many ties are missing. These ties were not preservatively treated, thus resulting in the severely deteriorated condition observed.

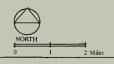
Superstructure - the predominant steel plate girder bridges are mostly in fair condition; however, severe corrosion has occurred in some areas, particularly at the girder bearing locations and horizontal connections (for example, the cross-bracing to girder connection). The concrete arch bridge at Aughwick Creek (structure number 1) exhibits severe spalling at the top and sides of the structure and also contains cracks and bows.



BRIDGES/TUNNELS

EAST BROAD TOP RAILROAD

National Historic Landmark





EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

AMERICA'S INDUSTRIAL HERITAGE PROJECT UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

957-40039-DSC-MAY 90

TABLE C-1. EBT RAILROAD STRUCTURES

	STRUCTURE No. & NAME	Bridge Type	CONSTR. DATE	No. of Spans/ Total Span	Remarks
1	Aughwick Creek Bridge A	Concrete arch	1917	4 / 203'	
2	Aughwick Creek Bridge B	Unknown	-	1 / 30' (+/-)	Superstructure missing; only rails remain
3	Shirleysburg Bridge	Steel plate girder	c.1900	1 / 33'	
4	Runk Road Bridge	Steel plate girder	c.1900	1 / 18'	
5	Orbisonia Bridge	Steel plate girder	c.1980	1 / 12' (+/-)	Replacement for box culvert, reused girders
6	Rockhill Furnace Bridge	Steel plate through girder	1900	2 / 90'	
7	Pogue Bridge	Steel deck truss/steel plate girder	1910	3 / 268'	Truss - 2 spans Girder - 1 span
8	EBT Bridge A	Steel plate through girder	c.1915	1 / 50'	
9	EBT Bridge B	Steel plate through girder	c.1910	1 / 135'	
10	Three Springs Bridge	Steel plate through girder	c.1900	1 / 80'	
11	Tank House Bridge	Steel plate through girder	c.1900	1 / 54'	
12	Sideling Hill Tunnel	Tunnel	1874	- / 830' long	Concrete portal added c. 1919
13	Wray's Hill Tunnel	Tunnel	1874	- / 1,228' long	Concrete portal added c. 1900
14	Rocky Ridge Bridge	Steel plate girder	c.1900	1 / 65'	
15	Little Trough Creek Bridge A	Steel plate through girder	c.1900	1 / 77'	
16	Little Trough Creek Bridge B	Steel plate through girder	c.1900	1 / 65'	
17	Robertsdale Wye Bridge	Steel plate girder	c.1900	1 / 23'	
18	Woodvale Bridge	I-beam girder	1916	1 / 27'	

Abutments and piers - most of the stone abutments are in fair condition, although some minor failures have occurred at the wing walls and some girder bearing locations. Some of the abutments have a cementitious parging, which appears to be a later treatment to protect the stonework. Where the stonework is still exposed, the mortar joints are extensively deteriorated. Some erosion of the backfill material has occurred, particularly where the stonework has failed.

Foundations - most of the foundations could not be closely inspected because they are underwater; however, the water level is rather shallow at all the bridges. It is apparent that most of the foundations are constructed of stone and are shallow footings bearing on bedrock (some foundations are constructed of concrete). Although some erosion of the foundations is visible, there does not appear to be any substantial settlement of the foundations. Additionally, undermining of the foundations from scouring was not observed, except at Aughwick Creek bridge A (structure number 1).

An additional item concerning the bridges is that all the abandoned ones are heavily overgrown with vegetation. This problem exacerbates the conditions, which furthers the deterioration processes.

All existing bridges are repairable at this time. Where extreme corrosion of the steel elements has occurred, extensive repair or possibly replacement of the entire member will be necessary. Recommendations for rehabilitation of the bridges are contained in the next section.

Tunnels

Both tunnels, which are on the abandoned portion of the railroad, are in poor to fair condition. A lack of maintenance has contributed to the deteriorated condition. In general, the condition of the elements of the tunnels are as follows:

Approaches - the approaches to the tunnels are heavily vegetated, making access somewhat difficult. The tunnels were constructed on a slope to facilitate drainage; however, this drainage is blocked by fallen vegetation and other debris on the railroad bed.

Roof - most of the lengths of both tunnels are unlined. The predominantly claystone rock has many cleavages and fractures, which in many instances has resulted in roof failures from water and freeze/thaw action.

Lining - both tunnels have areas that are lined intermittently with timber (log posts and beams and roof boards). Much of this timber is decayed and the lining has failed in some locations. Associated with the failure of the lining has been collapse of some portions of the tunnel roof, particularly at the west end of the Wray's Hill tunnel.

Portals - The portals are in fair condition, with the exception of the roll-up doors, which have fallen from the portals. The concrete portals have some areas that are spalled and cracked.

Floors - drainage at the tunnel floors has been blocked in some locations by the rock piles resulting from collapse of the roof. The source of the water in the tunnels is seepage through joints in the overburden. Standing water in one area of the Wray's Hill Tunnel is over 1 foot deep. The rails are in fair condition, and the timber ties are mostly saturated and in poor condition. The rock floor itself appears to be in sound condition.

Although portions of the two tunnels are in poor condition, it is possible to restore the structural integrity of the structures and make them safe and/or usable in the future. Included in the following section are recommendations for achieving this.

Individual inspection reports indicating conditions of each structure have been written and are available from the National Park Service's Denver Service Center. Each structure is rated numerically from "0" (failed condition) to "8" (very good condition) to indicate its condition. This system is similar to the Federal Highway Administration's inspection rating for highway bridges. Photographs are included in these reports to indicate both general and specific conditions. Table C-2 consists of a summary of the ratings for all the structures (refer to figure C-1 for the numerical rating guide), and also includes construction cost estimates for rehabilitation. The basis for these cost estimates is contained in the following section.

RECOMMENDATIONS

As mentioned previously, all of the structures along the main line track of the EBT railroad can be rehabilitated, if desired. At this time, rehabilitation is urgently needed to preserve the existing fabric and to reduce further deterioration, which is occurring exponentially and may eventually lead to complete failure. Sometime within the next decade, the abandoned bridges will become so deteriorated that retaining the structures will not be structurally feasible. The recommendations below address the repair work necessary at the present to rehabilitate the bridges and tunnels.

Bridges

The work necessary to rehabilitate the structural steel bridges generally involves the following:

- Remove rails and decayed timber ties including overgrown vegetation.
- Repair or replace corroded structural steel.
- Blast clean and paint steelwork.
- Repair abutments, piers, and approaches.
- Install new deck use timber ties and steel rails for railroad use or lumber deck and guardrail for recreational use. All timber/lumber should be pressure-treated with an appropriate preservative.

All of the work necessary to rehabilitate the bridges should be performed in accordance with *The Secretary of the Interior's Standards for Rehabilitation* (NPS 1983). Following the standards will ensure appropriate preservation treatments for this historical resource while providing for an efficient contemporary use.

Before rehabilitation work is started for the bridges, it is necessary to perform a more thorough inspection of the structures, including foundation, substructure, and superstructure. This will serve to identify and quantify the extent of deterioration and thus produce an appropriate level of design. This is especially necessary at the Aughwick Creek Bridge A (structure number 1), where more extensive investigation and testing of the concrete is required to determine the condition and extent of repair. Also, a structural analysis of each bridge should be performed to ensure that the bridges have an adequate factor of safety with respect to loading specified in the current American Railway Engineering Association standards.

TABLE C-2. EBT RAILROAD STRUCTURES APPRAISAL

STRUC	STRUCTURE DESCRIPTION	-		APPRAISAL (See Note 1)	(See Note 1)		REHABILITATION
				SUPER	SUB	CHANNEL	CONSTRUCTION
NO.	NAME	APPROACH	DECK	STRUC.	STRUC.	PROTECT.	COST ESTIMATE
-	Aughwick	5	4	4	ς,	9	\$603,000
	Creek Bridge A						
(i	(¢	•	t	900
7	Aughwick Creek	n	0	o	4	_	41,600
	Bridge B						
ю	Shirleysburg	\$	2	S	Ś	7	71,000
	Bridge						
4	Runk Road	9	9	9	5	N/A	36,000
	Bridge						
2	Orbisonia	∞	7	7	∞	7	10,200
	Bridge						
9	Rockhill	8	5	7	5	9	136,000
	Furnace Bridge						
7	Pogue Bridge	5	2	5	4	ς.	585,000
∞	EBT Bridge A	9	2	4	5	7	129,300
6	EBT Bridge B	5	2	9	5	7	350,400
9	Three Springs	V.	2	4	4	7	229,200
)	Bridge						
Ξ	Tank	9	0	4	5	9	\$87,000
	House Bridge						

TABLE C-2. EBT RAILROAD STRUCTURES APPRAISAL (CONT.)

REHABII ITATION	CONSTRUCTION COST ESTIMATE	\$569,000	933,000	114,400	209,200	176,400	68,800	30,000	\$4,379,500
	CHANNEL PROTECT.			9	9	٢	7	9	Total
APPRAISAL (See Note 1)	SUB STRUC.			'n	м	v	4	٧,	
APPRAISAL	SUPER STRUC.	Condition of Tunnel - 4	Condition of Tunnel - 3	ν.	'n	4	ν,	4	
	DECK	Condition	Condition	2	7	2	7	2	
NO	APPROACH	S	vo	W	'n	9	9	9	
STRUCTURE DESCRIPTION	NAME	Sideling Hill Tunnel	Wray's Hill Tunnel	Rocky Ridge Bridge	Little Trough Creek Bridge A	Little Trough Creek Bridge B	Robertsdale Wye Bridge	Woodvale Bridge	
STRUC	NO.	12	13	4	15	91	17	18	

NOTES

- 1. Appraisal is the overall rating for the structure components listed (see figure C-1 for numerical rating guide). For complete rating see individual inspection reports in the Preliminary Inspection of Structures, East Broad Top Railroad (available at NPS Denver Service Center).
 - 2. Substructure includes abutments and piers.
 3. For work required in determining construction
- For work required in determining construction cost estimate see individual inspection reports in the Preliminary Inspection of Structures (Bridges and Tunnels), East Broad Top Railroad (available at NPS Denver Service Center).

FIGURE C-1. FIELD INSPECTION REPORT – NUMERICAL RATING GUIDE

Code Description

N/A NOT APPLICABLE

- 9 AS-BUILT CONDITION
- 8 VERY GOOD CONDITION no problems noted
- 7 GOOD CONDITION some minor problems
- 6 SATISFACTORY CONDITION structural elements show minor deterioration
- 5 FAIR CONDITION all primary structural elements are sound but may have minor section loss, cracking, or spalling. Secondary elements may have significant deterioration.
- 4 POOR CONDITION advanced section loss, deterioration, or spalling
- 3 SERIOUS CONDITION loss of section, deterioration, or spalling have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
- 2 CRITICAL CONDITION advanced deterioration or primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present. Bridge should be closed until corrective action is taken.
- 1 "IMMINENT" FAILURE CONDITION major deterioration or section loss present in critical structural components. Bridge is closed to traffic but corrective action may put it back in light service.
- 0 FAILED CONDITION out of service beyond corrective action

Tunnels

The work necessary to rehabilitate the tunnels and make them safe and operational consists of the following:

- Provide emergency stabilization, such as shoring, bracing, and rock bolting to provide a safe working
 environment.
- Clear vegetation at approaches.
- Remove decayed timber lining and fallen stone.
- · Remove rails and ties.
- Install rock bolts and new lining (probably concrete or perhaps timber to restore the historic appearance), where necessary, and provide proper drainage.
- Repair portals.
- Install new pressure-treated timber ties and rails.

More extensive geotechnical engineering investigation and testing is required to determine the stability of the overburden and rock at the tunnels. After this is completed, proper design and construction could proceed.

Summary

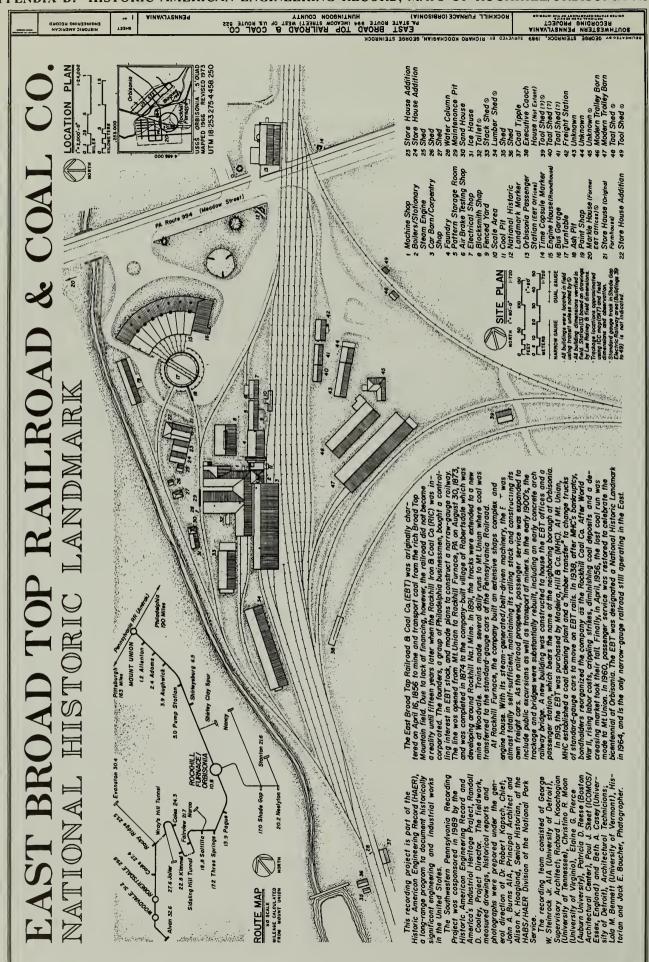
To summarize, all of the existing structures could be rehabilitated; however, time is of the essence. Because maintenance is not being performed on the abandoned structures, deterioration is occurring at accelerating levels. Decisions should be made as soon as possible, and appropriate repairs should be made, if the structures are to be preserved. Cyclical maintenance should be implemented for any structure that is rehabilitated.

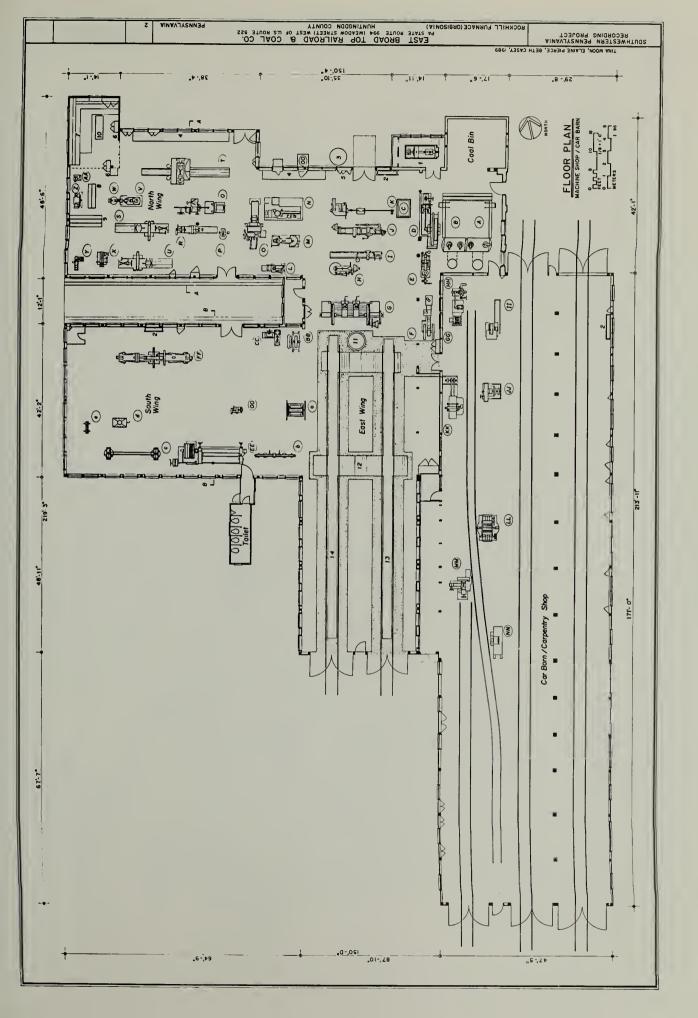
CONSTRUCTION COST ESTIMATES

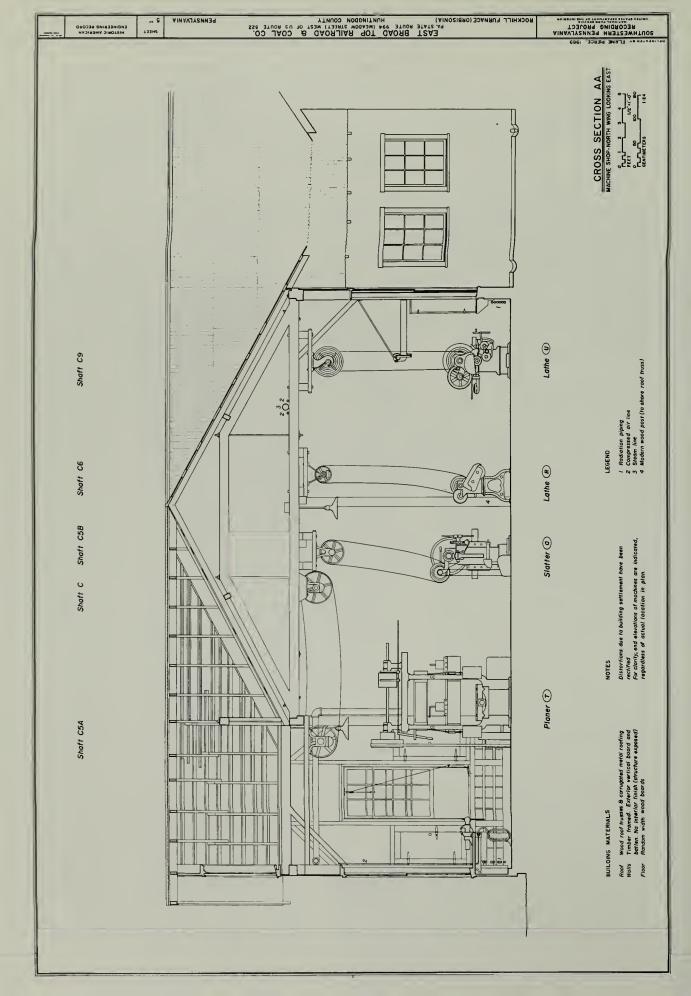
The construction cost estimates for rehabilitating the EBT railroad structures are shown in table C-2. These costs (1991 dollars) are based on the work described in the aforementioned recommendations for either railroad or recreational use. The following assumptions were made in determining the costs:

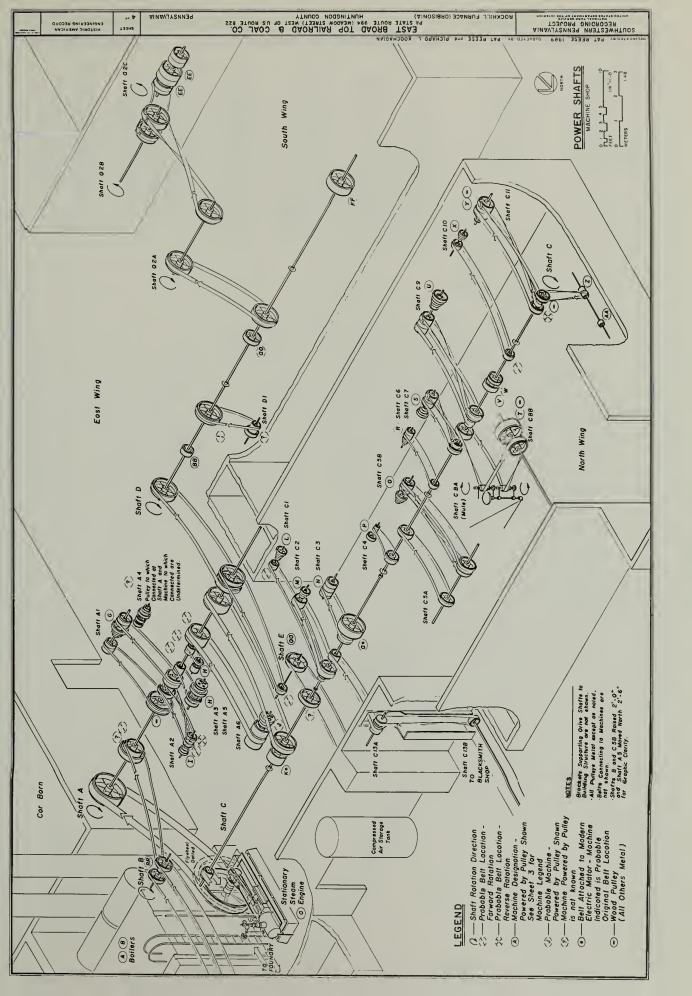
- government unit prices were used (typically 15-20 percent higher than private contracts, because of general provision requirements)
- timber ties at the abandoned structures were not preservatively treated, thus they do not have to be disposed of as toxic waste
- a complete enclosure system is required for cleaning and painting the steelwork
- a 20 percent contingency is included to allow for unknown conditions.

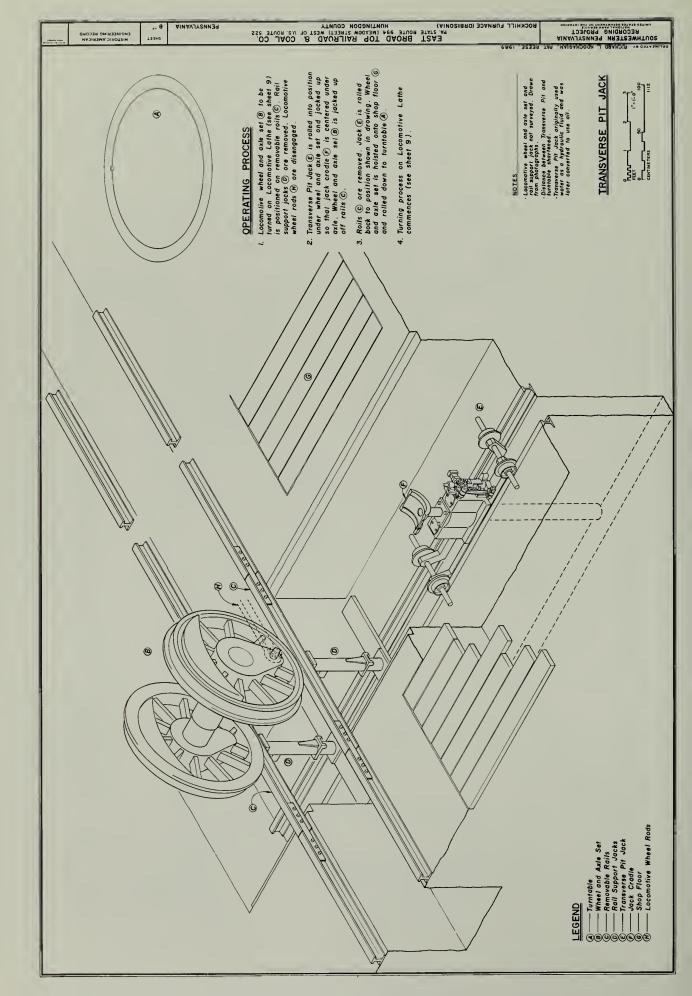
Lastly, the construction cost estimates do not include design costs (approximately 25 percent of the construction costs), or project supervision costs/Washington Office contingencies (typically 31 percent of construction costs), normally used in NPS projects.

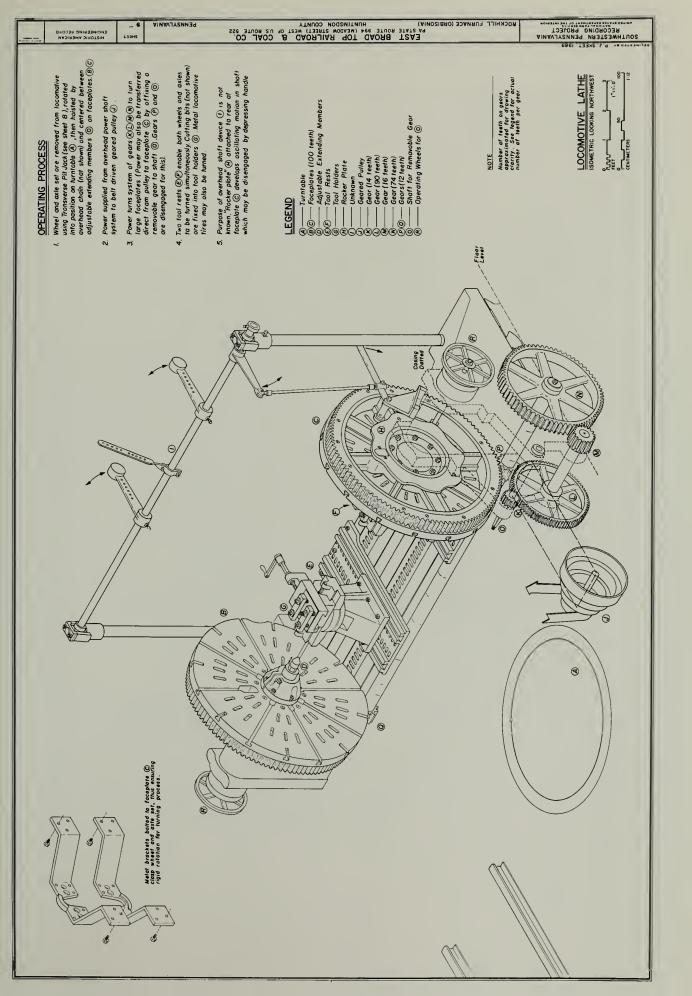


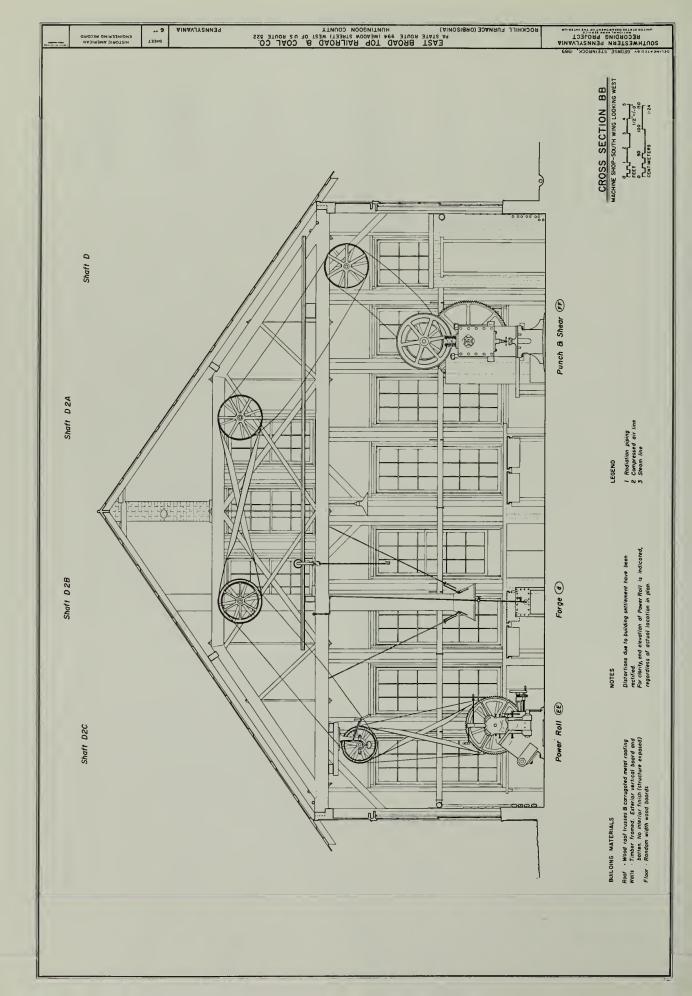


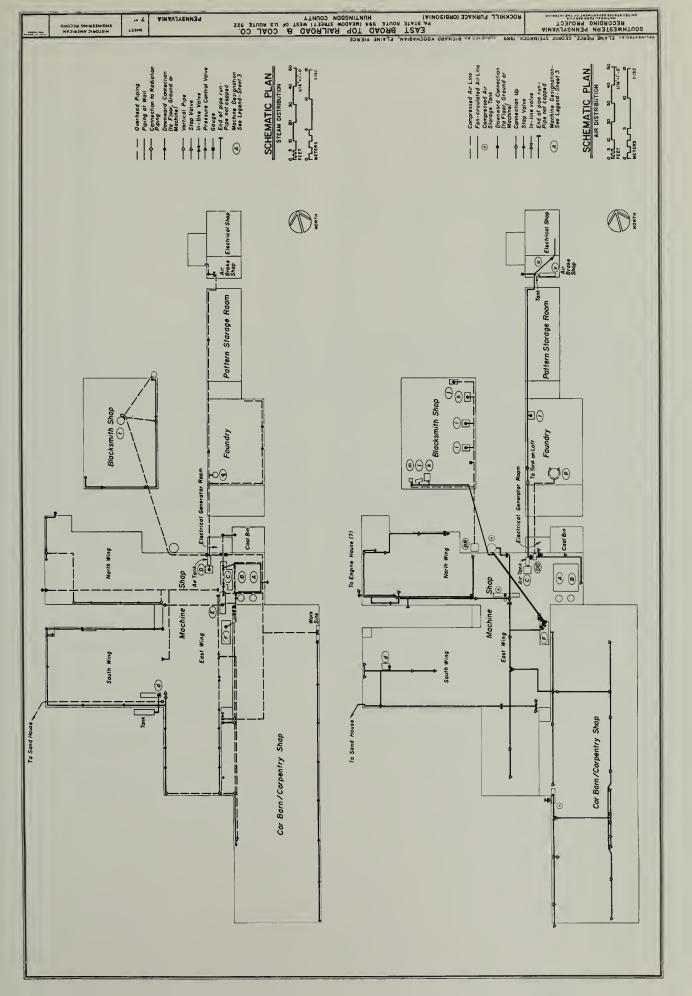












APPENDIX E: ROLLING STOCK INVENTORY

LOCOMOTIVES

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#12, 2-8-2, Baldwin Mikado (1911)
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#14, 2-8-2, Baldwin Mikado (1912)

#15, 2-8-2, Baldwin Mikado (1914)

#16, 2-8-2, Baldwin Mikado (1916)

#17, 2-8-2, Baldwin Mikado (1918)

#18, 2-8-2, Baldwin Mikado (1920) all built for the EBT

#3, 0-6-0, Baldwin (1923) standard-gauge switcher

PASSENGER CARS

#8 Coach (1916), built by Laconia Car Company

#14 Combination Baggage-Coach (1916) "Miners' Coach," built by Laconia Car Company

#15 Combination Baggage-Coach "Miners' Coach," built by Laconia Car Company, Laconia, New Hampshire; all originally from the Boston, Revere Beach and Lynn Railroad

#20 Official Car (Business Car) "Orbisonia," (1907), built by Billmeyer & Small, rebuilt by and purchased from Bradford, Bordell and Kinzua Railroad

OTHER

M-1 Gas-electric motor car (1927), J. G. Brill Company and Westinghouse, assembled by EBT M-3 Gas-mechanical (1928), built from 1928 Nash Motor by EBT

FREIGHT

On-site inventory needs to be done; on-site rolling stock may possibly include hopper cars, box cars, flat cars, and a caboose car.

APPENDIX F: EBT RIDERSHIP, BY MONTH, 1962-1989

	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
4060		1065	0.555	10070	2151	2076	20027
1962		4065	8775	10060	3151	2876	28927
1963		2864	5969	8121	3599	3792	24345
1964		2694	6352	8719	2537	1846	22148
1965		3031	5753	6576	1992	2149	19501
1966		3071	6597	6915	1994	2557	21134
1967		3020	5768	6642	2149	1953	19532
1968		3006	5859	6319	2468	2227	19879
1969		3893	5189	7156	1726	2459	20423
1970		3746	5865	6531	2366	1662	20170
1971		3508	6217	6446	1634	1329	19134
1972		3154	5300	6311	2088	1985	18838
1973		3231	6873	6139	2229	1921	20393
1974		2986	5848	6650	1785	2150	19419
1975		4349	5585	5466	1125	2385	18910
1976	2029	2149	6396	6554	2103	1746	20977
1977	1210	2023	6808	6273	2459	1968	20741
1978	1252	2554	6835	6577	2152	2321	21691
1979	1549	1901	4454	6424	2305	1943	18576
1980	1504	2613	7393	7997	2130	2667	24304
1981	1286	2275	7100	8395	2120	3022	24198
1982	1294	3057	7332	8028	2745	3380	25836
1983	1111	2007	7555	7018	2058	3091	22840
1984	1146	2038	7649	7610	2902	4008	25353
1985	1316	3260	7893	7793	2879	3730	26871
1986	1140	2664	6337	7587	2216	3771	23715
1987	900	2081	5770	6447	1718	3476	20392
1988	1438	2445	6385	6237	1895	5031	23431
Mean	1321	2877	6439	7074	2242	2646	21914
STD	264	649	926	980	498	868	2696
MAX	2029	4349	8775	10060	3599	5031	28927
MIN	900	1901	4454	5466	1125	1329	18576
1989	687	1574	2983	3784	1745	3489	14262

Data for 1989 is separated from previous years because the railroad was open only on weekends.

APPENDIX G: LANDMARK NOMINATION FORM

Form 10-300 UNITED STATES DEPARTMENT OF THE INTERIOR (Rev. 6-72) NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES

Penn	sylvania
COUNTY	
Hunt	ingdon
	FOR NPS USE ONLY

INVENTOR	RY - NOMINATION	FORM		FOR MIRE			1
			Ε	FOR NPS L	USE ONLY		4
(Type all entries	complete applicab	le sectio	1				-
. NAME							1
COMMON:							1
East Broad Top	Railroad						
AND/OR HISTORIC:	- REALITORS						
East Barad Top	Railroad						
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STREET AND NUMBER:							1
Meadow Street							
CITY OR TOWN:			CONGRESSION	AL DISTRICT.			1
Rockhill Furnace			#9				
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The East Broad Top Railroad today represents a surprisingly intact specimen of the steam era of railroading. With one exception, the approximately thirty-three miles of the main line are intact, including one tunnel at Coles, although only five miles of it (from Rockhill to Colgate's Grove) are in use. A portion approximately 1400' long was washed out in 1972, but the grading has been stabilized and the damage is not extensive. This portion is just north of Shirleysburg, running parallel to Aughwick Creek. The main line originally ran from Robertsdale to Mount Union, but was then extended south from Robertsdale to Alvan. Branching off of the main line were three spurs to strip mines, at Shade Gap, Coles Valley and Rocky Ridge. Today only a 3/4 mile portion of the Shade Gap spur track remains. An additional 3/4 mile of track here was also washed out in 1972. This stretch is used by the Shade Gap Electric Railway, a public entertainment feature.

Aside from the track, the railroad property includes the Mount Union yard, the Rockhill yard, and structures associated with the Saltillo, Coles, Robertsdale, and Wood stations. With the exception of the Rockhill yard, where the East Broad Top shops are located as well as the primary roundhouse and car barn, and the Orbisonia station, the rest of the properties are in varying states of decay and disrepair. The Saltillo station house and tankhouse remain, as do the Coles station house and tankhouse. The Robertsdale station house remains, while at Wood there are only sheds and a supply house. At Mount Union, where the East Broad Top transferred its cargo to the Pennsylvania Railroad, most of the freight offices have burned. The roundhouse, engine house, and coal yards are in fair condition.

The Rockhill yard, with all its shops and service buildings, represents one of the best features of the East Broad Topy, yet even it is in a vulnerable condition. (Refer to enclosed map for precise layout.) The bulk of the structures at Rockhill date from 1874. This includes the roundhouse and the "Armstrong" turntable. The locomotive roundhouse is one story tall, built of red brick, with berths for eight engines. The paint shop is a one story brick structure. The two-story stone farmhouse which predates the railroad, was used as the storehouse. The blacksmith shop, the foundry and the connected machine and car shops are all frame buildings of similar construc-They all house original machinery. The foundry is filled with many of the patterns used in making the rolling stock. The machine and car shops are still housing a variety of belt-driven tools, although the central steam engine which powered all the machines is no longer functioning. A few machines have been adapted for use with an electric motor. Beyond these shops are the carpentry shop, sand house, and ice house. Beyond these shops, outside the yard proper, is the railroad reservoir, which was formed by the damming of Jordan Creek, which runs along the western boundary of the yard. Across the track and to the north of the reservoir are the coal tower, water plug, sheet metal carbarn, and one story frame freight station.

In addition, there are three structures formerly used as tool and storage sheds, now leased to the Shade Gap Electric Railway, which operates over the remainder of the Shade Gap spur. Across Meadow Street from the yard is the Orbisonia passenger station, which is largely unaltered except for

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NATIONAL REGISTER OF HISTORIC PLACES INVENTORY - NOMINATION FORM

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(Number all entries) East Broad Top Railroad #7 Description Page 2

the conversion of the waiting room and the freight room into a gift shop and a snack bar, respectively.

The rolling stock consists of six "Mikado" type locomotives, built for the East Broad Top by the Baldwin works of Philadelphia, several passenger and freight cars, and several miscellaneous cars, such as a gas-electric car built at the Rockhill Furnace yard in 1926.

Boundaries:

The landmark is composed of the thirty-two and a half miles of main track from Mount Union to Alvan. The right-of-way extends 60' from the middle of the track, on either side, and this 120' zone constitutes the landmark along the railroad's length, except at Rockhill Furnace. At Rockhill Furnace, the landmark boundaries are expanded to include the yard and facilities, and the one-and-a half mile of the Shade Gap spur from its origin at Rockhill Furnace east to the point of intersection of Blacklog Creek with U.S. Route 522. The 120' right-of-way zone constitutes the boundaries on this one-and-a-half mile stretch as well. The Rockhill yard is bounded thusly: beginning at the intersection of Meadow Street (State Route 994) with the East Broad Top right-of-way, proceed W along the south curb of Meadow Street approximately 430' to the inter section of the south curb with the west bank of Jordan Creek. Then proceed south along the west bank of the creek approximately 2000' to the foot of the railroad reservoir, thence E approximately 200' to the eastern limit of the right-of-way. The boundary follows the right-of-way north for 1000', and then branches to the northeast, approximately 900', in a straight line, which intersects with the southern boundary of the Shade Gap spur right-of-way at the junction of its two branches. The boundary continues to run northwest along the northern boundary of the right-of-way of the north branch of the spur, to its intersection with the south curb of Meadow Street, thence W along the southern curb to the point of origin. These boundaries enclose all the remaining track of the East Broad Top Railroad, the various stations and service buildings remaining on the line, as well as the Rockhill Furnace yard and facilities.

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STATEMENT OF SIGNIFICANCE

One of the oldest narrow gauge lines in America, the East Broad Top Rail-road operated for over eighty years as a coal-carrying line in the heart of the Pennsylvania mining region. Established in 1871, the East Broad Top transported semi-bituminous coal from the Broad Top mines, as well as timber, sand, rock, general freight, and passengers to the Pennsylvania Railroad, over a thirty-three mile track from Alvan to Mt. Union.

Decline in the use of coal after World War II forced the East Broad Top to cease operations in 1956. All of its track and rolling stock seemed doomed, but the purchaser of the line generously preserved five miles of the track and six of the steam engines. The original engines and passenger cars are now used to carry visitors on the ten-mile round trip out of Orbisonia, where the original station, roundhouse, and shops are preserved, and opened to the public.

History:

Before the Civil War, a group of retired businessmen on a vacation near Broad Top City realized that the construction of a railroad would make possible the exploitation of the vast quantities of bituminous coal in the Broad Top region. But the Civil War interfered with their plans, and it was not until 1871 that the East Broad Top Railroad and Coal Company was established. The construction of the railroad soon began, and by 1874 the line ran between Robertsdale and Mount Union, where it joined the Pennsylvania Railroad. The railroad wound in and out of the mountains for thirty miles, but subsequently was lengthened to about forty miles, including three spurs extending out to the strip mines at Shade Gap, Coles Valley, and Rocky Ridge. Today only a portion of the Shade Gap spur still remains.

The most unusual feature about the railroad was that it was a narrow gauge line. Instead of employing the standard width of four feet eight-and-a-half inches between the rails, the East Broad Top's rails were separated by but three feet. When the line was built, the narrow gauge was popular because it involved smaller costs for grading. The shops of the railroad stood at Rockhill Furnace, a middle point on the line.

Although the railroad carried timber, sand, rock and general freight, and had a passenger service, its great money-maker was coal. Trains pulled

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(Number all entries) East Broad Top Railroad #8 Statement of Significance Page 2

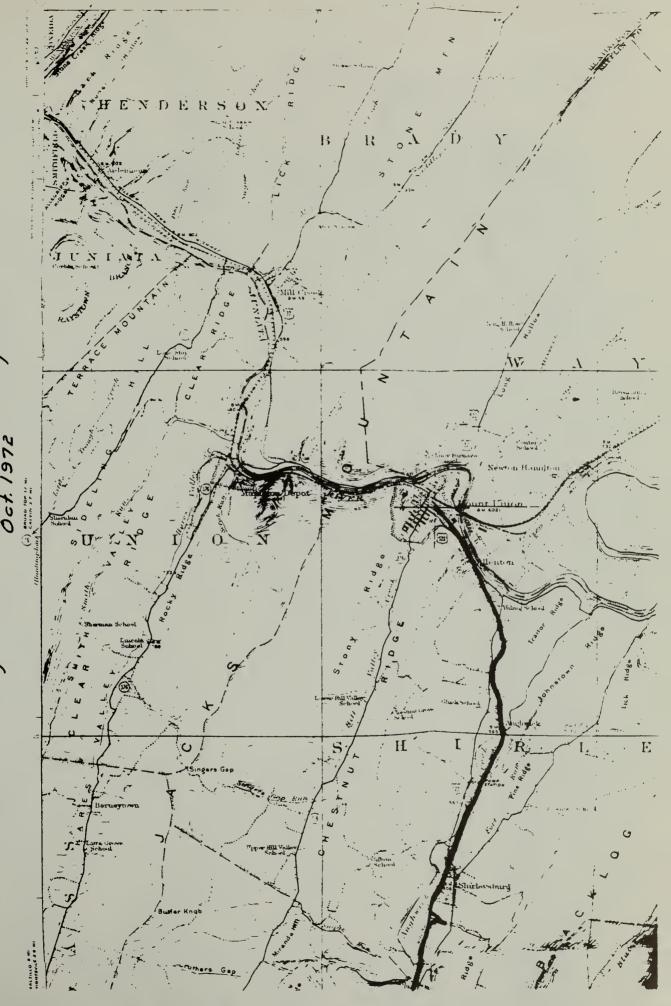
coal-laden cars to Mt. Union, where the coal was transferred to the Pennsylvania Railroad. In the decades after its construction, the railroad prospered especially as the tonnage of coal hauled increased for years. But after the end of World War II, when other fuels began to supplant coal, the line's business suffered, so much so that by the 1950's the end of operations was in sight. In 1953 the road ended passenger service, and on April 16, 1956, the company ran its last train.

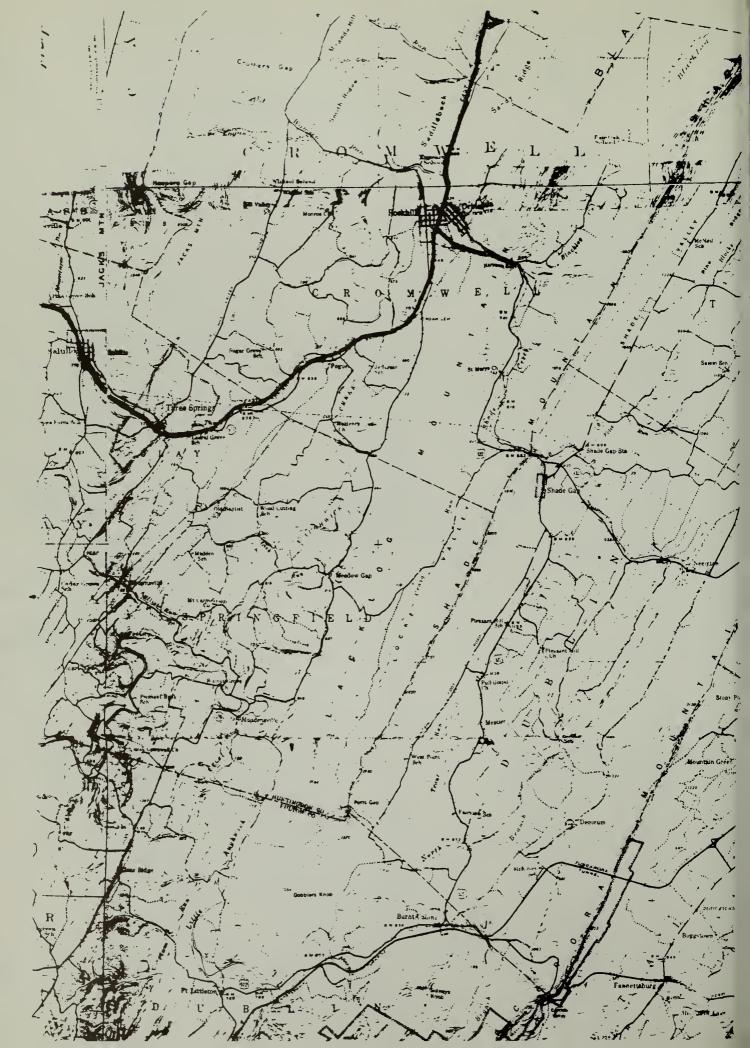
The closing of the railroad apparently presaged its total abandonment. A public-spirited railroad fan purchased the entire line in 1956, however, and began to operate part of the line as a tourist attraction in 1960. The East Broad Top trains continue today to be operated and maintained by engineers and mechanics who were associated with the railroad in its coal-carrying days and original machinery is used in making repairs.

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Top Rail Road & Coal Co. Map Showing Right Of Way Of The Eost Broad







APPENDIX H: OTHER EXCURSION RAILROAD OPERATIONS IN PENNSYLVANIA

There are several other excursion railroad experiences in Pennsylvania that would serve as competition for potential ridership.

The Railways to Yesterday Inc.'s Shade Gap Electric Railway has operated since 1963 in Rockhill. Featured are rides on historic trolleys and artifact and photo displays. All of the car barns and exhibitry associated with this operation are east of the main EBT tracks in Rockhill. The trolleys run over dual-gauge track for a 2-mile, 20-minute trip. The attraction is operated by a nonprofit, tax-exempt group from Allentown, Pennsylvania. Only 3/4 mile of the Shade Gap Branch remains intact with track.

The Pioneer Tunnel Coal Mine Railroad, in Ashland, is a 42" gauge steam train featuring open mine cars. The ride includes 1½ miles of outdoor trackage and access to an electric-powered mine train tour of an anthracite mine. A community park is adjacent to the mine entrance.

The Bellefonte Historical Railroad, in Bellefonte, features a Budd diesel rail car, standard gauge, for a 15-mile, 1-hour scenic trip through the Bald Eagle Valley. There is a stop at a state-owned, restored ironmaking site at Curtin Village. The train travels over Nittany & Bald Eagle Railroad lines, a former branch of the Pennsylvania Railroad. The Bellefonte station contains a model route layout, historical photos, and memorabilia of area railroading.

The Gettysburg Railroad, in Gettysburg, is a standard-gauge steam train composed of open side excursion cars, steel coaches, and a double-decker open car. The locomotives are not original to the site. The ride is a 16-mile, 1½-hour trip to Biglerville. Two times per year there is a special Civil War train raid reenactment on the route.

The Sourbridge Line Rail Excursions in Honesdale features a 50-mile round-trip from Honesdale to Hawley and Lackawaxen. The train runs over the Lackawaxen and Stourbridge Railroad, closely following the route of the old Delaware & Hudson Canal, and travels through the scenic Wayne and Pike counties along the Lackawaxen River. Some trips are operations with local groups, while others are scenic rail excursions. The train is diesel and standard gauge, and the locomotive is not original to the site.

West Shore Rail Excursions, out of Mifflinburg, is a standard-gauge diesel train. There are two rides – a 10-mile, 1-hour round-trip to Vicksburg, and an 18-mile, 2-hour round-trip to Lewisburg. The train includes ex-Pennsylvania Railroad locomotives and steel coaches from the Pennsylvania, Jersey Central, and Erie-Lackawanna railroads.

The Knox, Kane, Kinzua Railroad runs from Marienville to Kane and to Kinzua Bridge – over a former Baltimore & Ohio Railroad branch. There are two rides: a 96-mile, 8½-hour ride out of Marienville, and a 32-mile, 4-hour ride out of Kane. The steam and diesel standard-gauge trains feature EMD and Baldwin diesels, as well as a Baldwin 2-8-0 from the Huntington & Broad Top Mountain Railroad. The cars are steel coaches and open cars. A noted feature of the railroad is the Kinzua Bridge, d. 1882, which once was the highest railroad bridge in the world. The structure is on the National Register of Historic Places and is a national historic civil engineering landmark.

The New Hope Steam Railway in New Hope features a 14-mile, 1½-hour round-trip between New Hope and Buckingham. The steam standard-gauge train contains both steam and diesel locomotives, Baldwin, Alco, and EMD, with 1930 vintage Reading steel, open-window coaches and caboose. The train also features displays of various locomotives, cars, and other railroad equipment.

The Penn's Landing Trolley in Philadelphia runs along the city's historic riverfront on tracks of the Philadelphia Belt Line Railroad. The historic, standard-gauge trolleys take 2.2-mile, 20-minute round-trips past the Port of History Museum and the city's fleet of historic ships.

The Stewartstown Railroad, out of Stewartstown, is a standard-gauge diesel train that has a 15-mile, 1 3/4-hour round-trip from Stewartstown to New Freedom. The locomotives include a plymouth and a diesel G.E., with former Reading Company all-steel, open-window day coaches. Displays include the unchanged 1915 station depot with waiting room and ticket window.

The Strasburg Rail Road in Strasburg, is a standard-gauge steam train featuring Baldwin, Canadian, and Juniata locomotives. The ride is a 9-mile, 45-minute round-trip from Strasburg to Paradise through farmlands. Displays include a large collection of historic cars and locomotives and the adjacent Railroad Museum of Pennsylvania.

The Blue Mountain & Reading Railroad, in Hamburg, runs along the historic Schuylkill Canal and Schuylkill River for a 26-mile, 1½-hour round-trip. The train contains completely restored Delaware, Lackawanna & Western open-window coaches, and Baldwin, Reading shops, EMD, and Budd diesel and steam locomotives.

The Oil Creek & Titusville Railroad runs through the historic oil region of northwestern Pennsylvania in Titusville. The ride is a 27-mile, 2½-hour round-trip through Oil Creek Valley and Oil Creek State Park. It also passes Petroleum Centre and Drake Well Park. The Alco diesel standard-gauge locomotive pulls open-window coaches and a sleeping car. Oil Creek State Park offers picnic grounds, bike rental, hiking trails, and a bike trail on the Oil Creek Railroad (c. 1860) original right-of-way.

The Arden Trolley Museum in Washington is on the former broad-gauge main line of the Pittsburgh-Washington interurban. A 1-mile, 20-minute ride features several historic electric trolleys on 5 foot, $2\frac{1}{2}$ inch, and standard-gauge tracks. Displays feature two dozen cars and a collection of standard-gauge railroad equipment. Special attractions include the Trolley Carbarn Theater, demonstrations, arts and crafts, antique automobiles and carriages, and an outside model railroad display. A Trolley Fair is held in June.

APPENDIX I: MARKETING STUDY SUMMARY

Information for the October 1990 draft East Broad Top Railroad: A Background Study and Report, a marketing study done by Richard C. Sutter and Associates, Inc., was done during summer 1990. "This [draft] report provides background information about the East Broad Top Railroad, its ridership, the area in which it is located and the travel and tourism industry in Huntingdon County, Pennsylvania" (pg. 1). The final report will include a description of the market area, a section containing findings and recommendations concerning the best alternative development scenario for the EBT based on local considerations and ridership preferences, and a section analyzing the impacts of the various management and development alternatives on the EBT and the local area.

"This analysis of the EBT market area is based primarily on a sample of several hundred groups of riders taken in the spring and early summer of 1990. The sample captured nearly all groups who rode the railroad during periods when the survey was administered" (pg. 66, unmarked).

The study found that the EBT "is an important regional attraction. It gets just over half of its ridership from within 70 miles of the site, another third from within 180 miles, and the remainder from places as remote as Arizona and England. Many of those [visitors] from more than 180 miles away are visiting friends or relatives or are just passing through on their way to somewhere else" (pg. 73, unmarked).

The following five conclusions were made in the draft study (pgs. 56-58):

"There are two definite groups of people who visit the EBT: those who visit once as casual tourists and those who return time and time again, drawn by their interest in railroads and railroad lore.

"A majority of both groups are day trippers who come from within about 70 miles of the site. However, a sizable percentage of both groups are over night visitors to the area who stay in motels, with family of friends or in area campgrounds.

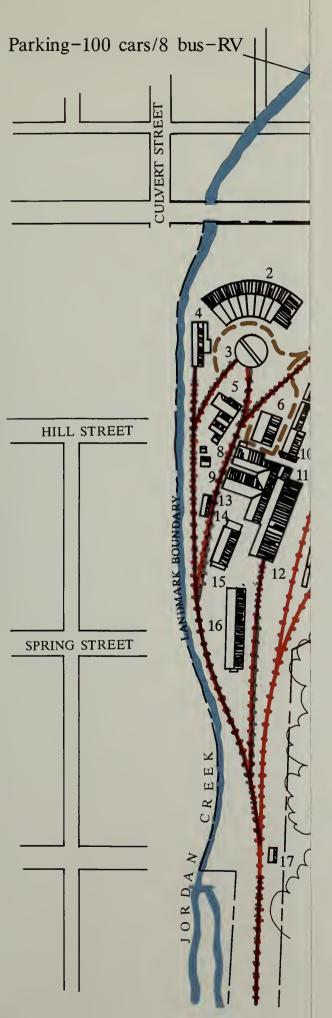
"The EBT is clearly not simply a local or regional attraction. The fact that in our relatively small sample nineteen states were represented, suggests that aggressive marketing would dramatically increase the number of visitors each year.

"Improvements to the EBT should be broad based and should concentrate on improving the educational/historic interpretation elements of the facility. A longer ride is much desired but it is not clear that extending the length of the ride at the expense of other improvements would be cost effective from the point of view of ticket sales; after all, 25 percent of the riders have visited the facility five or more times as it is currently structured.

The potential for increased ancillary sales seems to be quite high based on the fact that many people spend far more at the EBT than just the ticket price. Since there is little . . . to purchase except souvenirs and convenience lunches in Orbisonia as things are currently structured, the possibility may exist for related retail and on-site restaurant facilities."

APPENDIX J: AREA-SPECIFIC MAPS FOR EACH ALTERNATIVE





- 1 ORBISONIA DEPOT
- 2 ROUNDHOUSE
- 3 TURNTABLE
- 4 PAINT SHOP/CARPENTER SHOP
- 5 STORE HOUSE
- 6 BLACKSMITH SHOP
- 7 PATTERN HOUSE
- 8 MACHINE SHOP
- 9 BOILER SHOP
- 10 FOUNDRY
- 11 BOILER ROOM
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- 13 ICEHOUSE
- 14 SANDHOUSE
- 15 STOCK SHED
- 16 LUMBER SHED
- 17 COAL TIPPLE
- 18 ELECTRIC SHADE GAP RAILWAY

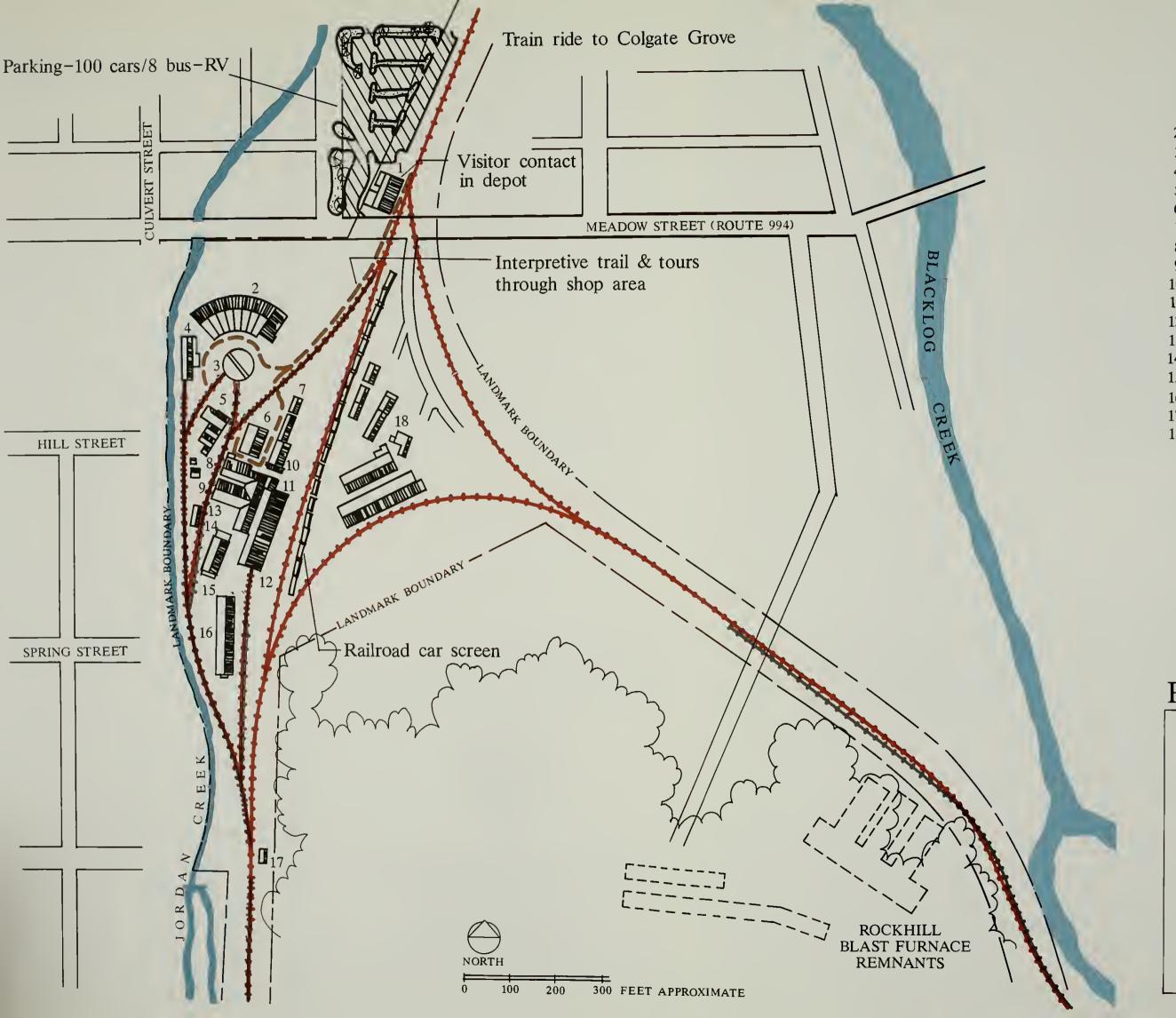
ALTERNATIVE 1 ROCKHILL/ORBISONIA



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

AMERICA'S INDUSTRIAL HERITAGE PROJECT UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE



- 1 ORBISONIA DEPOT
- 2 ROUNDHOUSE
- 3 TURNTABLE
- 4 PAINT SHOP/CARPENTER SHOP
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- 6 BLACKSMITH SHOP
- 7 PATTERN HOUSE
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ALTERNATIVE 1 ROCKHILL/ORBISONIA

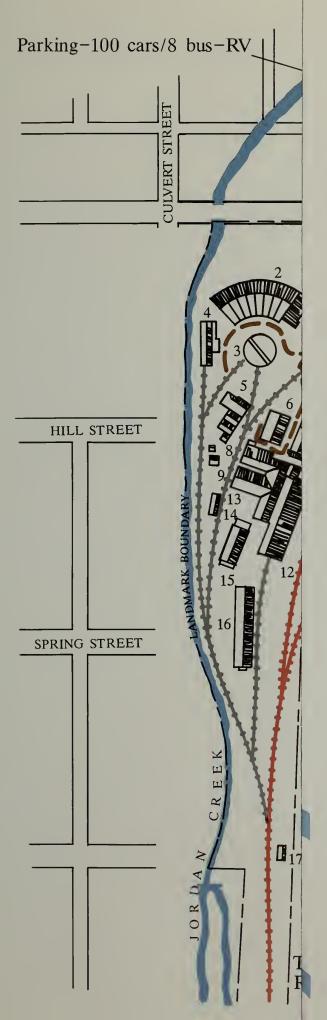


EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

AMERICA'S INDUSTRIAL HERITAGE PROJECT UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

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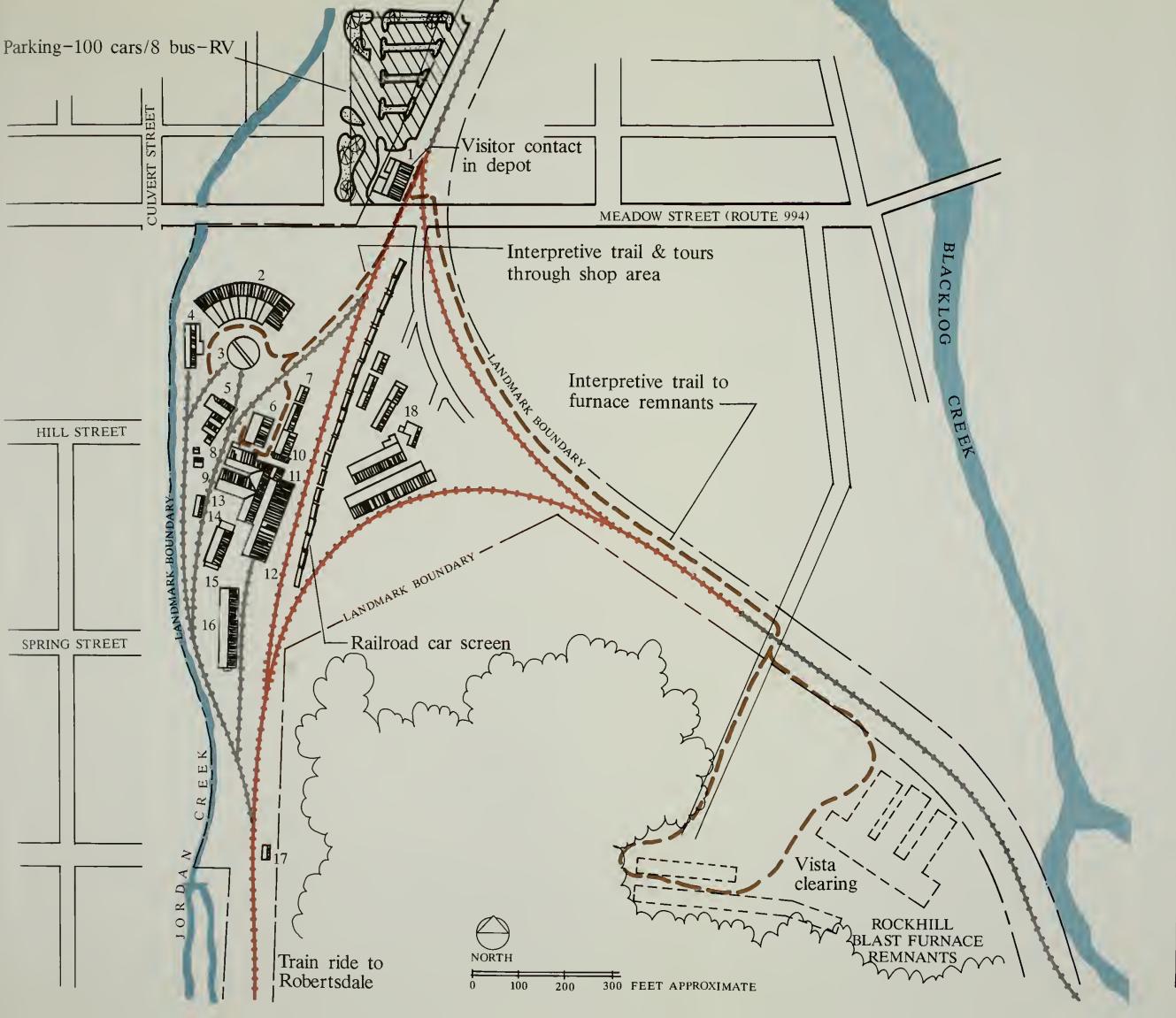
ALTERNATIVE 2 ROCKHILL/ORBISONIA



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

AMERICA'S INDUSTRIAL HERITAGE PROJECT UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE



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ALTERNATIVE 2 ROCKHILL/ORBISONIA

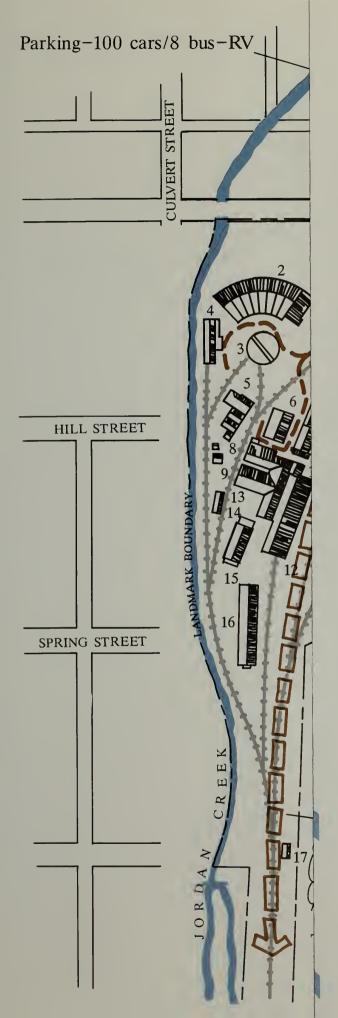


EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

AMERICA'S INDUSTRIAL HERITAGE PROJECT UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

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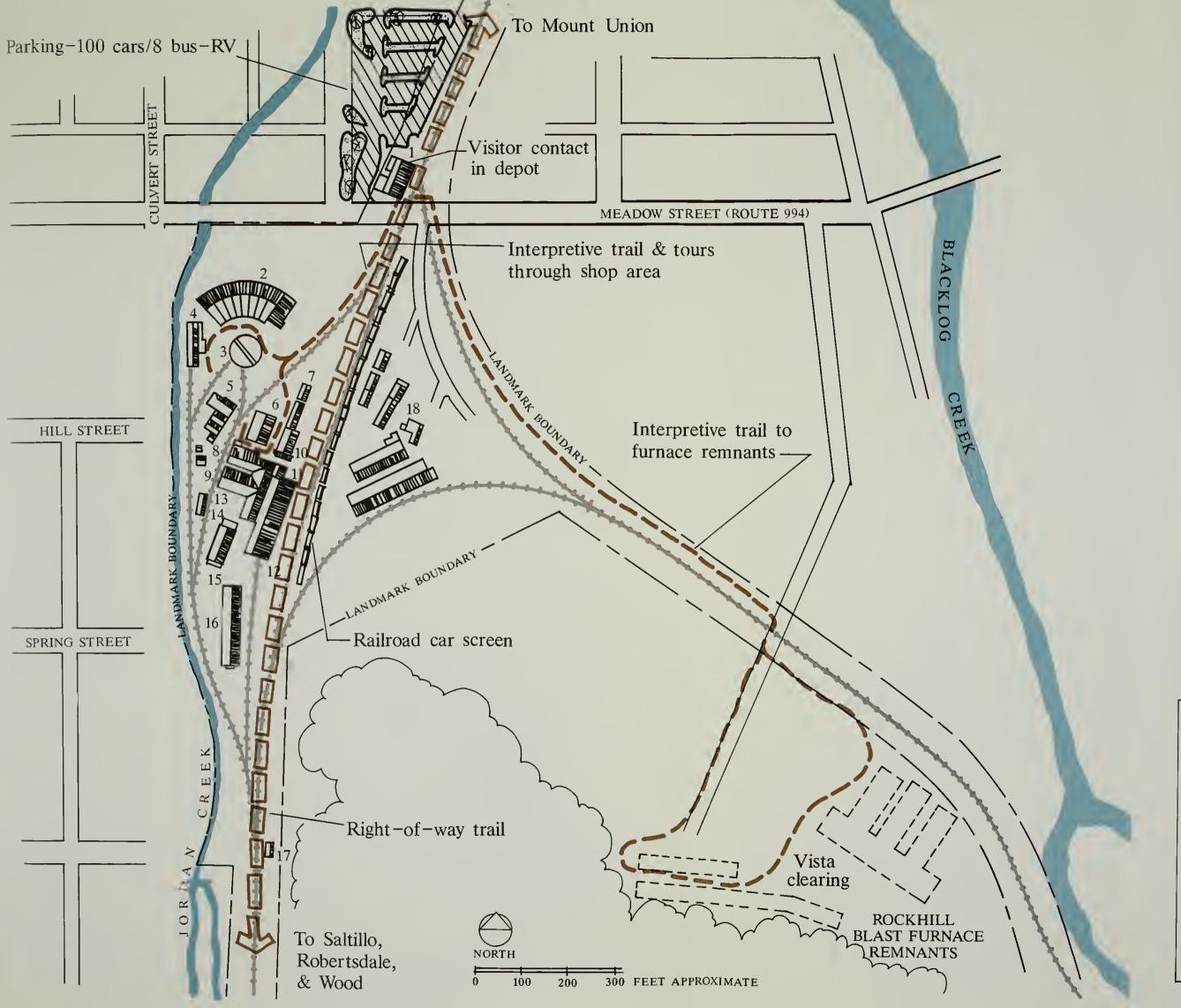
ALTERNATIVE 3 ROCKHILL/ORBISONIA



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

AMERICA'S INDUSTRIAL HERITAGE PROJECT UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE



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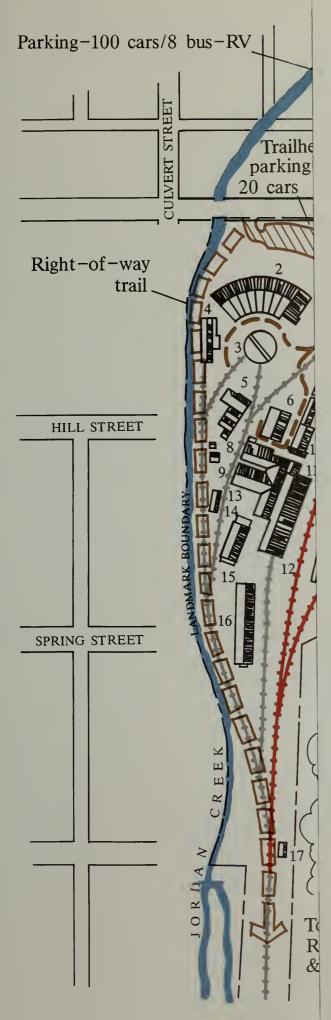
ALTERNATIVE 3 ROCKHILL/ORBISONIA



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

AMERICA'S INDUSTRIAL HERITAGE PROJECT UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE



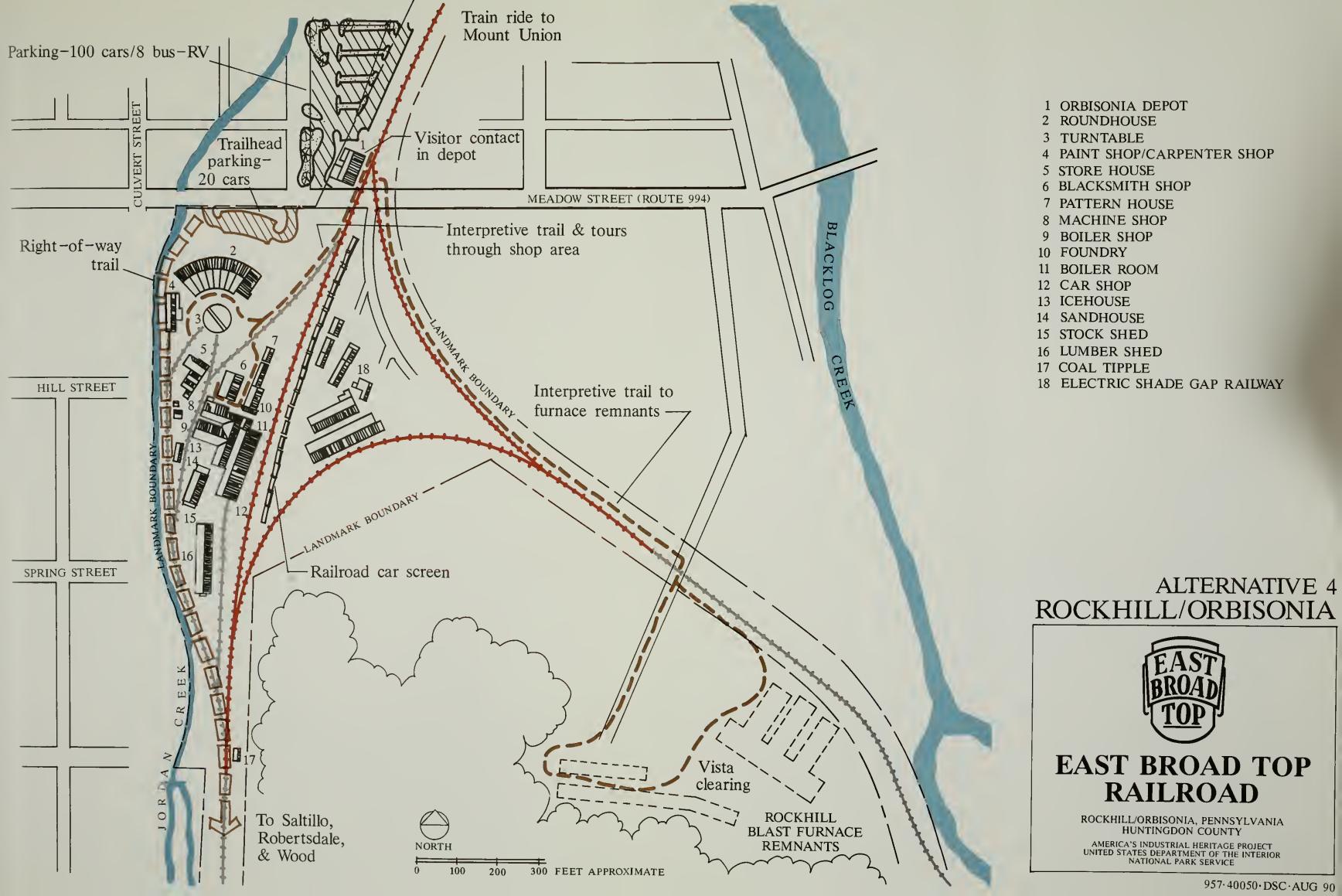
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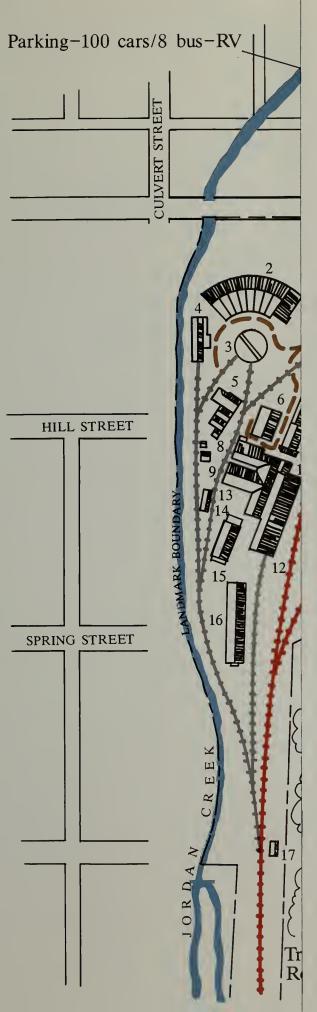
ALTERNATIVE 4 ROCKHILL/ORBISONIA



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY





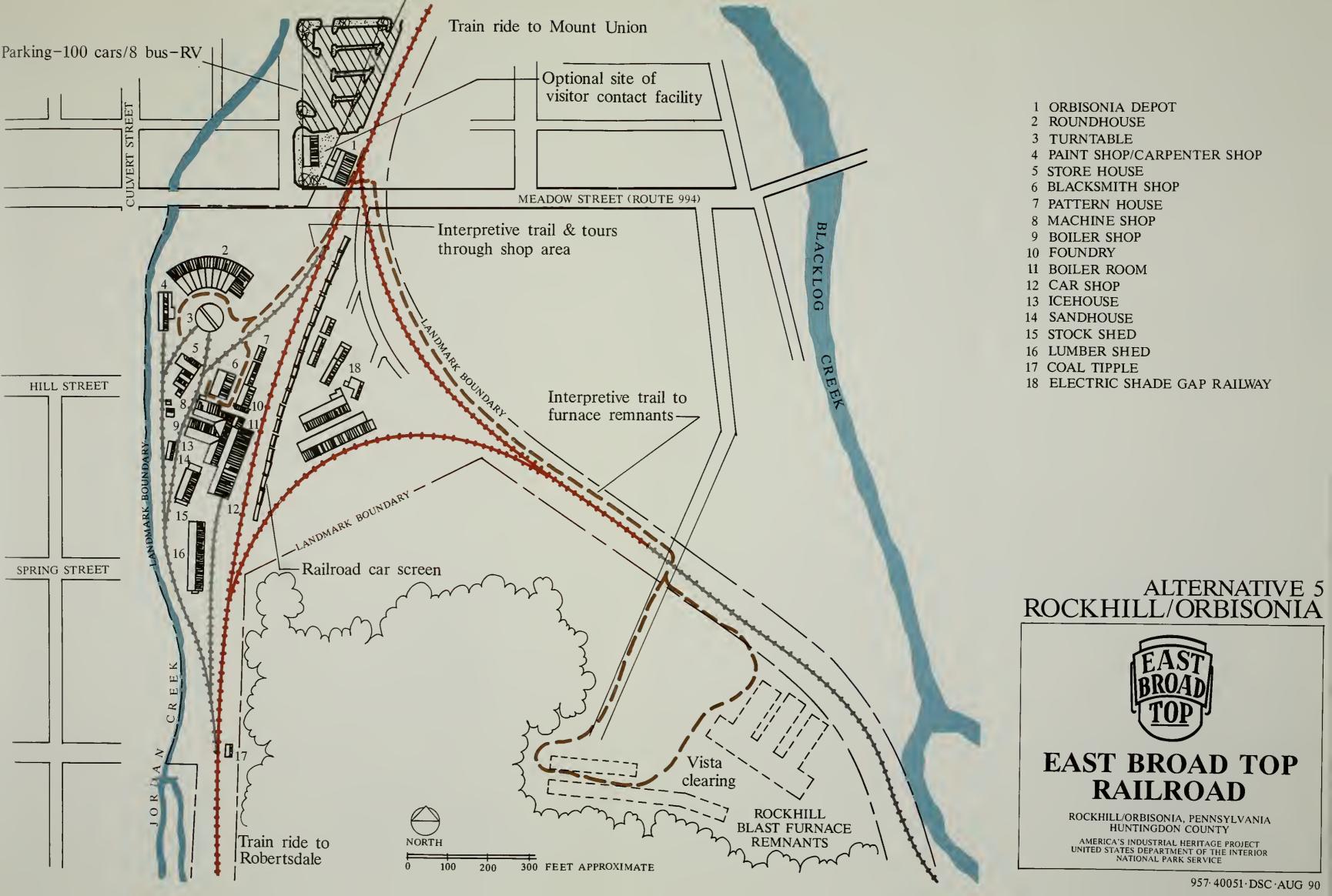
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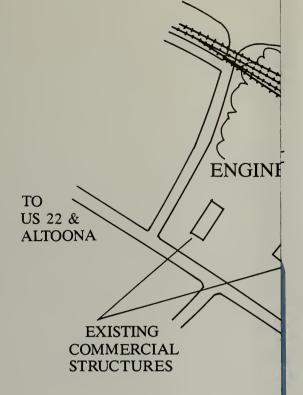
ALTERNATIVE 5 ROCKHILL/ORBISONIA



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY





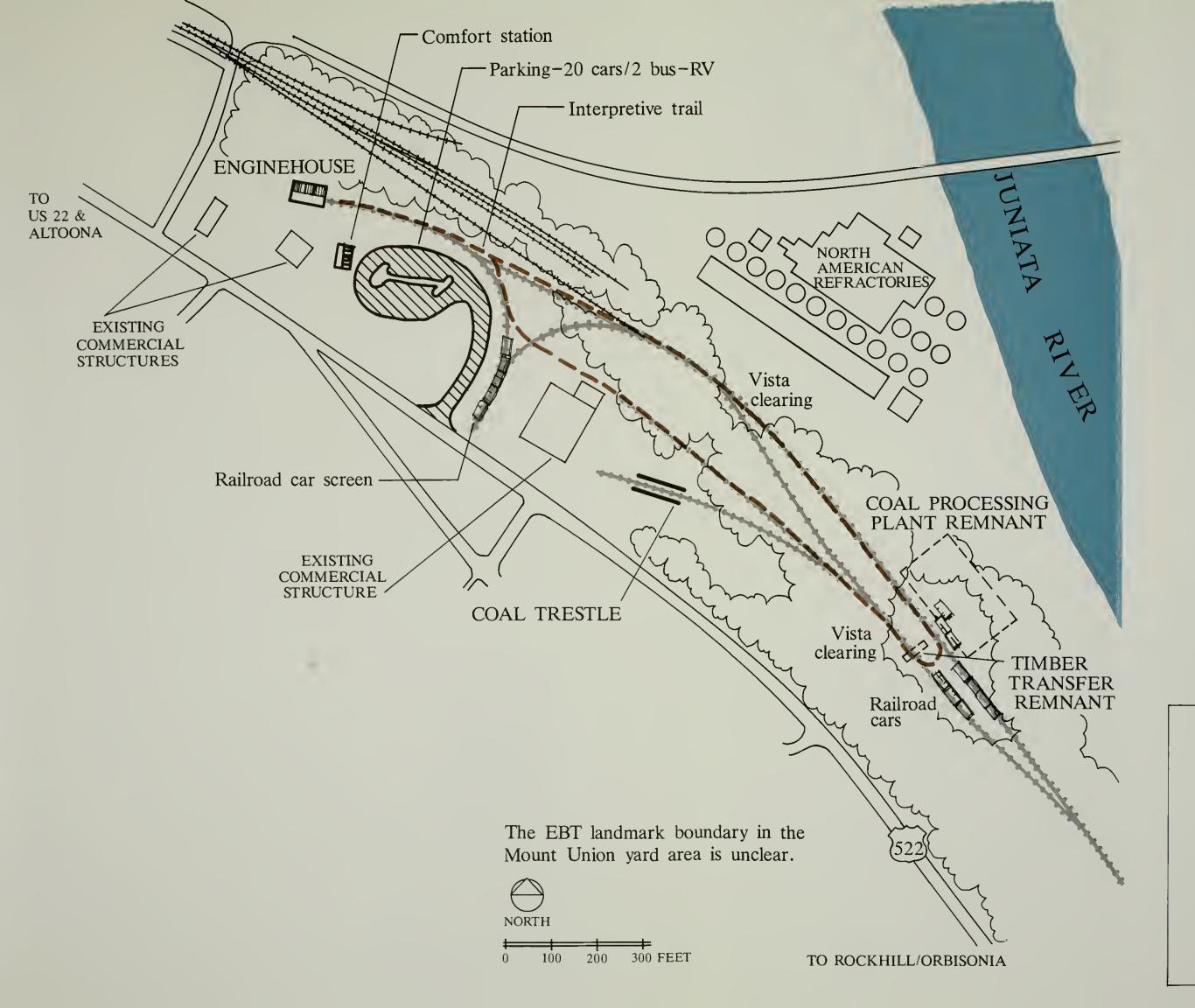
Railroad

ALTERNATIVE 2 MOUNT UNION



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

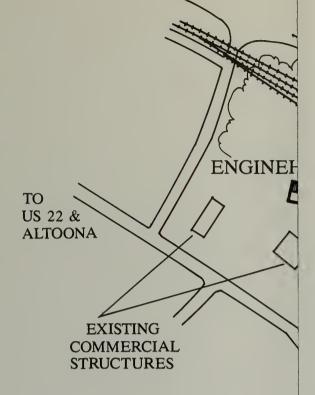


ALTERNATIVE 2 MOUNT UNION



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY



Railroad

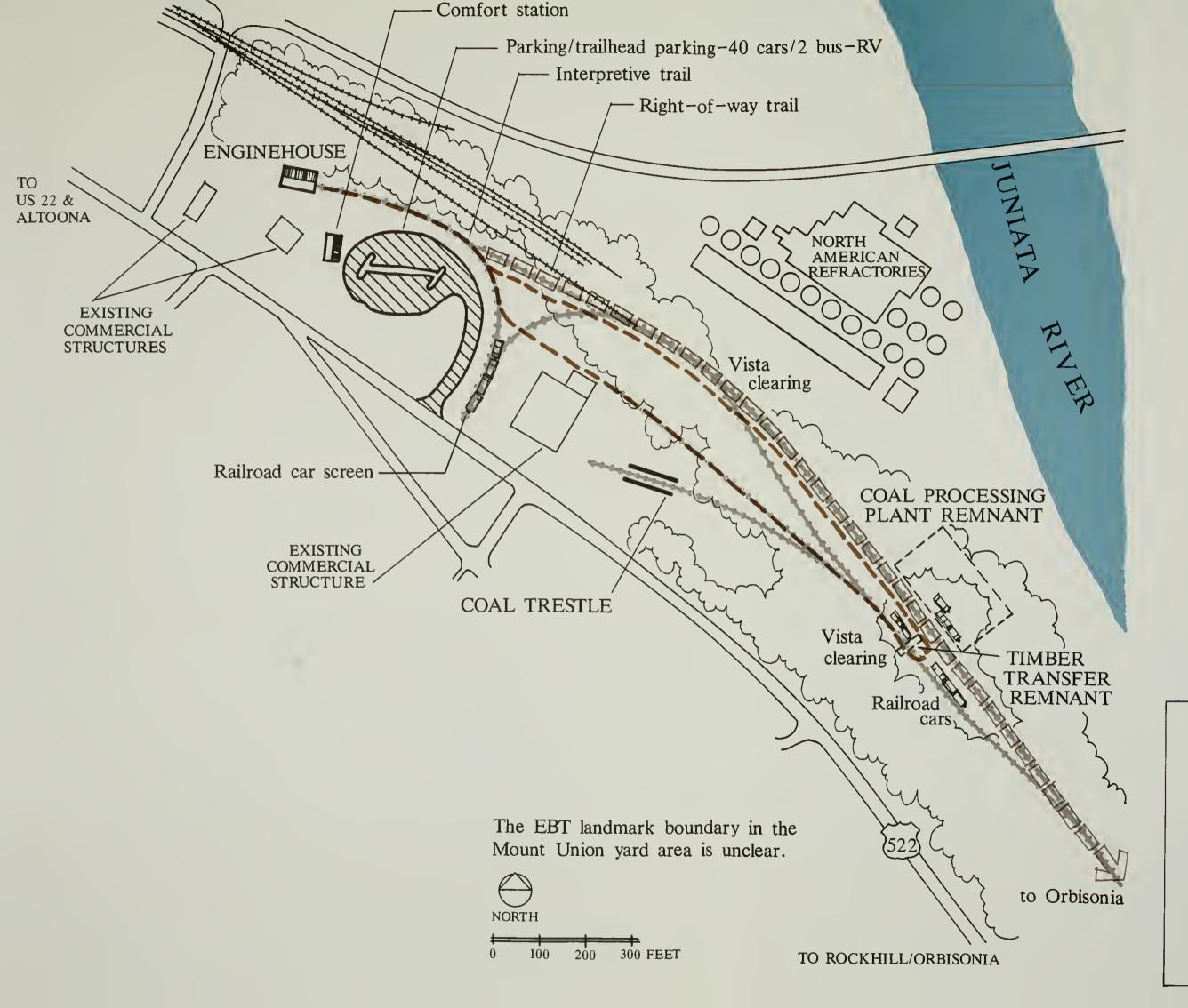
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ALTERNATIVE 3 MOUNT UNION



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

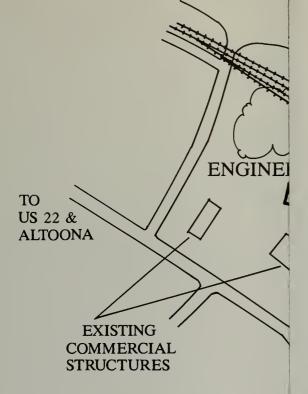


ALTERNATIVE 3 MOUNT UNION



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY



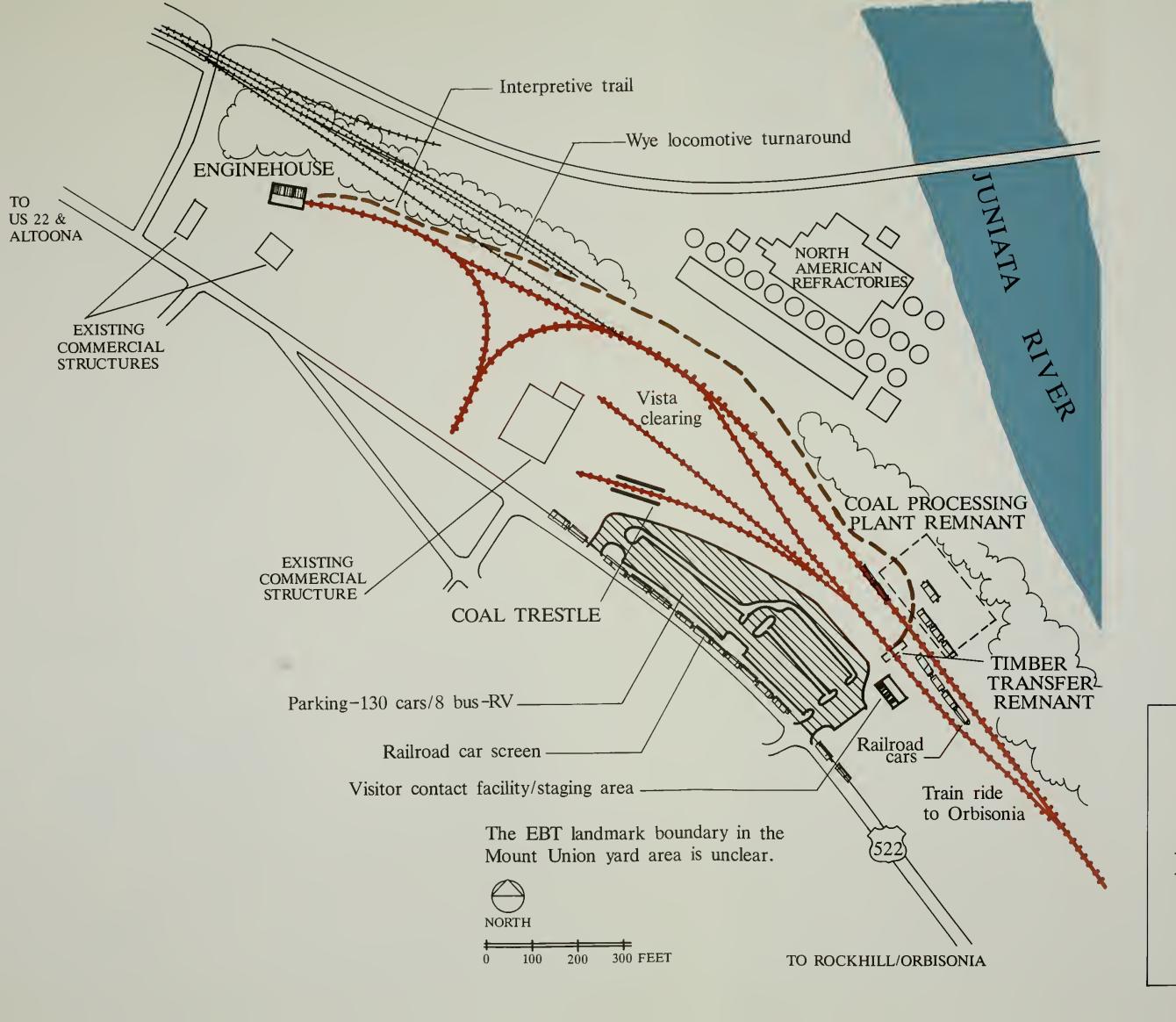
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ALTERNATIVES 4 & 5 MOUNT UNION



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY



ALTERNATIVES 4 & 5 MOUNT UNION



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

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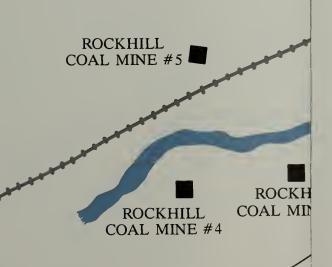
Parkin

R

Interpretive trail to coa

ROCKHILL COAL MINE #

ROCK #5 T

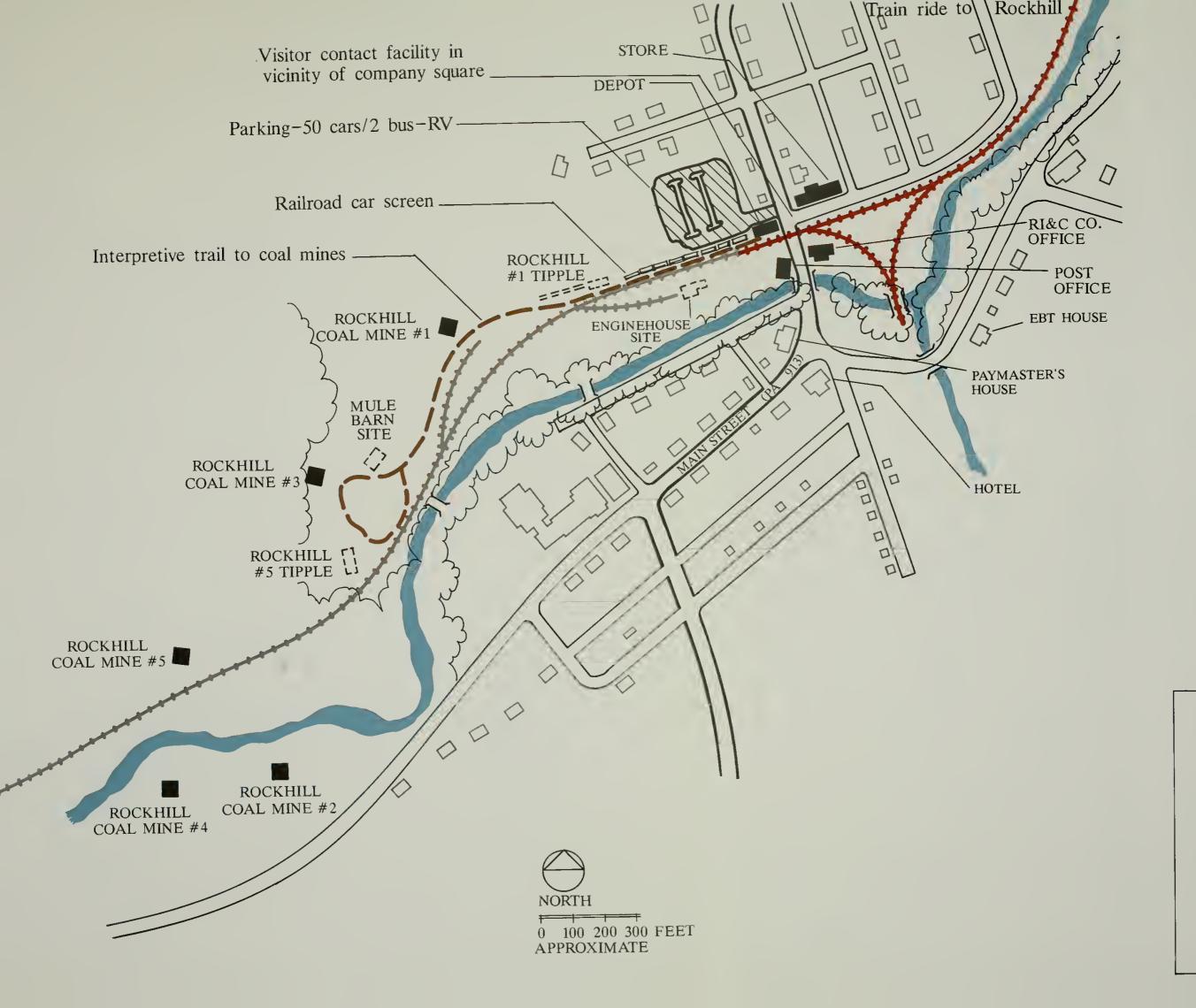


ALTERNATIVES 2 & 5 ROBERTSDALE



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY



ALTERNATIVES 2 & 5 ROBERTSDALE



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY

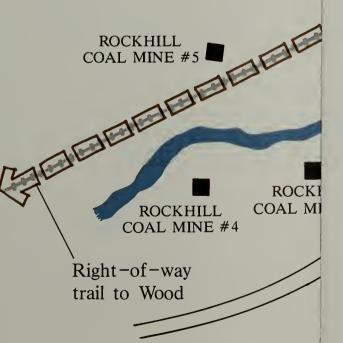
Right-of-way / trail to Rockhill

Trailhe

Interpretive trail to coa

ROCKHILL COAL MINE

ROC!

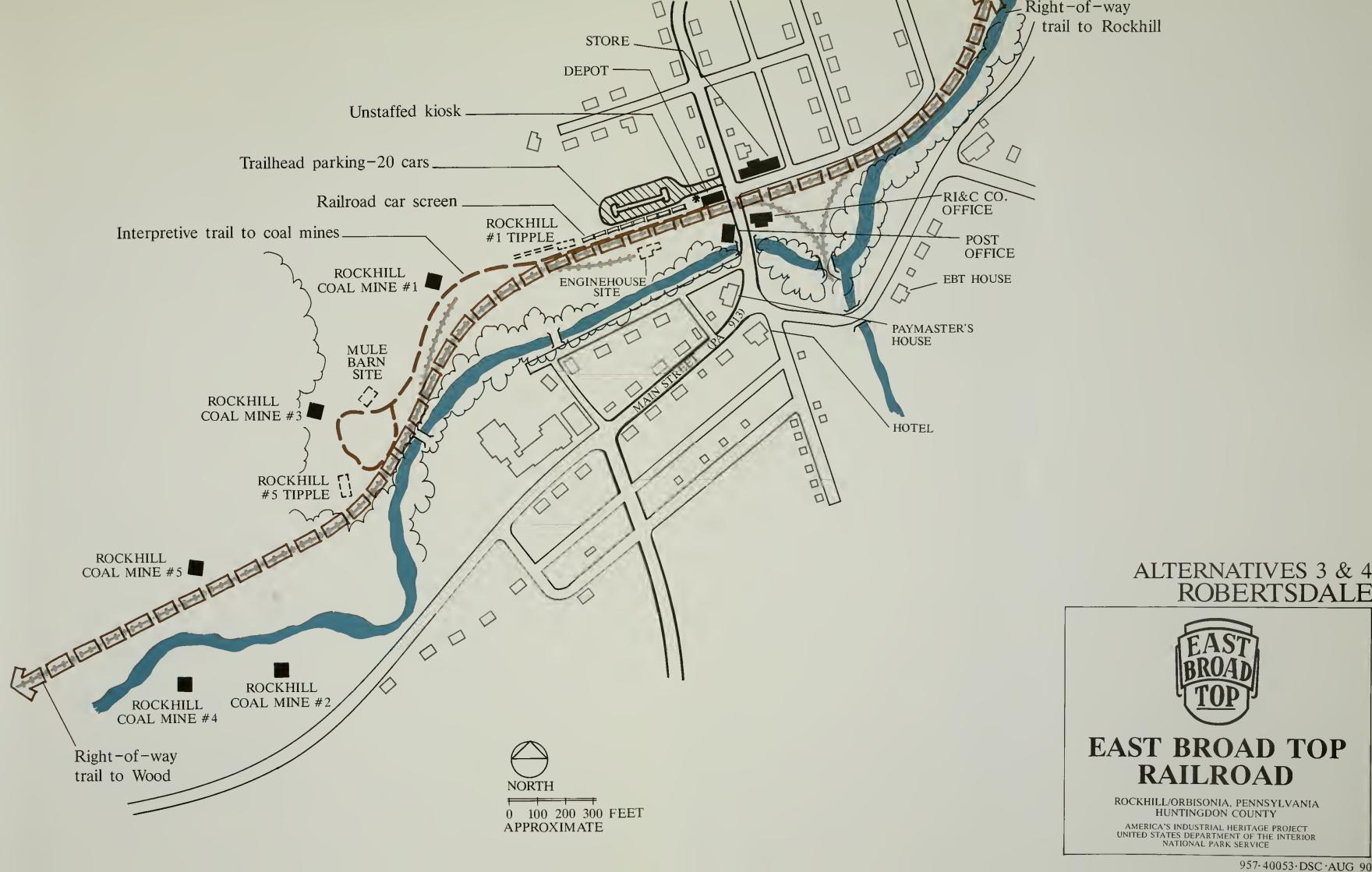


ALTERNATIVES 3 & 4 ROBERTSDALE



EAST BROAD TOP RAILROAD

ROCKHILL/ORBISONIA, PENNSYLVANIA HUNTINGDON COUNTY



APPENDIX K: OTHER RECREATION AND EDUCATION PROJECTS THAT RELATE TO THE EBT

With the growth of the America's Industrial Heritage Project, there are many projects in southwestern Pennsylvania that will draw visitors to the area when they are completed. The Mine 40 site in Scalp Level, the coal heritage center in Windber, the restored cottages in St. Michael, the expanded railroad museum in Altoona, the Cambria Iron Company National Historic Landmark – to name a few – will all contribute to visitors wanting to come to the area. An expansion of visitor access at the EBT could benefit from and also contribute to the reasons people will want to visit the area. The following discusses this interrelationship by exploring other EBT area projects.

Tourism-related projects in the AIHP Action Plan suggest possible bus tour links to the EBT region. Festivals such as a Canal Week festival, which would bring visitors into the area, would also be appropriate in Mount Union. Rural and small town tours could be provided at Mount Union, Orbisonia, Robertsdale, and Wood. Highway beautification programs related to the Heritage Tour Route could also be implemented in the Mount Union area and along US 522.

Other recreation and education projects that may be tied to EBT development are as follows:

RAILS TO TRAILS

The Rails-to-Trails Conservancy is a national nonprofit organization that works with citizen groups, public agencies, railroads, and others to build a transcontinental trail network. This effort seeks to preserve America's spectacular rail corridor system. The conservancy notifies trail advocates and local governments of upcoming abandonments; assists public and private agencies in following proper legal procedures; provides technical assistance to trail groups and managers; and publicizes rails-to-trails issues throughout the country.

The Park Service cooperates with the conservancy by providing technical and planning assistance to state and local governments and organizations for the development and protection of nonfederal park and recreation resources. Trail-related activities within the Recreation Resources Assistance Division include the Rivers and Trails Conservation Assistance Program, which provides technical expertise to specific projects, and the National Trails System Branch, which provides assistance on rails-to-trails conversion projects. The program has shown economic value, both in attracting visitors to the trails and in helping stimulate property values along the corridors. Trails do provide an attractive destination for visitors, who then spend money in the vicinity.

The commonwealth of Pennsylvania is encouraging the development of abandoned or unused railroad rights-of-way throughout the AIHP region for recreational activities such as bicycling, hiking, snowmobiling, trail biking, and cross-country skiing. Near the EBT, a proposal has been made to develop a trail from Williamsburg and Canoe Creek, Blair County, to Alexandria and possibly Petersburg in Huntingdon County. Efforts should be made to evaluate the potential linking of the EBT area with these trails, once they are established. Efforts should also be made to link potential EBT trails with AIHP planning related to the Juniata River corridor.

The EBT right-of-way is very suitable as a potential trail conversion project. Among the criteria used to evaluate railroad-to-trail corridors – accessibility to the region, historic significance, scenic values, and recreation demand – the EBT right-of-way has several positive attributes.

A comparable rail-to-trail conversion project was undertaken in central Wisconsin. The 32-mile Elroy-Sparta Trail links five communities via an abandoned Chicago and Northwestern railway right-of-way. The host towns, every 6 to 9 miles, offer services that cater to trail users. The most popular attraction is access through three former railroad tunnels, which range from 1/4 to 3/4 mile in length. Trail users are advised to carry flashlights and walk their bicycles through the tunnels, which offer cool relief from the hot and humid midwestern summers.

PENNSYLVANIA HERITAGE PARKS PROGRAM

The EBT is a prime candidate for the commonwealth of Pennsylvania's Pennsylvania Heritage Parks program. The purpose of this program is to highlight regions in the state that possess cultural, historic, and recreational resources that illustrate the industrial heritage of Pennsylvania. The program will stress intergovernmental cooperation, economic development, cultural conservation, recreation, and education within a defined region.

The EBT may meet the program's goals because as a heritage park it would serve as the focus of economic revitalization for Huntingdon County through its visitor attraction. The railroad is regional in nature and could be supported by the various municipalities, county, nonprofit groups, and private sectors involved. Cultural conservation of the buildings and structures associated with the EBT, the social history of communities and workers that supported and worked on the railroad, and the living cultural traditions that developed within occupational groups in the region could be carried out. The railroad could also serve as a recreation corridor to link the significant historic, natural, and recreational sites in the region. Finally, the EBT could play an important role in educating both national visitors and local people about Pennsylvania's industrial heritage.

If a region completes a feasibility study for the EBT and has it approved, the railroad and its environs can be designated as a Pennsylvania Heritage Park Planning Area and can compete for management action plan project grants. When the action plan is completed and accepted, the region will be designated a Pennsylvania Heritage Park, which will allow the region to compete for project grants of up to 75 percent funding of the total eligible project costs. There are three categories of applicants that are eligible to receive funds from the program: a congressionally designated federal commission, a municipality acting on behalf of other municipalities in the heritage park area, and a nonprofit organization that has the approval of the municipalities to act on their behalf.

APPENDIX L: EBT EXCURSION OPERATING COSTS

ROCKHILL/ORBISONIA TO COLGATE GROVE - (PRE 1989 EXCURSION SCHEDULE)

Weekends April 1 - October 31 and Daily May 1 - September 30, four trains daily

Operating the above schedule for the EBT would involve hiring local or imported employees and would involve the following salaries:

	IMPORTED*	LOCAL*
1 chief maintenance officer	\$ 50,000	\$ 35,000
1 department supervisor	30,000	
2 skilled laborers/foremen	52,000	
4 laborers/trainmen	80,000	48,000
2 firemen/laborers	40,000	24,000
2 engineer laborers	46,000	30,000
2 laborers/semiskilled		24,000
	\$ 298,000	\$ 161,000
Benefits, taxes, etc. x 1.5 =	<u>x 1.5</u>	<u>x 1.5</u>
	\$ 447,000	\$ 241,500
Because these figures are probably low, especially for imported labor costs, it would be reasonable to expect		
labor to cost	\$ 500,000	\$ 250,000
Consultant service, training, etc.		\$ 25,000 \$ 275,000
Contract	\$ 25,000	\$ 50,000
Total, Labor and Contract	\$ 525,000	\$ 325,000

^{*} Imported labor is defined as experienced workers who require no additional training for the job. Hiring preference would be for local labor, which would be less costly until training is completed. There is no reason why local people cannot be trained to operate the railroad.

In both cases, it is assumed a program of rehabilitation will be undertaken by the work force upon completion of daily operational work. The goal would be to have one locomotive rebuilt in 3-4 years and two new passenger cars in 3-4 years.

Expenses That Would Be Equal, Regardless of Labor Force

Insurance – whole property	\$ 100,000
Insurance – railroad only	60,000
Coal – 350 tons at \$35/ton	12,250
Lubricants	1,500
Other taxes	75,000
Miscellaneous supplies (paint, wood, steel, etc.)	15,000
Ties, spikes, etc. (250 ties)	15,000
Track contractor	30,000
Grounds maintenance (3 persons @ \$5/hour, seasonal)	25,000

The track from Orbisonia/Rockhill to Colgate Grove is in good condition; no costs would be incurred to use this track. However, there would be costs for the three bridges

Bridge repair, Orbisonia/Rockhill to Colgate Grove \$ 182,000

EXPANDING RAILROAD RUN FROM COLGATE GROVE TO MOUNT UNION

Track cost for approximately 7 additional miles

3000 ties/mile – azobe 6" x 8" x 6'10" @ \$1.50/ft. = \$41.00 each delivered = 21,000 ties x \$41	\$ 861,000
Cost per foot to remove vegetation, prepare grade, and lay track and surface = \$50/foot x 7 miles =	\$1,848,000
Misc. fasteners/hardware (including bolts) = \$4 per tie x 3,000 ties x 7 miles =	\$ 84,000
Bridge repair, Colgate Grove - Mount Union	\$ 715,600
Crossings @ \$5,000.00 (blacktop only)	\$ 25,000

COSTS FOR REHABILITATING TRACK - MOUNT UNION YARD

Approx. 1 mile, Mount Union yard 3,000 azobe ties @ \$41 =	\$ 123,000
Material and labor for 10 turnouts \$7,500 each =	\$ 75,000
Cost per foot - track finished \$50 x 5,280'	\$ 264,000
Misc. fasteners/hardware (including bolts) = \$4 per tie x 3,000 ties =	\$ 12,000

EXPANDING THE RAILROAD RUN FROM MOUNT UNION TO ROBERTSDALE

Based on the above assumptions, the cost for ties, trim, site work, architectural and engineering firm contracts, and contingency funds, the costs for operating the railroad would be \$76.30 per foot. Based on this estimate, the following would be the costs for track rehabilitation and repair for the entire right-of-way:

Rockhill to Mount Union	\$ 4,334,450
Rockhill to Robertsdale	<u>\$ 8,782,435</u>
Total, track only	\$ 13,116,885
Rockhill to Mount Union	\$ 4,230,072
Rockhill to Robertsdale	\$ 12,264,135
Total with bridge repair	\$ 17 496 1 8 5

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PREPARERS

PLANNING TEAM

Owner

Joseph and Judy Kovalchick, Indiana, Pennsylvania

National Park Service

Sharon A. Brown, Team Captain, Interpretive Planner, Denver Service Center (DSC), Denver Michael Bureman, Outdoor Recreation Planner, DSC

Keith Dunbar, Planning Director, America's Industrial Heritage Project (AIHP), Hollidaysburg, Pennsylvania

Christy Fischer, Writer/Editor, DSC

Robert Pilk, Landscape Architect, DSC

Linda Ray, Visual Information Specialist, DSC

Ron West, Natural Resource Specialist, DSC

Pennsylvania Historical and Museum Commission, Harrisburg, PA

Brenda Barrett, Pennsylvania Historical and Museum Commission, Harrisburg, Pennsylvania Robert H. Eaton, Pennsylvania Historical and Museum Commission, Harrisburg, Pennsylvania

Huntingdon County Planning and Development, Huntingdon, PA

Richard Stahl, Huntingdon County Planning and Development, Huntingdon, Pennsylvania George Drobnock, Huntingdon County Planning and Development, Huntingdon, Pennsylvania

CONSULTANTS

Nancy Baker, Landscape Architect, National Park Service (NPS), DSC
William C. Bolger, NPS Mid-Atlantic Regional Office, Philadelphia, Pennsylvania
Gordon Chappell, Regional Historian, NPS Western Regional Office, San Francisco, California
Randall Cooley, Director, AIHP, Hollidaysburg, Pennsylvania
Walter P. Gray III, California State Railroad Museum, Sacramento, California
Linn Moedinger, Strasburg Railroad Company, Strasburg, Pennsylvania
William L. Withuhn, National Museum of American History, Smithsonian Institution, Washington,
D.C.

Terry Wong, Structural Engineer, NPS, DSC

ORGANIZATIONS CONTACTED

Federal Emergency Management Agency
Pennsylvania Department of Environmental Resources, Natural Diversity Inventory
Pennsylvania Fish Commission
Pennsylvania Game Commission
U.S. Fish and Wildlife Service

CREDIT TO

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As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, 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. The department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting 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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