



U.S. Department
of Transportation

**Federal Highway
Administration**

Final Case Study for the National Scenic Byways Study

A Proposed Coal Heritage Road and
Scenic Byway in Southern West Virginia

Scenic **BYWAYS**



September 1990

NOTICE

This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The contents of this report reflect the views of the authors who are responsible for the facts and technical data herein, as well as, the typographical and editorial accuracy of the information. The contents do not necessarily reflect the official policy of the U.S. Department of Transportation.

Final Case Study
for the
National Scenic Byways Study

**A PROPOSED COAL HERITAGE ROAD
and SCENIC BYWAY in
SOUTHERN WEST VIRGINIA**

SEPTEMBER 1990

Prepared for
The Federal Highway Administration

Submitted by
Howard G. Adkins and Mack H. Gillenwater

Marshall University
Huntington, West Virginia 25755
304-696-2500

TABLE OF CONTENTS

Executive Summary..... i

List of Figures..... v

Illustrations..... vi

A PROPOSED COAL HERITAGE ROAD AND SCENIC BYWAY IN
SOUTHERN WEST VIRGINIA..... 1

The Iron Trail of Minnesota..... 3

 Examples of Iron Heritage Tourism..... 6

The Black Hills Gold Fever Trail of South Dakota... 23

 Examples of Gold Fever Heritage Tourism..... 26

Southern West Virginia Tourism Potential..... 43

 Topography..... 43

 Climate..... 44

 Forest..... 45

 Appalachian Coal Field..... 45

 Coal Heritage Corridor and Scenic Byway..... 49

 Coal Road Heritage Trail of SWVCC--Actual and
 Potential..... 57

 Appalachian Tourism..... 66

Summary..... 97

A PROPOSED COAL HERITAGE ROAD AND SCENIC BYWAY
IN SOUTHERN WEST VIRGINIA

EXECUTIVE SUMMARY

To a large extent southern West Virginia has existed for generations as a region apart from the urbanized and industrialized Eastern Seaboard. At first the isolation was physical and cultural, but with the American industrial revolution in the early post-Civil War years coal mining became the major industry and further set the region apart. Coal mining determined the course of settlement, brought in large numbers of ethnically-diverse immigrants, and was the mainstay of the economy in the century that followed. Recently, however, the downturn of coal plus the interests in America's industrial heritage and scenic and natural landscapes are possibilities for attracting tourist to the region.

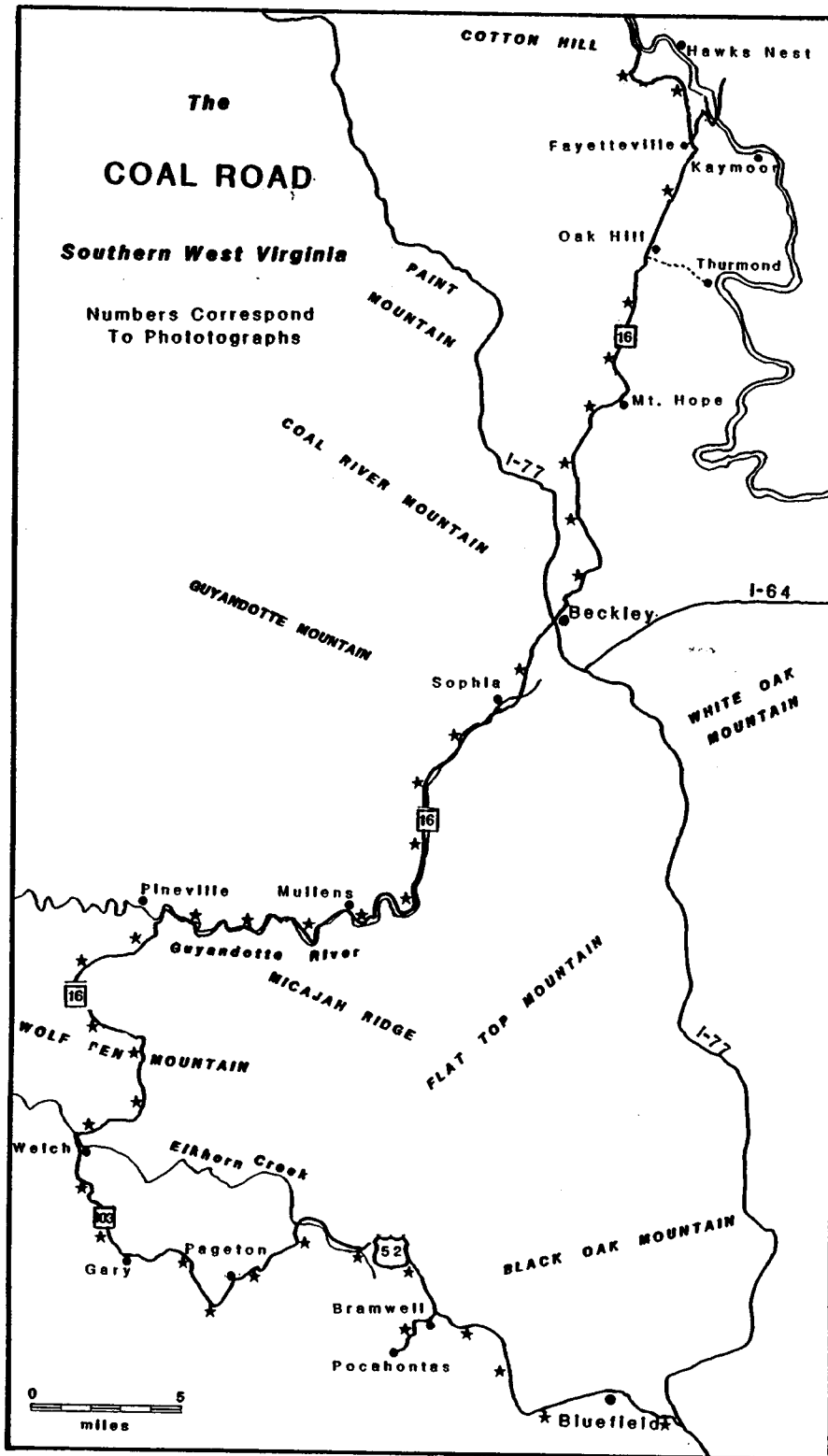
Successful tourism incorporating industrial heritage and scenic and natural landscapes have developed in the Black Hills gold fields of South Dakota and the Iron Ranges of Minnesota. In May 1990, a visit was made to both locations, identifying industrial heritage and scenic and natural landscape sites. The Iron Trail of Minnesota, including sites from Vermilion, Mesabi and Cuyuna ranges, follows U.S. Highway 169 (a part of which is also State Highway 169) for 188 miles between Ely and Brainerd. The highway extends through some of Minnesota's more pristine forested and glacial lake country and several stretches extend

along the ridge tops of the ore ranges providing the motorist with views of the surrounding countryside. Along this route are 19 industrial heritage sites, including an underground mine and the \$16,000,000 Ironworld USA theme park, and numerous non-industrial heritage activity sites. The industrial heritage sites are located in 10 towns and cities ranging in population between 250 and 21,000. More than 300,000 visit these sites annually.

Heritage sites related to gold mining exists along the picturesque and scenic Gold Fever Trail in the Black Hills of South Dakota. The Gold Fever Trail follows I-90, U.S. Highways 14A, 385, and 16, and State Highway 244 for approximately 100 miles from Rapid City, north to Spearfish and south to Custer. The trail extends through the eastern half of the Black Hills by way of deep canyons, rugged intercanyon ridges, and bold craggy knobs. Along this trail are 16 industrial heritage sites located in five towns and cities ranging in population between 300 and 50,000. Annual visits to the Black Hills total over 5.2 million.

Six existing and ten potential coal heritage sites have been identified at 12 locations in southern West Virginia along State highways 16 and 103, and U.S. Highways 19 and 52 between Hawks Nest State Park and Pocahontas, Virginia. (See attached map.) This route also incorporates much of the scenic beauty of southern West Virginia, following at times level and rugged portions of the Appalachian Plateau and at other locations crossing mountains or meandering along the narrow floodplain of rivers and crossing through small coal towns. When developed, this route will provide the tourist or traveller with a balanced scenic, cultural heritage,

geologic, flora and fauna habitat, accessible and aesthetic experience.



LIST OF FIGURES

Figure 1. The Iron Trail, Minnesota.....5

Figure 2. The Gold Fever Trail in the Black Hills,
South Dakota,.....25

Figure 3. West Virginia Coal Fields.....46

Figure 4. The Coal Road and Coal Mines in 1938 in
Southern West Virginia.....47

Figure 5. The Coal Road, Southern West Virginia.....50

Figure 6. Southern West Virginia Coal Country Coal Heritage
Road/Scenic Byway and Tourism Facilities.....67

ILLUSTRATIONS

Iron Trail, Soudan, MN.....	12
Iron Trail, Tower, MN.....	12
Underground Iron Mine: Tower-Soudan State Park, MN.....	13
Iron Trail, Soudan Mine, MN.....	13
State 169, Iron Trail between Soudan and Tower, MN.....	14
State 169, Iron Trail near Virginia, MN.....	14
State 169, Iron Trail near Virginia, MN.....	15
U.S. 169 and 53, Iron Trail at Eveleth, MN.....	15
U.S. 169, Iron Trail near Chisholm, MN.....	16
U.S. 169, Iron Trail near Chisholm, MN.....	16
U.S. 169, Iron Trail near Hibbing, MN.....	17
Iron Trail, Ironworld USA, Hibbing, MN.....	17
Iron Trail, Ironworld USA, Hibbing, MN.....	18
Iron Trail, Ironworld USA, Hibbing, MN.....	18
U.S. 169, Iron Trail near Calumet, MN.....	19
Iron Trail, Calumet, MN.....	19
Iron Trail, Hill Annex Iron Complex, Calumet, MN.....	20
Iron Trail, Open Pit, Calumet, MN.....	20
U.S. 169, Iron Trail near Ironton/Crosby, MN.....	21
U.S. 169, Iron Trail at Ironton, MN.....	21
U.S. 169, Iron Trail, South of Ironton.....	22
Roadside Scene along I-90 near Rapid City, SD.....	32
Roadside Scene along I-90 near Rapid City, SD.....	32
Gold Fever Trail, Shopping Center, Rapid City, SD.....	33
Gold Fever Trail, Rapid City, SD.....	33

Gold Fever Trail, U.S. 385 between Spearfish and Lead, SD.....	34
Gold Fever Trail, Lead, SD.....	34
Gold Fever Trail, Lead, SD.....	35
Gold Fever Trail, Black Hills Mining Museum, Lead, SD.....	35
Gold Fever Trail, Homestake Gold Mine, Lead, SD.....	36
Gold Fever Trail, Souvenir Shop, Lead, SD.....	36
Gold Fever Trail, Deadwood, SD.....	37
Gold Fever Trail, Deadwood, SD.....	37
Gold Fever Trail, U.S. 385, SD.....	38
Gold Fever Trail, U.S. 385, SD.....	38
Gold Fever Trail, U.S. 385, Lake Pactola, SD.....	39
Gold Fever Trail, U.S. 385, Lake Pactola, SD.....	39
Gold Fever Trail, Mt. Rushmore, SD.....	40
Gold Fever Trail, U.S. 16, near Keystone, SD.....	40
Gold Fever Trail, U.S. 16, Keystone, SD.....	41
Gold Fever Trail, U.S. 16, Keystone, SD.....	41
Gold Fever Trail, U.S. 16, SD.....	42
Gold Fever Trail, U.S. 16, SD.....	42
Coal Road, U.S. 60, Gauley Mountain, WV.....	69
Coal Road, U.S. 60, along New River Gorge, WV.....	69
Coal Road, Gift Shop, U.S. 60, WV.....	70
Coal Road, U.S. 60, Hawk's Nest State Park, WV.....	70
Coal Road, U.S. 60, Anstead, WV.....	71
Coal Road, U.S. 60 and State 16, WV.....	71
Coal Road, State 16 near Hawk's Nest State Park, WV.....	72
Coal Road, State 16, at Cotton Hill Public Fishing Area, WV....	72
Coal Road, State 16, near Cotton Hill, WV.....	73

Coal Road, State 16, between Hawk's Nest State Park and Fayetteville, WV.....73

Coal Road, State 16, between Hawk's Nest State Park and Fayetteville, WV.....74

Coal Road, State 16, between Hawk's Nest State Park and Fayetteville, WV.....74

Coal Road, State 16, between Hawk's Nest State Park and Fayetteville, WV.....75

Coal Road, U.S. 19 and State 16, near Fayetteville, WV.....75

Coal Road, U.S. 19 and State 16, near Fayetteville, WV.....76

Coal Road, U.S. 19 and State 16, near Fayetteville, WV.....76

Coal Road, Crossing New River Gorge Bridge, WV.....77

Coal Road, Beckley Exhibition Mine, WV.....77

Coal Road, near Little Beaver State Park, WV.....78

Coal Road, Little Beaver State Park, WV.....78

Coal Road, Grandview State Park, WV.....79

Coal Road, Grandview State Park, overlooking New River Gorge, WV.....79

Coal Road, Sophia, WV.....80

Coal Road, Strip Development, Sophia, WV.....80

Coal Road, State 16, near Twin Falls State Park, WV.....81

Coal Road, Twin Falls State Park, WV.....81

Coal Road, State 54, between Sophia and Mullens, WV.....82

Coal Road, Slab Fork, WV.....82

Coal Road, Strip Mine Operation, near Otsego, WV.....83

Coal Road, Otsego, WV.....83

Coal Road, State 16, near Mullens, WV.....84

Coal Road, State 16, Itmann Company Store, Itmann, WV.....84

Coal Road, Coal Preparation Plant, Itmann, WV.....85

Coal Road, Gob Pile Restoration.....	85
Coal Road, Guyandotte River, State 16, near Pineville, WV.....	86
Coal Road, Castle Rock, Pineville, WV.....	86
Coal Road, U.S. 52 and State 16, Welch, WV.....	87
Coal Road, Retaining Walls, U.S. 52 and State 16, Welch, WV....	87
Coal Road, State 103, Wilcoe, WV.....	88
Coal Road, State 103, World's Largest Coal Preparation Plant, Gary, WV.....	88
Coal Road at Gary, WV.....	89
Coal Road, State 103, at Pageton, WV.....	89
Coal Road, State 103, Pageton, WV.....	90
Coal Road, State 103, Pageton, WV.....	90
Coal Road, State 103, Company Store, Pageton, WV.....	91
Coal Road, State 103, between Pageton and Maybeury, WV.....	91
Coal Road, U.S. 52, near Maybeury, WV.....	92
Coal Road, Abandoned Company Store, near Maybeury, WV.....	92
Coal Road, U.S. 52, at Bramwell, WV.....	93
Coal Road, Bramwell, WV.....	93
Coal Road, Bluestone River, Bramwell, WV.....	94
Coal Road, Pinnacle Rock State Park, near Bramwell, WV.....	94
Coal Road, near Pocahontas, VA.....	95
Coal Road, Pocahontas, VA.....	95
Coal Road, Pocahontas, VA.....	96
Coal Road, Pocahontas Exhibition Mine, VA.....	96

A PROPOSED COAL HERITAGE ROAD AND SCENIC BYWAY
IN SOUTHERN WEST VIRGINIA

A large part of the culture and history of West Virginia lives today in the southern coal fields. This history is seen in the many small communities and relic mining features that include mine portals, tipples, company stores, railroads and mining roads, slate dumps, equipment and mining towns. All of these features are located in a scenic environment of narrow valleys with steep slopes and high ridges in mountainous southern West Virginia. The farmers, lumbermen, coal barons and thousands of laborers who came into the area from other coal regions of the United States and Europe portray a fascinating story of how a region developed in little more than a century. Congress has noted that "the iron and steelmaking, coal and transportation industries and the labor of their workers contributed significantly to America's movement westward," and that there "are only a few recognized historic sites that are devoted to portraying the development and growth of heavy industry and industrial labor movement in America."¹

This report identifies a possible coal heritage and scenic byway through southern West Virginia in an effort to promote economic development and revitalization through tourism.² The very

¹ Quoted in, America's Industrial Heritage Project: Southern Pennsylvania, United States Department of the Interior, National Park Service, June 1989.

² Howard G. Adkins and Mack H. Gillenwater, The Coal Road: A Survey of Southern West Virginia Mining Tourism Potential, U.S. Department of Commerce, Economic Development Administration, 1989.

foundation on which to build tourism in Southern West Virginia Coal Country (SWVCC) rests upon (1) an industrial heritage of coal and related activities, (2) the natural and scenic beauty of narrow and sinuous valleys and ridges, great variety of streams, rugged hills and mountains, and mild climate of Appalachia, (3) existing tourist facilities and infrastructure, and (4) proximity and access to the major metropolitan areas that are 'starved' for open-space tourism.

A heritage route with scenic value in SWVCC will be identified, along with an inventory of existing and potential tourism resources and scenic sites. Driving for pleasure is a popular pastime for Americans. It is also an economical and convenient way to access tourism sites. Furthermore, the automobile is projected to continue to predominate travel. Thus, the route should provide the motorist in route to a particular tourist site with safe driving and a pleasant, continuous visual experience.

Parallels to the coal heritage in rural southern West Virginia are found in the gold fields of the Black Hills of South Dakota and the Iron Ranges of Minnesota. A major difference is that unlike SWVCC these regions have taken advantage of their heritage environment, preserved their unique history, and made them available to millions of Americans through successful tourism programs. Per capita tourism expenditures for all trips rank West Virginia 43, with Minnesota 13, and South Dakota 34.³

³ Compare Minnesota: An Economic & Statistical Fact Book, 1988 & 1989, Minnesota Department of Trade and Economic Development, Minnesota State Planning Agency, 1988, p. 41.

Each of these heritage examples serves as a proto-type for potential development in SWVCC.

The Iron Trail of Minnesota

As early as 1859, strong magnetic variations were reported in a U.S. Government land survey of the western Lake Superior country, but ore production did not begin until after 1880. Since the mines opened Minnesota has yielded more than two billion tons of iron ore. The ore occurred in the Cuyuna, Mesabi and Vermilion ranges, with the formations varying in thickness from less than 100 to over 2,000 feet and capped by granite outcroppings rising abruptly above the surrounding glacial topography to 400 to 500 feet in height. The ore was mostly hematite, with a content of 65 percent metallic and nearly non-phosphorous. Glaciers made the final impact on the geologic structure of Minnesota's three iron ranges, scraping and gouging out major landforms, leaving behind a surface of sand, gravel, rocks and lakes. The latter is the most conspicuous feature.

The Mesabi is a low granite ridge rising 1,300 to 1,600 feet above sea level. The range extends for 100 miles across portions of St. Louis and Itasca counties, with the soft ore formation varying in width from two to ten miles. The Cuyuna range consisted of medium hard hematite ore, 67 percent metallic. It extends for 68 miles across Aitkin and Crow Wing counties. Unlike the Mesabi, the ore lying in the two ranges did not outcrop but was covered with glacial drift 14 to 300 feet thick. The Vermilion consisted of hard rich hematite ore possessing a vertical rather than

horizontal depth. Consequently, it was mined mainly by underground operations.

By the time the high grade ore was exhausted in the mid-20th century, the three ranges had supplied the steel needs of two world wars and supported an expanding component in the American economy. Production in the Vermilion range ceased in 1958, though ore was shipped from its reserves until 1963. Two years later, 1965, the Soudan Mine became a unique state park. By 1977 the Cuyuna had ceased production, and shipments from its reserves had largely ceased. On the other hand, the Mesabi with new technologies continues to produce low grade ore and taconite for American steel makers. Changes were dramatic, but iron ore mining was an aspect of Minnesota's history that through tourism has not been allowed to enter into the annals of the unremembered.

The industrial heritage tourism activities associated with Minnesota's Vermilion, Mesabi and Cuyuna iron ranges is concentrated along a 188 miles stretch of U.S./State Route 169 and U.S. 210 extending from Ely to Brainerd, known as The Iron Trail, (Figure 1). The Iron Trail passes through some of Minnesota's more picturesque forest and glacial lake terrain. In this region the Mesabi serves as a divide between the waters flowing northward to Hudson Bay, eastward to the St. Lawrence and southward to the Gulf of Mexico. Grand Rapids, located at the southwestern end of the Mesabi, is the gateway to the Iron Range country.

Nationally, Minnesota ranks thirteenth in per capita tourism expenditure. Per capita tourism spending exceeds the national average, thereby constituting a significant source of income for

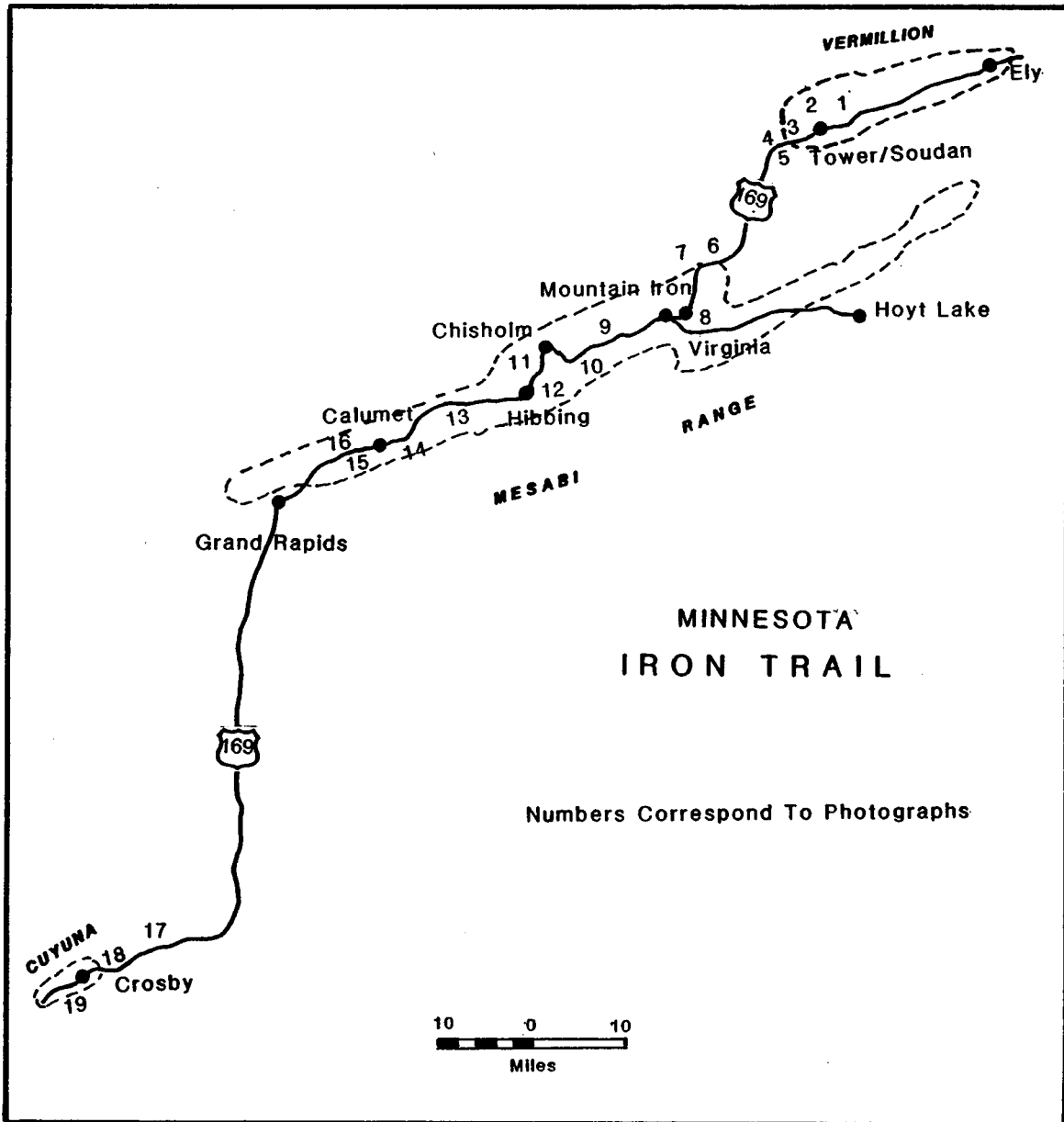


Figure 1. The Iron Trail, Minnesota

the state. The impact of travel in St. Louis, Itasca, Crow Wing and Aitkin counties in 1985, through which extends the Iron Trail, was as follows:

<u>Item</u>	<u>State</u>	<u>Iron Trail</u>	<u>St Louis</u>	<u>Itasca</u>	<u>Crow Wing</u>	<u>Aitkin</u>
Pop. (1980)	4,076,000	320,424	222,229	43,069	41,722	13,404
Expenditure	\$1293	\$1621	\$1120	\$1229	\$4022	\$3716
St. Tax Receipts	\$68	\$91	\$70	\$69	\$233	\$26
Local Tax Receipts	\$12	\$15	\$14	\$9	\$26	\$21
Jobs		1:37	1:27	1:28	1:11	1:20

Source: "The Economic Impact of Travel on Minnesota Counties, 1985." U.S. Travel Data Center, November 1986.

Examples of Iron Heritage Tourism

(1) Ely is located in the Vermilion Iron Ore Range in the heart of the Boundary Waters Canoe Area, a popular resort, fishing, canoe and camping center. The town owes its origin and development, however, to the discovery and production of iron ore. Ely, with a population of 4,820, is the northern gateway to the Iron Trail.

Industrial Heritage

- (1) The Vermilion Interpretive Center offers audiovisual displays depicting local history, beginning in the 1880s with iron ore production.

Other Activities

- (1) All American Championship Sled Dog Races.
- (2) Hidden Valley Recreation Area (Skiing).
- (3) Wolf Center Museum Zoo and Conference Center.
- (4) Taconite State Trail.
- (5) Boundary Waters Canoe Area.

(2) Tower/Soudan grew rapidly with the development of iron mining on the Vermilion. Tower (population 640 in 1980) was the business center and Soudan the residential center for miners from a variety of ethnic backgrounds.

Industrial Heritage

- (1) Soudan Underground Mine and State Park. The Soudan Mine is Minnesota's deepest underground mine, extending 2,400 feet below the surface accessed by elevator cage, exhibiting iron strata layers and underground railroad.
- (2) Tower/Soudan Historical Museum with exhibits of mining and miners' equipment.

Other Activities

- (1) McKinley Campground.
- (2) Fortune Bay Bingo Casino.
- (3) Virginia, with a 1980 population of 11,056, is located in the Mesabi Iron Range twenty miles east of Hibbing. Often referred to at the "Queen City of the Range," Virginia remained the largest town in size and activity until the early twentieth century. In its early years mining and lumbering provided employment for about an equal number of workers, mostly foreign-born Finns, Swedes, Norwegians, Canadians, Austrians, Irish, Russians, and Poles. Currently the city, surrounded by numerous open pit mines and mountains of overburden, has the necessary infrastructure to support tourism.

Industrial Heritage

- (1) Mine View in the Sky observation point to view the Rochleau Mine workings.
- (2) Virginia Heritage Museum.
- (3) Eveleth Mineview (at Eveleth, 3 miles distance).

Other Activities

- (1) Olcott Park.
- (2) U.S. Hockey Hall of Fame (at Eveleth, 3 miles distance), visited by 30,000 in 1989.
- (4) Hoyt Lake, population of 3,186 in 1980, is located 15 miles east of Virginia.

Industrial Heritage

- (1) Longyear Drill Site.
- (5) Mountain Iron, population of 4,134 in 1980, was originally known as Marfield, and then Grant, was incorporated in 1892. It was often referred to as the "Gem of the Mesabi."

Industrial Heritage

- (1) Mountain Iron Mineview.
- (2) Mountain Iron Historic Train.
- (3) Statue of Leonidas Merrit, one of the principal figures in the early development in the Mesabi.
- (4) Mott Pit.

Other Activities

- (1) West Two Rivers Reservoir/Campground.
- (6) Chisholm. The town of Chisholm was named for Archibald M. Chisholm, a Canadian-born mining man whose experience in mining had been gained in the Gogebic Range. Shortly after incorporation,

the town in 1905 had a population of 4,231. The 1980 population of Chisholm was 5,930.

Industrial Heritage

- (1) Ironworld USA, a 15-acre park located on the edge of the Glen Open-Pit Iron Mine, is an Interpretative Center of iron mining, ethnic heritage, genealogical library, festival park, a 1600-seat amphitheater and 2.5-mile railroad. Ironworld USA is the leading attraction along The Iron Trail. The Interpretative Center, opened in 1977, is a \$16,000,000 investment with 29 full-time and 65 part-time employees and an annual visitation of 125,000.
- (2) Minnesota Museum of Mining, indoor and outdoor exhibits of mining and related industries, replica of an underground drift, jet piercing drill, large mining trucks and equipment. 16,000 visited the museum in 1989.

Other Activities

- (1) Bridge of International Peace.
 - (2) Saints Peter and Paul Church.
 - (3) Longyear Swimming Beach and Park.
- (7) Hibbing, with a population of 21,200 in 1980, was founded in 1893 and has a justifiable claim as "the Iron Ore Capital of the World." However, lumbering overshadowed mining in the early years. But when iron was discovered under the town, the entire community moved two miles to the south. Remnants of streets, street lights,

and sidewalks remain on the landscape and provide a modest attraction to visitors.

Industrial Heritage

- (1) Hull-Rust Mine is one of the largest operating open pit iron ore mines in the world. It covers an area five miles by two miles and is 535 feet deep. More than one billion tons of material has been removed. The mine is visited by 40,000 annually.
- (2) Hibbing-Chisholm Pit Crossing Route.

Other Activities

- (1) The Paulucci Space Theatre, with a 40-foot diameter dome screen, presents programs on astronomy, space exploration and the environment to 25,000 visitors each year.
 - (2) The Greyhound Origin Center traces the history of the Greyhound Bus Company. 10,000 visited the museum in 1989.
 - (3) First Settler/Historical Society Museum.
- (8) Calumet is a small village located on the southwestern edge of the Mesabi Range encompassing 1,200 acres and a population of about 450. The village began with lumbering, but after 1904 iron mining became basic in the economic structure of the community.

Industrial Heritage

- (1) Hill Annex Mine State Park, a national historic site that explores the history and methods of iron ore mining in northern Minnesota.

(9) Grand Rapids is located at the western end of the Mesabi Range and at the head of navigation on the Mississippi River. Early economic development rested primarily upon timber rather than ore. The 1980 population of Grand Rapids was 7,934.

Industrial Heritage

- (1) Forest History Center.

Other Activities

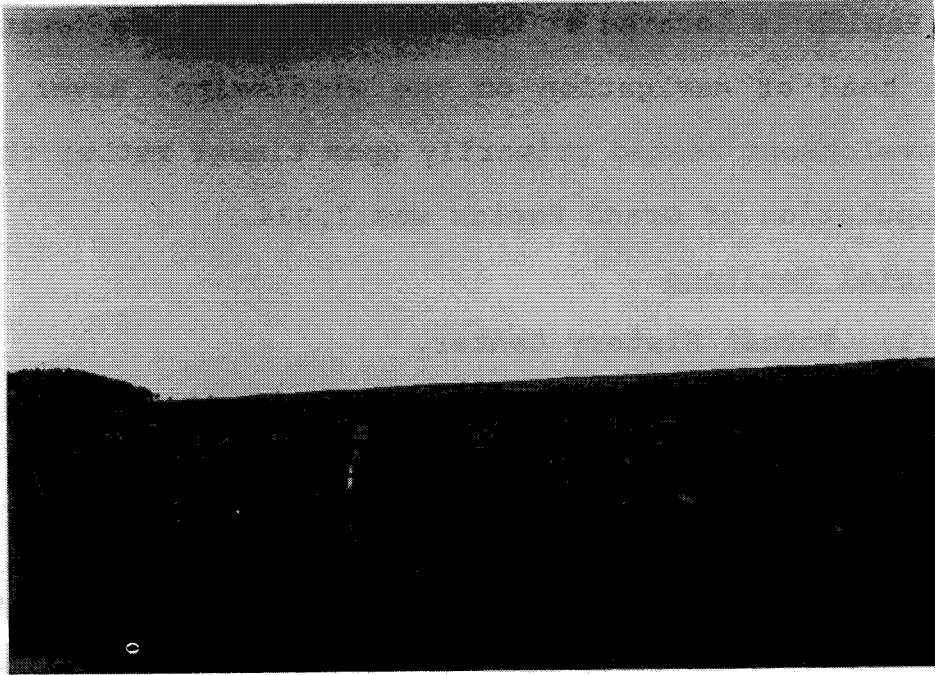
- (1) Central School Heritage and Arts Center.

(10) Crosby and nearby Ironton are located on the Cuyuna Range, a few miles northeast of Brainerd. Because the ore was covered with glacial drift from 14 to 300 feet thick, lakes, bogs and pine forest, the region was frequently referred to as geologically viewless. The ore lay in two formations, with Crosby the mining center for the five mile wide by twelve mile long north range. By 1912 there were eleven mines on the Cuyuna. Later, the number increased to more than forty mines. Little evidence of the mining era remains.

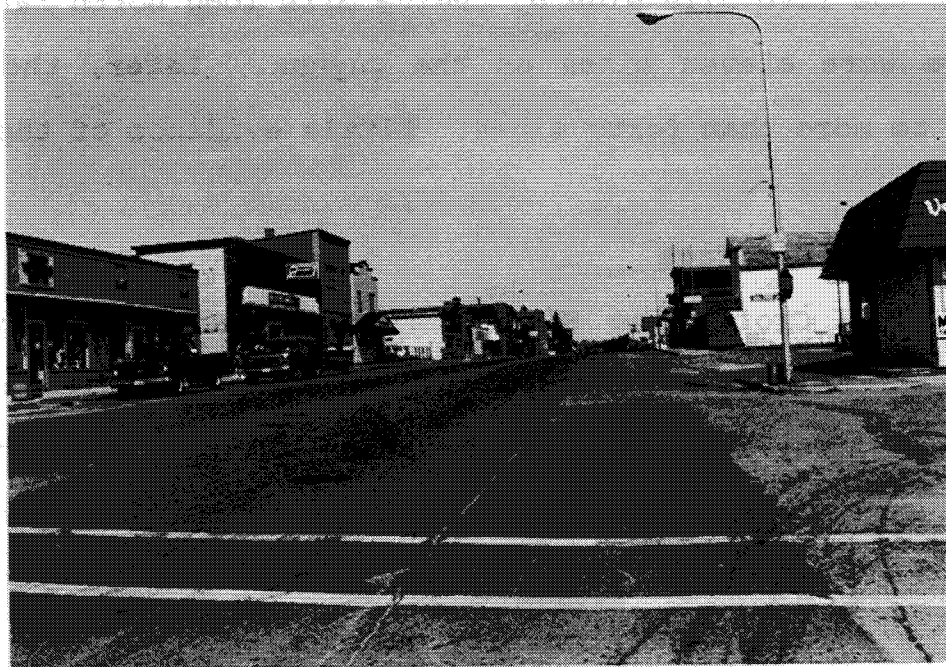
Industrial Heritage

- (1) Croft Mine Historical State Park preserves and displays remnants of iron mining, including "the-way-it-was" interpretation of the life of early mining. Within the seventeen acre park are picnic sites, playground facilities and a scenic locale for family and community outings.

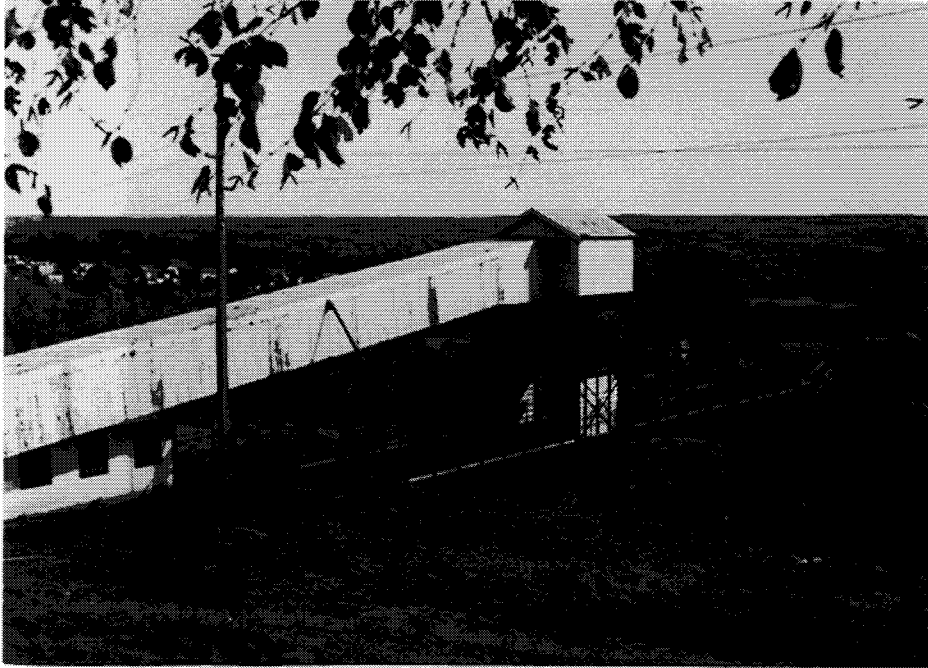
The following series of photographs are typical scenes along the Iron Trail of Minnesota.



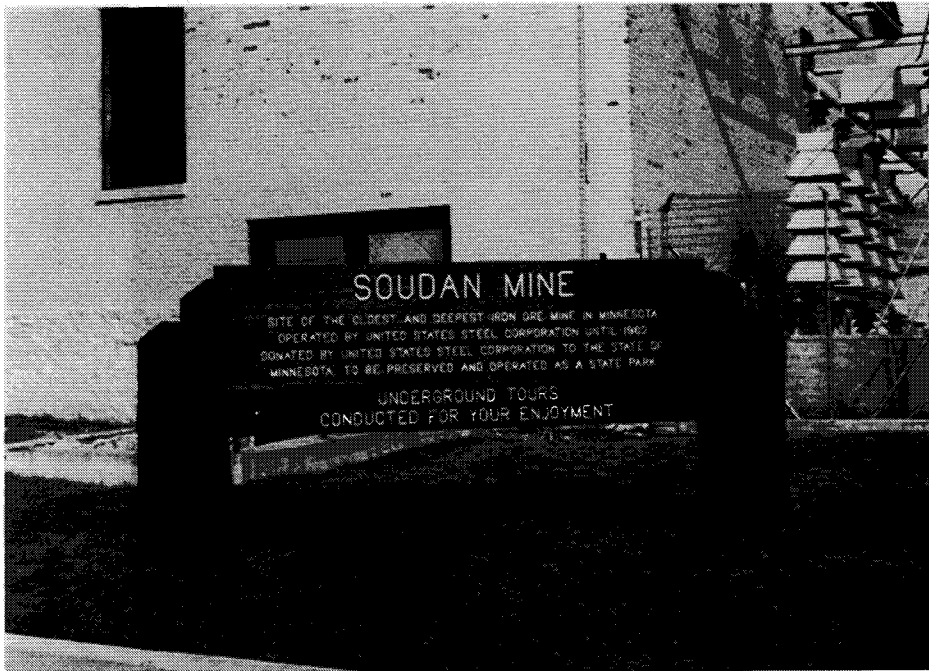
(1) Iron Trail, Soudan, MN



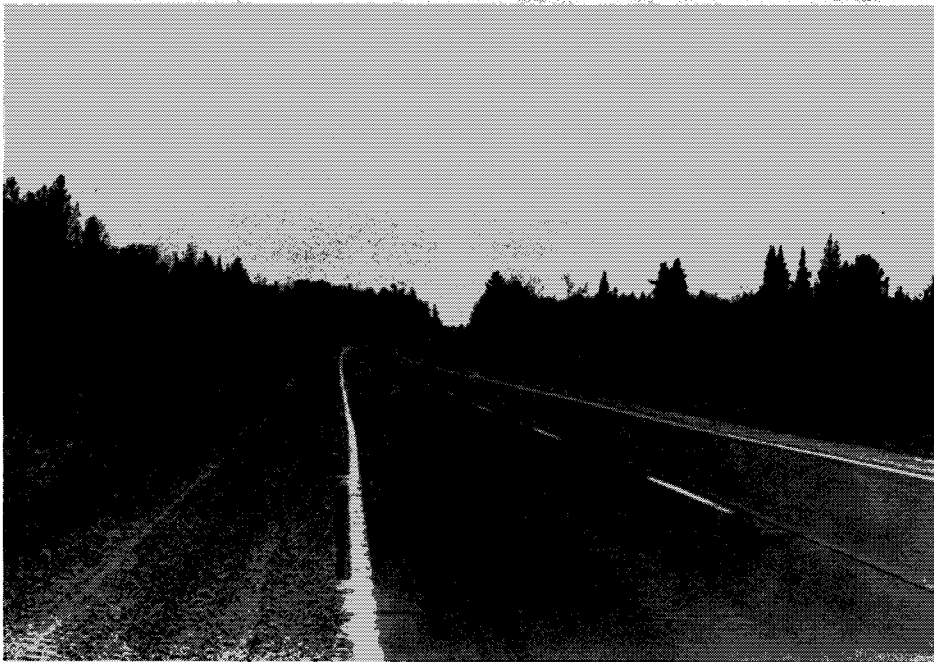
(2) Iron Trail, Tower, MN



(3) Underground Iron Mine: Tower-Soudan State Park, MN



(4) Iron Trail, Soudan Mine, MN



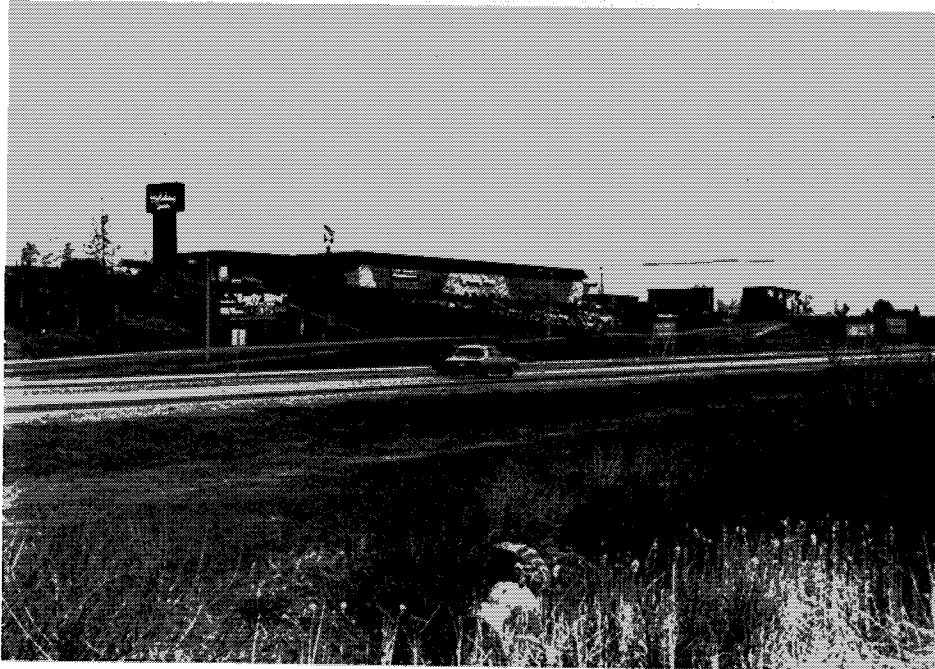
(5) State 169, Iron Trail between Soudan and Tower, MN



(6) State 169, Iron Trail near Virginia, MN



(7) State 169, Iron Trail near Virginia, MN



(8) U.S. 169 and 53, Iron Trail at Eveleth, MN



(9) U.S. 169, Iron Trail near Chisholm, MN



(10) U.S. 169, Iron Trail near Chisholm, MN



(11) U.S. 169, Iron Trail near Hibbing, MN



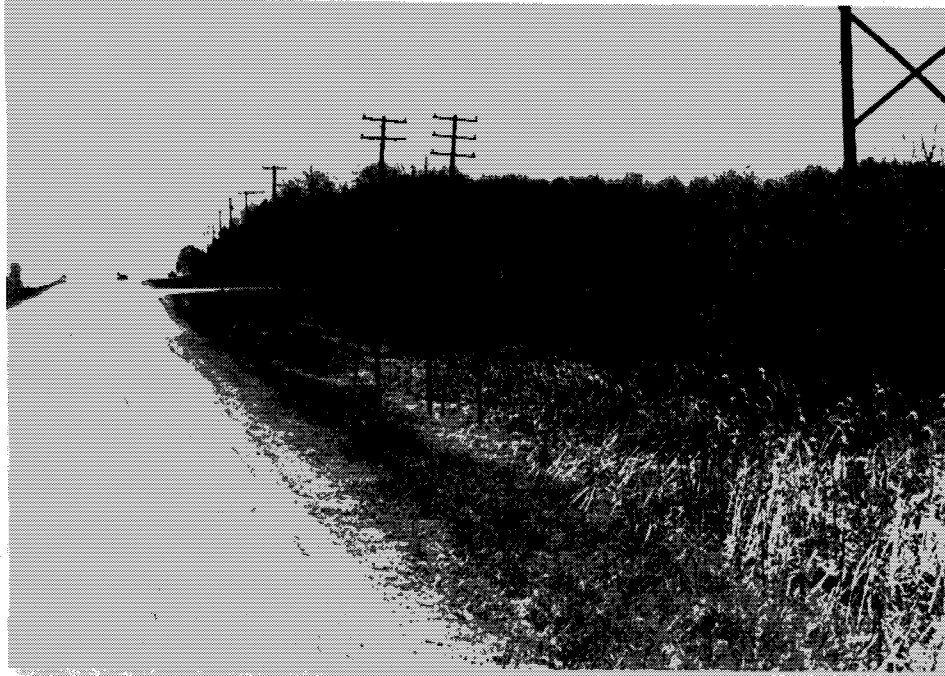
(12-A) Iron Trail, Ironworld USA, Hibbing, MN



(12-B) Iron Trail, Ironworld USA, Hibbing, MN



(12-C) Iron Trail, Ironworld USA, Hibbing, MN



(13) U.S. 169, Iron Trail near Calumet, MN



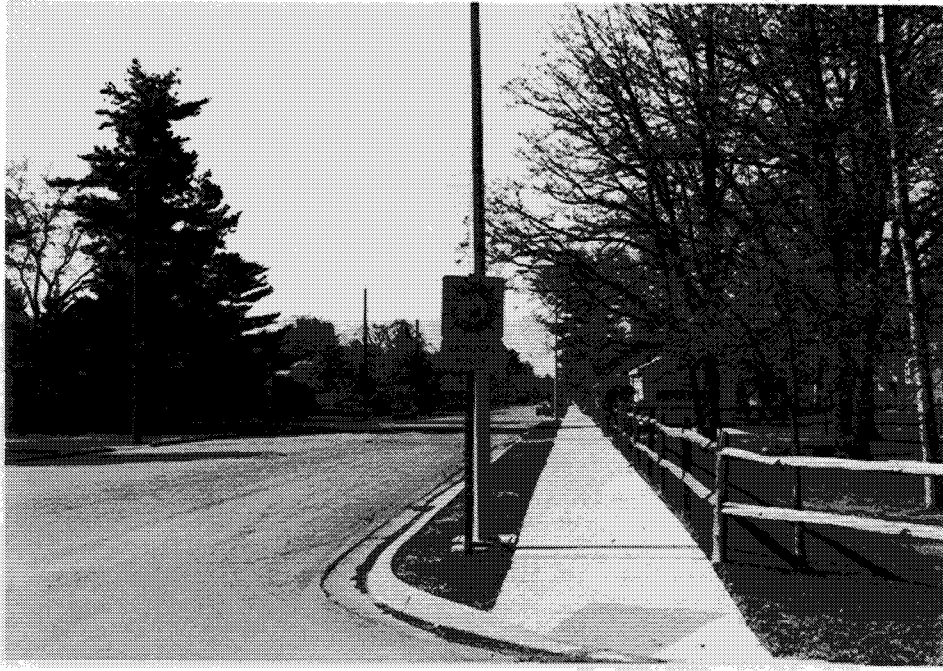
(14) Iron Trail, Calumet, MN



(15) Iron Trail, Hill Annex Iron Complex, Calumet, MN



(16) Iron Trail, Open Pit, Calumet, MN



(17) U.S. 169, Iron Trail near Ironton/Crosby, MN



(18) U.S. 169, Iron Trail at Ironton, MN



(19) U.S. 169, Iron Trail, South of Ironton

The Black Hills Gold Fever Trail of South Dakota

Lying west of the Missouri River on the Great Plains in South Dakota is the Black Hills, an isolated mountain range surrounded by hundreds of square miles of open plains of the Missouri Plateau. The Black Hills is a 125-mile long and 60-mile wide northeast to southwest elliptical dome uplifted above surrounding plateau surface and eroded into its present features. As erosion proceeded, a complete series of ancient metamorphic rocks were exposed in concentric elliptical bands in the east while the west remains covered with Carboniferous limestones. Harney Peak, a residual mountain in the east with an elevation of 7,242 feet above sea level, is the highest point in the Black Hills. Thus, in the east the Black Hills is a range of deep canyons, rugged intercanion ridges, bold mountain forms, craggy knobs, and other picturesque features that are a vest pocket edition of the Rocky Mountains.

The evergreen stands of ponderosa pine intermixed with white spruce and aspen of the Black Hills also stand in stark contrast to the surrounding brown, seared and semiarid plains. The Indians referred to the hills as Paha Sapa, meaning Black Hills, a name continued by the early settlers. The dark colored evergreen trees no doubt suggested the name Black Hills to both the Ogala Sioux Indians and the early settlers.

When pioneering people entered a region, they looked about in order to determine the most-favored occupations. In the eastern one-half of the Black Hills this proved to be gold mining, a basic and indispensable industry, but every producing mine eventually

runs out of ore. Nevertheless, the urge to acquire gold has an emotional affect on mankind, more so than most any other ore.

There is no agreement as to the date when gold was discovered in the Black Hills. An expedition for exploration of the Black Hills led by Lt. Colonel George A. Custer authenticated gold in 1874, and shortly thereafter the rush was on as placer claims were located on practically every creek in the northern Black Hills. Three years later, in 1877, the Homestake Mining Company was organized and operations began at Lead City, then about one year old. At first the gold bearing rock was mined in open cuts, but underground work was soon started through shafts. The Homestake Mine is the oldest continuously operated gold mine in the world.

Like the discovery of gold, the date of the first tourist visit to the Black Hills is a moot issue. Tourism in the Black Hills has developed around its natural and scenic, cultural/industrial heritage and recreational activities. Annual tourist visits to the Black Hills total over 5.2 million. An estimated forty-five percent of total visitor sales in 1989 occurred in the five counties comprising the Black Hills, an area accounting for eighteen to twenty percent of the population of South Dakota.

Most tourist sites have developed along U.S. Highways 14, 16 and 385, between Spearfish, Hot Springs and Keystone, (Figure 2). Highway 385 extends from Sturgis on Interstate 90 south to Custer State Park, a distance of 110 miles. This highway has been designated by the American Automobile Association as a scenic highway and locally designated as the Gold Fever Trail by the Black

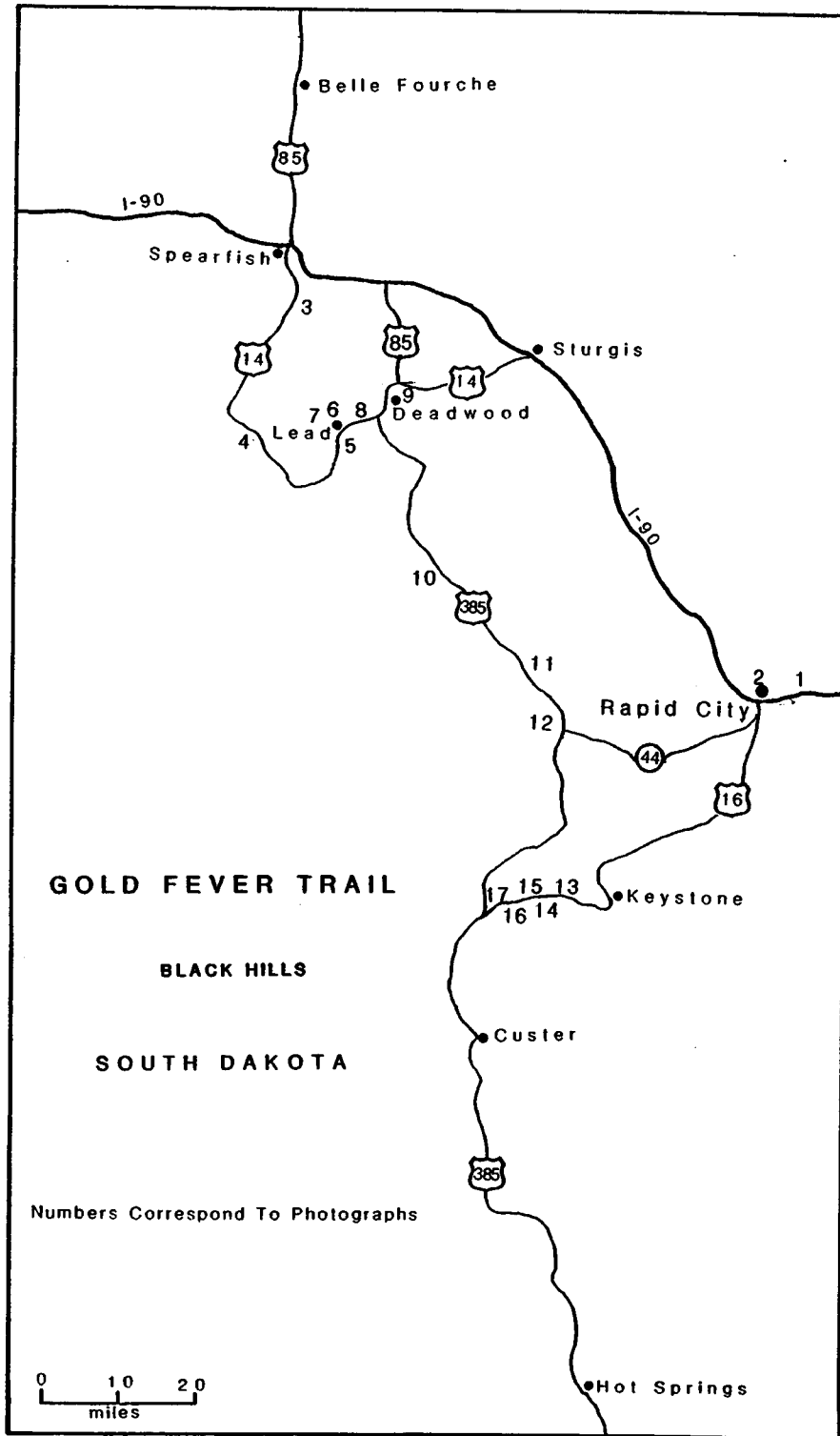


Figure 2. The Gold Fever Trail in the Black Hills, South Dakota

Hills, Badlands and Lakes Association. From Spearfish to Custer, a distance of 75 miles, several alternative routes deviated from this main highway, such as the Rimrock and Skyline routes from Rapid City and the Needles Highway from Custer. These highways combine spectacular rugged terrain and natural beauty with gold heritage sites to attract tourist. However, all but two of the heritage sites are located in Lead, Deadwood and Keystone. The most visited site is Mt. Rushmore, near Keystone.

Examples of Gold Fever Heritage Tourism

(1) Rapid City, the gateway to the Black Hills, serves as a Commercial and tourist center. Rapid City, the second largest in South Dakota, has a population of 50,000. Even though gold mining is basic to much of the Black Hills overall tourism, within 50 miles of Rapid City there are two national parks, a national monument, a national memorial, a national forest, two wilderness areas, a national grassland, two state parks and numerous sites developed around cultural heritage rather than around an industrial heritage.

Industrial Heritage

(1) Museum of Geology contains rocks, minerals and ores from the Black Hills and Badlands. The museum is located in South Dakota School of Mines, Administration Building, just off State Route 79.

Other Activities

(1) Black Hills Caverns, six miles southwest of Rapid City on State Route 44, contains chambers and large

cave room with stalactites, stalagmites, flowstones and frost crystals.

- (2) Black Hills Petrified Forest, eleven miles northwest on I-90, includes an interpretative film on Black Hills geology and petrification.
 - (3) Black Hills Reptile Gardens, six miles south on U.S. 16, contains rare and dangerous snakes, birds of prey, giant tortoises and gardens with 20,000 flowering plants.
 - (4) Crystal Cave Park is located on State Route 44. The cave contains numerous cavern formations, petrified wood specimens and nature trails.
 - (5) Ellsworth Air Force Base on I-90. Available are guided tours of SAC bombers and missiles and a museum containing a variety of military air force equipment.
 - (6) Marine Life Aquarium presents performing dolphins, seals and sea lions, penguins and exotic fish.
 - (7) Minnilusa Pioneer Museum in Halley Park contains pioneer artifacts and history of people and events that helped shape the area.
 - (8) Sioux Indian Museum, adjacent to the Minnilusa Museum, exhibits the creative works of Sioux and other native American Artisans.
- (2) Sturgis, population 500, is located on I-90 and State Route 34 near the edge of the Black Hills.

Industrial Heritage

None.

Other Activities

- (1) Fort Meade Cavalry Museum.
- (2) Bear Butte State Park.
- (3) Belle Fourche, population of 4,692 and elevation of 3,050 feet above sea level, is the northern gateway to the Black Hills.

Industrial Heritage

- (1) Bentonite Mining Company.

Other Activities

- (1) Tri-state Museum.
- (2) Black Hills Roundup (rodeo).
- (4) Spearfish lies near the mouth of 19-mile long Spearfish Canyon. Limestone palisades extending up to 1,000 feet and Black Hills Spruce trees align scenic U.S. 14A which passes through the canyon.

Industrial Heritage

None.

Other Activities

- (1) Black Hills Passion Play, recounting the last seven days of Christ, is attended by 100,000 each summer.
- (2) D. C. Booth Historic Fish Hatchery.
- (3) Spearfish Classic Auto Museum.
- (4) High Plains Heritage Center.
- (5) Lead, population 4,200 and over one mile above sea level, is the only town to prosper from frontier gold rush to the present on earnings from gold diggings. The town is accessed via U.S. Route 14, either from Sturgis or Spearfish.

Industrial Heritage

- (1) Black Hills Mining Museum was opened in 1986 and in 1989 more than 40,000 persons passed through. The number of visitors for 1990 is expected to reach some 50,000. In addition to the mining equipment, which is on permanent loan, the museum offers a tour through a simulated mine and an opportunity to mine gold. The annual operating budget is \$130,000, with a staff of 10 full-time and 2 part-time employees.
- (2) Homestake Gold Mine. Guided tours are offered of the surface operations, with proceeds above expenses supporting civic and community activities. Since 1945 more than 2,000,000 visitors have taken the surface tour.
- (3) Homestake Recreation Center.
- (4) Bobtail Placer Mine.

Other Activities

- (1) Terry Peak Ski Area.
- (2) Deer Mountain Ski Area.
- (6) Deadwood, population 2,000, is the oldest living gold camp. The town that was poured into a narrow gulch and surrounded by fire-scarred hills is accessed via scenic U.S. 14 and 85, either through Spearfish Canyon or from Sturgis. Deadwood has restored legal gambling, with slot machines, poker tables and blackjack tables operating in more than 50 old west styled saloons.

Industrial Heritage

- (1) Adams Memorial Museum.

- (2) Broken Boot Gold Mine.
- (3) Deadwood Central Railroad.
- (4) Ghost of Deadwood Gulch-Western Heritage Wax Museum.
- (5) Mt. Moriah Cemetery.
- (6) Preacher Smith Methodist Heritage Museum.
- (7) Saloon No. 10.

Other Activities

- (1) "Trail of Jack McCall for Murder of Bill Hickok."
- (7) Keystone with a 1980 population of 300 was born in the gold rush in 1880. The town is located on U.S. 385, the Black Hills Parkway, two miles from Mt. Rushmore.

Industrial Heritage

- (1) Big Thunder Gold Mine.
- (2) Black Hills Central Railroad (1880 Train).
- (3) Historical Society Museum--Laura Ingalls Wilder Collection.

Other Activities

- (1) Rushmore Cave.
- (2) Parade of Presidents Wax Museum.
- (3) Rushmore-Borglum Story.
- (4) Cosmos of Black Hills.
- (5) Rushmore Aerial Tramway.
- (6) Rushmore Helicopters.
- (7) Mt. Rushmore National Memorial, visited by more than 2,000,000 persons annually.
- (8) Custer, located on U.S. 385 and 16, and State Routes 36 and 89, has a population of 1800.

Industrial Heritage

None.

Other Activities

- (1) Custer County Courthouse Museum.
 - (2) Custer State Park, including the 18-mile Wildlife Loop Road, is visited by more than 1.2 million persons annually.
 - (3) Flintstones Bedrock City.
 - (4) National Museum of Woodcarving.
 - (5) Needles Highway Scenic Drive (State Route 87).
- (9) Hot Springs, 1980 population of 4,600.

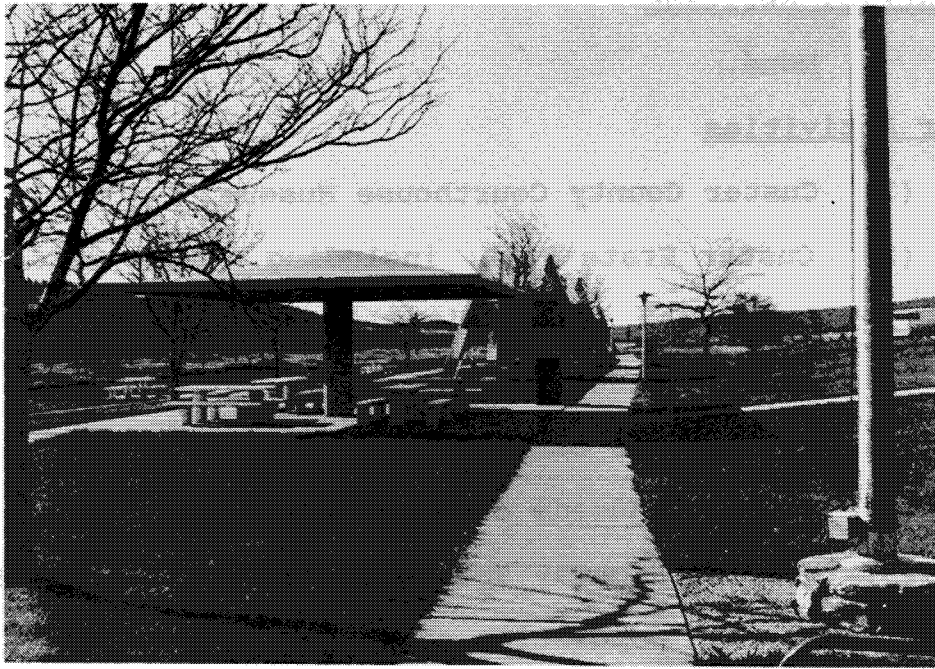
Industrial Heritage

None.

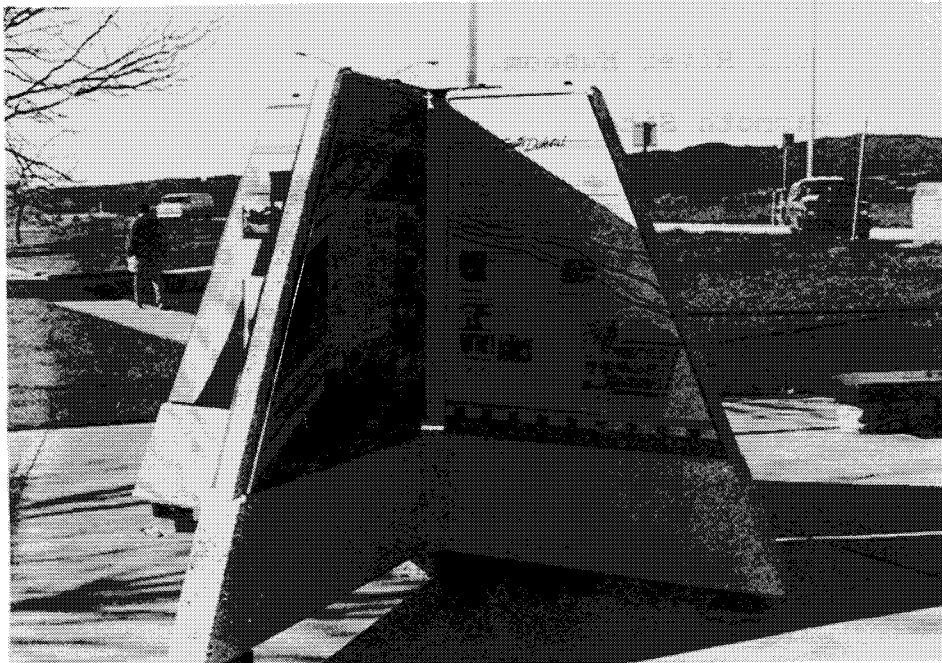
Other Activities

- (1) Fall River Museum.
- (2) Mammoth Site.

The following series of photographs are typical of scenes along the Gold Fever Trail in the Black Hills of South Dakota.



(1-A) Roadside scene along I-90 near Rapid City, SD



(1-B) Roadside scene along I-90 near Rapid City, SD



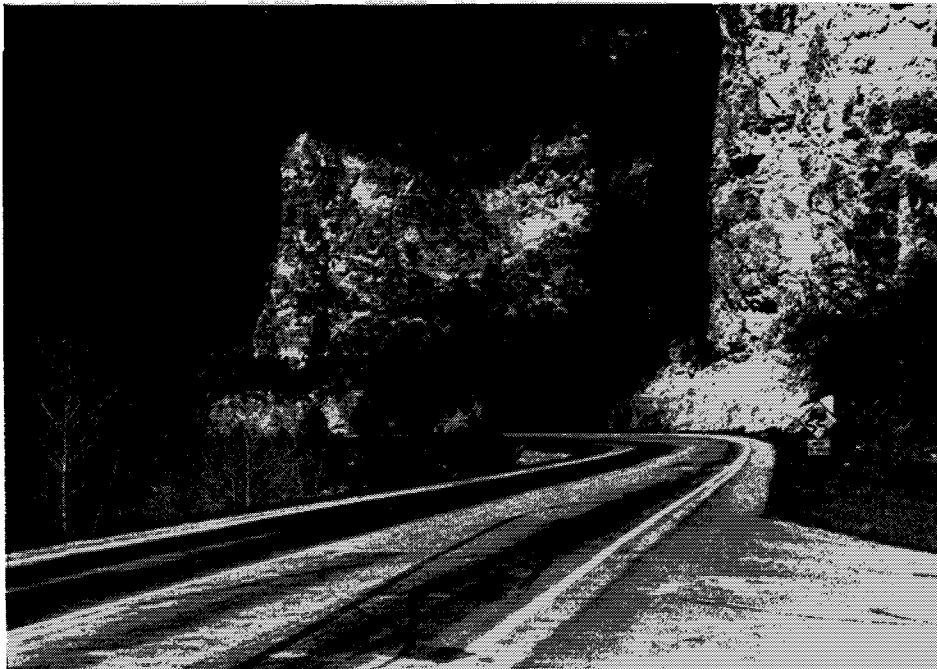
(2-A) Gold Fever Trail, Shopping Center, Rapid City, SD



(2-B) Gold Fever Trail, Rapid City, SD



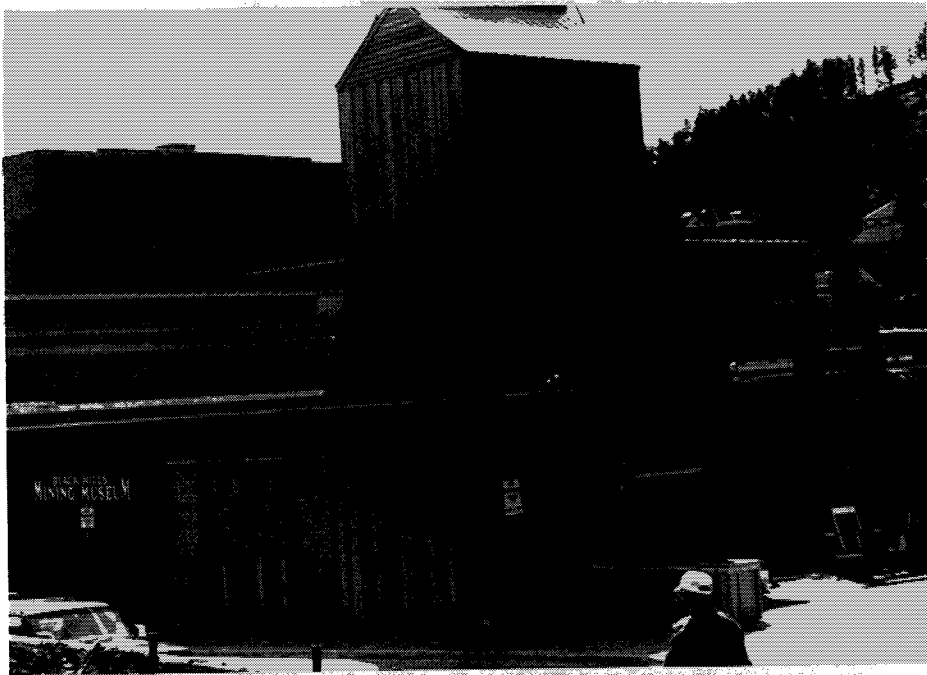
(3) Gold Fever Trail, U.S. 385 between Spearfish and Lead, SD



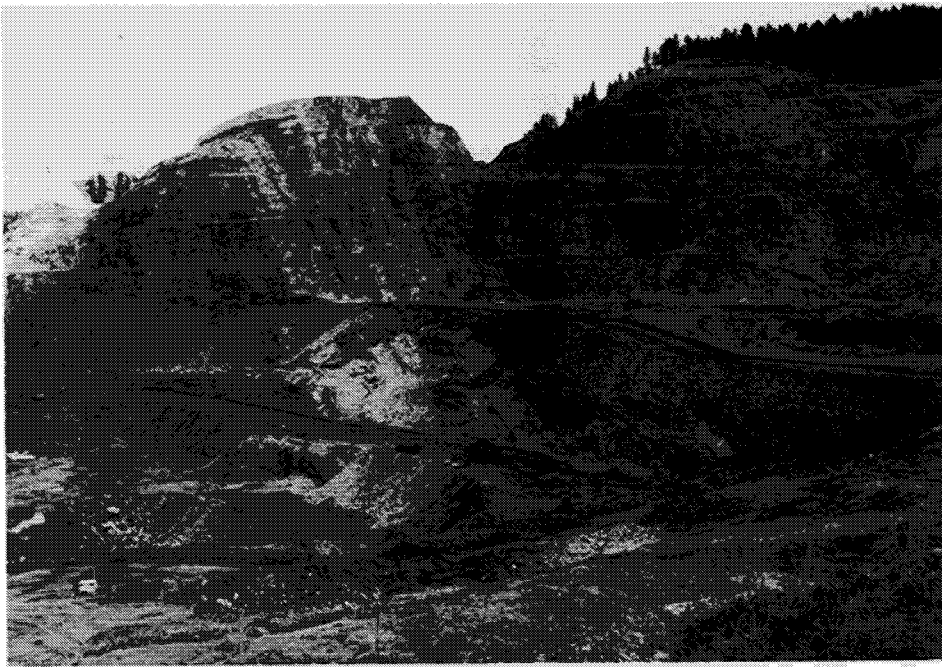
(4) Gold Fever Trail, Lead, SD



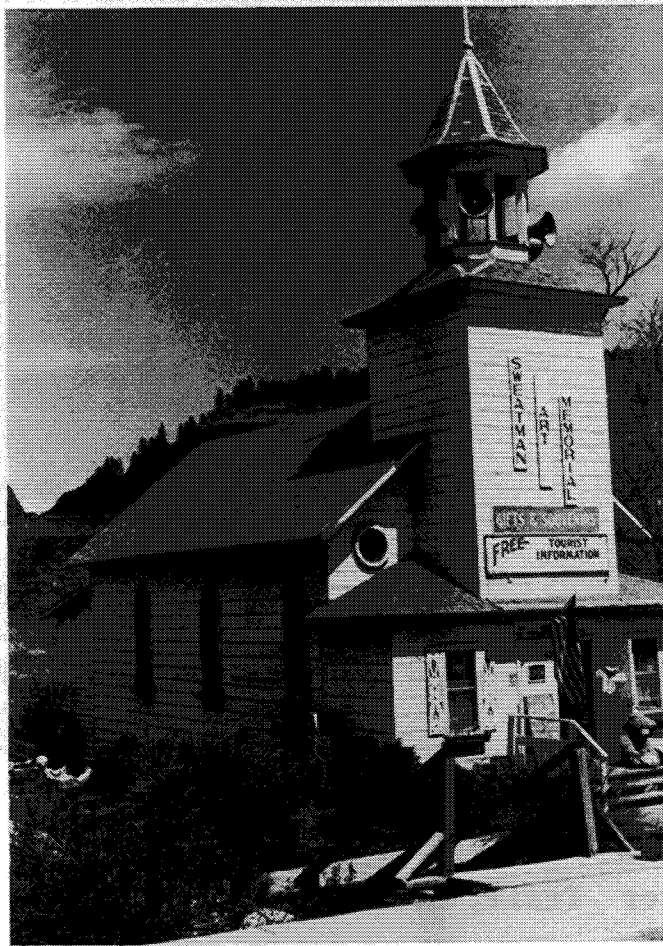
(5) Gold Fever Trail, Lead, SD



(6) Gold Fever Trail, Black Hills Mining Museum,
Lead, SD



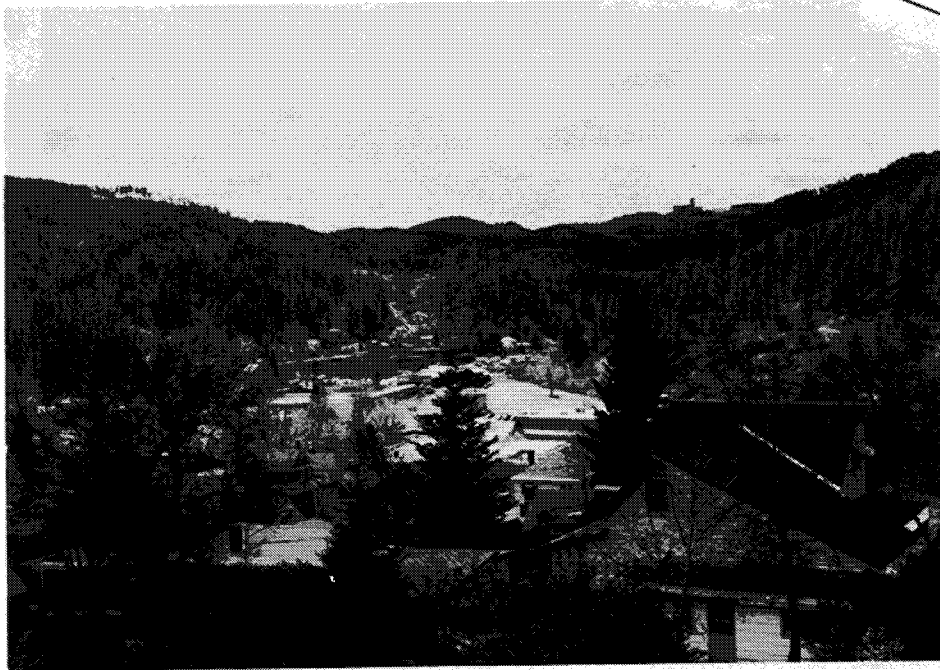
(7) Gold Fever Trail, Homestake Gold Mine, Lead, SD



(8) Gold Fever Trail, Souvenir Shop, Lead, SD



(9-A) Gold Fever Trail, Deadwood, SD



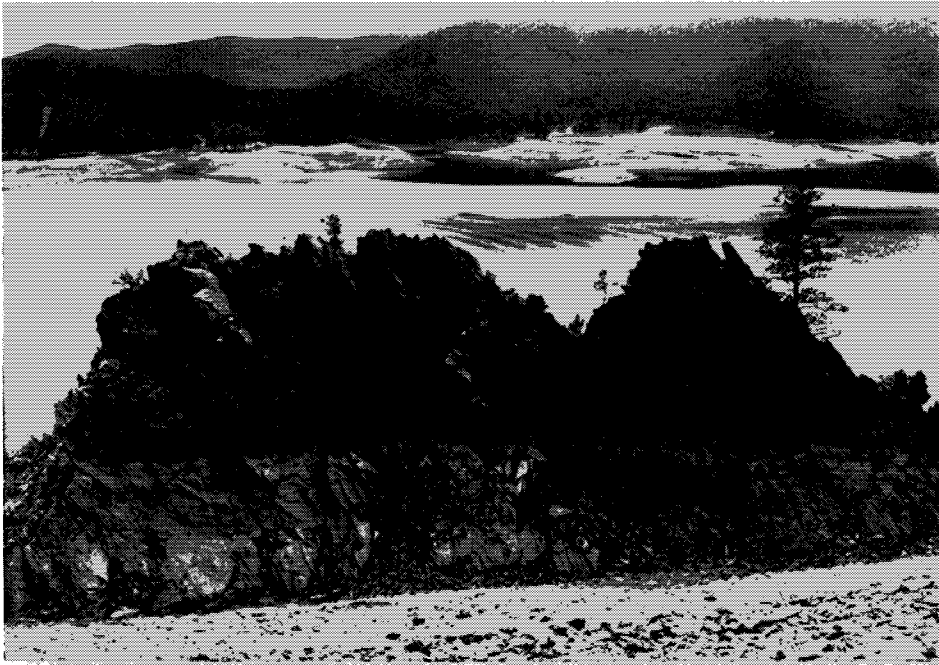
(9-B) Gold Fever Trail, Deadwood, SD



(10) Gold Fever Trail, U.S. 385, SD



(11) Gold Fever Trail, U.S. 385, SD



(12-A) Gold Fever Trail, U.S. 385, Lake Pactola, SD



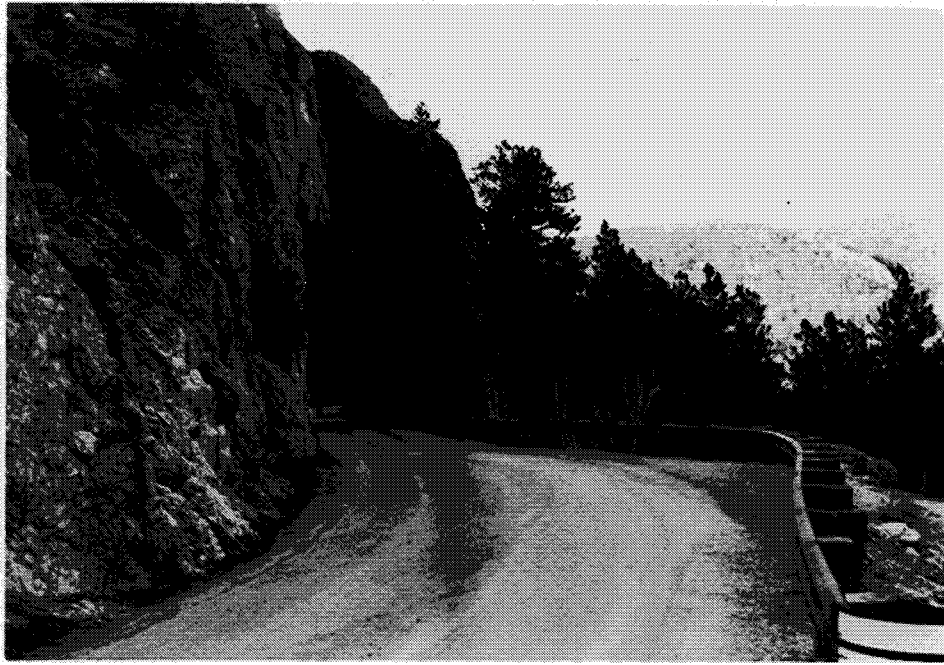
(12-B) Gold Fever Trail, U.S. 385, Lake Pactola, SD



(13-A) Gold Fever Trail, Mt. Rushmore, SD



(13-B) Gold Fever Trail, U.S. 16 near Keystone, SD



(14) Gold Fever Trail, U.S. 16, Keystone, SD



(15) Gold Fever Trail, U.S. 16, Keystone, SD



(16) Gold Fever Trail, U.S. 16, SD



(17) Gold Fever Trail, U.S. 16, SD

Southern West Virginia Tourism Potential

Southern West Virginia was recently placed under a U.S. Congressional mandate through Public Law 100-699, Title VI, Coal Heritage, to protect and preserve significant cultural, historical and natural resources associated with the coal mining heritage. Associated with this desire to "preserve and protect" has been the desire to develop and interpret these resources in combination with southern West Virginia's abundant scenic, natural and recreational areas to revitalize the area's economy through tourism. The SWVCC is the most mountainous and isolated region in the state, and for many decades the economic base was void of developments other than that associated with coal. Hence, coal was the economy, culture and history, and with the demise of certain coal seams, mines and markets the region became economically depressed. Recent unemployment in SWVCC ranged from 9 to 14 percent, yet the geographic base of coal heritage and scenic beauty favors successful tourism if that which has developed in the Iron Ranges of Minnesota and the Black Hills of South Dakota are true examples of what can be done in an area having a similar heritage.

Topography. The surface of the SWVCC is a dissected plateau which lies west of the Allegheny Front and largely within the Cumberland Plateau. As significant in terms of development, the region lies within the central Appalachian Coal Fields. The bedrock of the region consists of nearly horizontal sandstones, shales and coal, and the surface has been deeply dissected into a rugged dendritic pattern producing some of the nation's more picturesque natural landscapes. Local relief over much of SWVCC

ranges between 1,000 and 3,500 feet. All streams have cut deep, V-shaped valleys with sloped angles of 40 to 50 percent not uncommon between sharp crested serrated ridges of little variation in elevation. Narrow flat benches, interspersed along the slopes, mark former layers of coal and soft shale that have been eroded or mined.

Most of the streams have steep gradients ranging from 10 to 25 feet per mile, since they originate in the higher elevations. Stream valley bottoms are almost everywhere less than a few hundred feet wide, although in places widths of approximately one-half mile may be attained. The narrow stream valleys did not provide a satisfactory amount of level land for farming nor were the streams navigable; nevertheless, the settlement pattern of SWVCC is pristine riverine.

Climate. Diversity is the most important aspect of SWVCCs climate. The diversity is created by the rugged hilly terrain and accentuated by temperature and precipitation differences between valley bottom and mountain top locations. All four seasons are strongly identified and their periods of typical weather are nearly equal in length. The winters are moderate to rigorous and occasionally severe in higher elevations. Cold waves occur on an average of two to three times during the winter, but severe cold spells usually last only two to three days. Summers are warm in the valleys and mild on the plateau, where temperatures in excess of 90 degrees F. are infrequent. Both the fall foliage and spring 'break-out' are attractive seasonal features.

Forest. As late as 1880, over 75 percent of SWVCC remained in virgin forest. There were reports of large stands of poplar, oak, spruce, hemlock and chestnut trees 4 to 6 feet in diameter and more than 150 feet tall, but between 1890 and 1920 the virgin forest was depleted through the practice of "cut out and get out." Today, second and third growth oak, spruce, poplar and hemlock cover 85 to 90 percent of SWVCC and contribute to the region's scenic and natural beauty.

Appalachian Coal Field. The Appalachian coal field extends 850 miles from the northern edge of Pennsylvania to central Alabama. Individual coal fields in West Virginia are located geographically in the heart of the greater Appalachian coal field. They cover an area of 9,500 square miles, with an estimated 115 billion tons of bituminous or semi-bituminous coal reserves. The state's coal fields are roughly divided into a northern and southern division. Included in the southern division are the Kanawha, Logan, Williamson, New River, Winding Gulf and Pocahontas-Tug River fields (Figure 3).

Commercial mining began on a limited scale in the southern fields in 1817 to supply fuel to evaporate salt. However, large scale commercial developments began in the early 1870s when the Chesapeake and Ohio Railroad entered the New River Field, allowing coal to reach the eastern markets. By 1907 the remaining fields had been accessed by railroads and full-scale production was underway. SWVCC was producing two-thirds of the state's coal in the mid 1930s. The distribution pattern of coal mines was established by the late 1930s (Figure 4).

At the turn of the century SWVCC was sparsely populated, with a density of 35 per square mile. However, the production of coal completely changed the natural landscape of SWVCC. The population in the region went from 35,000 in the 1870s to 434,289 in 1930, and during the same time McDowell County increased from 1,900 to 90,479. Mine operators at first looked to the surrounding population for labor, but the number available was small and miners recruited from the coal fields of Pennsylvania and Ohio, southern Blacks and recent immigrants from Europe. Thus, southern West Virginia has a rich legacy of ethnicity, of which many elements remain on the landscape.

The company town, tipple, company store and other related infrastructural elements of coal mining are the most symbolic features on the landscape, reflecting the change from a rural mountain to an industrial mining society. Company towns were ubiquitous in all coal fields, and in other early industrial areas, but they never reached the level of dominance elsewhere as they did in SWVCC. By 1922 over one-half of all company controlled communities were in West Virginia, and 79 percent of the state's miners depended on the company for houses.

The location of most mine sites was not much more than a crevice in the earth between steep rugged hillsides. In such restricted space land use competition was every present, but the mine site always took precedence, with the tipple (preparation plant), repair shop, power house, administrative offices, company store and other service buildings receiving next choice. The nature of the site almost always provided limited space for the

mining town, thereby contributing to the confined and congested appearance of the town. Homes for miners and their families were often built on the same uniform plan, constructed of wood and painted the same color. Even the most moderately well-built houses for a mine labor force of 200 required a very substantial investment and with an average probable life of 43 years for the mine, economies were always put into effect in constructing company towns. All coal towns reflect elements of the geography, industrial and cultural heritage of SWCC.

Coal Heritage Corridor and Scenic Byway. State Route 16 is very much a part of the SWCC coal heritage. The highway extends across the state from St. Marys on the Ohio River in Pleasants County to the Virginia state line in McDowell County (Figure 5). North of the New River State Route 16 passes through some of West Virginia's more scenic highlands and rural countrysides in Pleasants, Richie, Calhoun and Clay counties. South of the New River State Route 16 crosses approximately 130 miles of the rugged and scenic southern Appalachian mountains and extends through the heart of the coal fields in Fayette, Raleigh, Wyoming and McDowell counties. The major location points of existing and potential tourist sites and distances along State Route 16 are as follows:

<u>Location Points</u>	<u>Highway</u>	<u>Miles</u>	<u>Cumulative</u>
Hawks Nest to Fayetteville	S.R. 16	6.4	6.4
Fayetteville to New River Bridge	U.S. 119	3.0	9.4
Fayetteville to Oak Hill	S.R. 16	6.2	15.6
Oak Hill to Mount Hope	S.R. 16	8.8	24.4

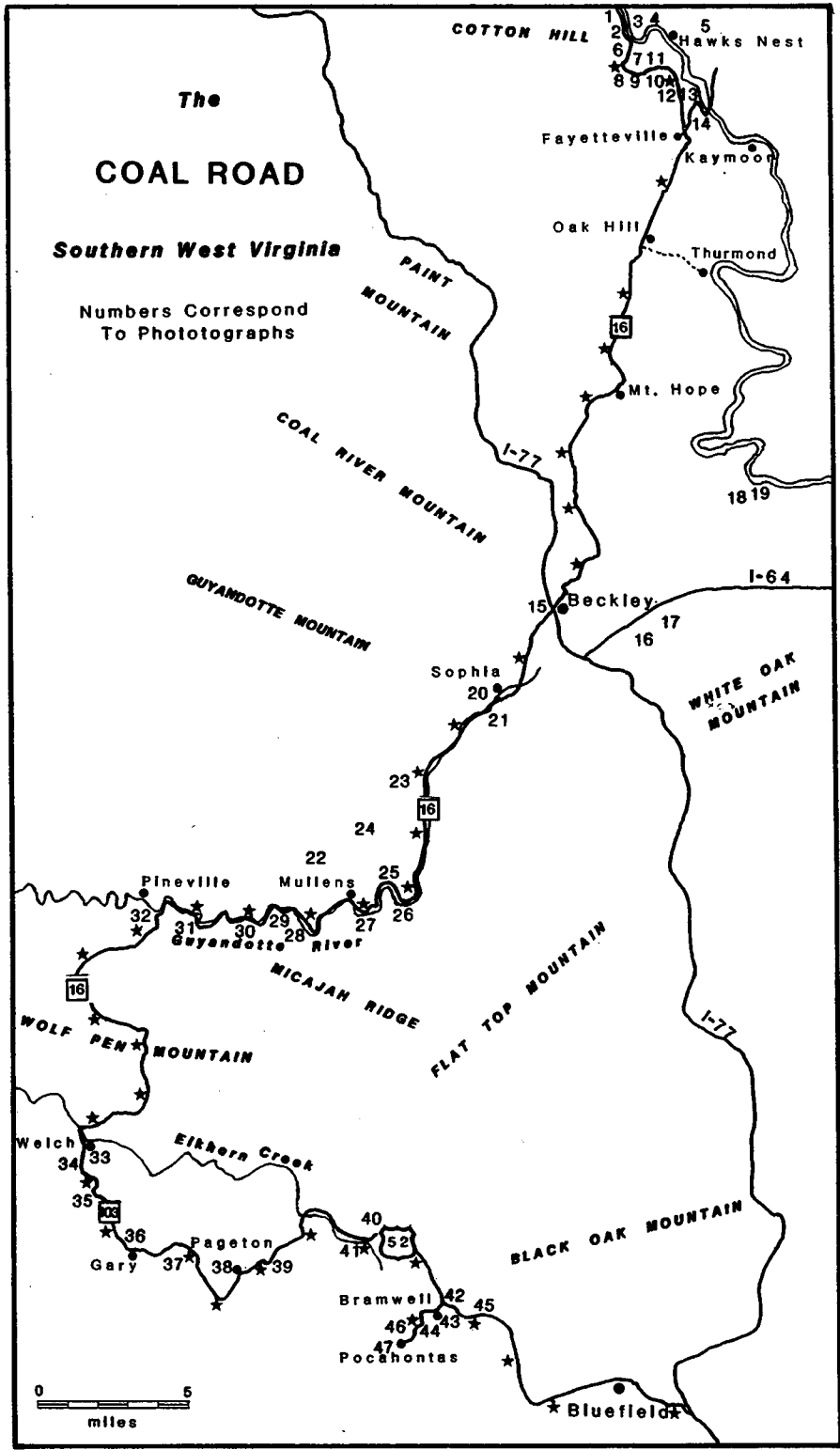


Figure 5. The Coal Road, Southern West Virginia

Mount Hope to Beckley	S.R. 16	9.2	33.6
Beckley to Sophia	S.R. 16	7.0	40.6
Sophia to Mullens	S.R. 16	19.5	60.1
Mullens to Itmann	S.R. 16	3.6	63.7
Itmann to Pineville	S.R. 16	10.0	73.7
Pineville to Welch	S.R. 16	18.8	92.5
Welch to Gary	S.R. 102	5.4	97.5
Gary to Pageton	S.R. 102	7.2	105.1
Pageton to Maybeury	S.R. 102	11.0	116.1
Maybeury to Bramwell	U.S. 52	5.4	121.5
Bramwell to Bluefield	U.S. 52	7.2	128.7

At the point where State Route 16 crosses the New River is truly some of America's most breath-taking scenery in the famed New River Gorge. Although the age is somewhat controversial, the New River was able to cut and maintain its course northward across the Appalachian Mountains as they were being upheaved some 180-185 million years ago. Through stretches in this general location the New River Gorge is between 800 to 1,100 feet deep.

State Route 16 crosses the New River into SWVCC at Cotton Hill, then proceeds up Laurel Creek, passing through the hamlet of Beckwith. About midway between the hamlet, the route climbs up onto a broad plain of the plateau to about 1,600 feet above sea level. At the town of Fayetteville, State Route 16 is joined by U.S. Route 19, which carries traffic across the New River bridge. The Gorge at this point drops from 1,680 to 840 feet, in a horizontal distance of about one-half mile. Those viewing the

gorge are instantly aware of its canyon-like features and the rugged but scenic beauty of this portion of the state.

Between Fayetteville and Oak Hill State Route 16 passes through several small mountain hamlets; otherwise it is everywhere a rural countryside. At Oak Hill, with a 1980 population of 7,120 and the second largest urban place along the entire length of the highway, an alternate State Route is four lanes into Beckley. In the Oak Hill environs there is much evidence of coal mining, including the mining communities of Carlisle, Whipple, Scarbro and Glen Jean, and visible strip mining. Elevation in Oak Hill ranges between 1,800 and 2,000 feet, with Haystack Mountain to the west the highest point at 2,500 feet above sea level. Oak Hill, with Glen Jean and Thurmond five miles to the east on the New River, is the center of the White Water Rafting recreation industry. However, evidence of a coal heritage is ever present.

Beckley (1980 population of 20,492) is the transportation hub and service center for SWVCC, and with the recent completions of I-64 and I-77/79 the city is emerging as a major crossroads in southern Appalachia. The city is located on a small divide of the rolling plateau at about 2,300 to 2,400 feet above sea level. Dissection of the plateau surface is minimal.

State Route 3 connects Beckley with Little Beaver State Park and Recreation Area and Grandview Park. This highway extends along a broad ridge at about 2,800 feet through 10 miles of a rural farming community. Grandview State Park is the home of the popular outdoor drama productions of "Honey in the Rock" and the "Hatfields and McCoys." The main overlook at this day-use park overwhelms the

visitor with a vast panorama of famed Horseshoe Bend in the New River Gorge. Also, viewed in a distance bend of the river are the quaint river and coal towns of Quinnimont and Prince. More than one-half million people visit the park annually.

Commercial strip developments are present along much of the seven-mile four-lane section of Route 16 between Beckley and Sophia, offering a full range of services to the tourist and the local communities. Sophia is a town of 1,216 (1980 population).

From Sophia, two coal heritage routes are possible to Mullens, West Virginia. One route would follow State Route 54, which crosses two divides (from Shockley Branch to Surveyor Creek and through Jenny Gap into Low Gap Branch). The Norfolk and Western Railroad also follows this route, passing through a tunnel at Jenny Gap across Guyandotte Mountain. Along this route are the coal towns of Glen White, Lester, Slab Fork, Hotchkiss, Maben, Pierpont, Otsego and Nuriva. The Guyandotte Mountain is the divide between the New River and Guyandotte River drainage systems. Out of Sophia the recommended route is State Road 16 which crosses the Guyandotte Mountain at 2,640 feet above sea level and enters Winding Gulf Creek just north of the former coal mining towns of Tams, Ury and Helen. This entire valley is an industrial waste land of relic mining features and equipment. Both the tracks of the Chesapeake and Ohio and Norfolk and Western railroads follow the creek.

State Routes 16 and 54 join at Mullens, a town of 2,929 people located at the juncture of Slab Fork Creek with the Guyandotte River. The town is nestled in the valley at 1,400 feet and surrounded by mountains extending up to 2,300 feet. Mullens is

typical of these towns in Appalachia stream valleys where the business district and railroad occupies the choice land in the valley, forcing residential dwellings to perch precariously on narrow ledges along the hillsides. Moreover, Mullens has an infrastructure that offers little in the way of services for tourist. The role of the railroad in hauling coal out of SWVCC is evident with multiple tracking in the town.

State Route 16 follows the Guyandotte River from Mullens to Pineville. The river along this stretch is similar to other mature streams in SWVCC in that it is alternately cutting away the bank on the outside curves and filling its valley with deposition of sediments on the inside curves. These entrenched meanders of a mature-to-old-age stream in a youthful valley provides very little developable land on the floodplain. The gradient of the Guyandotte along this stretch is 27 feet per mile.

At the coal town of Itmann, located between Mullens and Pineville, the elevation of the plateau is 2,300 feet and that of the Guyandotte is 1,380 feet. Northwest of Itmann is an exit off route 16 to Twin Falls State Park. After a steep incline the park road follows Cabin Creek Ridge at 2,200 feet to the park. Along State Route 16 in the area around Itmann there are numerous mine dumps, tailing ponds and strip mine sites. At Itmann is one of SWVCCs most unique company stores and nearby is an excellent example of mine reclamation. Between Itmann and Pineville are several examples of swinging bridges used to access homes that are on the "wrong side of the river."

From Pineville, State Route 16 cuts across an exceptionally rugged and sparsely populated area, following for a short distance Wolf Pen and Indian Creeks, then crossing Indian Ridge into the headwaters of Browns Creek to the Tug Fork at Welch. Indian Ridge, with an elevation of 2,300 feet, is a divide between the drainage basins of the Guyandotte and Tug Fork Rivers. An example of the nature of the terrain is offered by the fact that in this air line distance of 12 miles between where Route 16 makes contact with the Tug Fork in the town of Welch and Guyandotte in the town of Pineville, the highway winds and twists its way 18 miles over Indian Ridge along a routeway that is often perched precariously on the mountainsides.

The Coal Heritage Road out of Welch would follow State Route 103 up the headwaters of the Tug Fork through the coal hamlets of Havaco, Jed and Wilco to Gary. Along this routeway all settlements are riverine, and the elevations between the stream channel and ridge tops is about 800 to 900 feet. From Gary, 1980 population of 2,233, State Route 103 continues through the towns of Pageton, Anawalt and Leckie. The route joints U.S. Route 52 near the mining town of Maybeury. After crossing Coaldale Mountain at 2,700 feet, the divide between the Tug Fork and Elkhorn Rivers at the hamlet of Coaldale, U.S. 52 follows a tributary of the Bluestone River to Bramwell. The town of Bramwell is nestled in a small basin in a bend of the Bluestone. Between Bramwell and Bluefield the topography changes from Appalachian Plateau with its coal heritage to Ridge and Valley.

For the most part the population along the route designated is identified by the U.S. Census as rural non-farm and urban. Because of obvious reasons related to terrain farming is largely precluded. The best estimate of the non-farm population would place about seventy-five percent in small hamlets and unincorporated towns and villages. Using the U.S. Census definition of 2,500, only five places along the route as designated are urban; however, eleven places have incorporation status, and populations are noted as follows:

<u>Urban Place</u>	<u>1980</u>	<u>1970</u>
Beckley	20,492	19,884
Bluefield	16,060	15,921
Oak Hill	7,120	4,738
Welch	3,885	4,149
Mullens	2,919	2,967
Fayetteville	2,366	1,712
Gary	2,233	
Mount Hope	1,849	1,829
Sophia	1,216	1,303
Pineville	1,140	1,187
Bramwell	989	1,125

The traffic volume along the West Virginia Turnpike (I-77/79) at Beckley averages 26,000 vehicles daily. Southward near Princeton and northward near Mossy, the volume averages 16,000 vehicles daily. The volume of traffic on U.S. 19 where it crosses the New River increases from 10,983 to 20,151 vehicles daily in Beckley. Truck traffic along both the turnpike and U.S. 19 is

heavy, contributing fifteen percent and over to the average daily traffic. Traffic volumes along State Route 16 from Sophia to Pineville averages between 1,166 vehicles daily, near Sophia, to 4,396 vehicles daily at Pineville. An average of 2,697 vehicles daily cross Wolf Pen Mountain between Pineville and Welch. Along Route 102 the high volume near Welch is 5,060 while near Elkhorn, located on U.S. Route 52, the volume is only 855 daily. From Elkhorn to Bluefield the average daily traffic volume increases from 4,983 to 15,905. On the recommended route south of Beckley truck traffic accounts for less than ten percent of the total.⁴

Coal Road Heritage Trail of SWCC--Actual and Potential

(1) Hawks Nest State Park encompasses 259 acres along the New River Gorge in northern Fayette County. More than one-half million people visit the park annually.

Industrial Activities

None.

Other Activities

(1) Hawks Nest State Park contains a lodge, canyon tramway and museum.

(2) Nearby in the town of Anstead is the Contentment Historic Complex.

(2) Fayetteville is the small county seat town of Fayette County. Some of the first coal mining in SWVCC occurred in the New River Coal Field along the New River in Fayette County. The town is located on a broad plateau along the rim of the gorge.

⁴ Data provided by the West Virginia Department of Highways, July 1990, and acquired from the "1984-85 Traffic Flow Map, State of West Virginia," West Virginia Department of Highways.

Industrial Activities

- (1) Thurmond, a declining railroad town, is located in the gorge. There are several examples of turn-of-the-century buildings. It is an Amtrak stop, particularly for white water rafters.
- (2) Kaymoor, an early mining town now extinct, was located partly on the rim of the gorge, about midway down the gorge, and in the canyon. However, parts of the town's early mining history, specifically coke ovens and the powder house, are being restored by the National Park Service.

Other Activities

- (1) New River Gorge Bridge. The bridge extends 3,035 feet across and stands 876 feet from the New River. It is the world's largest single steel arch bridge. As a tourist attraction, once a year in late October "bridge day" permits pedestrians to cross and parachutists to jump from the bridge. The Canyon Rim Visitor's Center and overlook annually attract more than 140,000 visitors.
- (2) Babcock State Park contains 4,127 acres. The park is located near the town of Clifftop and contains lodges, camping, food services, a souvenir shop, hiking trails, a reconstructed and operational grist mill and a 19-acre lake. Annual visitations exceed 228,000 people.

(3) Operational sites for several White Water Rafting companies.

(3) Beckley, population 20,492, is the hub and gateway city to the SWVCC. The city is often referred to as the center of southern West Virginia's smokeless coal region.

Industrial Activities

(1) Beckley Exhibition Mine, located in the New River City Park, provides a tour through a drift mine and displays of mining equipment.

Other Activities

(1) Grandview State Park provides picnicking and an outdoor drama theater with summertime presentations of the "Hatfields and McCoys," and "Honey in the Rock."

(2) Little Beaver State Park.

(3) Lake Stephens.

(4) Wildwood House Museum.

(5) Youth Museum.

(4) Otsego.

Industrial Activities

(1) NO DEVELOPMENT; however, Otsego could be used as a living museum mining town, if the residents agreed to permit visitors to tour the dwellings. Dwellings could be purchased and restored to visitation standards for overnight occupancy.

- (2) NO DEVELOPMENT; however, a strip mining site is located nearby and it is possible that arrangements can be made to observe the operation.

(5) Mullens, population 2,500, is located at the junction of State Routes 10, 16 and 54, where the Slab Fork Creek joins the Guyandotte River. Incorporated in 1912, the town was a prominent center for the Virginian Railroad, now incorporated with the Norfolk and Southern Railway Company. The Virginian Railroad maintained a rail repair shop and large coal storage facility and until recently it was the largest employer in Mullens. In addition to the railroad facilities, Mullens was a service center for nearby mining towns such as Otsego, Amigo, Black Eagle, Corinne, Tralee and Itmann.

Industrial Activities

- (1) NO DEVELOPMENT; however, it was a railroad own for nearby coal mines. Because of the role of the Virginian Railroad in opening up this area of the SWVCC, there is the possibility of a railroad museum.
- (2) NO DEVELOPMENT; however, it could serve as an example of a coal mining service town.

Other Activities

- (1) The Dogwood City Festival.
- (2) Nearby Twin Falls State Park provides camping, lodges and cabins, a recreation center, 18-hole championship golf course, swimming pool, hiking trails and a restored nineteenth century pioneer farm

living museum. In recent years annual visitations have approached 400,000. The park covers 3,700 acres.

(6) Itmann is located four miles south of Mullens along the Guyandotte River. The town was designed and built in 1917 by a local coal baron, I. T. Mann. Itmann was one of the few mining towns that was constructed of prefabricated materials. Although coal operations have ceased, people continue to live in the mining town. The original preparation plant remains intact. The town has no tourist facilities, but it does contain basic elements conducive for development.

Industrial Activities

(1) NO DEVELOPMENT; however, Itmann was a prefabricated town constructed by the Pocahontas Fuel Company shortly after World War I. Four basic house types are revealed in the town: the one-story L, B-type bungalow, two-story four-pen, and two-story L. Itmann could be an excellent example of a living museum mining town, with dwellings opened to visitors on prearranged schedules. Eckley, Pennsylvania is the only known living mining town museum and has proven to be very successful in tourist visitations.

(2) NO DEVELOPMENT; however, a tipple/coal preparation plant and large company store have potential. For example, the hub of the mining town was the company store. The size and architecture of the Itmann

store makes it ideal for use of a mining museum.

- (3) NO DEVELOPMENT; however, an excellent example of restored strip mining is present and available for visits.

Other Activities

None.

- (7) Pineville, a service center for nearby mines and county seat town of Wyoming County.

Industrial Activities

None.

Other Activities

- (1) Castle Rock, an erosional geologic feature.
- (8) Welch is the county seat town for McDowell County and service center for mining towns. Several buildings have been recommended for nomination to the National Register.

Industrial Activities

None. However, the town would be an excellent location for an European Immigrant and Black Miners Hall of Fame and Museum. Forty-three percent of all Black miners in the United States in 1920 worked in West Virginia, and the vast majority were in the southern coal fields. One-third of all miners in McDowell County in 1910 were Black. Also, the SWVCC received more than a proportionate share of immigrant miners.

Other Activities

- (1) Courthouse.
- (2) "City of Walls." Practically all residents are

located on foundations stabilized by walls of laid stone often as much as 20 to 30 feet high.

(9) Gary is a mining town planned and constructed by the United States Steel Company shortly after the turn of the century. In the 1940s the population of Gary is reported to have reached 15,000 compared to a population of 2,200.

Industrial Activities

(1) NO DEVELOPMENT; however, the world's largest coal tipple/preparation plant is now inoperative and scheduled for demolition. This important SWVCC heritage should be preserved and made available to tourist interested in coal heritage.

Other Activities

(1) Several churches reflect both the religion and architectural styles of varied ethnic groups of miners in Gary.

(10) Pageton.

Industrial Activities

(1) NO DEVELOPMENT; however, Pageton is a classic mining town with an inoperative tipple, vacant company store, miners and administrators houses and slag pile that are significant features of SWVCCs coal heritage. This town could be upgraded to tourism standards: restaurant, gift shop, town tour and orientation center and mine equipment museum.

(11) Maybeury.

Industrial Activities

- (1) NO DEVELOPMENT; however, a railroad and mining town with a company store and classic examples of residential coal bins.

Other Activities

- (1) A stream of water rushing out of the hillside, most likely from a coal mine. It is a source of drinking water for nearby residents and for passing motorists. No one seems to know how long it has been running.

(12) Bramwell was "a town so wealthy that no one blinked an eye at the site of the bank's janitor pushing a wheelbarrow full of payroll money from the bank to the train station for shipment to the mines." The town was chosen by mine owners and operators for their residences shortly after the Pocahontas Coal Field was open to mining.

Industrial Activities

- (1) Coal Baron Homes (the town of millionaires).
- (2) NO DEVELOPMENT; however, it is possible that a railroad tour between Bramwell and Matoaka would be a major tourist interest. Also, the Coopers Company Store could be used for a gift shop, restaurant, local archives or depot.

Other Activities

- (1) Historic Town District
- (2) Pinnacle Rock State Park contains a striking

vertical sandstone outcrop nearly 200 feet high. It is a day-use park visited by nearly 100,000 annually.

(13) Pocahontas, Virginia, was the first mining town in the Pocahontas Coal Field. The town was founded in 1882 and during the early years of its existence it resembled in many ways a frontier. In time, Pocahontas evolved into a service town to small coal towns. By 1930 the population had reached 3,775, but declined after the mining operations ceased in 1940 to its present population of 2,500.

Industrial Activities

- (1) Pocahontas Exhibition Mine provides a guided trip through an underground mine.

Other Activities

- (1) Historic Cemetery of ethnic graves.
- (2) Numerous examples of original urban structures with original facades, including the city hall and theater.

(14) Bluefield, West Virginia, is the southern gateway city of 16,000 into SWVCC. It is both a service and rail center for nearby coal mines.

Industrial Activities

- (1) Craft Memorial Library containing memorabilia of coal mining. It could be expanded and upgraded to include mining genealogy, including that related to foreign miners.

Appalachian Tourism. Appalachia has been a prominent region for supplying the nation with mineral resources. Since the early 1700s a variety of minerals have been extracted in the region extending from the mountains in central Vermont to the hills of northern Georgia. Examples of minerals extracted would include coal, iron ore, gold, granite, marble, sandstone, limestone and gemstones. Any survey of mining related tourist facilities would reveal a very limited development in Appalachia of this most important heritage. The same survey would reveal a vast array of potential mining tourism opportunities.

Tourism has become one of the most important service industries in the United States, generating more than \$275 billion annually. In West Virginia tourism is the second largest private sector employer in the state and in 1987 generated more than \$2.5 billion in direct and indirect sales. Some examples of the existing tourist facilities in SWVCC, adjacent Kentucky and Virginia counties are noted in Figure 6. Resident and non-resident visitations at state parks, lakes, hunting and fishing areas and forest in southern West Virginia are as follows:

<u>County</u>	<u>Facility</u>	<u>Resident Visitation</u>	<u>Non-Resident Visitation</u>	<u>Total Total</u>
Boone	Fall Creek Public Hunting Area	N.A.	N.A.	N.A.
Fayette	Babcock St. Park	162,763	65,254	228,017
	Hawks Nest St. Park	316,540	224,820	541,360
	Plum Orchard Lake	22,835	7,330	30,165
	New River National Park	N.A.	N.A.	N.A.

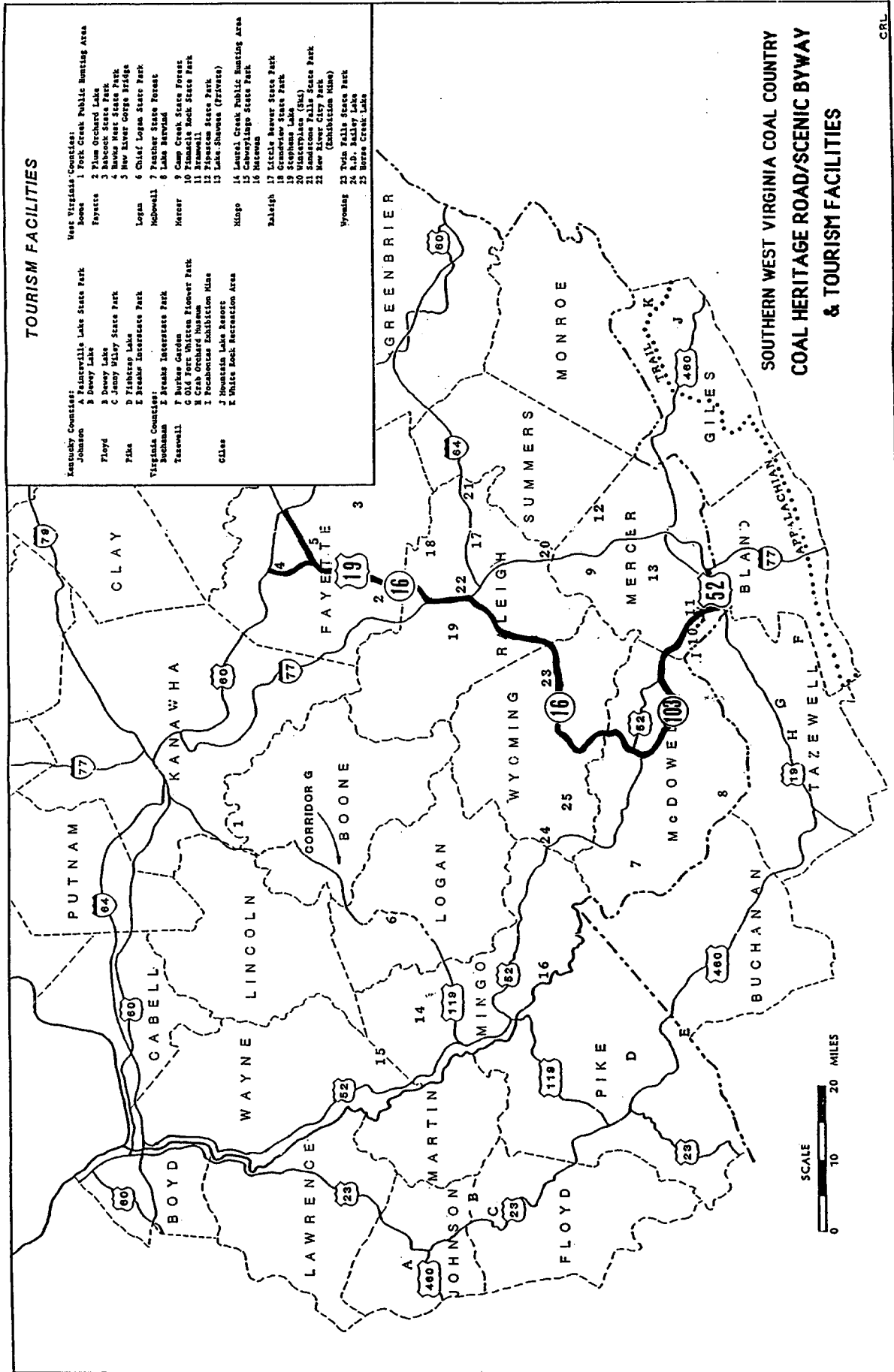


Figure 6. Southern West Virginia Coal Country Coal Heritage Road/Scenic Byway and Tourism Facilities

Logan	Chief Logan St. Park	662,600	84,973	747,573
McDowell	Panther St. Forest	32,212	5,367	37,579
	Berwind Lake	20,855	6,365	27,220
Mercer	Camp Creek St. Forest	70,635	5,560	76,195
	Pinnacle Rock St. Park	55,135	38,050	93,195
	Bramwell	N.A.	N.A.	N.A.
	Pipesteam St. Park	562,142	280,461	842,603
	Shawnee Lake		--Private--	
Mingo	Laurel Lake Hunting/ Fishing Area	109,980	59,350	169,330
	Cabwaylingo St. Forest	79,400	15,460	94,860
	Matewan	N.A.	N.A.	N.A.
Raleigh	Little Beaver St. Park	65,223	4,292	69,515
	Grandview (St.) National Park	509,185	62,225	571,410
	New River City Park	40,000	N.A.	40,000
	Stephens Lake	N.A.	N.A.	N.A.
	Winterplace	N.A.	N.A.	N.A.
Wyoming	Twin Falls St. Park	346,467	44,083	390,550
	R. D. Bailey Dam	N.A.	N.A.	N.A.
	Horse Creek Lake	N.A.	N.A.	N.A.
	TOTAL	3,055,972	903,590	3,959,562

Source: West Virginia: Economic Statistical Profile, West Virginia Chamber of Commerce, 1987.

Obviously, what is missing from SWVCC is coal heritage and scenic byway related tourism.

The following series of photographs are typical of scenes along the proposed Coal Road and scenic byway.



(1) Coal Road, U.S. 60, Gauley Mountain, WV



(2) Coal Road, U.S. 60, along New River Gorge, WV



(3) Coal Road, Gift Shop, U.S. 60, WV



(4) Coal Road, U.S. 60, Hawk's Nest State Park, WV



(5) Coal Road, U.S. 60, Anstead, WV



(6) Coal Road, U.S. 60 and State 16, WV



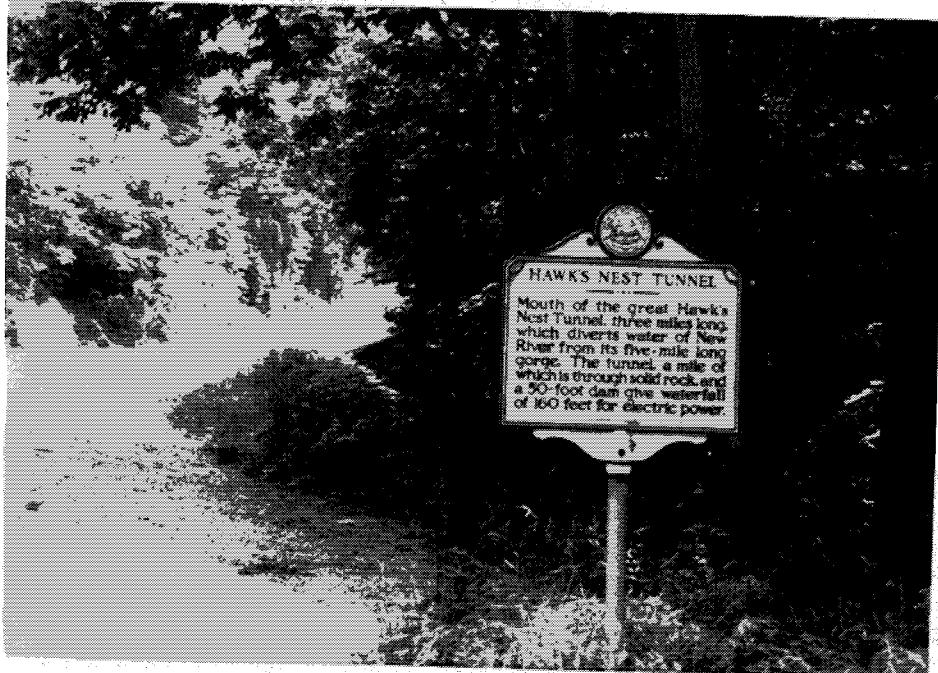
(7) Coal Road, State 16, near Hawk's Nest State Park, WV



(8) Coal Road, State 16, at Cotton Hill Public Fishing Area, WV



(9) Coal Road, State 16, near Cotton Hill, WV



(10) Coal Road, State 16, between Hawk's Nest State Park and Fayetteville, WV



(11-A) Coal Road, State 16, between Hawk's Nest State Park and Fayetteville, WV



(11-B) Coal Road, State 16, between Hawk's Nest State Park and Fayetteville, WV



(11-C) Coal Road, State 16, between Hawk's Nest State Park and Fayetteville, WV



(12) Coal Road, U.S. 19 and State 16, near Fayetteville, WV



(13-A) Coal Road, U.S. 19 and State 16, near Fayetteville, WV



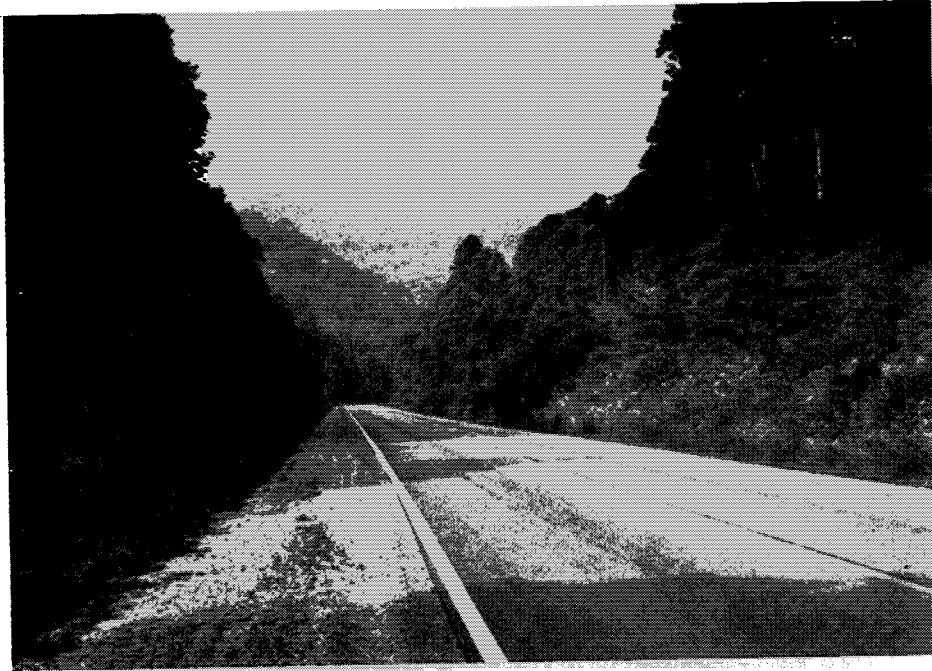
(13-B) Coal Road, U.S. 19 and State 16, near Fayetteville, WV



(14) Coal Road, Crossing New River Gorge Bridge, WV



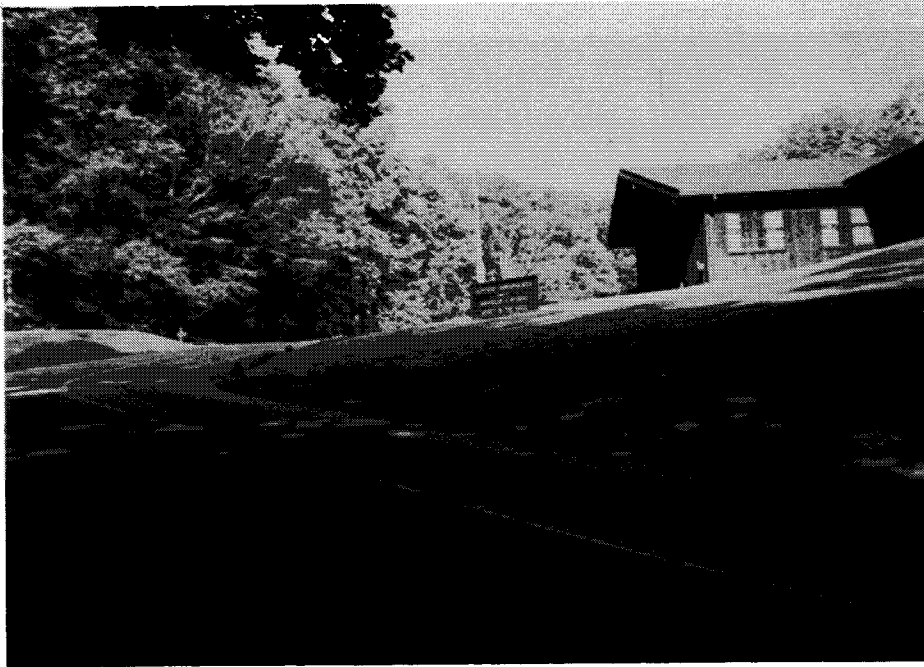
(15) Coal Road, Beckley Exhibition Mine, WV



(16) Coal Road, near Little Beaver State Park, WV



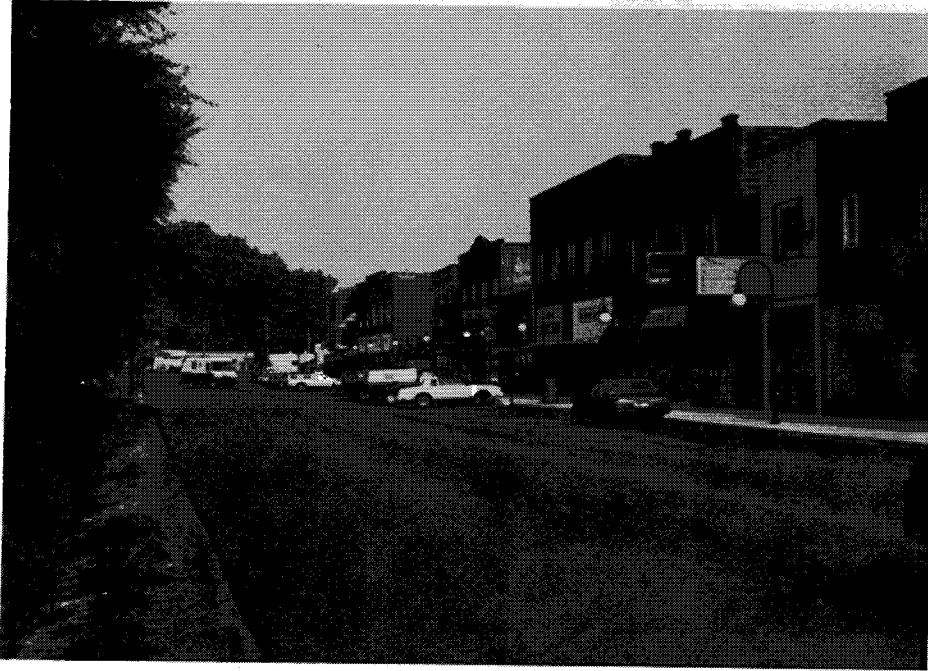
(17) Coal Road, Little Beaver State Park, WV



(18) Coal Road, Grandview State Park, WV



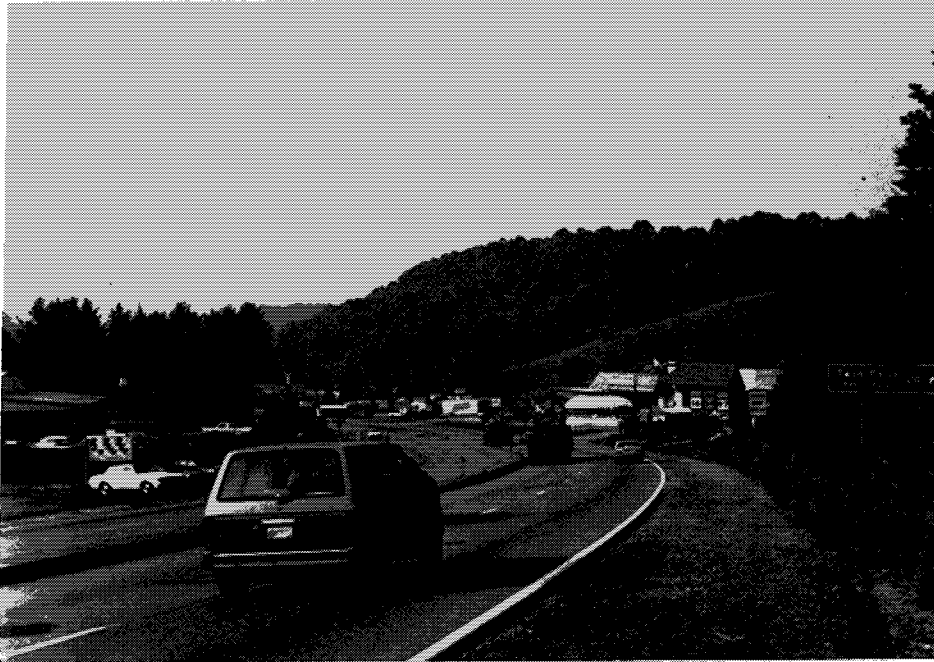
(19) Coal Road, Grandview State Park, overlooking
New River Gorge, WV



(20-A) Coal Road, Sophia, WV



(20-B) Coal Road, Strip Development, Sophia, WV



(21) Coal Road, State 16, near Twin Falls State Park, WV



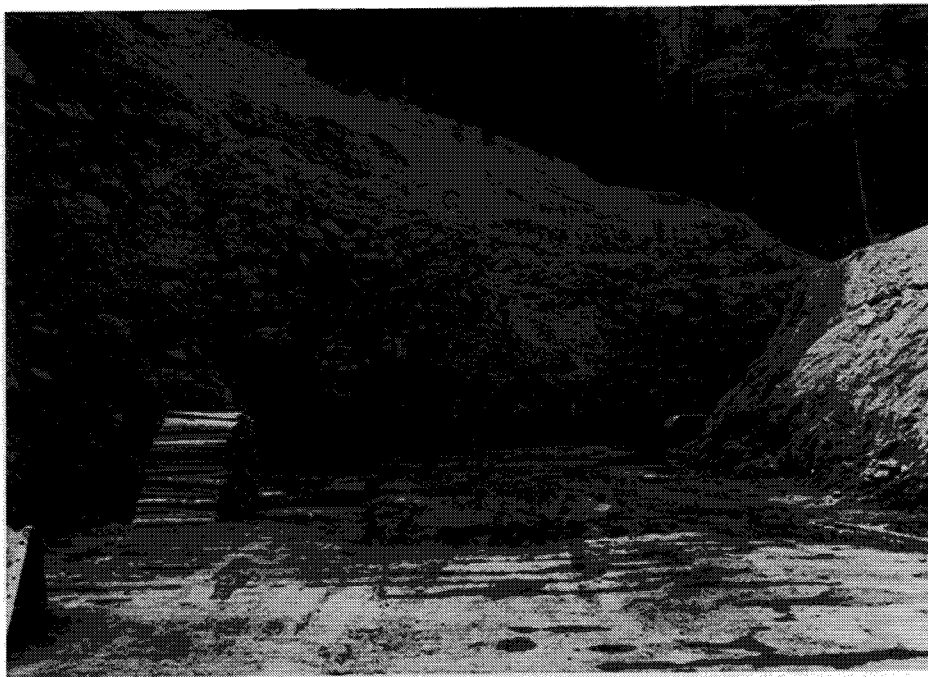
(22) Coal Road, Twin Falls State Park, WV



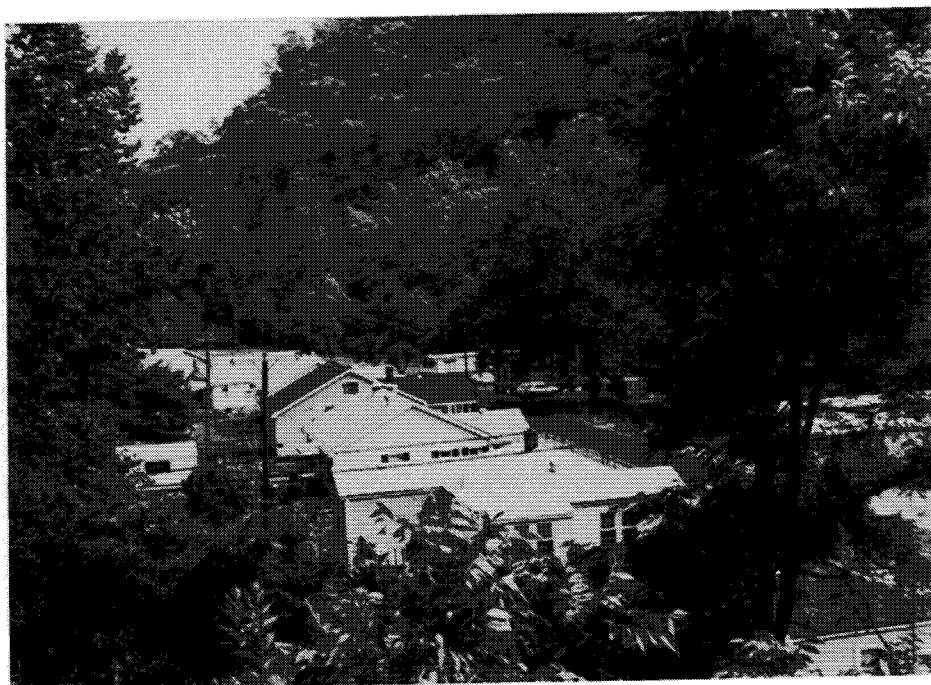
(23) Coal Road, State 54, between Sophia and Mullens, WV



(24) Coal Road, Slab Fork, WV



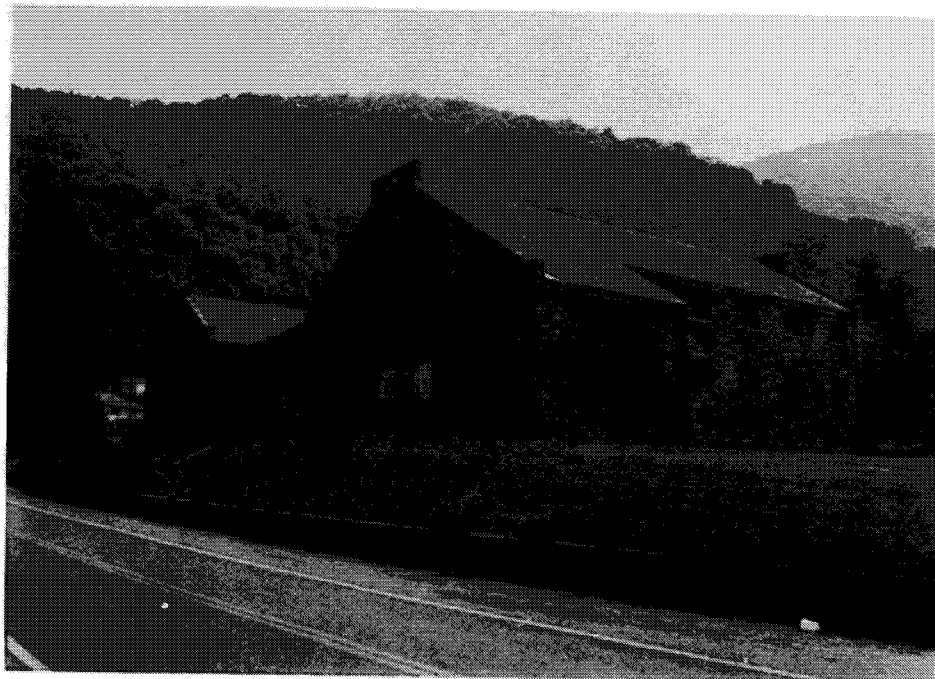
(25) Coal Road, Strip Mine Operation, near Otsego, WV



(26) Coal Road, Otsego, WV



(27) Coal Road, State 16, near Mullens, WV



(28) Coal Road, State 16, Itmann Company Store,
Itmann WV



(29) Coal Road, Coal Preparation Plant, Itmann, WV



(30) Coal Road, Gob Pile Restoration, Itmann, WV



(31) Coal Road, Guyandotte River, State 16, near Pineville, WV



(32) Coal Road, Castle Rock, Pineville, WV



(33) Coal Road, U.S. 52 and State 16, Welch, WV



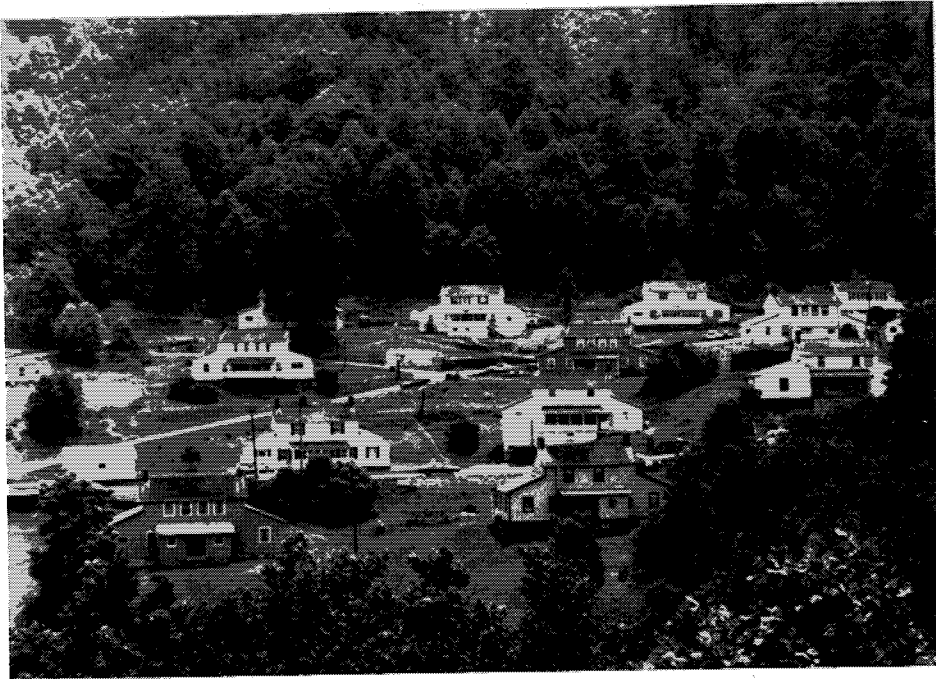
(34) Coal Road, Retaining Walls, U.S. 52 and State 16, Welch, WV



(35) Coal Road, State 103, Wilcoe, WV



(36) Coal Road, State 103, World's Largest
Coal Preparation Plant, Gary, WV



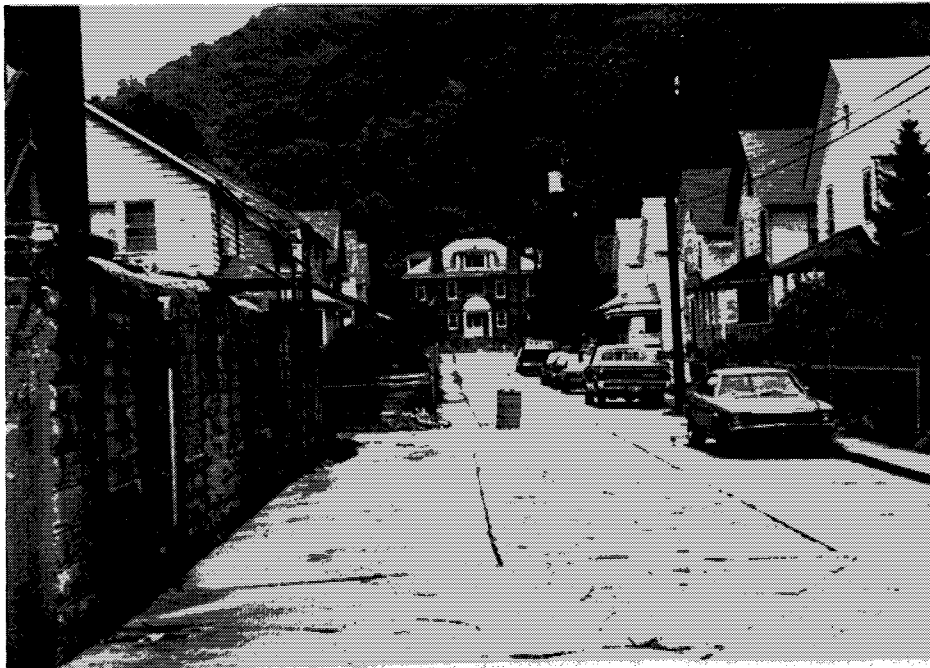
(37) Coal Road at Gary, WV



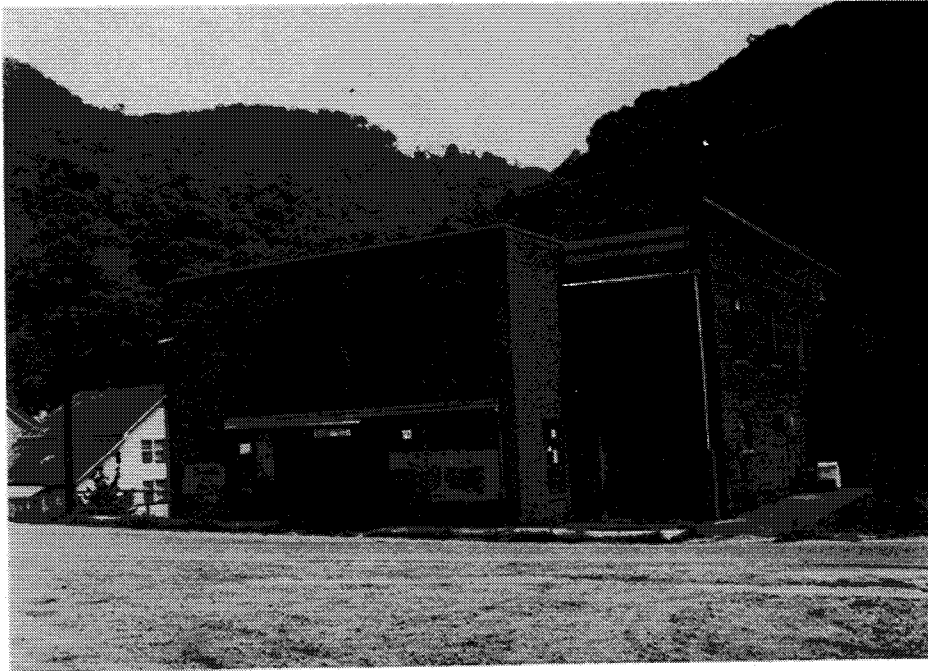
(37-A) Coal Road, State 103, at Pageton, WV



(37-B) Coal Road, State 103, Pageton, WV



(37-C) Coal Road, State 103, Pageton, WV



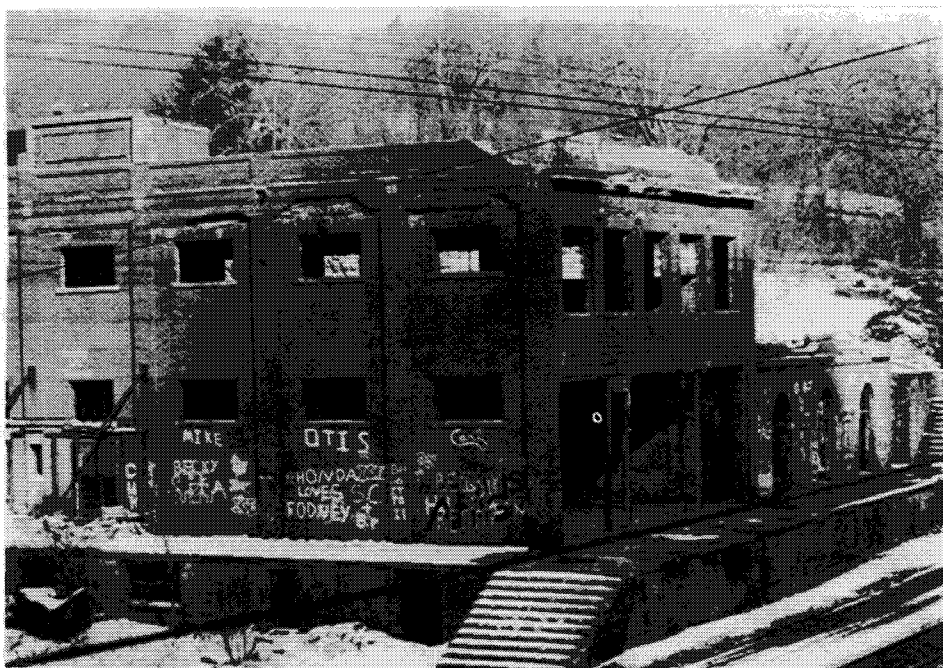
(38) Coal Road, State 103, Company Store, Pageton, WV



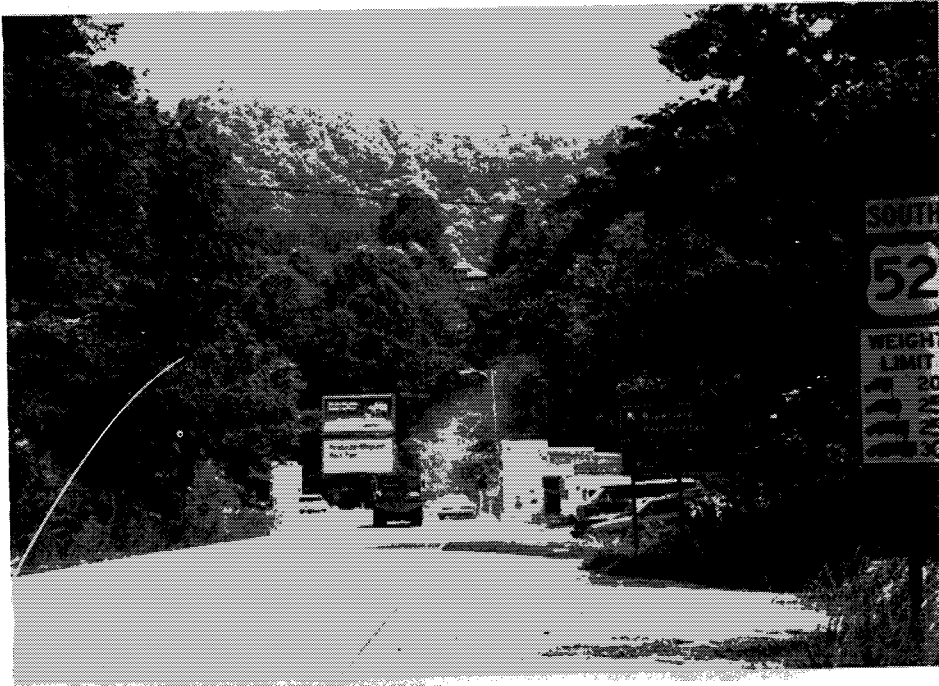
(39) Coal Road, State 103, between Pageton and Maybeury, WV



(40) Coal Road, U.S. 52, near Maybeury, WV.



(41) Coal Road, Abandoned Company Store, near Maybeury, WV



(42) Coal Road, U.S. 52, at Bramwell, WV



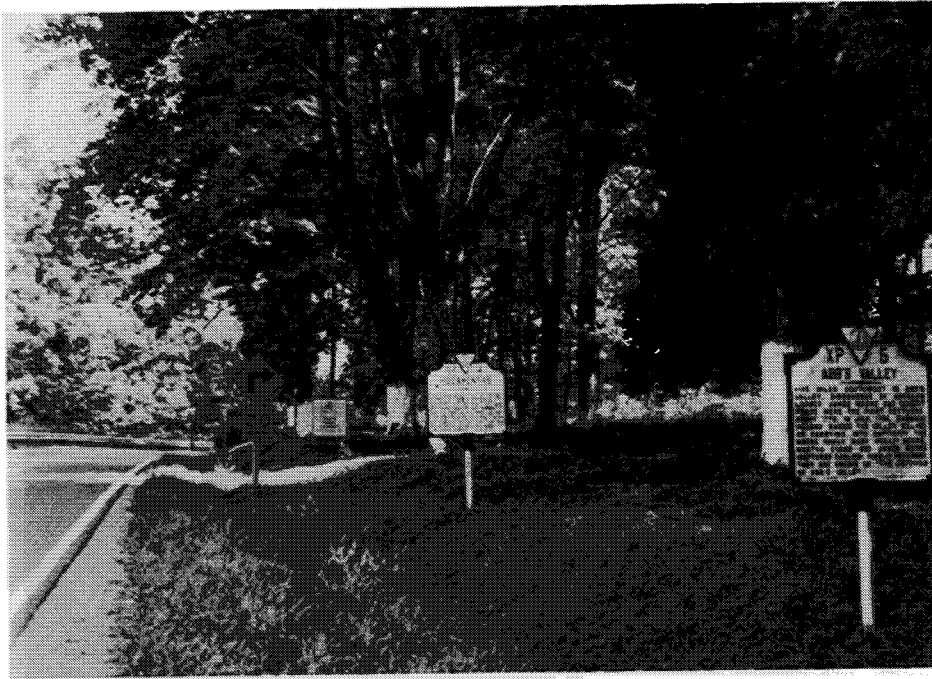
(43) Coal Road, Bramwell, WV



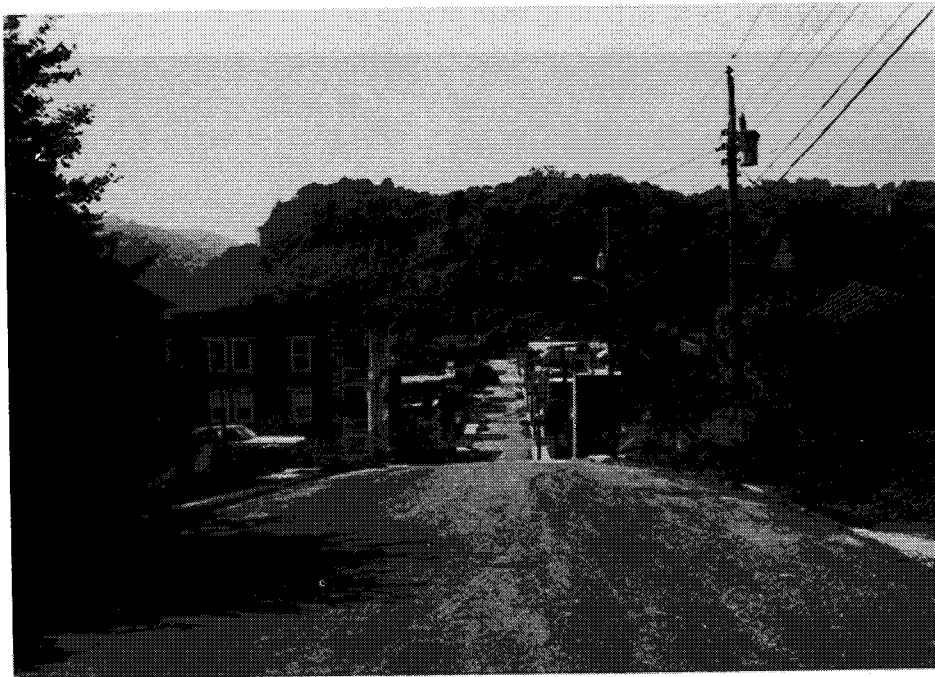
(44) Coal Road, Bluestone River, Bramwell, WV



(45) Coal Road, Pinnacle Rock State Park, near
Bramwell, WV



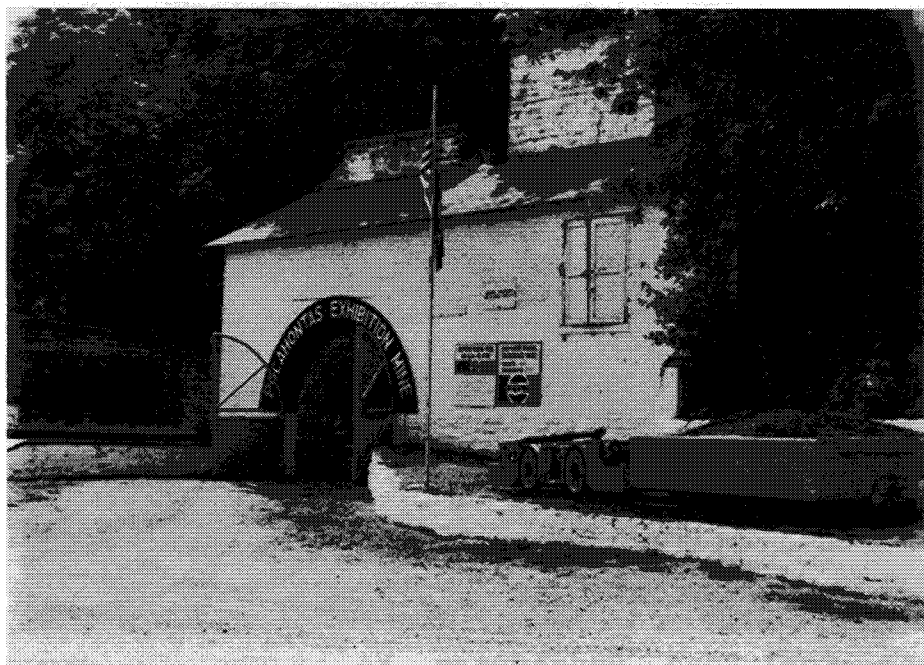
(46) Coal Road, near Pocahontas, VA



(46-A) Coal Road, Pocahontas, VA



(46-B) Coal Road, Pocahontas, VA



(47) Coal Road, Pocahontas Exhibition Mine, VA

Summary

"A Proposed Coal Heritage Road and Scenic Byway" is the study of a potential route that basically follows State Route 16 through the heart of five southern West Virginia coal counties: Fayette, Raleigh, Wyoming, McDowell and Mercer. Each county has both natural beauty and a rich heritage of involvement with coal production dating to the 1870s and 1880s. In the years that followed, the coal industry contributed significantly to the settlement pattern and cultural development in the five counties.

In recent years, however, the downturn of the coal based economy of SWVCC has economically depressed the region and caused much interest in exploring the possibilities of tourism to capture both the scenic beauty of the rugged, mountainous terrain and coal heritage. Federal, State and Local authorities have designated local highways throughout the country as scenic byways, particularly where they pass through areas of natural beauty and areas rich in culture. In this investigation the Iron Trail in Minnesota which primarily follows State Route 169 and the Gold Fever Trail in South Dakota follows U.S. Routes 14, 385 and 16 and State Route 244 were investigated as possible parallels for SWVCC. The Iron Trail extends for 188 miles through glacially formed country whereas the Gold Fever Trail is about 100 miles long through an uplifted elliptical shaped dome surrounded by Missouri Plateau. In comparison, the proposed Coal Heritage and Scenic Byway crosses 130 miles of the rugged and mountainous Appalachian Plateau between the New River and Bluefield, West Virginia.

The investigation revealed that there are many parallels between southern West Virginia and the iron ore ranges of Minnesota and gold fields of South Dakota. All three areas possess natural beauty and are rich in heritage associated with mining. The primary difference, however, is the fact that the SWVCCs have not developed an infrastructure capable of supporting and attracting the tourist potential that is available. Moreover, the SWVCCs have an added advantage: proximity and access to the highly urbanized eastern seaboard.

Several studies have revealed the potential for development of mining heritage tourism in southern West Virginia and work is progressing by the State of West Virginia, the National Park Service and the U.S. Army Corps of Engineers to develop a mining heritage. Mostly, however, the economic opportunities in coal mining tourism and a natural scenic environment in southern West Virginia awaits implementation.

Publication No. FHWA-ED-90-035
HEP-23/11-90(1M)QE