

THE MIDWEST CHALLENGER SPECIAL

Sunday, November 8, 1992

St. Louis

De Soto

Ironton

Poplar Bluff

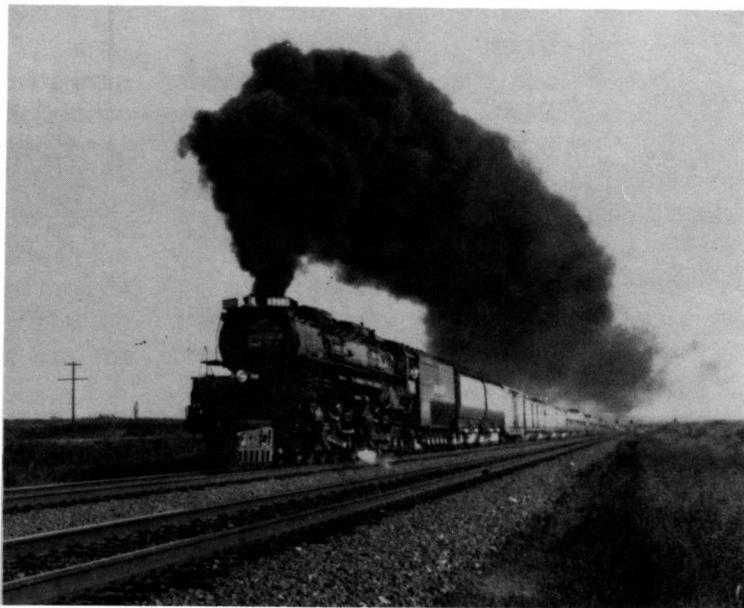
Sponsored by the St. Louis Chapter, National Railway Historical Society
In Cooperation with Union Pacific Railroad

Welcome Aboard!

Your hosts in the St. Louis Chapter of the National Railway Historical Society (NRHS), along with the members of the St. Louis Steam Train Association, and Union Pacific Railroad, welcome you aboard this special steam-powered excursion train.

Today's excursion is powered by the world's largest operating steam locomotive, Union Pacific 3985. Built in 1942 by the American Locomotive Company of Schenectady, N.Y. for the Union Pacific, the 3985 was a powerful workhorse pulling freight trains across the railroad's rugged territory in the West.

Our trip today is also part of the 1992 Union Pacific Steam Excursion Program, the nation's oldest continuous program of steam-powered rail passenger excursions. Of all American railroads, only Union Pacific never fully retired its entire steam locomotive roster, maintaining its big Northern-type locomotive no. 844 (formerly 8444) in service without retirement to the present day. Later, the 3985, the world's only operating Challenger-type, was returned to service through restoration.



Union Pacific 3985 with a special excursion for the Union Pacific Historical Society convention earlier this year. Photo courtesy Union Pacific Historical Museum.

We are pleased and privileged to host this unusual late autumn steam excursion, made possible as the 3985 heads east onto the CSX system to pull the 50th anniversary trip of the **Santa Claus Special** on the former Clinchfield Railroad in Kentucky, Virginia and Tennessee. Sincere thanks to Union Pacific Railroad for its generous cooperation in making this very special excursion possible.

For Your Safety and Comfort

Safety First! These are the two most important words on the railroad, and they should be your two most important words today, too. For safety's sake:

- * **Always watch your step!** Be especially careful...
- * Getting on or off the train, or
- * When walking about the train or between cars.

- * At stops, watch your footing on uneven ground, gravel, and track ballast stone.
- * Always step **over**, *never* on top of, a rail.
- * Always **walk**, *never* run.
- * Keep your head, hands and arms fully inside the train at all times!

- * If you get a wind-blown particle in your eye in a vestibule area or while in the baggage car, do not rub the eye. Let the eye's natural watering action remove the particle.
- * A medical team is on board. **For medical assistance, contact any crew member.**
- * Children should not play in the aisles.
- * Packages, camera bags, suitcases etc. must be kept out of aisles and off seats. Please use the overhead baggage racks.
- * Union Pacific does not permit coolers to be brought aboard the train. Your cooperation is appreciated.
- * Please always follow the instructions of your car host or other NRHS or railroad crew members, especially at photo stops.
- * No sandals, thongs or bare feet permitted. We reserve the right to insist on appropriate, safe footwear.
- * **Alcoholic beverages may not be brought aboard or consumed on the train, nor anywhere on railroad property.**

THE HISTORIC IRON MOUNTAIN ROUTE



1909 logo

Your trip today on the Union Pacific's De Soto Subdivision summons many reminders of the history of railroading in Missouri. The route you will traverse was built in the mid-19th century as one of the oldest railroads in Missouri and the trans-Mississippi West, the St. Louis & Iron Mountain Railroad, more commonly known as "The

Iron Mountain." One of the most significant predecessors of the well-known Missouri Pacific Railroad, the former Iron Mountain route today plays an important role in the Union Pacific system.

Early Plans and Predecessors

The mineral wealth of the Ozark region of Missouri has been known since the early part of the 18th century. Lead, the most abundant of the deposits, was not fully exploited until after the Civil War, but during the 1830s the most valuable mineral known to exist in the region was iron. The largest deposits of iron ore were at Iron Mountain and Pilot Knob, some 80 miles south of St. Louis. Add to the minerals the vast forests of pine and hardwood, and it was easy to see that any railroad that could build into the region could experience enormous profit in supplying the growing city of St. Louis and other business centers as well.

The first railroad to attempt to reach this wealth was the St. Louis & Bellevue. Its charter in January of 1837 directed builders to follow the nearest and best route between St. Louis and the Iron Mountain region. In 1839 William H. Morell proposed a route west to the Big River, then south over the hills west of the river, eventually reaching the Iron Mountain deposits after 110 miles of steep grades. The route was too long and expensive to build, and after a few years the St. Louis & Bellevue faded from existence without ever laying a rail.

The St. Louis & Iron Mountain

In 1849 Capt. Joshua Barney completed a survey from St. Louis to Fulton, Arkansas for the federal

government, which was interested in establishing overland communication with Texas. The result was renewed interest in building a railroad south from St. Louis. In 1851 the Missouri Legislature chartered the St. Louis & Iron Mountain Railroad. The charter stated that the railroad should run southward from any point on the newly constructed Pacific Railroad, which had built west from St. Louis toward Kansas City with heavy state and local government aid. The Pacific was the first railroad west of the Mississippi, and earliest predecessor of the Missouri Pacific.

The goal of the new St. Louis & Iron Mountain was the general vicinity of Pilot Knob and Iron Mountain, with no specific southern terminus mentioned. Therefore the railroad was free to build beyond Iron Mountain to any part of southern Missouri.

The line was to be built at a gauge of 5 feet 6 inches to match that of the Pacific Railroad, deemed the official track gauge for all railroads built within Missouri. This wide gauge was adopted for two reasons: the perceived ability to build larger cars and thus haul heavier loads; and the opinion of James Kirkwood, chief engineer for the Pacific Railroad. Mr. Kirkwood, who strongly favored the wider gauge, also believed that the Mississippi River would never be bridged. Thus rolling stock would never be interchanged between what were then considered "narrow gauge" 4' 8½" lines of the East and the wider gauge proposed for the West.

Construction Begins

Construction of the St. Louis & Iron Mountain began in October 1853 at Mile Post 0, just south of Plum Street (near today's Poplar Street Bridge) in St. Louis. Progress soon slowed after Secretary of War Jefferson Davis prohibited the railroad from building through the St. Louis Arsenal and Jefferson Barracks, both on the line's route along the river. Davis' concern was with errant sparks from the road's steam locomotives passing close to magazines full of explosives. After two and one half years, the controversy was settled with the Iron Mountain required to use horse power for its trains "when the Government expects to receive, or intends to ship gunpowder at the magazine landing." It is not known whether the horses were ever used.

Construction really began in earnest in 1856, heading south along the Mississippi River until the route turned inland at Riverside, near Pevely, Mo. Construction was completed to De Soto in 1857, and proceeded southward from De Soto and northward from Pilot Knob until the two sections met at Blackwell, Mo., on April 2, 1858. The Iron Mountain was finally operating 86 miles of track between Pilot Knob and St. Louis four and one half years after construction began.

The Civil War

Before plans on how to further expand the railroad were completed the Civil War broke out. During the war the Iron Mountain line was used heavily by the Union forces to protect against Confederate approaches to St. Louis from the south. Destruction on the route was extensive, with tracks torn up, bridges burned and some rolling stock destroyed. The tracks and bridges were quickly repaired and the line was never more than temporarily shut down.

Though the railroad was able to continue operations during the war, lost revenues and the high cost of the repairs took their toll. The State of Missouri, the principal bondholder, foreclosed on the road on February 19, 1866. For a few months the line was operated by a Board of State Commissioners as the difficult postwar period of Reconstruction began.

Expansion Under the Cairo & Fulton

On January 7, 1867, the railroad was sold to a group of investors who had also purchased the Cairo & Fulton Railroad of Missouri. In turn they sold the two lines to Thomas Allen, a past president of the Pacific Railroad, and his brother-in-law Henry Marquard. The company was reorganized as The St. Louis & Iron Mountain Railroad Company in July of 1867.

The first extension of the railroad was the Belmont line, the Iron Mountain's attempt to reach the southeast part of the country. It was started in 1865 but, due to the foreclosure of 1866, serious work did not commence until 1868. Starting at Bismarck, the line was built southeast through Knob Lick, Fredericktown and Delta before reaching the Mississippi River at Belmont, Missouri in 1869. A ferry was used to cross the river to Columbus, Ky. and a connection with the Mobile & Ohio Railroad, then projected as a prominent line to the south and southeast. However, this routing never achieved the traffic levels its promoters projected, and gradually became the Belmont Branch, not a main line.

Construction of what actually became the Iron Mountain's main line started in 1870 when the Arkansas Branch of the St. Louis & Iron Mountain Railroad was incorporated to construct a line from Pilot Knob to the Missouri-Arkansas state line. Work began in 1871, and by 1873 it connected with the Cairo & Fulton of Missouri at Poplar Bluff, and the Cairo & Fulton of Arkansas near the Missouri-Arkansas state line. Eventually the road reached Little Rock and Texarkana via the Cairo & Fulton of Arkansas before the three lines were consolidated into the St. Louis, Iron Mountain & Southern in 1874.

Conversion to Standard Gauge

The original Iron Mountain Route to Pilot Knob, constructed to a gauge of 5'6", was later changed to 5 feet. All other lines mentioned previously were constructed at 5 feet. By the late 1870s it was apparent that building to the wide gauge had been a costly mistake. In 1869 the Pacific Railroad converted to the "standard" 4' 8½" gauge. At St. Louis, the Eads Bridge across the Mississippi, opened in July 1874, was built to standard gauge, as was the trackage to the new Union Depot in 1875. Furthermore, the Iron Mountain's connection in Texarkana, the Texas & Pacific, operated on standard gauge track, necessitating the changing of wheels on cars to fit the other road's gauge or transloading to another car.

On June 28, 1879, the Iron Mountain changed its entire main line to standard gauge in one day, starting in Texarkana at 4:00 a.m. and completing the task in St. Louis at 11:30 p.m. that night. All engines were converted at the De Soto shops by simply pushing in each wheel 1 3/4 inches.



1884 Gould System logo

The Gould Era

In 1879 Thomas Allen sold the Missouri Pacific (the Pacific Railway until 1876) to Jay Gould, the great railroad magnate of the late 19th century. Gould, who called himself "the most hated man in America," purchased a controlling interest in the Iron Mountain Route in 1880 and bought the remainder of the stock outright the next year. Gould added the Iron Mountain to his "Gould System" of southwestern railroads, bringing the total mileage of his empire to 9,547 miles. His system of eight railroads controlled much of the rail traffic in the southwestern United States. It was at this time that the St. Louis, Iron Mountain and Southern became a fully-owned subsidiary of Missouri Pacific.

Under Gould, the Iron Mountain continued to expand through construction and acquisitions. After Jay Gould died in 1892, his son, George, took over the Missouri Pacific System, including the Iron Mountain route. The Goulds were especially ambitious for expansion of their railroads, and under their control the Iron Mountain reached such places as Memphis, Tenn., Alexandria, La., and Fort Smith, Arkansas. Other routes through the Ozarks ran from Batesville, Ark. and Carthage, Missouri.

The heavy grades and many curves of the original Iron Mountain route resulted in high operating costs for the many through freight and passenger trains operating on the line. A new route via Illinois following the east bank of the Mississippi from East St. Louis was completed in 1904. The route was jointly operated with the St. Louis Southwestern (Cotton Belt Route), and used the new Thebes Bridge over the river at Thebes, Illinois, just south of Cape Girardeau. The line then continued southwestward to Dexter and the old Cairo & Fulton line to Poplar Bluff. Most freight traffic has been routed down the easier grades of the river line ever since.

Following the Panic of 1907 the Gould system began to fall apart. George Gould's passion to develop a transcontinental railroad system resulted in his empire expanding to some 19,000 miles. Following receiverships and takeover attempts, the younger Gould began to lose power. In the Missouri Pacific and Iron Mountain stockholders' elections of March 1915, George Gould was voted out. By 1918 he was completely out of the railroad business.



1921 logo

Merger Into the Missouri Pacific

On August 19, 1915, the St. Louis, Iron Mountain & Southern, along with the Missouri Pacific, was forced into receivership. The two roads were merged into the Missouri Pacific Railroad through reorganization on May 12, 1917. Under the MoPac, the line continued in importance, especially during the two World Wars when the rails were called upon to transport the war materiel of the nation. Over the years the St. Louis-Poplar Bluff route was improved by reducing grades and curvature through the Ozarks. However, during this century the river line to Poplar Bluff via Thebes Bridge steadily gained importance, while traffic on the old Iron Mountain line declined.

The Van Sweringen Legacy

As the Missouri Pacific had once attracted Jay Gould, in 1930 it lured two equally notable railroad investors of this century, Oris Paxton Van Sweringen and his brother Mantis James Van Sweringen. "The



"A Service Institution"

1929 logo

Vans", as they were known, formed the Alleghany Corp. in 1929 as a holding company for their vast railway interests. In 1930 the brothers bought a controlling interest in the MoPac for \$100 million. But their financial empire, a hollow pyramid supported by increasingly worthless securities as the nation plunged into the Great Depression, soon collapsed. In 1933 the MoPac became the first major railroad to file for bankruptcy under the new Section 77 of the Bankruptcy Act. It did not emerge from receivership until 1956. Even then it was hampered by a difficult division of stock ownership into two classes which would constrain management as the modern era of large-scale mergers began in the 1960s.

But under the capable financial oversight of William Marbury, and the steady management of its president and later chairman, Downing B. Jenks, the MoPac still managed a remarkable turnaround and physical revitalization. In 1974 the troublesome Class "B" stock was bought back, and the MoPac was fully free to seek its destiny with little encumbrance.

The Union Pacific Merger

On April 18, 1980, stockholders of the Missouri Pacific and the Union Pacific approved a merger under which the MoPac would become a wholly owned subsidiary of the Union Pacific Corporation. The merger was approved by the Interstate Commerce Commission on October 20, 1982, and took effect on December 22 of the same year. The former Iron Mountain line, along with the rest of the Missouri Pacific Railroad, became part of the 22,000-mile Union Pacific Railroad. The Missouri Pacific Railroad still exists as a corporate entity today within the Union Pacific's holdings.



1974 MP and 1983 UP logos



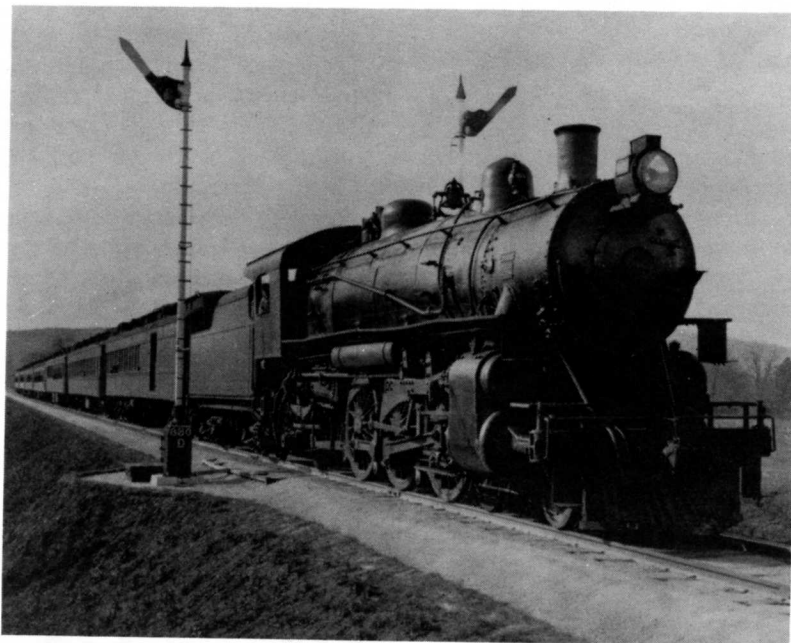
mo-pac

Passenger Traffic on the Iron Mountain

The June 1916 *Official Railway Guide* listed six passenger trains each way on the route between St. Louis and Poplar Bluff with an additional train connecting with the Mississippi River and Bonne Terre at Riverside. By June of 1941 the number was reduced to five each way, and a De Soto – Bismarck and Bismarck – Poplar Bluff mixed train. By the 1960s the number of first class trains was down to three, and when Amtrak assumed control of the nation's passenger trains in 1971 there was but one left.

The route was host to some of the Missouri Pacific's top "name" trains, including the **Sunshine Special**, the premier train to Texas, with **The Texan** and **The Southerner** also operating between St. Louis and Texas points. In the post-World War II period, the **Texas Eagle** was the premier train south from St. Louis on the Iron Mountain. The last pre-Amtrak train was a remnant of the **Texas Eagle** running between St. Louis and Texarkana. Today, Amtrak's version of the **Texas Eagle** between Chicago and Houston/San Antonio traverses the former Iron Mountain line on an overnight schedule between St. Louis and Poplar Bluff. Today's excursion is a unique opportunity to travel this very scenic and historic line during daylight hours.

– Dan Gassen, St. Louis Chapter NRHS



The Sunshine Special, the Iron Mountain's most famous passenger train, posed for this publicity photo in 1917 at MP 88 near Arcadia. Barriger Collection, Mercantile Library.

A Guide to the Route

Union Pacific De Soto Subdivision (St. Louis Division)

Former stations no longer in service indicated by brackets [].
Other non-station locations of interest indicated by asterisk *.

Milepost (MP) and station name or location of interest

Union Pacific Sedalia Subdivision

3.4 Compress Track *

This siding in central St. Louis is named for its location near the site of the former St. Louis Cotton Compress Company. Today's excursion begins here on Union Pacific's ex-Missouri Pacific Sedalia Subdivision, UP's line to Kansas City. From here the train will back up about one mile to the junction at Grand Avenue in order to enter Burlington Northern trackage for the connection to the Union Pacific's De Soto Subdivision, the route for the remainder of the trip.

2.3 Grand Avenue

Junction with the Burlington Northern (ex-St. Louis - San Francisco Railway, or Frisco Lines) and the Terminal Railroad Association of St. Louis, or TRRA. The new Metro Link light rail line, to open in 1993, is visible just to the north (right) of the train following former TRRA and Norfolk & Western (ex-Wabash) right-of-way.

Burlington Northern Springfield Division

Upon completing the backup move, our train moves forward from Grand Avenue, entering Burlington Northern (ex-Frisco) trackage for 1.5 miles to the relocated Iron Mountain Jct.

Union Pacific De Soto Subdivision

0.0 Iron Mountain Junction

Beginning of the De Soto Subdivision, Iron Mountain Jct. was originally located on the Sedalia Subdivision line to Kansas City, just to the north (right) of our train, and just west of our Compress Track boarding site. It was relocated onto Burlington Northern in the mid-1980s. Trains entering the De Soto Subdivision at the old junction turned south and soon crossed the

BN at grade where the present junction switch we'll use is located. The *Texas Eagle*, which uses the De Soto Sub on its run from Chicago and St. Louis to Houston and San Antonio, is the only Amtrak train scheduled to run on ex-Frisco trackage in traversing this short section.

The first 6.8 miles of the subdivision was built in 1887 as the St. Louis, Oak Hill & Carondelet, and merged into the Missouri Pacific in 1910. Known as the "Oak Hill Line", it begins its looping route across most of the city's South Side on the west side of Oak Hill, one of the highest points in the city. Dropping down the east side of the hill, the line passes over Chippewa St. and Gravois Ave. before heading southeast to Carondelet Park.

6.4 Broadway Junction

Shortly after passing through the eastern edge of Carondelet Park the track makes a sharp turn to the east (left) as the former Carondelet Subdivision to Kirk Jct. (at Kirkwood) branches to the right. The branch was built by Missouri Pacific predecessor Pacific Railroad in 1872 as an 11-mile connection west from the Carondelet area of South St. Louis. Later it became a connection between the MoPac's Kansas City line at Kirkwood, the St. Louis, Iron Mountain & Southern, and a railroad ferry across the Mississippi at Ivory Street in Carondelet. Except for a short industrial lead at each end, the line is now out of service.

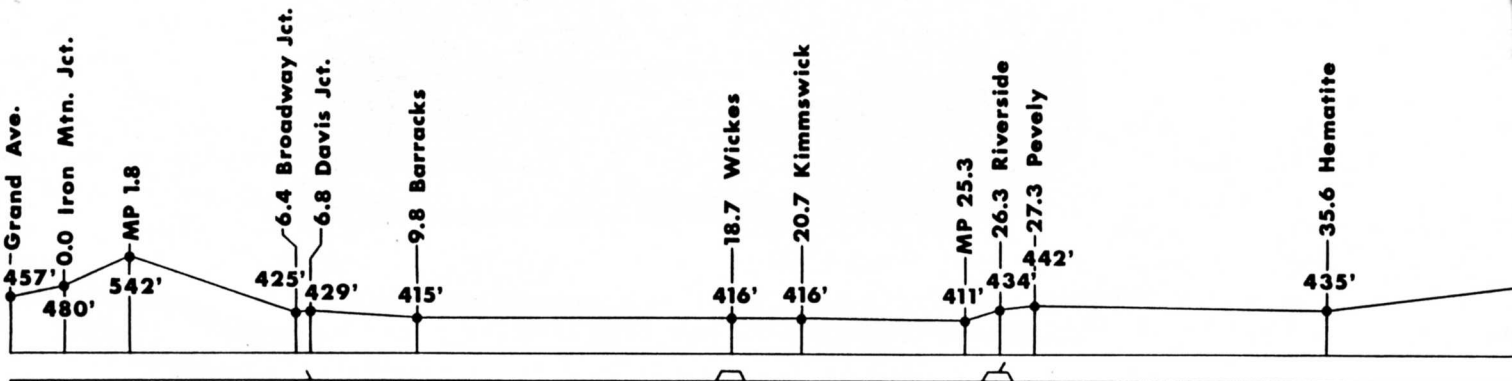
6.8 Davis Junction

Junction with the 6.1 mile Lesperance Industrial Lead northward to UP's Lesperance Street Yard on the riverfront just south of downtown St. Louis. The line, built in 1858 as part of the original St. Louis & Iron Mountain, was known as the Lesperance Subdivision until the mid-1980s. It is here that our train enters the original trackage of the former St. Louis, Iron Mountain & Southern route southward from St. Louis.

9.8 Barracks

Formerly called Barracks Junction when it was the end of double track from Iron Mountain Junction. Barracks is the shortened name for Jefferson Barracks, a U.S. Army post dating back to August 1826 when the 1st U.S. Infantry arrived here from Fort

Route profile



Track plan schematic

Bellefontaine, the first army post in the St. Louis area, located on the Missouri River north of the city. Over the years many famous military leaders were assigned here, including (then) Lt. Jefferson Davis, Col. Robert E. Lee, Gen. John C. Fremont, Gen. William T. Sherman and Gen. Ulysses S. Grant. The base was closed in 1946, but an important National Cemetery, Veterans Hospital and a National Guard detachment remain today. The rest of the installation is now a county park, with an interesting historical museum. The red brick station at which thousands of GIs boarded troop trains stood to the right of the track until a few years ago.

Just south of Barracks, the track passes under the award-winning twin steel-arch bridges of I-255, commonly known as the Jefferson Barracks, or "JB", bridge(s). Although suburban south St. Louis County sprawls atop of the bluffs to the west (right), the railroad follows the Mississippi River beneath the bluffs and away from the sprawl for the next 16 miles.

10.8 Triangle Spur

11.0 CF Industries

[12.6 Cliff Cave]

At one time, double track extended to here. Cliff Cave County Park can be seen to the east (left) of the train, opposite the river bluff to the west where the cave is located.

[16.1 White House]

Atop the bluff is the White House, a Jesuit retreat center. During the 1870s there was talk of moving the nation's capital closer to the center of the country, and some St. Louis interests pushed hard for the city to become the new national capital. This location gained its name as a proposed location for the residence of the President.

17.8 Hillcrest

Location of Union Electric's Meramec power plant. This coal-fired plant was once served by rail, as evidenced by the yard tracks to the west (right) of the train. Today the plant receives its coal by barge.

18.1 Meramec River Bridge *

The Meramec - Indian for catfish - rises in the south-central part of Missouri near Salem and winds its way northeasterly to its confluence with the Mississippi here. Jean Baptiste Gomache established the first river ferry in Missouri across the Meramec near here in 1776. The line crosses the river on a 559-foot combination plate girder and through truss bridge.

18.7 Wickes

[20.7 Kimmswick]

Pop. 207. The community traces its origins to Theodore Kimm, who laid out the town in 1857. In early years a river port, it found modest prosperity as a smelting and shipping point for iron mined at Pilot Knob and Iron Mountain until 1882, when the smelter closed. The town became a farming center, and today draws tourists to shop at its many handicraft and gift stores.

26.3 Riverside

Here the line turns inland from the Mississippi River. A wye and several storage tracks on the south (left) mark the junction with the St. Genevieve branch to Herculaneum and Crystal City. It was built by the St. Joe Lead Company as the narrow gauge Mississippi River & Bonne Terre in 1888. The MR&BT originally ran 33 miles from Riverside to Bonne Terre, but in 1893 was extended 14 miles to Doe Run and converted to standard gauge. It hauled lead ore to the company smelter at Herculaneum, and refined lead back to the Iron Mountain connection at Riverside for shipment to market. In 1929 the MoPac bought a controlling interest from St. Joe Lead and merged the MR&BT into the newly acquired Missouri-Illinois Railroad. Today the line still serves the smelter but ends south of Festus. Union Pacific trains reach St. Genevieve via trackage rights on the Burlington Northern (ex-Frisco) from Crystal City.

27.3 Pevely

Pop. 2,732. Here the line passes beneath Interstate 55.

[29.5 Horine]

To the north (right) is Burlington Northern's Memphis Division between St. Louis and Memphis via Cape Girardeau. BN gained this line in its 1980 merger with the Frisco. At one time the MoPac and Frisco had an interchange track here.

[30.6 Munsons]

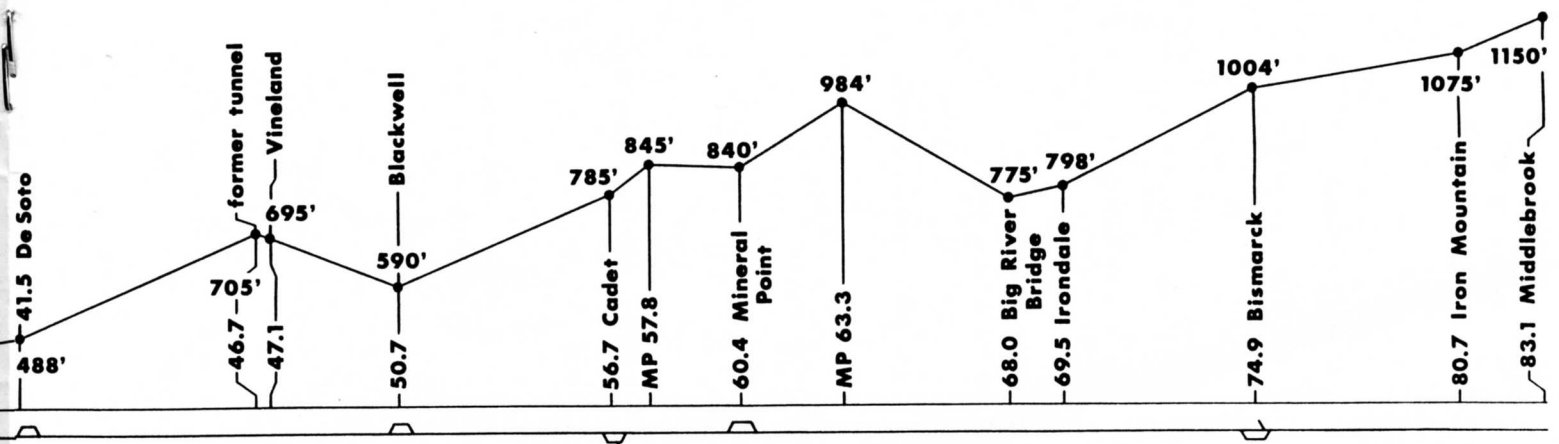
BN overcrossing as the line enters the Joachim Creek Valley.

[31.9 Silica]

A open pit silica sand mine may be seen near the bluff to the east (left), an outcrop of St. Peter sandstone. It produces molding sand and ground sand for abrasives, glass and pottery.

35.6 Hematite

Pop. 200. The town's name is the geologist's term for iron ore. William Null and a group of American immigrants are said to have settled here on Spanish land grants around 1800.



41.5 De Soto

Pop. 5,993. Sometimes called the "Fountain City" for its many artesian wells, De Soto lies partly along the valley of Joachim Creek and partly across the limestone hills to the west. Isaac van Metre built the first house here in 1803, but the town was not established until the Iron Mountain Railroad arrived in 1857. The Iron Mountain moved its shops here from the Carondelet area of South St. Louis in the early 1870s. Following the 1980 census, the population center of the United States was located near here. In 1990 it moved southwest to a point near Potosi, Mo.

The railroad's facilities here at one time included a 15-stall roundhouse, along with a brick depot, freight house, and stock pens. Freight cars seen on sidings await repair or overhaul at Union Pacific's De Soto Shops, one of the company's major car repair and rebuilding facilities.

De Soto is our first scheduled stop only to pick up passengers. Passengers traveling beyond De Soto should remain on the train.

As the train leaves De Soto, the line climbs out of the Joachim Creek Valley. The next 90 miles will be filled with steep grades and tight curves as the railroad crosses between several watersheds and over the St. Francois Mountains, the crest of the Missouri Ozarks.

[47.1 Vineland]

Shortly before Vineland, at MP 46.7, was the 791-foot Vineland Tunnel, at the crest between the Joachim Creek and Big River valleys. The line approached from the north on a grade as steep as 1.3 percent. The tunnel was "daylighted" (opened up and turned into a deep cut) in the 1940s.

48.7 Big River Bridge *

The first crossing of the river on a 278-foot plate girder bridge. The Big River is the principal tributary of the Meramec, flowing generally northward from headwaters near Viburnum.

50.7 Blackwell

Pop. 100. The Iron Mountain Railroad, building south from St. Louis and north from Pilot Knob, completed its line here on April 2, 1858. MoPac local passenger trains stopped here as late as 1964.

[54.0 Tiff]

56.7 Cadet

Pop. 10. A short distance beyond Cadet the Pea Ridge Subdivision diverges to the west (right). The 26-mile line was built in 1960 to serve the Indian Creek lead works at Indian Creek and the Pea Ridge iron mine at Pea Ridge. The terrain here is noticeably marked by the scars of numerous open pit mines for the extraction of barite, or "tiff".

60.4 Mineral Point

Pop. 358. The Potosi Branch diverged to the west (right) here. The four-mile line was built in 1858 by the St. Louis & Iron Mountain. It was cut back two miles to Lumtie in 1980 and eventually abandoned in 1987. About a mile west of town is the Potosi State Corrections Facility.

[63.1 Summit]

Near here, at MP 63.3, the railroad crosses the ridge between the Mill Creek and Hopewell Creek valleys. The narrow gauge St. Joe & Desloge Railroad, hauling lead ore from Bonne Terre, interchanged here with the Iron Mountain.

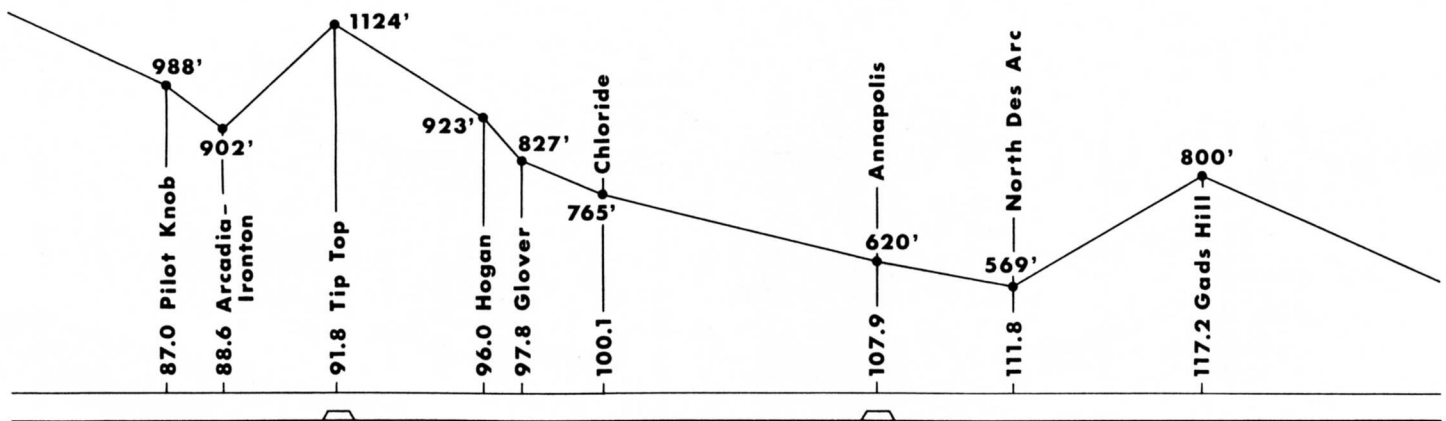
[65.2 Hopewell]

68.0 Big River Bridge *

Second crossing of the river on a 237-foot plate girder and truss bridge.

[69.5 Irondale]

Pop. 349. This area of Missouri is the largest lead district in the world, along a rich ore vein known as the Viburnum Trend. To the east are the towns of Bonne Terre, Desloge and Flat River – all sites of massive underground lead mines dating from the 19th century. Beginning in 1710, Europeans reported large quantities of silver in the area, but only lead was actually found. In 1719, a French entity, the Royal Company of the Indies, opened mines on the Big River and at Mine la Motte. Reporting that rich silver mines had been found, the company's stock soared. Early in 1720 the company sent an agent, Philippe Renault, and about 50 miners to exploit the silver, but no precious metals were found. A few months later the speculative hopes of the company – the so-called "Mississippi Bubble" – burst, and the company went bankrupt. Although lead was mined throughout the 18th century, it was not until after the Civil War that large-scale mining began in the area.



74.9 Bismarck

Pop. 1,625. Founded in 1868 at the junction of the Iron Mountain Railroad's originally projected line southeast to Belmont, Mo. on the Mississippi River opposite Columbus, Ky. (later to be the Belmont branch), and what instead became the road's main line south to Poplar Bluff and Arkansas. Bismarck was also the western terminus of the Missouri-Illinois Railroad, created in 1920 from predecessors Illinois Southern Railroad, Southern Missouri Railway, and Mississippi River & Bonne Terre. The M-I crossed the Mississippi via a well-known ferry between Thomure, near St. Genevieve, Mo., and Kellogg, Ill. M-I predecessor Southern Missouri Railway reached Bismarck from the river to the east in August 1903.

In 1929 the MoPac acquired controlling interest of the Missouri-Illinois of 1920 and combined it with the Mississippi River & Bonne Terre, forming a new Missouri-Illinois. It existed as a controlled subsidiary into the 1980s. Today the Union Pacific still uses the former M-I between here and Bonne Terre.

80.7 Iron Mountain

Pop. 556. A former mining town and the original destination of the St. Louis, Iron Mountain & Southern Railroad, which began service to here in April 1858. To the northeast of town is the Iron Mountain, rising 200 feet above the valley. The mountain was once thought to be composed of solid iron, and was proclaimed the "largest and richest mass of iron upon the globe." After the first mining began in 1836, the town roared with activity, but when the richer deposits ran out in the 1880s and the price of iron dropped, the mines were no longer profitable. Using nearby limestone for flux and wood from the surrounding forest for fuel, iron ore was mined and smelted here. In 1851 a wood plank road was built between here and St. Genevieve to haul the cast iron ingots by oxcart to the Mississippi River. Mining operations ceased after World War I.

Also here was a junction with the Bellevue Valley Railway. A spur off the south end of the siding here serves the Iron Mountain Trap Rock Company. Trap rock, a very hard granitic stone, is prized by railroads as ballast stone for track, and for other uses.

83.1 Middlebrook

The highest point on the De Soto Subdivision, at 1,151 feet above sea level, is located just .2 mile to the north at milepost 82.9.

[84.1 Lopez Spur]

A former spur west to quarries near Graniteville, famous for their "Missouri Red" granite, diverged here.

[87.0 Pilot Knob]

Pop. 722. Another iron mining town named for the source of its ore, the Pilot Knob, a cone-shaped hill 600 feet high just east of town. Like Iron Mountain, it was thought to be solid iron and was worked for fifty years before the comparatively shallow surface veins were exhausted.

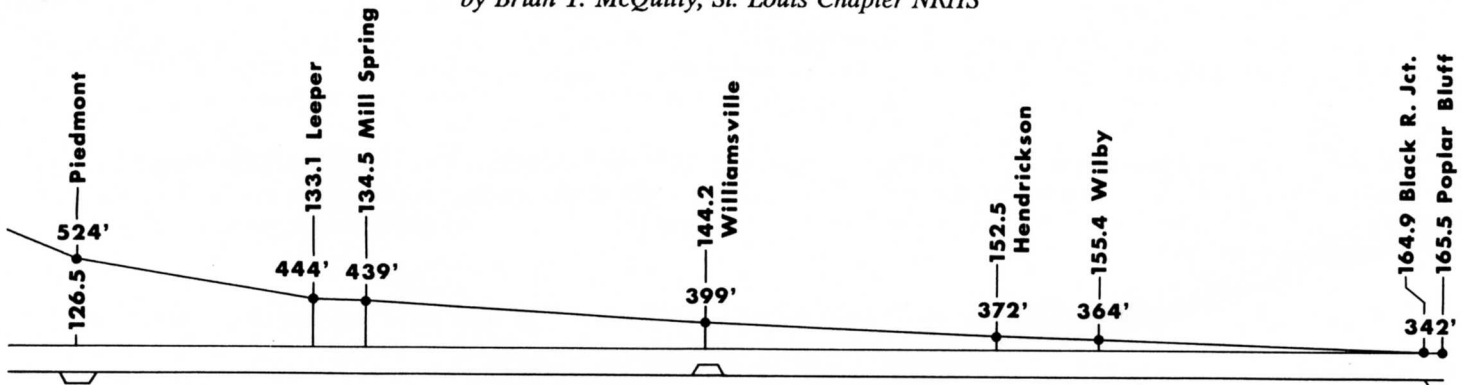
At Pilot Knob was Fort Davidson, erected by Union troops during the Civil War to protect the Pilot Knob and Iron Mountain mineral deposits. In September 1864 Confederate General Sterling Price and a force of about 15,000 troops attempted to seize St. Louis, approaching from the south. General Thomas Ewing and a force of about 1,000 Union soldiers evacuated as many supplies as possible up the Iron Mountain Railroad while fighting a delaying action at Pilot Knob. The intent was to hold out long enough for Union reinforcements to be sent to St. Louis. On September 27, in what became the Battle of Pilot Knob, Price directed a bloody assault on Fort Davidson with two of his three divisions, but was repulsed with a loss of about 1,500 men. That night, though surrounded by Confederate artillery in the mountains around them, Ewing's troops slipped away from Pilot Knob under the cover of darkness, leaving two soldiers to blow up the powder magazine at sunrise. The Confederates did not detect the escape until the explosion. Price pursued the Union forces as far as Potosi, but fearing a larger force would be brought against them down the Iron Mountain line, turned away from St. Louis and toward the state capital at Jefferson City.

[87.5 Ironton]

Pop. 1,743. Spread across the base of Shepherd Mountain in the lovely Arcadia Valley, this seat of Iron County was established when the county was organized in 1857. A small iron furnace was built near here in 1815, using ore from Shepherd Mountain and wood from the hills for fuel. On August 8, 1861, after receiving his commission, Brig. Gen. Ulysses S. Grant arrived at Ironton with the 21st Illinois regiment to assume command of the district. Soon afterwards he was placed in command of the District of Southeast Missouri and moved his headquarters to Cape Girardeau.

Ironton is our second scheduled stop. If you are traveling to Poplar Bluff, please stay on board the train. If you are leaving us here, thank you for riding with us today.

Route profile and track plan schematic
by Brian T. McQuitty, St. Louis Chapter NRHS





Two MoPac trains, one behind 4-8-2 no. 5338, pass on the Iron Mountain deep in the Ozarks circa 1936. John W. Barriger III photo, St. Louis Mercantile Library.

north, and the Big Creek Valley from the south. The result is a cut nearly 200 feet deep through the top of the mountain, with impressively engineered approaches. Taum Sauk Mountain, the highest point in Missouri at 1,772 feet above sea level, may be seen to the west (right) as the train begins to follow the Big Creek Valley south of Tip Top for the next 20 miles.

[96.0 Hogan]

Pop. 30. This crossroads is situated between 1,680 foot Glover Mountain to the west (right) and 1,698 foot Ketcherside Mountain to the east (left). A former "helper station" for locomotives assisting northbound trains over Tip Top, Hogan had a wye, water tank and section house.

Milepost Equation: MP 95 to MP 97 = 1.3 miles

97.8 Glover

Pop. 400. A crossroads reported to have been named after a certain Congressman Glover, who aided the settlement in obtaining a post office. The most obvious landmark here is the huge lead smelter operated by ASARCO, the American Smelting and Refining Company.

100.1 Chloride

Pop. 6. Another crossroads with just a few houses and a siding.

107.9 Annapolis

Pop. 370. A spur across the valley serves the ISP Minerals plant, where granules for roofing shingles are made from felsite. 4,538-foot controlled passing siding.

111.8 North Des Arc

A line relocation project in 1949 between here and milepost 119 completely bypassed the town of Des Arc. North Des Arc replaced Vulcan, a station located on the original line at MP 112.5 and abandoned after the relocation was completed.

112.4 Brush Creek Bridge *

The creek is crossed on a 246-foot long cast concrete bridge, built during the line relocation of 1949. After crossing the bridge the tracks traverse a series of cuts and fills on an ascending grade of 1.23% for the next six miles.

117.2 Gads Hill

Pop. 30. Said to be named for the home of author Charles Dickens. A 4,334-foot controlled siding as well as a small yard here serve the Quality Aggregate Company, owned by Union Pacific Resources. Much of the excellent crushed track ballast stone for Union Pacific's former MoPac lines comes from this trap rock quarry. From here to Poplar Bluff the line descends from the Ozark Plateau. Maximum gradient is 1.29%, near MP 122.

On January 31, 1874 the southbound **Little Rock Express** was robbed at Gads Hill by Jesse and Frank James and their gang.

Milepost Equation: MP 119 to MP 121 = 0.7 miles

88.6 Arcadia-Ironton

In 1941 the MoPac built a new station to serve both Arcadia and Ironton, replacing the original frame depots. The restored "Missouri Red" granite structure stands to the right of the track.

[89.1 Arcadia]

Pop. 683. Nestled along Stouts Creek, Arcadia is the older of the two towns, platted in 1848. The Ursuline Academy was established here as a Methodist high school in 1849 and reorganized as the Arcadia Seminary in 1870. In 1871 it was sold to the Ursuline Sisters and became a Roman Catholic school for girls. The buildings of the academy may be seen across the highway on the right.

91.8 Tip Top

Location of a 4,243-foot controlled passing siding. During the mid 1940s the MoPac undertook a massive line relocation project to reduce the curves and grades of up to 2.1% climbing out of the Arcadia Valley from the

126.5 Piedmont

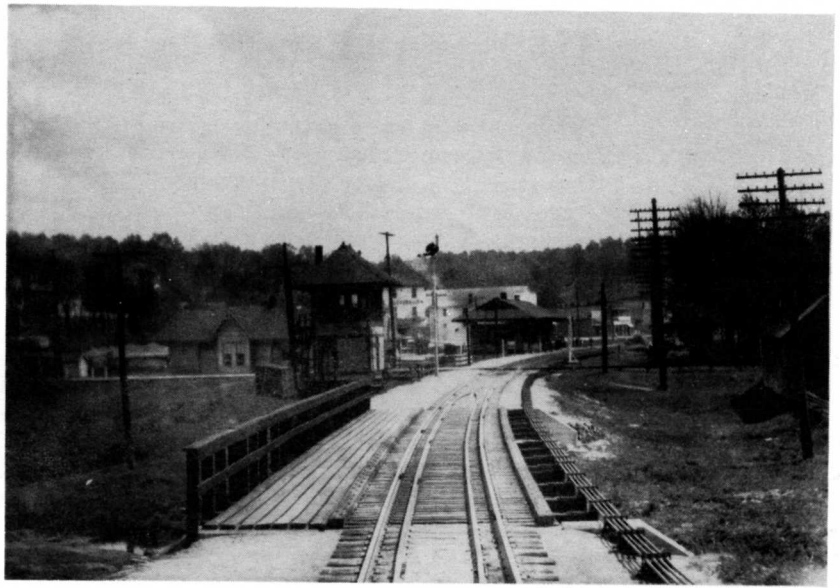
Pop. 2,359. Laid out by the Iron Mountain Railroad upon completion of the line here in 1872. A fire in February 1888 destroyed much of the town's business district, including its newspaper. The former MoPac depot is to the east (left). Following McKenzie Creek, the railroad enters the scenic Black River Valley about three miles south of Piedmont.

133.1 Leeper

Former junction with the Missouri Southern Railroad, which ran west 54 miles to Bunker. The MS was abandoned in the 1940s. The two railroads shared a depot and turning wye here.

134.5 Mill Spring

Pop. 257. The town was laid out in 1872 by the St. Louis & Iron Mountain upon completion to this point.



At Williamsville, the Frisco crossed at this interlocking near the depot. Frisco's own depot is to the left of the tower. John Barriger photo, St. Louis Mercantile Library.

144.2 Williamsville

Pop. 418. 4,418 foot controlled siding. Founded in 1872 by Asa E. Williams. The Frisco's line between Willow Springs and Puxico crossed here at a 24-lever interlocking tower. The Frisco line was removed in 1930s. A spur to the left serves the Gross & Janes Railroad Tie Co.

[152.5 Hendrickson]

155.4 Wilby

Milepost Equation: MP 160 to MP 161 = 0.7 miles

161.0 Black River Bridge *

The line's only crossing of the river is on a 539-foot combination through truss, through plate girder and reinforced concrete bridge.

164.9 Black River Junction

Once known as PB Jct., this is the former crossing of the Frisco line from Delta and Cape Girardeau to Hoxie, Arkansas. An interlocking tower with a 24-lever machine controlled the junction. Beginning of double track extending beyond Poplar Bluff.

165.5 Poplar Bluff

Pop. 17,139. Situated on the outer fringe of the Ozark Highlands, Poplar Bluff is located on the last high ground along the Black River as it flows toward Arkansas. Established in 1850 by a commission appointed to select a site for the Butler County seat, the town grew slowly and was almost deserted during the Civil War due to guerilla warfare. Completion of the Iron Mountain Railroad in 1873 led to great lumbering activity nearby. As lumbering faded, the town became an agricultural center for the rich, flat alluvial lands to the south and southeast. Poplar Bluff was incorporated in 1892.

The Southern Missouri & Arkansas Railroad built through Poplar Bluff on its line from Delta and Cape Girardeau south to Hoxie, Arkansas. It came under control of the Frisco, which built a new depot in 1928 to replace the original building destroyed by a deadly 1927 tornado. The line was removed in 1965, but the Mission Revival-style station remains as the Poplar Bluff Railroad Museum. Poplar Bluff is today a division point for the Union Pacific. Trains from St. Louis and Little Rock change crews here. Always a railroad town, it had a 20-stall roundhouse and coaling station during steam days.

Today's excursion concludes here. Buses will take many passengers to their designated cities. Thank you for travelling with us. We hope you've enjoyed your trip, and we look forward to having you on board again.

- Rick Sprung, St. Louis Chapter NRHS

The World's Largest Operating Steam Locomotive



The magnificent steam locomotive powering our train today was built in 1943 by the American Locomotive Company (Alco) of Schenectady, N.Y. to a design developed by Union Pacific. Locomotives such as the 3985 are known as "Challenger"-types, having a 4-6-6-4 wheel arrangement. A four-wheel pilot truck at the front of the locomotive guides the engine into curves; six coupled driving wheels are powered from the forward steam cylinders; another six coupled driving wheels are powered from the rear steam cylinders; and a four-wheel trailing truck supports the rear of the locomotive, including the cab and the massive firebox. The 3985 is the only operating Challenger-type in the world today.

The 3985's twelve driving wheels gave the locomotive tremendous pulling power. But the length of the wheelbase for these twelve drivers (over 24 feet) would, if rigid, make it impossible to operate the engine on virtually any but straight track. To gain the advantages of more driving wheels on rail and thus more pulling power, but to avoid excessive wheelbase length, steam locomotive designers used **articulation** to effectively break the long wheelbase into two halves. A specially hinged frame permits the two sets of driving wheels to rotate on independent axes. This effectively permits the locomotive's very long wheelbase to "bend" in the middle. The advantages of articulation are visible when the 3985 tracks through a curve. As it does, you will see the long rigid boiler swing out to the side independently of the wheels beneath the boiler. Then the front set of drivers on their own axis begin to track through the curve, followed by the rear sets of drivers, rotating independently on their own axis on the hinged frame.

It was such advantages that led Union Pacific to develop the Challenger-type for fast freight use on its rugged operating profile in the West, especially over its crest of the Rockies at Sherman Hill, west of Cheyenne, Wyoming. In all, the UP purchased 105 Challengers between 1936 and 1943. Challengers occasionally pulled passenger trains, but were primarily used in freight service. After a long career, the 3985 was retired in 1962 and stored in the roundhouse at its home terminal of Cheyenne. In 1975 it was placed on display near the Cheyenne depot. A group of volunteer employees restored the engine to service in 1981, and in 1990 it was converted from coal to burn fuel oil. Today's excursion marks the 3985's first visit to Missouri.

Built	American Locomotive Co., 1943
Total Engine Weight	627,900 pounds (in working order)
Weight on Drivers	404,000 pounds (working order)
Tender Weight	441,900 pounds (loaded)
Main Driving Wheels	69-inch diameters
Fire Box Dimensions	15.58 ft. x 9 ft.
Tender Fuel Capacity	5,945 gallons
Tender Water Capacity	25,000 gallons
Boiler Dimensions	94-11/16 inches inside diameter
Boiler Pressure	280 pounds per square inch
Cylinders - Bore/Stroke	21 inches x 32 inches
Tractive Effort	97,350 pounds (pulling power)
Length, Engine & Tender	121 feet 10 7/8 inches
Weight, Engine & Tender	1,069,800 pounds

This map, from a rare July 1897 Missouri Pacific - Iron Mountain public timetable, shows the route of today's excursion south from St. Louis to Poplar Bluff.

Map, historic logos of the Iron Mountain and Missouri Pacific, and research assistance for this publication were provided by the Barriger Railroad Collection, St. Louis Mercantile Library.

