

BIRMINGHAM HISTORICAL SOCIETY

# Newsletter

March 2021

## Rails to Trails ...

### Celebrating the City Created at the Crossing of Two Railroads, 150 Years Ago

Birmingham was founded on December 19, 1871 one month after the arrival of the South & North Alabama Railroad. It was founded to become the city at the center of the North Alabama mineral region. Throughout the ensuing decades, railroads would extend track into the region as industries sought to mine and smelt coal, iron ore, and limestone—the raw materials for making iron—found here in unique concentrations. Birmingham quickly became and remained the South's largest rail and industrial center.

Celebrate Birmingham's Sesquicentennial by reading about these Birmingham rail trails and possibly head out-of-doors this spring to

walk or bike the two publicly accessible ones.

**The South & North Alabama Railroad at Brock's Gap (1871)**  
Elvira Road, Hoover (private road)

**The Red Gap Branch of the Birmingham Mineral Railroad (1889)**  
Kiwamis Vulcan Trail from Vulcan Park to Green Springs Highway (public)

**The Seaboard Airline Track Depression (1906)**  
Rotary Trail Birmingham along First Avenue South from 20th Street South to 24th Street South (public)

#### *The Cut That Created Birmingham*

##### **The South & North Alabama Railroad at Brock's Gap (1871)**

Elvira Road at 3721 South Shades Crest Road on the grounds of the Brock's Gap Training Center, Hoover

Brock's Gap is a natural pass through which Native American trails, the Montevallo Road—a 19th century wagon route—and the South & North Alabama Railroad have passed. Extending 3.5 miles across Shades Mountain, the former railroad connected Shades Valley with the Cahaba River near Helena. At points it cuts through the hard Shades Mountain sandstone. Named for Pinckney J. Brock who acquired the gap in 1858, it is located in Hoover, Alabama today. Hoover's current comprehensive plan calls for a parkway to link Ross

Bridge Parkway to I-459 and Morgan Road. As currently envisioned, a parkway and greenway would pass through Brock's Gap following the former railbed, the handmade cuts and fills that paved the way to the founding of Birmingham.

In 1871, the first train on the South & North Alabama Railroad proceeded through Brock's Gap. Its crossing with the extant east-west line occasioned the founding of Birmingham. In 1872 the Louisville & Nashville Railroad acquired the line and completed it north to Louisville.

The South & North Alabama Railroad was chartered in 1854 to run north from Montgomery to the Tennessee River and open Alabama's mineral regions for development. Construction proceeded during the Civil War with the infusion of Confederate funds. Anticipating the arrival of the rails, railway principals acquired vast acreage in Shades Valley and hired large numbers of laborers to grade and lay track for the railroad, open red ore mining (at today's Red Mountain Park), and begin iron making at Oxmoor and Irondale (at today's Irondale Furnace Park in Mountain Brook). Railroad engineers supervised the building in 1863 of the impressive stone Ross Creek Culvert (in today's Ross Bridge Park in Hoover with stone from the Coward quarry remnants still extant on Shades Mountain). Accessing these ironmaking facilities via rail during the war proved an insurmountable task. Ox carts hauled Confederate iron for munition making at the arsenal at Selma over the culvert and through Brock's Gap. Iron making at Oxmoor continued until 1927; ore mining on Red Mountain until 1971. Coal mining and coke production at the Billy Gould Mines along the South & North Alabama Railroad, near Alabaster in Shelby County, began in the 1850s (today impressive stone coke ovens remain at the Bucks Creek site).

Try as they could the engineers for the South & North Alabama Railroad, chartered in 1854, could not get their railroad up and across Shades Mountain during the Civil War. Finally, in November 1871, the passage through Shades Mountain was achieved and the first train rolled over the track.



South & North Alabama Railroad crossing through 70 feet of hard sandstone at Brock's Gap, with Red Mountain looming in the distance across Shades Valley. *Oven Magic: Book of Southern Recipes*, Linly Heflin Unit, 1940.

Why was this so difficult? Historians cite the unwillingness of the Confederate government to release gunpowder to blast away the rock. A recent field exploration of the still extant railbed provided additional insight into the challenge of achieving the necessary low grade for the 2.5 miles of unrelenting ascent from the Cahaba River to the summit of Shades Mountain. It took more than \$2 million (in today's dollars) of gun powder to get through Brock's Gap. It took a massive amount of manpower—including slave and convict labor—working with levers, derricks, and drills. A *Birmingham News* report, written at the time a second railroad (the still active CSX line) blasted a channel through the mountain, describes the scene.

*"The country is very rough around Brock's Gap and there are a number of deep cuts, high fills and perilous looking dry trestles."*

"Big Developments Near Brock's Gap," *The Birmingham News*, September 13, 1906. Courtesy John Stewart.



Heading out to explore the gap, February 2021. Marjorie White.

## A Report from the Field

On February 28, a scouting crew including two knowledgeable Birmingham railway buffs: John Stewart and Bob Yuill; Jim Langley, President, and Deborah Burtnett of the Hoover Historical Society; Brock's Gap Training Center member, Thomas Abbey; landscape architect Birgit Kibelka, and the author set out to explore the gap.

John Stewart was the best informed of the group having explored the gap with Jim Bennett several years ago. He provided us the following description for our walk along the elevated railbed and descent into the deep cut at the crest of Shades Mountain.

*"Elvira Road extends about a mile south from South Shades Crest Road, forming the entry into the Brock's Gap Training Center. The road follows the old railbed on a tall fill, traversing several 30' to 40' cuts through the hard rock of Shades Mountain before passing through a wider valley on a second embankment, formerly topped by a dry trestle. At Shades Crest Road the original cut lies much lower than the road, creating a now wooded, secluded canyon. Spoil heaps line the top of the cut."*

*About 1955, Barney Wilborn Sr. built a family home and a remarkable concrete arch dam that created Wilborn Lake. In 1962, the Brock's Gap Training Center acquired several hundred acres of this property. In a valley south of the railway cuts, gun bays and shooting ranges provide the opportunity for police and private citizens to sharpen their gun skills, using current technology and also that of 19th century 'Wild West Cowboys' at the center's Cowboy town re-creation."*

John Stewart, author and keeper of the superb [www.bhamrails.info](http://www.bhamrails.info) website

The enormity of the construction project dawned on the explorers as Bob Yuill relates.

*"I made a remark to John [Stewart] when we were in the big rock cut [the depressed section near South Shades Crest Road] to the effect 'What was the big deal in getting through this?' The more I thought about that the more I realized the error in my comment."*

*My comment to John was based on the large amount of fracture rock I was seeing, something that could be broken with wedges and levers and hauled out of the cut by manpower on carts and or wagons. Once the wagons were at the dumping point on the fill the rocks would have been manhandled out of the wagon—a time consuming process."*

*The difficult part was the removal of the large rock that had to be blasted loose, and there were a few sections of very massive and solid rock in that cut. The biggest rocks as we saw were too large for carts. Some 4 axle wagons could have carried the rock out of the cut and to the locations requiring fill—which is why I think those repeating rock piles we saw on the east side of the cut were large rocks lifted out of the cut as they were just too big to transport."*

*Another realization was just how large those [mile-long high] fills we walked on were. Those fills took a lot of time to create. All this excavation work was done by hand!"*

Bob Yuill, railroad historian and steam train restoration expert

Birgit Kibelka comments about the inability of historic topographical maps to tell the full story of this railway project.

*"Our afternoon in the field has been a veritable eye opener for me. I had read about the difficulties of getting the train tracks up the long southern slope of Shades Mountain and had thoroughly studied the historic maps. Due to the large scale of those maps, it was hard to understand the undertaking in detail. It looked confusing with the multiple mountain ridges (Pine Mountain and Chestnut Ridge) that had to be passed in order to get to the crest of Shades Mountain. After seeing the cuts through the ridges and the enormous fills, it becomes very clear what the 1905 map is showing and why the trestles that are always mentioned in historic accounts were also needed. The Brock's Gap Training Center property happens to contain all three of the methods used (cut, fill, fill and trestle). What an incredible coincidence!"*

Birgit Kibelka, landscape architect and planner, March 1, 2021

Those who explored the gap together concluded that our walk through railway history was a beautiful, forested walk through an amazing feat of grit and perseverance made possible by savvy engineers and multitudes who chiseled, blasted, carted, lifted, and otherwise accomplished the removal of immense sandstone rocks to create enormous fills and cuts that permit the railroad to rise 66' per mile at a 1.25% grade as the South & North Alabama Railroad climbs the rugged south slope of Shades Mountain. While a 924' long and 40' high wooden pile trestle that extended across today's sag in Elvira Road at the shooting range no longer remains, the Brock's Gap Training Center has done a remarkable job of integrating their

activities within the valley setting while preserving the railbed, fills and cuts completed in 1871.

Today the historic railroad bed along Elvira Road connects South Shades Crest Road with

Stadium Trace Parkway. Across the bridge at the parkway a mountain bike park was recently opened and might become a perfect scenic anchor for a future rail trail and greenway through Brock's Gap Park.

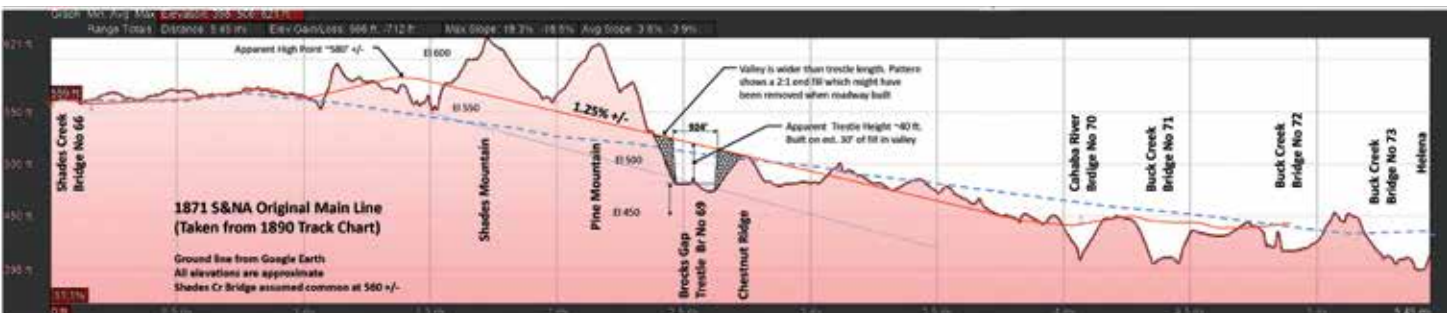


John Stewart and Birgit Kibelka, contemplating the hard rock cut at the crest of Shades Mountain, February 2021. Marjorie White.

To one who has never seen anything of the sort, Brock's Gap presents a scene of curiosity and wonder. The Shades Mountain is here broken into a series of billowy ridges which, at an old cabin once occupied by a man named Brock, terminate in a solid backbone of almost unstratified limestone over which ran the old dirt road between the towns of Montevallo and Columbiana in Shelby county and the town of Elyton in Jefferson county. These ridges have been cut through by the South & North road and the valleys between them have been filled and trestled so that the voyager finds himself at one moment from thirty to seventy feet beneath the surface of the earth and the next from forty to seventy three feet above it. A man can hardly stoop to the depth of his own personal insignificance in the grand economy of creation until he whirls along in an open car over that half mile of trestling seventy three feet above the surface of his Mother Earth!

The cut through the solid limestone rock at the Gap proper, is over sixty feet, perpendicular in depth and about twenty-five or thirty feet in width at the top. Almost every foot has been cut by the agency of gunpowder, at a cost of 1,800 kegs of powder and largely over \$100,000 in cash. Some of the solid blocks of stone, removed by the derricks from the cut, are from four to six feet long and from two to three in width and depth; and as they lie there on the margin of that cut, piled up in vast conical mounds averaging from fifteen to twenty feet in height, they constitute a lasting monument to the great superiority of human brains over human muscle. They also commemorate the wonderful perseverance, energy, pluck, and enterprise of that truly wonderful man, Colonel J. F. B. Jackson, contractor on that part of the route, under whose personal supervision this stupendous work was inaugurated and pushed forward, in less than twelve months, to a successful and triumphant completion.

The Montgomery Advertiser, July 17, 1871. Courtesy John Stewart.



Profile of the South & North Original Main Line, 1871. Courtesy John Stewart. The line served as the L.&N. mainline from 1872 to 1908.

## The Loop that Integrated Birmingham's Iron Industry

Red Gap Branch of the Birmingham Mineral Railroad (in service: 1889-1933)

From 1884 to 1890, the Louisville & Nashville Railroad, successor to the South & North Alabama, built the Birmingham Mineral Railroad into a giant 156.22-mile loop about the city center. This same-day delivery system provided Birmingham iron producers—the Sloss, Woodward, and Tennessee Coal & Iron-U.S. Steel companies—a competitive edge which helped the region become the nation's premier foundry iron producer from the 1890s through the 1960s.

Due to the proximity of natural resources to production facilities, the rail links extended from mines to mills produced “vertical integration,” a term that refers to the ownership of all assets of a company's production and the hallmark of the Birmingham district.

*“From Mother Earth to Finished Product all in a mile or two.”*

Slogan, Birmingham Stove & Range Co.

Birmingham's distinctive landscape feature is the Red Mountain, red for the immense deposits of red iron ore that once visibly outcropped at its crest. With the construction of the Mineral Railroad, red ore mines were opened along the mountain to access its riches and transport them to area furnaces for smelting.

Constructed in 1889, the Red Gap Branch extended 10.2 miles along the northern face of Red Mountain from Lone Pine Gap at today's Vulcan Park east to Grace's Gap at today's Red Mountain Park and across the southern face west from Vulcan Park to Red Gap at today's Irondale. (Brown signs mark the route today.)

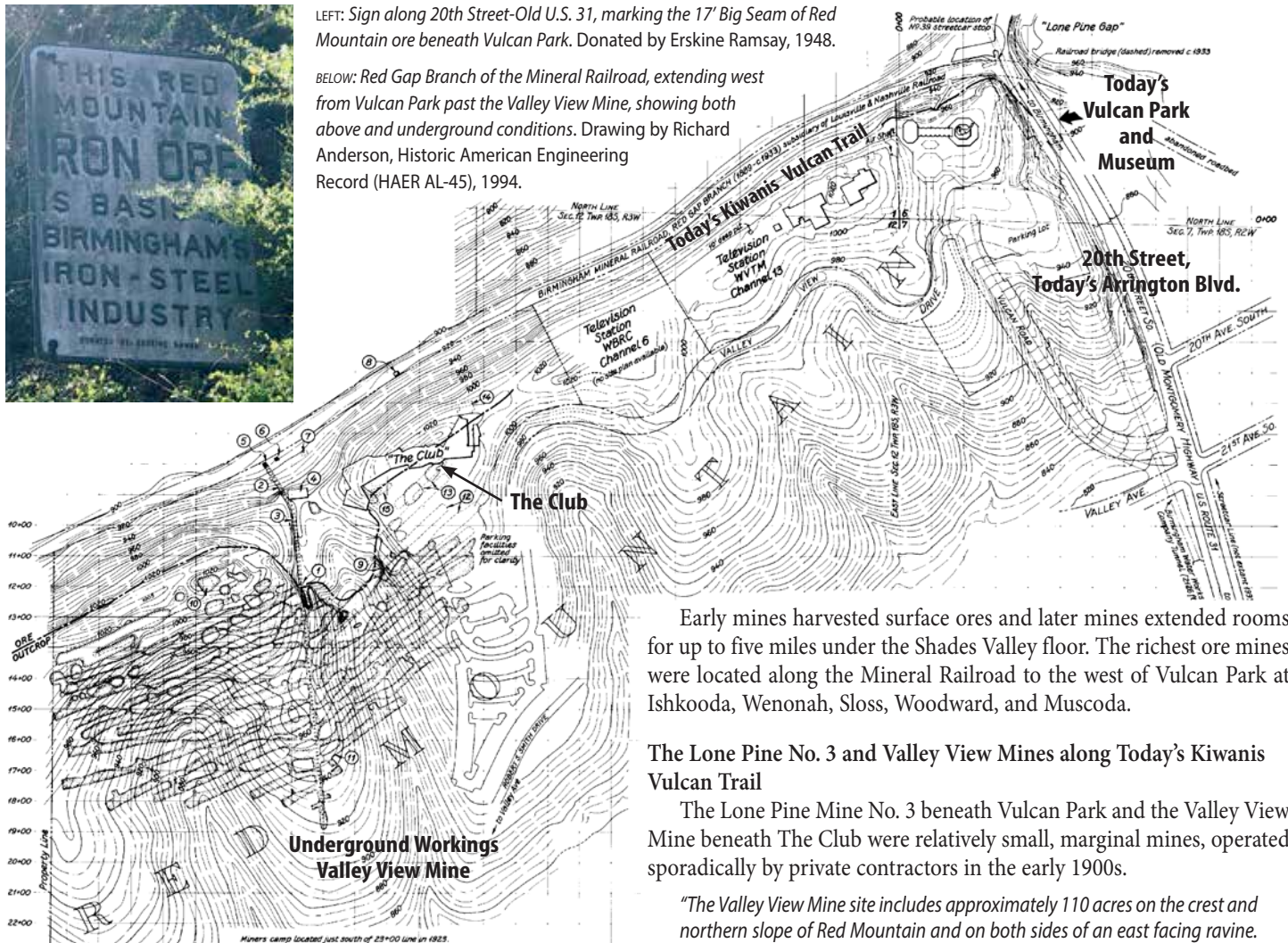
The Red Gap Branch crossed Red Mountain at 20th Street (today's Arrington Boulevard), just east of today's Vulcan Park. In 1910 excavation of a 72' cut permitted the passage of automobiles and a street-car line “over the mountain” along 20th Street. The new road ran under the then extant railway bridge. The 1930s widening of 20th Street into the Montgomery Highway U.S. 31 exposed the 17' Big Seam of Red Mountain iron ore. In 1937 rock removed to complete the highway cut was used to form the staircase into Vulcan Park at today's Kiwanis Centennial Park at the beginning of the Kiwanis Vulcan Trail along the former Red Gap Branch of the Mineral Railroad. This segment of the railway went out of service in 1933. The track from Vulcan Park to English Village was removed in 1943. Rail service continued from English Village to Red Gap until 1954 when the last segment of the Red Gap Branch was retired.

The Red Gap and other segments of the Mineral Railroad accessed the more than 100 red ore mines opened into the ore reserves and operated from the 1860s into the 1960s.



LEFT: Sign along 20th Street-Old U.S. 31, marking the 17' Big Seam of Red Mountain ore beneath Vulcan Park. Donated by Erskine Ramsay, 1948.

BELOW: Red Gap Branch of the Mineral Railroad, extending west from Vulcan Park past the Valley View Mine, showing both above and underground conditions. Drawing by Richard Anderson, Historic American Engineering Record (HAER AL-45), 1994.



Early mines harvested surface ores and later mines extended rooms for up to five miles under the Shades Valley floor. The richest ore mines were located along the Mineral Railroad to the west of Vulcan Park at Ishkooda, Wenonah, Sloss, Woodward, and Muscoda.

### The Lone Pine No. 3 and Valley View Mines along Today's Kiwanis Vulcan Trail

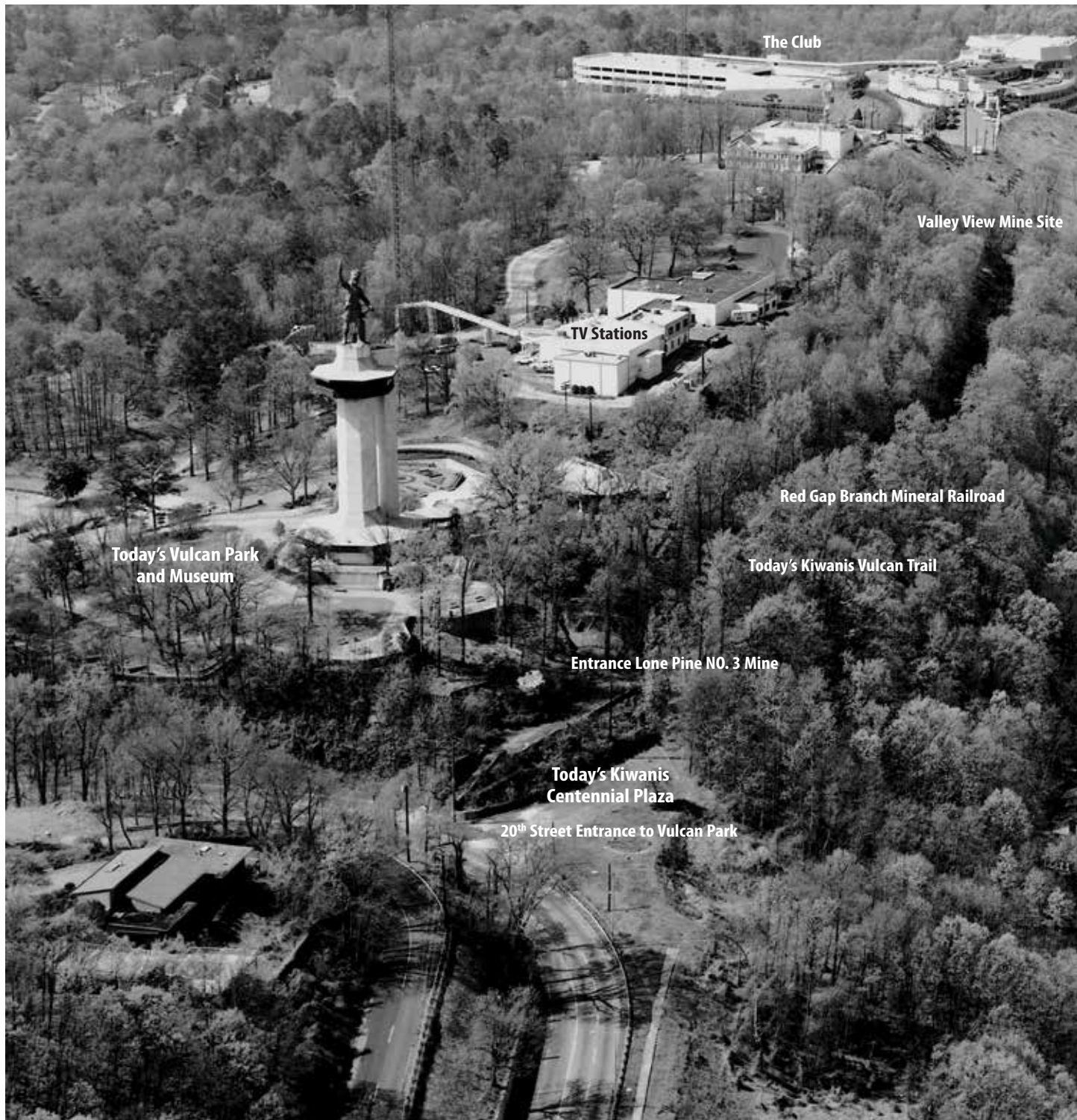
The Lone Pine Mine No. 3 beneath Vulcan Park and the Valley View Mine beneath The Club were relatively small, marginal mines, operated sporadically by private contractors in the early 1900s.

*“The Valley View Mine site includes approximately 110 acres on the crest and northern slope of Red Mountain and on both sides of an east facing ravine.*

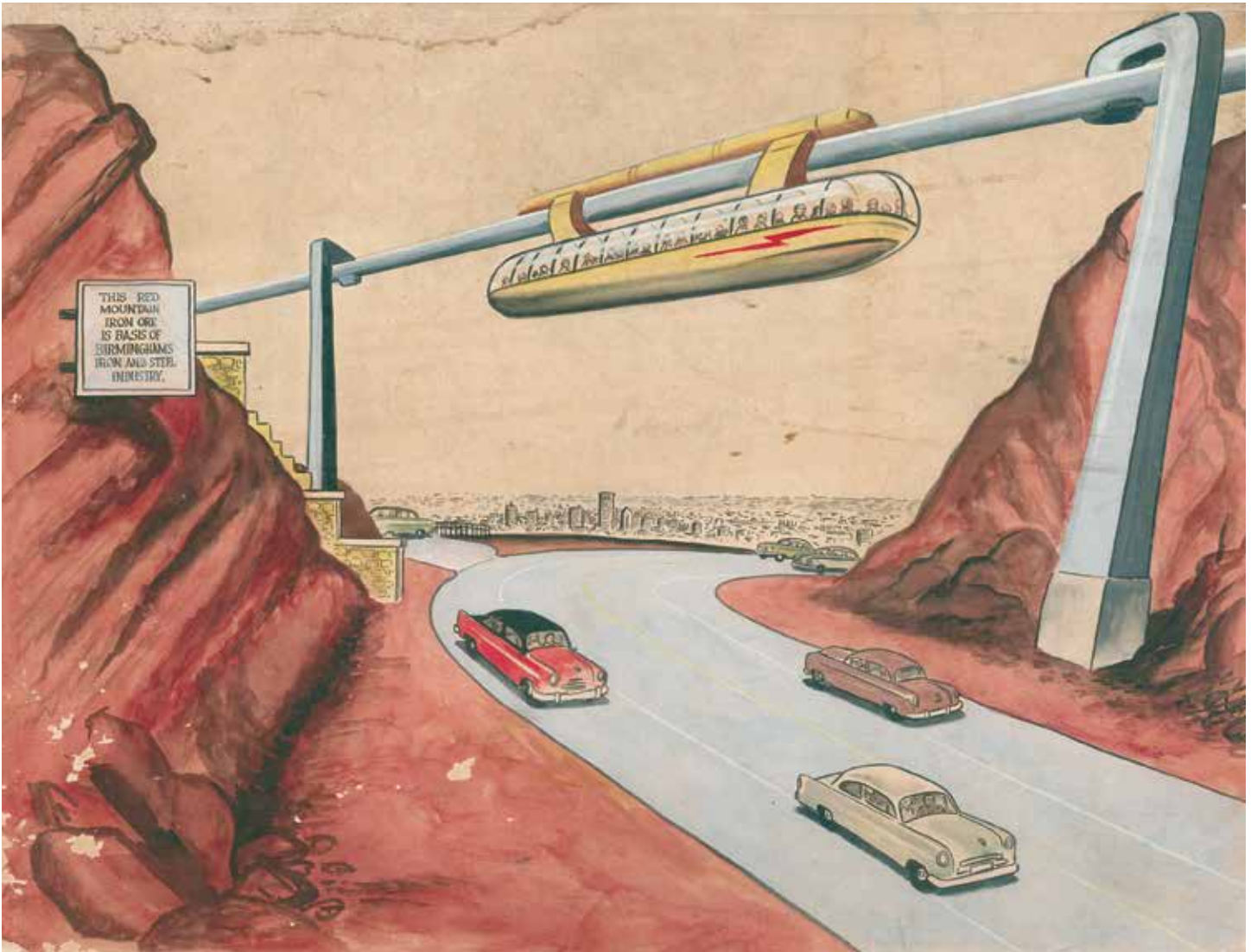
Here ore was surface mined on the top of the ridge and down the flanks of the east facing ravine, then drifts were driven into the ridge on the strike of the seam and later an underground slope extended 700 feet into the mountain's inner recesses and ore was extracted from both sides of the slope. The top 10 to 14 feet of the Big Seam were mined over a 20-year period from c. 1904 to 1924. Visible remains of the former mining activity include the entrance to the slope mine via a concrete portal inscribed '1906

Valley View 1924,' the railway alignment, a railway retaining wall, the hoist house foundation, the crusher foundation, crusher motor foundation, possible boiler house site, pump house, possible mine supervisor's house site, sealed mine drifts, and surface subsidence pits."

Lewis J. Shannon, *Historical Report on the Valley View Iron Ore Mine Site*, for the Historic American Engineering Record, January 29, 1994.



Aerial View of the Red Mountain Ridge, looking west at Vulcan Park and U.S. 31-20<sup>th</sup> Street - Today's Richard Arrington Jr. Boulevard, bottom left, along the Mineral Railroad Bed to Green Springs Highway. Jet Lowe, HAER, 1993.



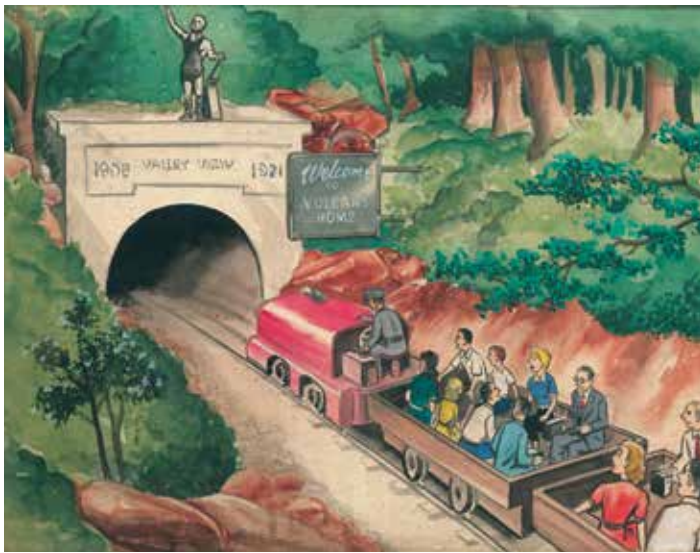
*Monorail crossing 20th Street, departing the Vulcan Iron Wonderland for the Birmingham Zoo, one of a series of undated promotional watercolors, now in the Collection of the Birmingham Historical Society.*

### **The Club and Plans for Vulcan’s Iron Wonderland within the Valley View Mine, 1950s to 1970s**

With mining closed for many years, new plans for the mountain-top mining site overlooking the city emerged. By 1951, “The Club”—a private club with facilities for meetings, receptions, dining and dancing—opened, its support pilings driven through the mine tunnels to bed rock, its cooling system using the 64-degree water of flooded mine chambers below. By the late 1950s both the Chamber of Commerce and The Club’s management proposed a rail link from Vulcan Park to a subterranean boat ride into the former mining chambers, passing historic cycloramas and murals telling the story of Red Mountain mining. Similarities to California’s Disneyland, “the metropolis of nostalgia, fantasy, and futurism” opened in 1955, abound. This part of the later plan to upgrade Vulcan Park in 1969 to 1971 never materialized, and the Valley View Mine site became increasingly overgrown. The Red Gap Branch of the Mineral Railroad remained open as a utility corridor.



*View of the Valley, the original watercolor caption. BHS Collection.*



*Mouth of the Earth Opens to Swallow you in Wonderland, the original watercolor caption. BHS Collection.*



*Fun-and-intrigue for the Family in the Depths of the Earth, the original watercolor caption. BHS Collection.*



*The Iron Museum Unfolds in the Underground Cavern, the original watercolor caption. BHS Collection.*

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## Redeveloping the Railbed as the Kiwanis Vulcan Trail, 1979-the Present

In 1979, the Five Points South neighborhood commissioned a study for a public trail along the abandoned right-of-way of the Mineral Railroad from Vulcan Park to Green Springs Highway. The study recommended enlargement of facilities at Vulcan Park, enjoyment of the spectacular views of Birmingham and of the relatively undisturbed natural area along the trail, and interpretation of the Valley View Mine site ruins. With the support of the Birmingham Kiwanis Club and in celebration of their 100th anniversary, the Kiwanis Centennial Plaza, a new plaza beneath Vulcan Park, was completed at the northern entrance to the park from 20th Street. The Kiwanis Centennial Plaza became reality in 2018 and now accesses the park, the Lone Pine Mine site, and the Kiwanis Vulcan Trail. The trail joins the Freshwater Land Trust's growing Red Rocks Trail System of current and future greenways extending across the Birmingham region.



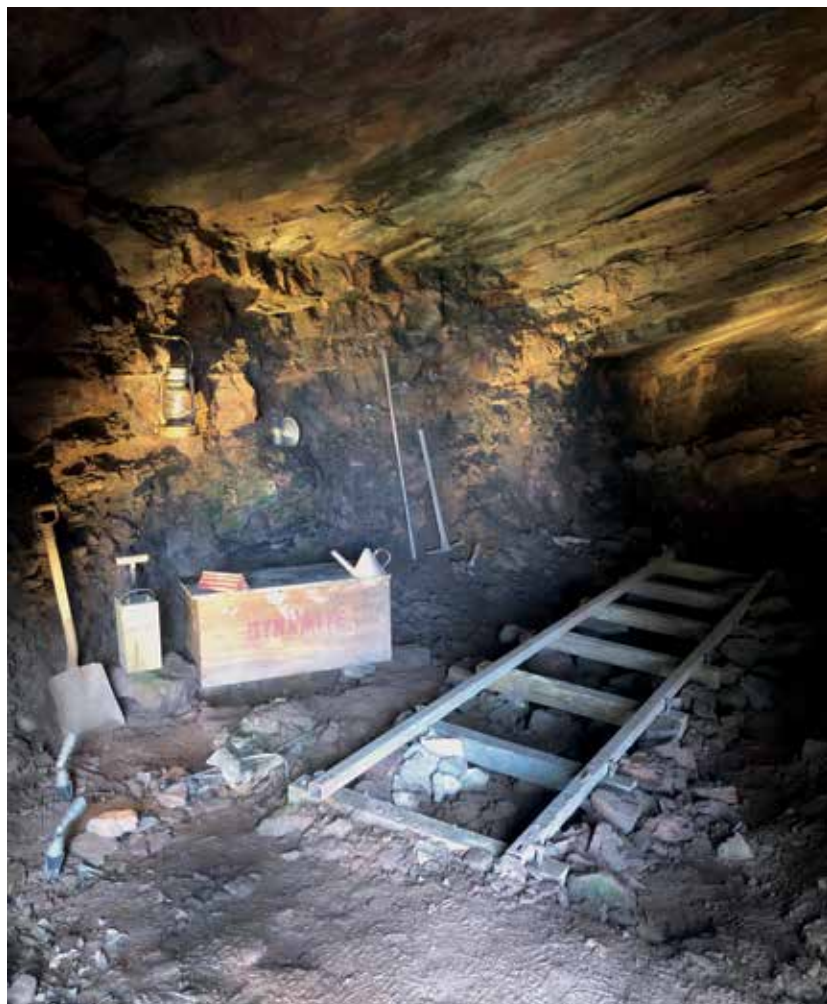
ABOVE: *Kiwanis Vulcan Plaza, with the staircase to the Lone Pine Mine and Vulcan Park Museum, left, and entrance to the trail, right, 2021. White.*

RIGHT: *Visitors from France checking out the view of Vulcan as they set out on the Kiwanis Vulcan Trail, 2021. White*

BELOW: *Birmingham skyline from Lone Pine Gap, just east of the Kiwanis Vulcan Trail, 2020. Abraham Odrezin.*







### Peeking into the Lone Pine No. 3 Mine

In 2020, Vulcan Park cleaned away cave-in debris and reopened the entrance to the Lone Pine Mine No. 3. Today park and trail visitors can look into the c.1900 mine chamber where miners' picks and crow bars and explosives suggest their handiwork in extracting the mountain's riches.

RIGHT, TOP: *Entrance to the Lone Pine Mine with the Vulcan Park Museum, above, 2021. White.*

RIGHT, BELOW: *Mining Chamber, Lone Pine Mine, 2021. White.*

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## Another Remarkable Engineering Feat

### Seaboard Airline Track Depression (1904)

### Rotary Trail Birmingham (2016)

Along First Avenue South from 20th Street South to 24th Street South

The extension of the Seaboard Air Line Railway, from Atlanta, Georgia to Birmingham was completed in 1904. The double track entrance to its newly built freight station (today's Alagasgo Center for Energy Technology at 20–20th Street South) passed through the heart of the business district of the city along First Avenue South. For the most part, these tracks were laid on the street surface involving no difficult or expensive work. However, due to topographic conditions it was necessary to depress the four-block stretch between the grade crossings at 24th and 20th Streets, involving many difficulties in drainage, in securing overhead clearances beneath the existing north-south viaducts, and in maintaining street traffic during construction. Heading to 20th Street, engineers achieved a 1 percent increase in grade over the 1,830-foot-long track depression.

*"It was an amazing engineering feat back then. They had lots of problems with the traffic flow of the railroads coming into Birmingham. Seaboard was very innovative with their track depression arrangement."*

Thomas Denny, archival researcher, 2020

Concrete retaining walls line the sides of the track depression. The coping was designed to shed rainwater onto the street and also to present "an uninviting seat for loafers and be 'boy proof' offering no temptation as a walkway." The walls from top to bottom were of concrete poured as one monolithic mass, then a new technique. Also new was the mixing of cleaned and crushed slag from area furnaces into the concrete which was prepared by hand and by mixer at the site.



**Completed Track Depression, Looking West from East End at 24th Street.**

"Track Depression of the Seaboard Air Line Railway at Birmingham, Ala.," by Philip Aylett, *Engineering News: A Journal of Civil, Mechanical, Mining and Electrical Engineering*. Courtesy Thomas Denny. The railbed is 26' wide and lined with concrete walls from 1' to 16' below street level.



**Looking East from 22nd Street After Core Excavation, Showing Work of Dressing Roadbed.**

"Track Depression of the Seaboard Air Line Railway at Birmingham, Ala.," by Philip Aylett, *Engineering News: A Journal of Civil, Mechanical, Mining and Electrical Engineering*. Courtesy Thomas Denny.

OPPOSITE PAGE: "The Cut" along First Avenue South, viewed from the Daniel Building showing the still extant tracks, January 2004. Courtesy John Stewart.





Seaboard Railway's "Orange Blossom Special," its deluxe passenger train, pulled by a brand-new diesel electric locomotive, parked for inspection at the Seaboard freight

depot on 20th Street South, December 18, 1938. Photograph courtesy Marvin Clemons. The depot is today's Alagasco Center for Energy Technology.

### From "The Cut" to the Rotary Trail, 2016

To celebrate their 100th anniversary, the Rotary Club of Birmingham repurposed this piece of industrial infrastructure as a public green space. The concrete retaining walls were restored, and new steps and ramps provided access to the rail trail from street level. Site furnishings and landscaped areas along the trail provide areas to sit and gather. A new filtration system reduces the amount of storm-water run-off into Village Creek and the city's water system.

At 24th Street South, the Jones Valley trail continues eastward to 32nd Street South and Sloss Furnaces along the former Seaboard railway which remained in service well into the 1990s for the annual visit of the circus train. Plans have been announced that construction of the pedestrian greenway east to 41st Street in Avondale will begin soon, with a link up to the Continental Gin Co. site in Avondale and then further east to Ruffner Mountain Nature Preserve at a later date.

### Society Calendar

The Annual and other meetings of the Society, the release of our forthcoming book: *The City Beautiful: Compliments of George Ward*, and gatherings of the Heritage Society are anticipated to be scheduled for fall 2021, pending resolution of the pandemic.

Volunteers are busy researching the history of Arlington Antebellum House and Gardens and "Old Elyton" and neighborhoods and sites across the city for our forthcoming guidebook. Wednesday mornings find us outside, cultivating our rose, herb and vegetable garden at Sloss. The Alabama Plein Air Painters will paint at our garden on April 25. Please mask up and come join us.



Rotary Trail, May 2, 2016, <https://www.facebook.com/rotarytrail/photos/>