

## BRIDGING THE PARKWAY

This newsletter calls attention to the importance of historic bridges and parkways and provides information to help inform decisions about preservation, rehabilitation, and other management issues surrounding bridges and parkways. National

Historic Preservation Month 2011 calls us to focus on “the importance of preserving landmarks from our past as touchstones of stability in times of change.” Hopefully, readers will become more-informed stewards of our historic road resources.

### *A New Road for a New Era—The “New” Montgomery Highway*

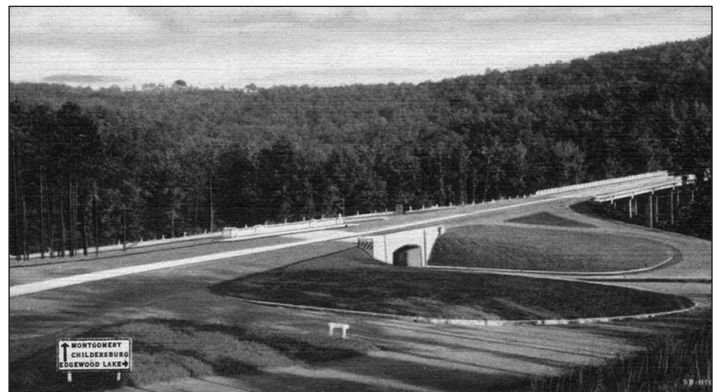
In the late 1930s, the numbers of U.S. motorists were increasing. The Good Roads Movement and the availability of federal aid created opportunities for more people to travel via automobile and to visit tourist destinations, not just relatives. Building roads employed thousands of unemployed workers during the Great Depression and met community aspirations to improve streets within city limits and to link cities to other places.

From 1936 to 1943, Alabama’s highway department and county commissions across the state devoted time and talent to improving roads: grading, draining, surfacing, straightening, widening, and constructing and reconstructing bridges and culverts. Typically, chert and borrow pits were opened near the site of these projects to provide the materials to surface and build roads. Roadsides were cleaned, and drainage ditches constructed. By the early 1940s, the old Montgomery Highway, then proudly called “U.S. No. 31,” became the first improved four-lane highway across the state of Alabama.

Improving U.S. No. 31 across Jefferson County received considerable attention from highway and county officials. The upgrade also helped develop a major tourist destination at Vulcan Park. Highway workers built the access road and drainage ditches up to the park site. Vulcan Park took its place alongside the Southeast’s top tourist attractions: Bellingrath and Bok Gardens in Theodore, Alabama, and Lake Wales, Florida, respectively. Motorists heading from the north to Florida stopped by Vulcan each year on their journeys.

Most highway construction funds during this period were federal funds. U.S. 31 was part of the “Federal Aid Highway System.” In 1936 and 1938, appropriations earmarked for U.S. 31 are recorded in Works Progress Administration (WPA) financial records. Jefferson County also received additional WPA appropriations for road and bridge construction. Because WPA funds paid for workers only, significant numbers of laborers worked on the project and operated the borrow pits to obtain materials to build the roads.

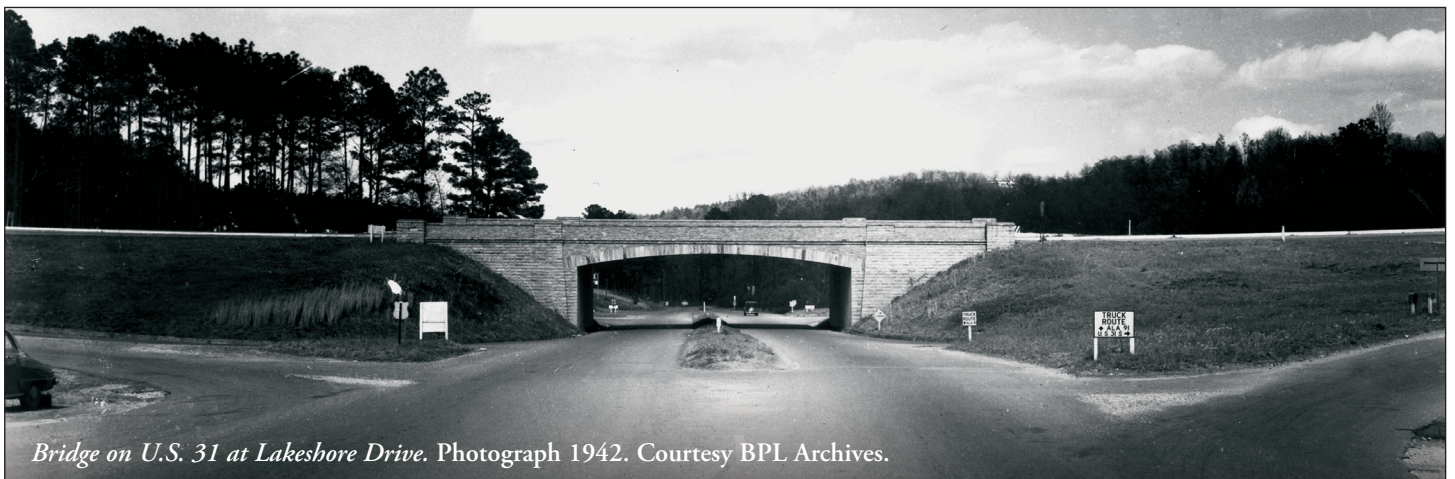
U.S. 31 north of Birmingham was improved first, then the sections through and south of the city. The state highway department required that cities provide funds and condemn property for right-of-way acquisition when such highways passed through their limits.



*Viaduct Across Shades Creek.* Linen postcard, c. 1946. Collection of J.D. Weeks.

Photographs of the completed project taken in the late 1940s show the Lakeshore Bridge and the viaduct across Shades Creek. Shades Valley is a heavily forested wilderness at this time. In the postcard image, a painted wooden sign points the way to Montgomery and to the Edgewood Lake; a few houses dot the Shades Mountain ridge in today’s Vestavia. The WPA and the county health department had just finished improvements to the Tuberculosis Sanatorium, today’s Lakeshore Rehabilitation Hospital, further reinforcing the remote character of this area.

A 1938 WPA appropriation of \$318,810 to the highway department identified a proposed road and bridge project within Homewood city limits: “Improve 31 from Homewood to top of Shades Mountain.” Minutes of the Homewood City Council’s February 27, 1939, meeting define the project as “straightening Highway No. 31 eliminating the curves on the north side of Shades Mountain and the building of a viaduct across Shades Creek and the proposed highways paralleling said creek...” Even though the city was struggling financially, local business people and city officials were determined to support the road project. “We are vitally interested in this work and want to see it through,” the Council Minutes note. For the purchase of six acres of right-of-way—“from Bob’s Tourist Camp to the city owned property on the south side of Shades Creek Parkway”—Homewood officials approved \$5,000. It appears that the Jefferson County Commission agreed to loan the city \$4,000 at the same time.



*Bridge on U.S. 31 at Lakeshore Drive.* Photograph 1942. Courtesy BPL Archives.

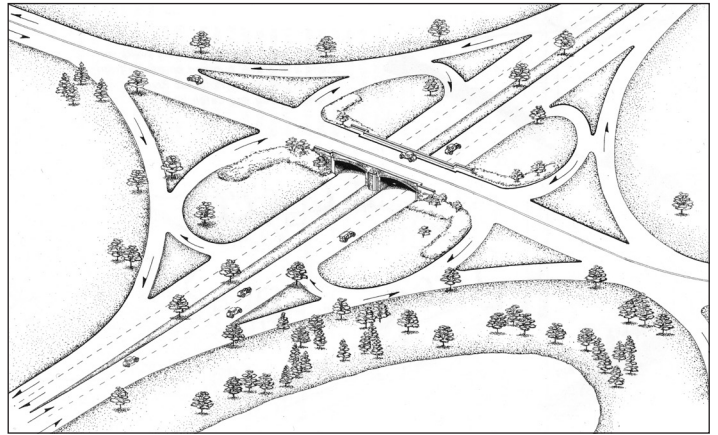
## Parks and Parkways: The Lake and Lakeshore Parkway

Edgewood Lake was created in 1914 through the damming of Shades Creek near Columbiana Road. The 100-plus acre lake extended more than two miles eastward from Columbiana Road across the floodplain. Shades Mountain was mirrored in its waters. The intent of building Edgewood Lake and its clubhouse was to attract pleasurable outings and to encourage prospective home builders to this area. Motorists were encouraged to come out for a drive, and roadways were graded about the lake; one of these became today's Lakeshore Drive. A streetcar line was extended to the lake across Red Mountain, at today's Vulcan Park, along Central Avenue and Broadway until it reached Shades Creek. Streetcar service did prove a boom to home building along the tracks, but not about the lake.

The creation of lakes and open areas in the floodplains of Shades Creek to provide for recreation as well as storm water management followed noted national planner Warren Manning's *Birmingham District Plan* of 1916, the 1924 Olmsted Brothers' *Park Plan for Birmingham*, and the 1929 Manning *General Plan for Mountain Brook*. Both Manning and Olmsted Brothers proposed a sequence of lakes and parkways for Shades Valley, recommending the parkway along Shades Creek—today's Mountain Brook and Shades Creek Parkways and Lakeshore Drive, and the parkway across the Shades Mountain ridge, today's Shades Crest Road. The planners also called for bluff-top residences and for the preservation of the bluffs of Shades Mountain. Preservation of the bluffs was accomplished through deed restrictions and the dedication of Jemison Park in Mountain Brook. In addition, by the late 1920s, the Mountain Brook Club and the Hollywood Country Club bordered the parkway and served as social and recreational facilities. Homewood's 16-acre Shades Creek Park, another extension of this park system plan, was acquired in 1931. During 1933, WPA workers built a baseball diamond, tennis courts, and barbecue pits at the site. Shades Creek Park was later sold to provide land for today's Colonial Brookwood Village and office complexes, the lake having been drained after World War II.

The Lakeshore Parkway remains and, thanks to the dedication of many individuals and groups, is a gorgeous drive along Shades Creek at the base of Shades Mountain. Planned in the 1920s, the road received WPA funds to improve it along Shades Creek. The exact extent of the improvement is not known. However, a broad right-of-way was acquired for the parkway which continued the Mountain Brook Parkway built in 1927.

Parkways were pioneered in the national park and parkway system during the 1930s. Typically, these drives through scenic areas provided for free-flowing traffic and limited access along the perimeter. Right-of-way was wider than other roads of the era, medians and edges landscaped, and commercial roadside development eliminated. These considerations made for a safer, more



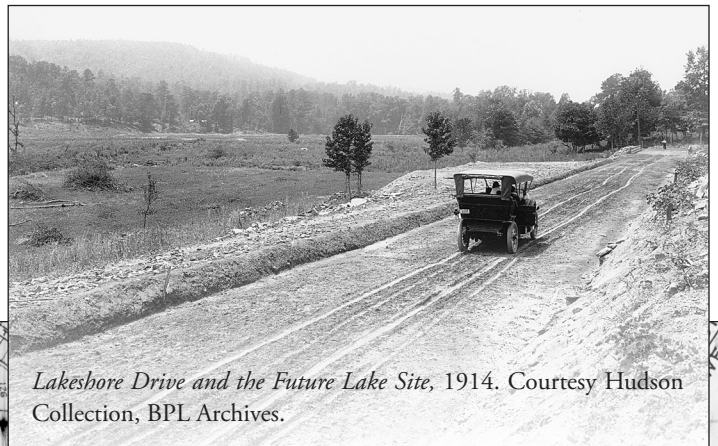
*Fourteenth Street Highway Bridge, George Washington Parkway, designed 1930. Courtesy George Washington Memorial Parkway Documentation Project. Ed Lupyak, Historic American Engineering Record—National Park Service, 1994.*

The first cloverleaf built by the federal government.

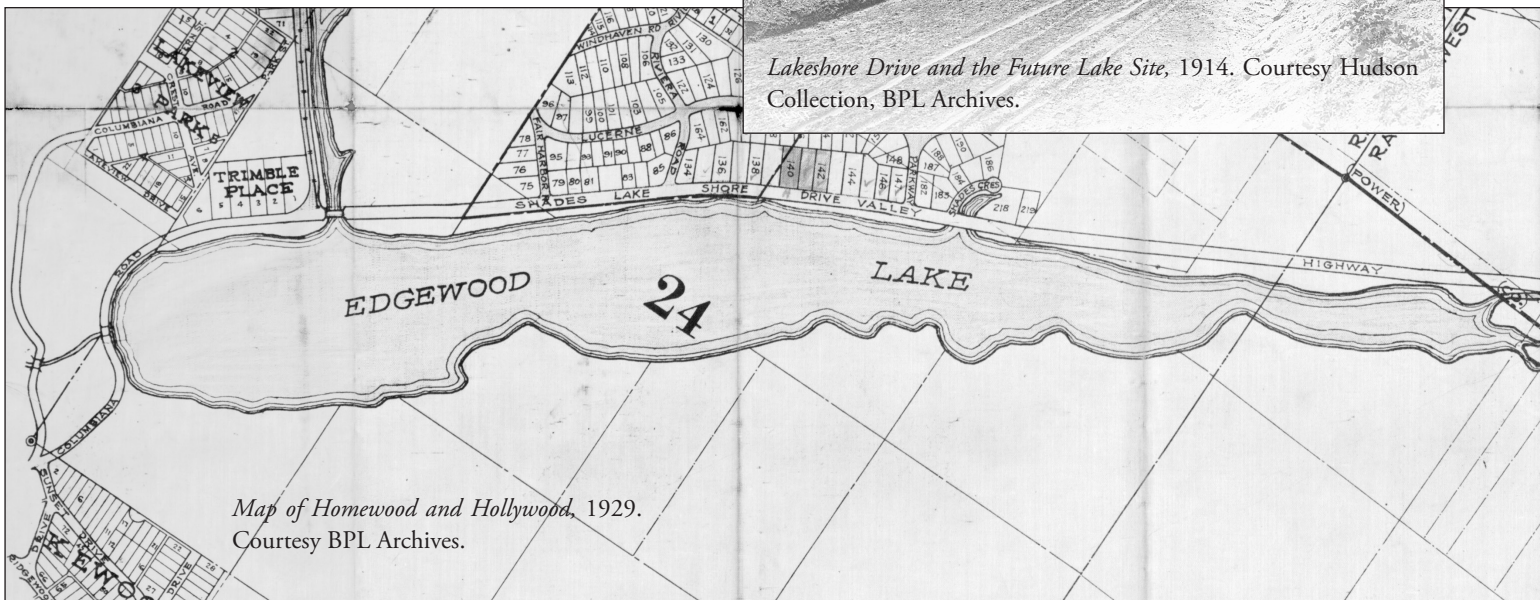
efficient motorist experience at the low speeds of the era. Motorists were to enjoy the landscape through which they traveled.

Within a decade, the Boston-based Olmsted Brothers park-and-campus-planning firm would select, from many sites across the state that the firm assessed, Lakeshore Drive as the site of the new Howard College campus, today's Samford University. Olmsted Brothers designed the campus layout, extending the development of the lake shore for institutional use. Later, and after law suits opposing the proposed change of land use, the cities of Homewood and Mountain Brook would rezone parklands along the creek for the Brookwood Shopping Mall and offices. Brookwood Hospital, literally, would suspend its operations on the bluffs of Shades Mountain. And Southern Progress Corporation would locate its headquarters at the edge of the former lake bed.

Today, 32,000–35,000 motorists drive up and down Shades Mountain each day on U.S. 31, taking in the scenic views of Homewood and the Birmingham region beyond. Despite all the new developments, Lakeshore Drive remains as planners intended: a parkway with limited access and scenic views. And in 2008, 65 acres along “Old 31” became a dedicated forest preserve.



*Lakeshore Drive and the Future Lake Site, 1914. Courtesy Hudson Collection, BPL Archives.*



*Map of Homewood and Hollywood, 1929. Courtesy BPL Archives.*

## The Lakeshore Bridge-The R.H. “Bob” Wharton Bridge

The U.S. 31 bridge over the Lakeshore Parkway is a spandrel arched bridge constructed of reinforced concrete and faced with native limestone. The stone was probably quarried nearby, rooting the structure to its natural surroundings. The ring stones (*voussoirs*) are set in a Moderne style used in the 1930s for bridge design. This style of the bridge is similar to that of bridges constructed at this time in America’s National Parks and along its national parkways. Similarities exist to the Stoneman Bridge in Yosemite National Park, the Baring Creek Bridge in Glacier National Park, and the Christine Falls Bridge in Mt. Rainier National Park as well as the bridges on the George Washington Memorial Parkway, across the Potomac River from Washington, D.C.

Bridges of this era were designed by architects and landscape architects. Often these professionals designed only the stone facings and worked in concert with engineers on the structural considerations. Birmingham architect E. B. Van Keuren is thought to be the designer of the Lakeshore Bridge. Harry Hendon was the County Engineer. R. D. Jordan was the Division Engineer for the state. The bridge was completed by 1942.

The bridge has two characters: one for motorists along U.S. 31 and the other for those on the Lakeshore Parkway. The spandrel walls along U.S. 31 are faced with finely detailed, stone belt coursing. The deck width is 50.2 feet, which includes sidewalks on both sides of the highway. The 69.9-foot arch across Lakeshore is made up of large ring stones. (This arch width is typical of parkway bridges.) The total length of the bridge is 139.1 feet. The bridge crosses the parkway; then the highway is supported on concrete piers across Shades Creek before ascending Shades Mountain.

The bridge is eligible for listing on the National Register of Historic Places.

But the bridge is not just a bridge; it is a *cloverleaf interchange*. A postcard image of the late 1940s advertises the new bridge as a “cloverleaf design.”

In the late 1930s, a cloverleaf bridge was cutting-edge technology. The first U.S. cloverleaf bridge made the front cover of *Engineering News* in 1931 (the Hoover Dam appeared on the rear). At this time, the National Park Service had designed and

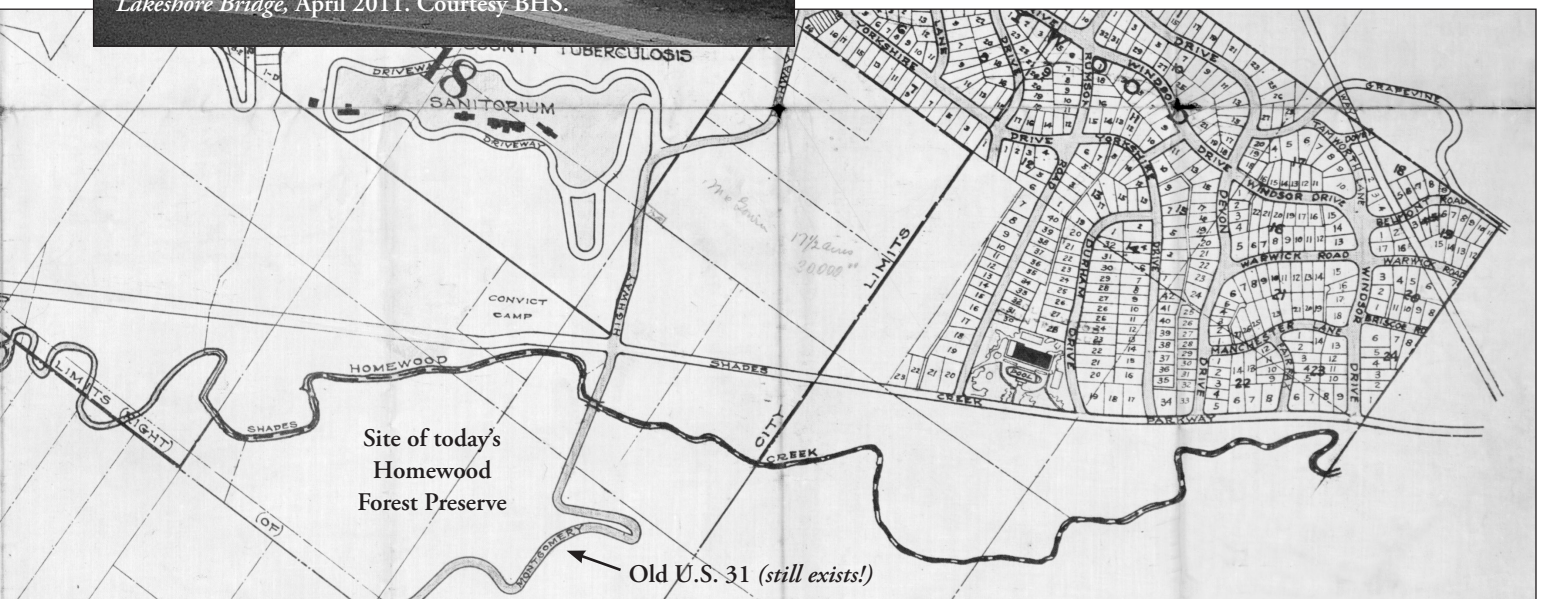
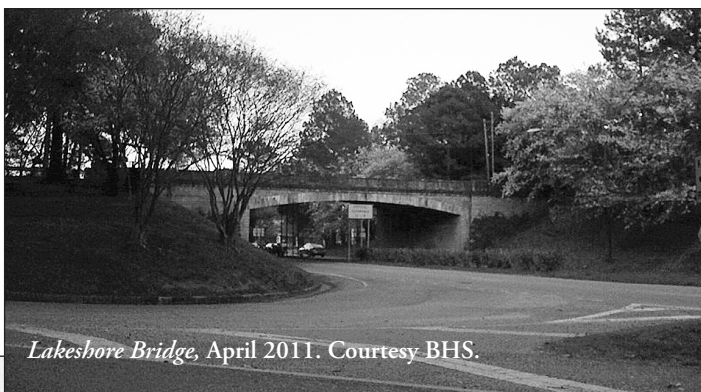
built a model of the Fourteenth Street Bridge on the George Washington Memorial Parkway and was trying, with the help of D.C. newspapers, to prepare motorists for how well it would function. This design for free-flowing traffic did not require the use of traffic signals. Motorists could merge from one road to another without braking.

Cloverleaf interchanges worked so well that they later became synonymous with the Interstate Highway System, but when the Lakeshore Bridge was built, there weren’t yet many of them. The first cloverleaf in the United States opened in 1929 on today’s Route 1 in New Jersey; the first in Europe opened in 1935 in Slussen, Sweden, and in 1937 a cloverleaf was built in Leipzig, Germany. Both European designs remain in use today. In the United States, traffic engineers don’t like cloverleaf designs as many fender-bender accidents occur when motorists stop without warning, and these interchanges were often built without merge lanes. During the era of intense interstate construction, there were jokes about the cloverleaf becoming the national flower, but these structures are fast disappearing today. New Jersey replaced the first cloverleaf design with a diamond-style interchange. This original interchange on one of the busiest highways in America was designed for 65,000 motorists daily.

The Lakeshore bridge handles 32,000–35,000 vehicles daily, but a Target store is soon to open in Colonial Brookwood Village!

The Bob Wharton Cloverleaf Bridge-Lakeshore Bridge is part of the first cloverleaf intersection in the state of Alabama and possibly one of the oldest remaining cloverleaf bridges in the nation.

- The bridge is built of reinforced concrete and was completed by 1942.
- The bridge employs naturalistic stonework and showcases Depression-era workmanship at its best.
- The use of native stone on the bridge facing and guard walls mirrors the texture and hues of adjacent outcrops, tying the structure to its site.
- The bridge is sized to the parkway that it crosses.
- The parkway, with its mature vegetation and landscaped medians, is a joy to travel.
- For Homewood citizens, the bridge is the “gateway” to their city from the south. When they cross this bridge, they know they are “home.”
- To all who drive Lakeshore Parkway and U.S. 31, the bridge is a venerated landmark.



## The Lakeshore Bridge

1943

The new bridge at Lakeshore Parkway-Drive\* officially became the R. H. "Bob" Wharton Cloverleaf Bridge, so named by the Homewood City Council. The structure honors Bob Wharton, President of the Jefferson County Commission from 1939 to 1945, for his "unselfish and untiring efforts" that were instrumental in building the bridge, the Lakeshore parkway, and the new U.S. 31. The intent of the citizens "to forever signify the appreciation of the people of the municipality" to the Commissioner is expressed at the bridge with a commemorative plaque.

\*Today's parkway is known as Shades Creek Parkway from Cahaba Road west to U.S. 31. Lakeshore Drive runs from U.S. 31 east to Oxmoor. Mountain Brook Parkway continues the drive to the east.

2007

"The bridge is **functionally obsolete**. It does not have a structural problem.... It is close enough to time to replace it, and we do not think we can figure out a way to widen it in place."

Alabama Highway Department Division Engineer Brian Davis, to the *Birmingham News*, April 12, 2007. ALDOT calls the bridge AL 2648 over AL 149 (Shades Creek Parkway-Lakeshore Drive) on U.S. 31 in Homewood, Alabama.

2011

"Although it poses no current danger to the 32,000 vehicles that cross it daily, the bridge is too old to repair, and its design is antiquated based on today's traffic engineering standards."

Brian Davis to the *Birmingham News*, March 23, 2011.

ALDOT has placed the bridge on the docket for replacement.

## Manage the Traffic Some Other Way...

"Flexibility is essential in preserving cultural artifacts that serve a practical function. With roads, the measures range from general guidance to site-specific approaches, to what is sometimes the boldest idea of all: leaving things largely as they are, even if it means reducing or otherwise managing the traffic."

Jon Jarvis, Director of the National Park Service, Speech at the Biennial Preserving the Historic Road Conference, Washington, D.C., September 2010.

"Over-scaled, over-priced highway projects are imposed, where smaller, less expensive, equally useful and more environmentally benign solutions would do."

Edward T. McMahon, "Road Design-A Turn Ahead," *Planning Commissioners Journal*, Number 40, Fall 2000.

## What Is a "Functionally Obsolete" Bridge?

"A functionally obsolete bridge is one that was built to standards that are not used today. These bridges are not automatically rated as structurally deficient, nor are they inherently unsafe. Functionally obsolete bridges are those that do not have adequate lane widths, shoulder widths, or vertical clearances to serve current traffic demand or to meet the current geometric standards or those that may be occasionally flooded."

Source: <http://www.iowadot.gov/subcommittee/faq.aspx>

**Statement by Birmingham Historical Society** prepared by Marjorie White, Katie Tipton, and Julius Linn Jr. from field observations, photographs, and WPA financial records in the collection of Birmingham Public Library Archives and of J. D. Weeks. Other sources consulted: *America's National Park Roads and Parkways—Drawings from the Historic American Engineering Record*, edited by Timothy Davis, Todd Croteau, and Christopher Marston, Johns Hopkins University Press, Baltimore and London, 2004; *Homewood: The Life of a City*, Sheryl Spradling Summe, Friends of Homewood Public Library, Homewood, 2001; *Minutes Regular Meetings of the City Council of the City of Homewood, Alabama*. February–September 1939 and October 11, 1943; *Street Railways of Birmingham*, Alvin Hudson and Harold Cox, Forty Fort, PA, 1976; "Road Design—A Turn Ahead," Edward T. McMahon, *Planning Commissioners Journal*, Number 40, Fall 2000; *Engineering News-Record*, November 26, 1931; David Chen, "A Cloverleaf That Made History Will Soon Be History Itself," *New York Times*, April 1, 1996; "Cloverleaf interchange," [http://en.wikipedia.org/wiki/Cloverleaf\\_interchange](http://en.wikipedia.org/wiki/Cloverleaf_interchange), accessed April 12, 2011; "Eyes on Irvington, Indiana," *Irvington Development Organization Newsletter*, April 2009; *First Word* by Jon Jarvis, adapted from a speech given at the Biennial Preserving the Historic Road Conference in Washington, D.C., September 2010, *Common Ground—Preserving Our Nation's Heritage*, published by the National Park Service, Washington D.C., Winter 2010; *The Birmingham News*, April 12, 2007, March 23, 2011; "R. H. Wharton Bridge," <http://bridgehunter.com/al/jefferson/r-h-wharton>, James Baughn and other contributors, 2002–2011, accessed April 12, 2011.

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