



Arkansas HIGHWAYS

FALL 2020

A PUBLICATION OF THE ARKANSAS DEPARTMENT OF TRANSPORTATION | MAGAZINE

Issue 1: The Road to Better Highways

**ENVIRONMENTAL
PUBLIC MEETINGS:
Online & You're Invited**

**FEDERAL GRANTS
WILL HELP IN WIDENING
U.S. Highway 67**

**PRESERVING
ARKANSAS'
Historic Bridges**

Dear ARDOT Family,

My Grandfather's name was Ralph Young. All the grandkids called him Papa. He was born in Arkansas in 1906. Papa was small – only reaching 5' 4" tall – but he was tough as nails. He was a quiet man. I don't remember him saying much. But he was generous, and he was kind. He was always my favorite grandparent. I loved him dearly. Papa had a pet name for each of his grandkids, and mine was "Morning Glory."

In 1942, he joined the Navy to fight during WW2. He personified what we've come to know as the greatest generation. He was assigned to the Construction Battalion also known as the Seabees and he learned the trade of construction.

Papa loved Arkansas. It was his home. He had a small farm and he loved farming. But in the 1940s, Arkansas was a poor, rural state. California, on the other hand, was booming and held the promise of many opportunities in the construction industry. So, after the war, he headed to California so that he could get work as a carpenter.

Meanwhile back in Arkansas, the Chief Engineer for the Highway Department, Billy Cooper, made this statement "Bad Road and Poverty Are Close Kin." A friend of Billy's was someone you may remember, Arkansas State Representative and later State Senator Vada Sheid who had this to say about Billy "What led Billy to serve at the Highway Department was the same motivation I had to serve in the Legislature – it was the roads. Our roads were poor and therefore so were we".

Vada Sheid and Billy Cooper spent their entire careers advocating for good roads along with countless other Arkansas leaders who have worked long and hard to improve the lives of Arkansans. And much has improved since the 1940s when Papa decided to leave his Arkansas home and settle in California to find a better life. But there is still so much left to be done. The problem is that Arkansas' primary revenue source for our roads is outdated and declining.

Issue 1 is a great solution to this problem. It will provide sustainable revenue for the State's highways, county roads and city streets that will be viable now as well as in the future because it tied to inflation.

If Issue 1 is approved, Arkansans will have made the choice to invest in safer roads, a stronger economy and an improved quality of life for ourselves, our children and our grandchildren. Issue 1 will make a lasting difference in our great State...the place that we call home.

All my best,

Lorie H. Tudor, P.E., Director



DIRECTOR'S MESSAGE



FRONT COVER:
Fall colors seen on State Highway 5 in Saline County.

BACK COVER:
A scenic view on State Highway 215, west of Oark.

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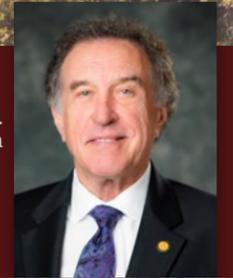
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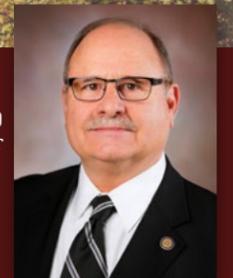
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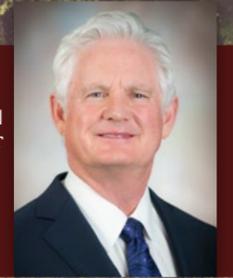
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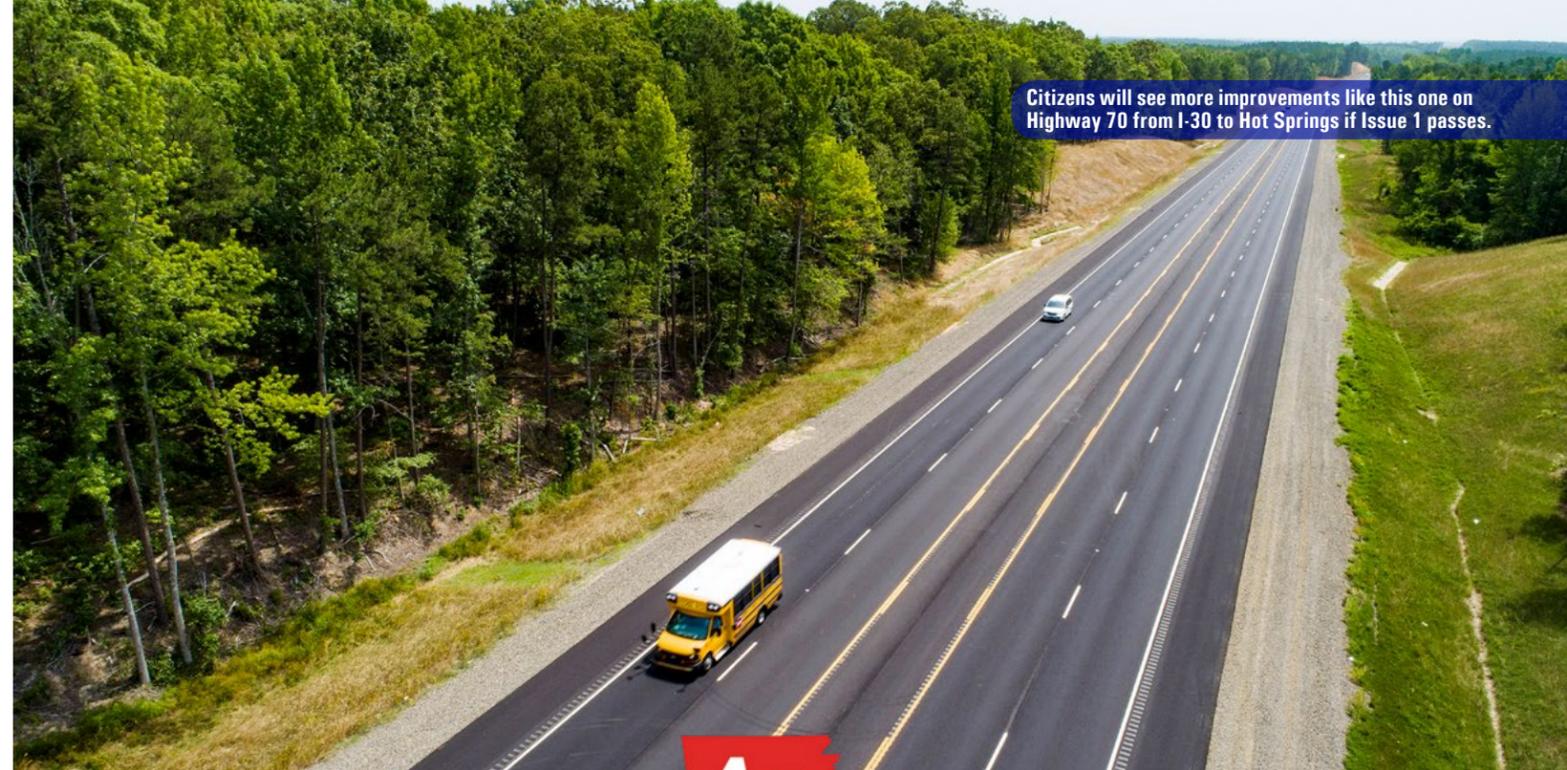
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Citizens will see more improvements like this one on Highway 70 from I-30 to Hot Springs if Issue 1 passes.

RENEW **AR** HIGHWAYS

ISSUE 1: THE ROAD TO BETTER HIGHWAYS

BY LORIE H. TUDOR, P.E., DIRECTOR

BY NOW, I HOPE EVERYONE AT ARDOT IS INFORMED ABOUT ISSUE 1 AND UNDERSTANDS ITS IMPACT ON THE FUTURE OF ARKANSAS' ROADS. The question on the November 3, 2020, general election ballot — Issue 1 — gives the citizens of Arkansas the opportunity to decide how they want to fund state highway, county road and city street maintenance and improvements beyond 2023.

A CLOSER LOOK

Governor Hutchinson introduced his Long-Term Highway Funding Plan during the 2019 legislative session. It consisted of two parts: a bill that was passed during the session that is now Act 416 of 2019, and a proposed Constitutional Amendment that will appear as Issue 1 on the ballot this November. Together, Act 416 and Issue 1 (if approved) will provide \$300 million annually for state highways and

bridges starting in July 2023. Act 416 is already providing an additional \$95 million annually for our state highways. That means the bulk of the funding for the Governor's plan (\$205 million a year) is in the hands of the voters this November.

MEETING ARDOT'S FUNDING NEEDS

Issue 1 addresses the fundamental flaw in road funding. Funding for Arkansas' state highways is primarily based on

(continued on page 6)

If Issue 1 is approved by voters, ARDOT, cities, and counties will continue to receive revenue from the ½-cent sales tax (shown in yellow on the graphic) from 2023 and beyond.

	STATE HIGHWAYS	COUNTY ROADS	CITY STREETS
ACT 416	\$95 MILLION	\$13 MILLION	\$13 MILLION
ISSUE 1	\$205 MILLION	\$44 MILLION	\$44 MILLION
TOTAL	\$300 MILLION	\$57 MILLION	\$57 MILLION

fuel consumption. Since our nation's goal is to reduce fuel consumption, highway revenues have remained flat even though Arkansans are driving more. When you consider the inflation of highway construction costs over the years along with flat revenues, we're going backward. As a result, for the last few decades, the Arkansas Department of Transportation (ARDOT) has not been able to keep up with the State Highway System's needs and meet the public's expectations in many areas of the State.

Issue 1 provides a source of funding that has natural growth potential. Just look how the State's General Revenue has increased over the years. As businesses grow and the economy grows, so does revenue. Diversifying the source of highway revenue will allow for growth to keep up with inflation.

Issue 1 would not be an additional out-of-pocket expense for citizens.

It would simply continue the collection of the current half-cent sales tax that the voters approved in 2012 and is set to expire in June 2023. This source of revenue does not apply to groceries and can only be used for improvements to state highways, county roads and city streets. Currently, an average household is paying \$8 a month and this would not increase or decrease if Issue 1 is approved.

RENEW ARKANSAS HIGHWAYS PROGRAM

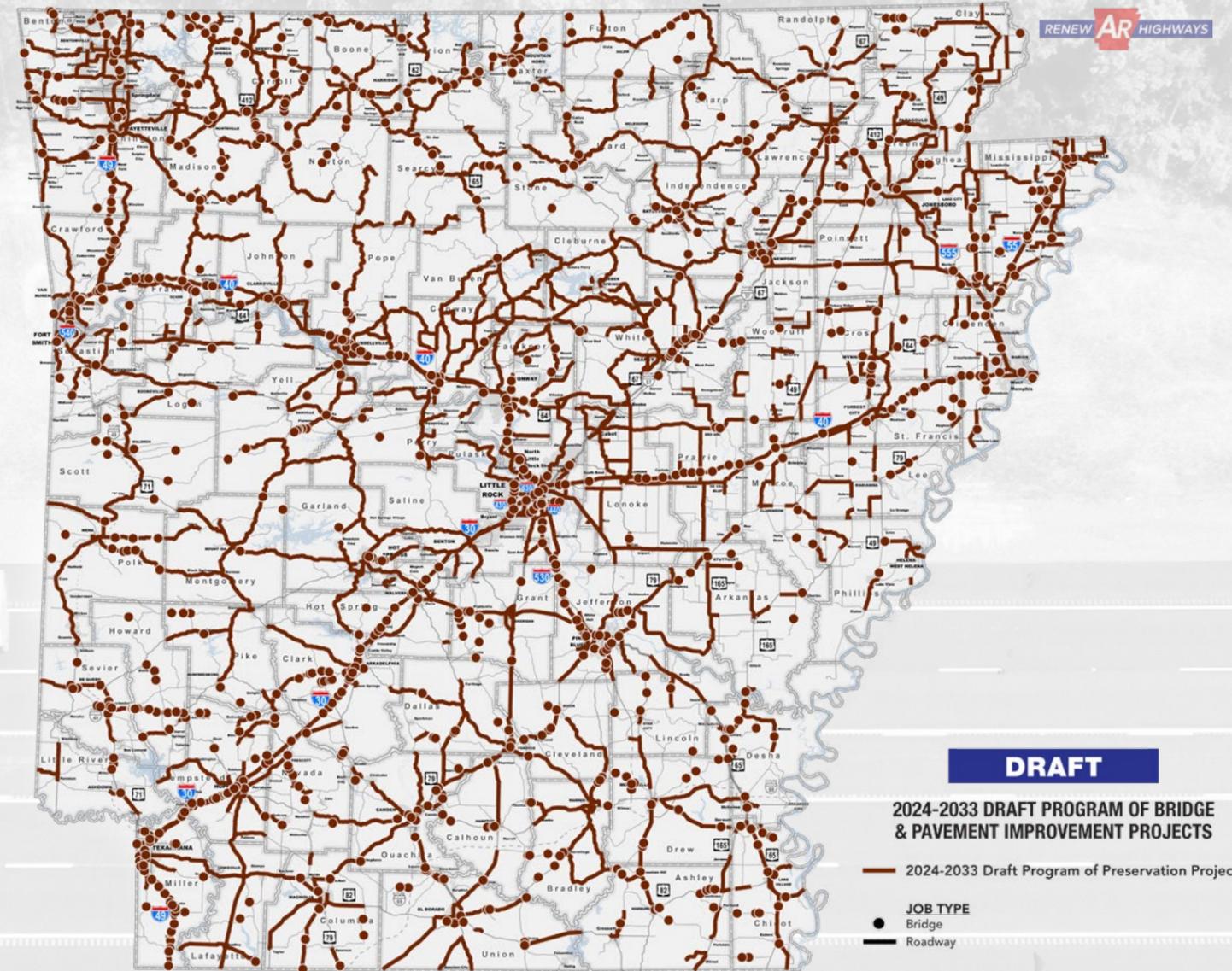
We have been working hard to educate the voters on the facts about Issue 1. As state employees, we can't campaign for or against the proposal. But, as the agency that will be responsible for administering these funds, we have a duty and responsibility to let the citizens know the impacts of its passage or failure.

To make sure voters know how their tax dollars will be spent if the ½-cent sales tax continues, ARDOT has developed a proposed program of construction projects we are calling the Renew Arkansas Highways program. This program will result in significant progress towards bringing the State Highway System into a state of good repair and to also fund some major capital and congestion relief projects that will promote economic development. The Renew Arkansas Highways program and other information can be viewed on our website at www.ardot.gov/Renew.

MAKING A DECISION

If Issue 1 fails, the tax will expire and the typical Arkansas household will save about \$8 per month. But that savings comes at a cost as the reduction in funding will result in a reduction in services provided. The Highway Commission and ARDOT staff will be faced with tough decisions as we decide how best to manage the decline of the State Highway System moving forward. It will be necessary to take measures to extend the life of already deteriorated roads and bridges and to reduce future maintenance costs. This will include more weight restrictions and possibly allowing some low traffic volume highways to revert to gravel. In addition, counties and cities will experience about a 30 percent reduction in their road and street budgets.

The final decision rests with the



This map shows the **System Preservation and Bridge work** that can be accomplished under the first ten years of the Renew Arkansas Highways program **if Issue 1 passes**. This includes about **7,000 miles** of non-Interstate highway work and the repair or replacement of all weight restricted bridges on the State Highway System. **Every county will see highway and/or bridge improvements during that time.**

citizens. The Governor has done his part by presenting and promoting his plan. The legislature has done their part by approving what they could and sending the rest — Issue 1 — to the people. And the Highway Commission and ARDOT have done our part by showing what can be accomplished with those funds. Now the people get to decide, and we hope they base that decision on the facts.

In summary, approval of Issue 1 means

the current half-cent sales tax will continue and taxes will not increase or decrease. It costs the average family \$8 per month and does not apply to groceries. This revenue can only be used for road and bridge improvements. If Issue 1 fails, the tax will go away in 2023.

Arkansans are about to make one of the most important decisions they have ever made concerning the future of our roads. We are all privileged to be

part of such an exciting time in Arkansas's history!

I would like to take this opportunity to thank ARDOT employees for the work you do every day as we strive to provide a quality product to the road users. And whether Issue 1 passes or fails, ARDOT will continue to do what we always have — provide the citizens of Arkansas with the best roads possible given the resources available. For more information, visit www.ardot.gov/renew. ■

Currently, an average household is paying \$8 a month and **this would not increase or decrease if Issue 1 is approved.**

LORIE H. TUDOR, P.E.
Arkansas Department of Transportation Director

View our video to learn more about Issue 1 at www.vimeo.com/myardot/issue1.



ENVIRONMENTAL PUBLIC MEETINGS: ONLINE AND YOU'RE INVITED

BY DAVID NILLES

WORKING AROUND THE COVID-19 VIRUS HAS TAUGHT EVERYONE HOW TO DO THINGS IN A NEW WAY. That includes ARDOT's Environmental Division and how the staff holds their public meetings.

Prior to the Covid-19 virus, staff members of the Environmental Division traveled to every corner of the state to hold public meetings and share plans for new highways in the area or to talk about improvements to existing roads. The meetings prove to be an opportunity not only to share design plans but to gain input from local citizens as well. The feedback gained from meeting with area residents is important to the planning process. The meetings are also an opportunity to answer any questions residents may have and address any concerns.

For 2020, those meetings are still taking place but rather than traveling to local communities, they are being presented online.

"It's very important to get the public meeting information out to our

communities," Ruby Jordan-Johnson, Section Head of Public Involvement in the Environmental Division shared. "Public participation in the transportation arena is very vital. It is an integral part of the transportation process. Even though we are in the middle of a pandemic, life goes on and that is where these virtual public involvement meetings allow us to move forward. These meetings allow the Department to make better-informed decisions through collaborative efforts between the public and us. Whenever you have project delays, that can mean funding lost, so we had to find a way to get our project information to the public so the entire process could continue. As a result, our public meetings went virtual."

As ARDOT presents virtual public involvement meetings, the Department is utilizing two different phases.

WHAT IS PRESENTED

Phase One virtual meetings feature video and audio only. Project staff produce a brief pre-recorded video presentation regarding the project

Following the video, meeting attendees have an option to view the public meeting notice, study the project location map and view the project design plans. Once that information has been reviewed, attendees can fill out a project survey to submit their personal comments and ideas on the project.

Phase Two meetings feature a "live" interactive segment. The project information is available just as it is in phase one meetings but a live segment allows citizens to interact with ARDOT staff on a specific meeting day and time.

"The live meetings typically last for an hour," Jordan-Johnson shared. "They are usually from 5:30 to 6:30 in the evening when people can come home from work, get settled and have time to join us. They can connect anytime during that live meeting."

"Material is posted on our website five to seven days prior to the actual meeting date. Citizens can take a look at the material so when it is time for the live meetings they will already have some background information concerning that proposed project

and will already know the questions they want addressed by Department staff. After that live meeting, they have 15 days to get their comments submitted."

Attending an online meeting is as easy as grabbing your computer or tablet. Once on the Department's website at www.ardot.gov, visitors will see an "Upcoming Events" box. In that box are listed all upcoming virtual public meetings. Visitors simply click on the particular event they are interested in and are linked to the virtual meeting. Information on every project remains online for 15 days.

GETTING THE WORD OUT

The word is now spreading across the state that ARDOT is presenting virtual public meetings.

Environmental staff have worked very hard and expanded their coverage area as far as getting names and addresses of previous meeting attendees, mailing more flyers out to residents and working with local leaders in each area. Environmental staff are using the local newspapers and airing public service announcements as well.

"We have conducted our first Phase Two meetings," Jordan-Johnson reflected. "I thought they were great. These virtual meetings are new for our citizens and our staff but we have been able to bring the information together and present it to local communities. After the first meeting, we were able to perfect the procedure. It has given us the confidence that we can do this and do it in a professional manner. I think our citizens have been pleased with it."

A FUTURE FOR VIRTUAL MEETINGS?

Jordan-Johnson was asked if going virtual has increased the number of people participating in Environmental public meetings.

"I really think so because the word is now out that we are doing meetings virtually. Online meetings eliminate the safety concern as far as the Covid-19 virus. You can participate in the privacy of your home. Even after the meeting, citizens can still contact us by telephone or email if they wish.

"I think the new meetings have been a success. People appreciate having the ability to move projects forward even in the crisis situation that we are experiencing. They appreciate having the opportunity to participate. We are able to expand our engagement area. If a person has property in Arkansas but they are in Chicago, they can still log on and find out what is happening.

"I assure you we will still conduct our traditional face-to-face meetings when it is safe. Traditional meetings allow for that in person interaction that is so effective. At this point, we just do not know when that is going to happen.

"I am just looking forward to this new adventure we are experiencing. I am enjoying it. It has been new, challenging and very rewarding to be a part of this virtual procedure."

In 2019, more than 1,900 citizens attended environmental public meetings across the state. With the success of the online meetings, it would not be surprising to see those numbers increase. ■



(L. to R) Edgar Ariza, Public Involvement Specialist; Ruby Jordan-Johnson, Public Involvement Section Head; Ricardo Ramirez, Public Involvement Specialist; Karla Sims, Advanced Public Involvement Specialist

FEDERAL GRANTS WILL HELP IN WIDENING U.S. HIGHWAY 67

BY DAVID NILLES

THE ARKANSAS DEPARTMENT OF TRANSPORTATION HAS BEEN AWARDED TWO FEDERAL GRANTS THAT WILL HELP FUND THE WIDENING OF TWO SECTIONS OF U.S. HIGHWAY 67 IN JACKSONVILLE AND CABOT.

The first grant of \$40 million was awarded under the Infrastructure for Rebuilding America (INFRA) grant program of the U.S. Department of Transportation. The program was established in the 2015 federal highway bill.

INFRA utilizes selection criteria that promote projects with national and regional economic vitality goals while

leveraging non-federal funding to increase the total investment by state, local and private partners

A second grant of \$10 million was recently awarded by the U.S. DOT from the Better Utilizing Investment to Leverage Development (BUILD) program. The BUILD Transportation Discretionary Grant program provides a unique opportunity for the U.S. Department of Transportation to invest in road, rail, transit and port projects that promise to achieve national objectives.

The funding will be utilized for a project that will begin in late 2021. A 2.5-mile section of Highway 67

between Main Street and Vandenberg Boulevard in Jacksonville and a 2.8-mile section of Highway 67 between Highway 5 and Highway 89 in Cabot will be widened from four to six lanes under a single contract.

Arkansas Highway Commission Chairman Robert S. Moore, Jr., praised Arkansas' congressional delegation in helping pursue the grant awards.

"The delegation has been very attentive to our needs here in Arkansas, and this is a great example of the success we can achieve when leaders at all levels of government work together towards a common goal."

In addition to widening the highway, the project will include building an overpass, converting the frontage roads to one-way operation and reconstructing interchanges.

The Jacksonville project is part of the Department's Connecting Arkansas Program (CAP). In 2012, through a voter-approved Constitutional Amendment, the people of Arkansas passed a 10-year, half-cent sales tax to improve the state's intermodal transportation system, including projects that widen and improve approximately 200 miles of highways and Interstates. The improvements to Highway 67 between Highway 5 and Highway 89 in Cabot are being made possible by these grants. ■



ARDOT BECOMING NATIONAL LEADER IN UTILIZING FAST TRACK HYDRO

BY PATRICK MARTENS, P.E.

THE ARKANSAS DEPARTMENT OF TRANSPORTATION IS QUICKLY BECOMING A NATIONAL LEADER IN THE IMPLEMENTATION OF BRIDGE DECK PRESERVATION. One area in which the Department has excelled in recent years is the use of Fast Track Hydrodemolition (FTH) and High Performance Latex Modified Concrete (HPLMC) overlays. Since embracing the hydrodemolition technology for surface preparation and utilizing the FTH approach, ARDOT has been able to restore (or is in the process to restore) and preserve over 180 bridge decks with FTH. That is since 2012.

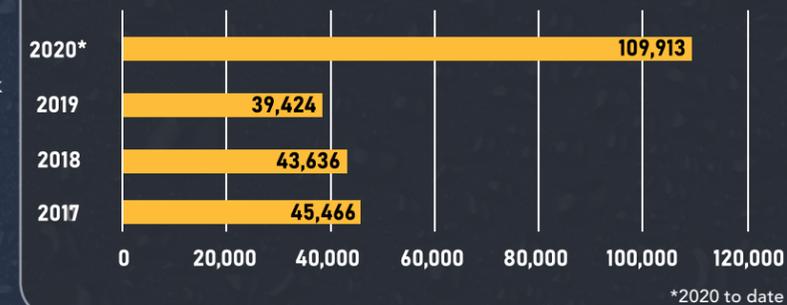
ARDOT has let 33 projects involving 133 bridge decks in just the last 3 and a half years. The Department has already pumped out almost 110,000 square yards of FTH and HPLMC through the first half of 2020 alone. This includes a major rehab recently let in June 2020 to restore the surface on the Interstate 430 Bridge over the Arkansas River. That project specifies a FTH of 58,960 square yards of bridge deck and overlaying with Very Early Strength HPLMC (VESHPLMC), to expedite the repairs and minimize traffic disruptions.

The use of FTH with HPLMC is making a gigantic impact on the Arkansas landscape, with much of the work on Interstate and high volume corridors.

Agencies across the country are finding out that the use of the combination of hydrodemolition and latex concrete to attack their bridge decks is a practical way to go in preserving their bridge deck surfaces long term. The states that do large volumes of hydrodemolition work (such as Pennsylvania, Indiana and Ohio) figured out quickly that FTH is the method to employ for projects. It is faster, done at a reduced cost, lasts longer and allows more bridge decks to be done within their program in order to stretch dollars.

The FTH surface preparation method is a real key in being able to attack and rehab so many bridge decks in such a short period of time, with minimal budget. It allows an agency to use a common sense approach to gaining

Square Yards of Hydro/HPLMC in Arkansas (2017-2020)



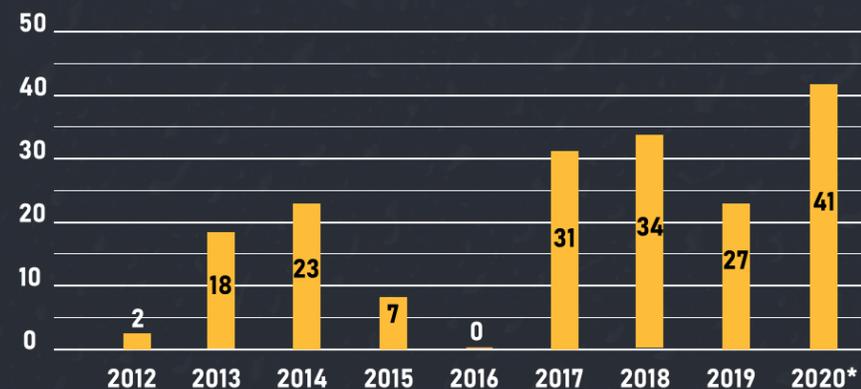
quality preparation work of the bridge deck in short order.

FTH utilizes high-pressure water to perform a selective removal technique that provides for a rapid removal of only the bad concrete. This eliminates wasteful removal of otherwise sound concrete. HPLMC then can be placed to preserve the deck for an extended period of time. It also can be placed thinner (1 1/2") than other portland cement based overlays. In addition, when combined with HPLMC, the monolithic attachment can be achieved without having to get under partially exposed rebar in the top mat, provided the deck is solid. This greatly expedites the work.

The process should yield upwards of 25 years and beyond of deck protection and service life. There is no other product that has the proven track record or longevity that HPLMC has – over 50 years in the business of protecting bridge decks. It really is a "no-brainer" to incorporate the selective removal approach of FTH with HPLMC. ARDOT has figured that out in recent years, and it is making a huge impact within our preservation program. ■

This article by Patrick Martens, P.E., appeared in the August 2020 newsletter of Bridge Preservation & Inspection Services.

Number of Bridges w/ Hydro & HPLMC in Arkansas (2012-2020)



ATTENTION TO DETAIL IS THE KEY TO SUCCESS

BY BRITNI PADILLA-DUMAS



IN 2017, ACT 707 WAS THE OFFICIAL LEGISLATION THAT CHANGED THE DEPARTMENT'S NAME FROM THE ARKANSAS HIGHWAY AND TRANSPORTATION DEPARTMENT (AHTD) TO THE ARKANSAS DEPARTMENT OF TRANSPORTATION (ARDOT). But changing the Department's name involves more than the flick of a pen; uniforms, buildings, letterheads and vehicles must also be updated to reflect the correct agency.

The Arkansas Highway Police (AHP), a Division of ARDOT, seized an opportunity to update their look.

"Our logos, both on our patrol units and our uniform patch, are more than 25 years old," explained AHP Chief Jay Thompson. "We had to change our patch anyway because it used our old name, AHTD, so we took the initiative to design a new patch that our officers

could wear with pride."

Chief Thompson collaborated with ARDOT Graphic Designers Marrissa Miller and Paula Cigainero. Together, they created a contemporary, cohesive graphic style that promotes the Department's professionalism and heritage.

PRIDE

The team collaborated for almost two years before finally creating the finished product.

"I had noticed that many of our counterparts in other states used the shape of their state as the outline to their patch," Thompson recalled. "I liked that idea. I also wanted to include some of our history, so we included 1929—the year we, Arkansas' first law enforcement agency, were created."

The star is the shape of AHP's first badge and the Great Seal of Arkansas is sewn in the middle.

"We found an awesome vendor that embroidered the intricate details of the seal and kept them legible," remarked Graphic Designer Marrissa Miller. "I'm really glad the Chief is happy with the new look."

The color scheme of the current uniform was one of many factors considered while creating the new artwork for the patch. Since maintaining a professional uniform is expensive and Chief Thompson did not want to require his officers to buy new clothing, the crew focused on changing the design.

PROFESSIONALISM

"We took this project seriously. We wanted to create something that would be more efficient for the Department," Thompson said. "Not only is this new look for our vehicles up-to-date, it's easier and cost effective."

The new design cuts the cost of marking new AHP patrol units in half.

The sleek stripe slashed across the side of the car can be applied in house by shop staff.

"We would print the designs on regular paper, cut it out and tape it to a car. Marrissa was so patient during the entire process. She kept working, without complaint, until we taped up that last one and we knew...that was it," Chief Thompson said.

The stripe on the car represents the stripe on AHP officers' Class A dress uniform, while the star and "1929" on the back are an homage to its history.

"When we started this project, I knew it wasn't going to be something we just threw together overnight. You want to make something that lasts and Marrissa was so excited to be part of this project. She made the rest of us comfortable during the whole process. Her pride, professionalism and attention to detail are what made us successful and keeps us among the best of the best." ■



I ALSO WANTED TO INCLUDE SOME OF OUR HISTORY, SO WE INCLUDED 1929—THE YEAR WE, ARKANSAS' FIRST LAW ENFORCEMENT AGENCY, WERE CREATED.



A model of PT109.



David Henning,
State Construction Engineer



A MODEL EMPLOYEE

BY BRITNI PADILLA-DUMAS

“**When I build something, I look for a specific piece that has history behind it.**”
DAVID HENNING

STUDYING HISTORY MAY NOT SOUND EXCITING FOR EVERYONE, BUT ARDOT STATE CONSTRUCTION ENGINEER DAVID HENNING HAS A UNIQUE APPROACH TO APPRECIATING EVENTS OF THE PAST.

Henning, a self-proclaimed history buff, began building model kits when he was eight years old. His father served in the U.S. Air Force, so Henning has always been close to pieces of American military history.

“I’ve always been interested in aircraft, ships and tanks,” Henning recalled, “and I’ve always liked building things out of wood and metal. I like to find a historic example that I can recreate.”

Since his childhood, Henning has had a knack for finding kits that are specific to his family’s experiences. One project he made as a gift for his father was a die cast 1960 Mercedes 190.

“My dad restored this exact car and we have a lot of fond memories with that car,” Henning said. “I disassembled the die cast model, stripped all of the paint and repainted the exterior and interior to look the way he had it.”

Henning also found a die cast 1917 Harley Davidson motorcycle that he converted to honor his grandfather, a motorcycle messenger in World War I. He has a few kits stashed away that will replicate aircraft of his father’s Air Force Wing or Squadron.

In the mid-1970s, Henning was one of many hobbyists that built Jacques Cousteau’s ship, the *Calypso*. Many years later, he discovered that the real *Calypso* was modified from a World War II Minesweeper.

“I decided I was going to do this, but I was going to work backwards. I took it from the *Calypso* and rebuilt it as a World War II Minesweeper. The only

thing left from the original kit was the hull of the ship, the propellers and rudders. Everything else, all of the decks, the superstructure, I built from scratch or modified pieces from other kits.”

This model won Best of Show at a contest in Dallas, Texas.

Another great historical conversion project was a Landing Craft Tank from World War II, used to storm the beaches of Normandy, France. Some of these landing craft were built by a bridge steel fabricator in Memphis, Tennessee. He found plans and drawings of the tanks manufactured in Memphis and converted his regular model to match those specifications, winning a national award at an International Plastic Modeler’s Society convention.

After reading the book *The Heart of Hell* by Mitch Weiss, Henning found himself building a replica of Landing

Craft Infantry 449, a U.S. gunboat that performed reconnaissance before the Battle of Iwo Jima, Japan, in 1945.

“When I build something, I look for a specific piece that has history behind it. I don’t usually build generic models. I like to research and discover the story about how and why it was significant to the shaping of our nation.”

Henning is currently working on a model to depict the *USS Midway* during the 1975 operation in Saigon, Vietnam. This 1/700th-scale aircraft carrier will be gifted to one of his friends who served on the ship during the fall of Saigon.

“Building is usually an on-and-off process as time allows; it may take me several months to complete one, but then I’m looking for my next project. I have a stash of nearly 300 models kits,” Henning said through a laugh. “I’m sure it’s more than I’ll ever have time to build.” ■



A display of awards that Henning has received for his work.

ARKANSAS' SCENIC BYWAYS:

Taking the Scenic Route

BY DAVID NILLES

Arkansas is the Natural State. Our highways provide incredible vistas that feature lakes, rivers, mountains, forests and much more. Within our borders are a select few highways that stand at the top of the list when it comes to great scenery and local flavor. They are Arkansas' Scenic Byways. This series looks at each one, allowing you to pick a favorite, chart a course and hit the open road.

ROUTE: Interstate 530

POINTS: White Hall to southeast of Pine Bluff

LENGTH: 15 miles



Pine Bluff is also known as "The City of Murals"



Arkansas Railroad Museum

MANY MOTORISTS HAVE TRAVELED ON INTERSTATE 530 IN THE PINE BLUFF AREA AT ONE TIME OR ANOTHER. WHAT SOME MAY NOT KNOW IS THE FACT THAT I-530, FROM WHITE HALL TO SOUTHEAST OF PINE BLUFF, IS AN ARKANSAS SCENIC BYWAY.

What makes this route scenic? The wetlands that travelers see along this 15-mile stretch of the Interstate. They are part of the world's longest bayou, Bayou Bartholomew. The bayou meanders for approximately 364 miles between Arkansas and Louisiana. The waters of the bayou are populated by bald cypress trees that serve as home to an assortment of birds. More than one hundred species of fish including bream, catfish and crappie can also be found in the bayou. Select areas are considered some of the best-kept secrets of Arkansas anglers. Alligators and otters call the bayou home as well.



Pine Bluff is another area where the fishing is good. In fact, the city is known as the "Bass Capital of the World."

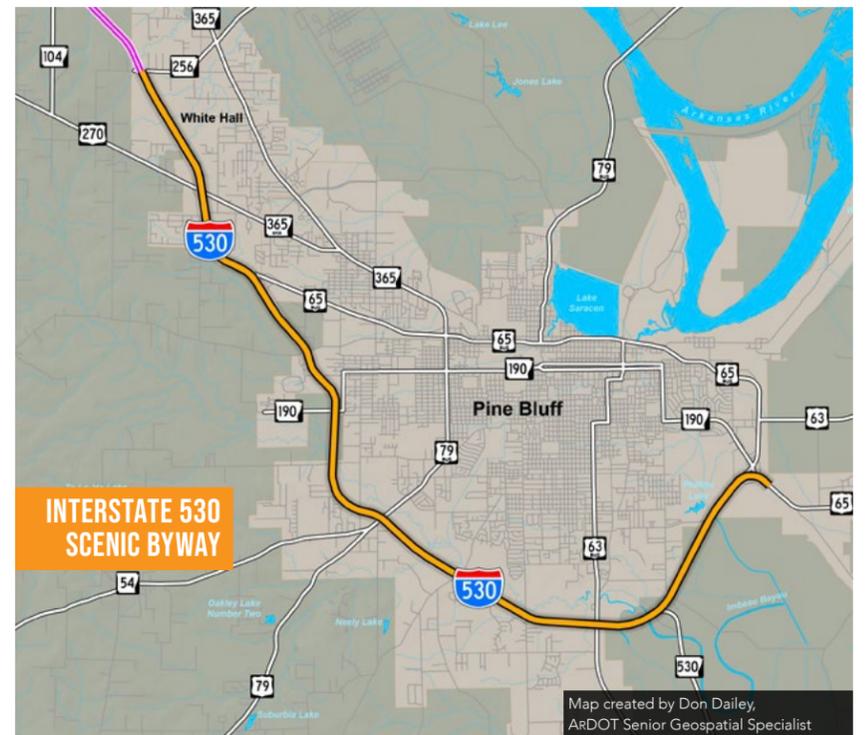
The community is also known as "**THE CITY OF MURALS**" because there are 11 murals depicting the history of Pine Bluff on building exteriors in the heart of downtown. All were created by nationally known artists.

A highlight of a trip to Pine Bluff is the **ARKANSAS RAILROAD MUSEUM** located at the former Cotton Belt railroad yard. Housed in a building that was built in 1894, the museum has more than 70,000 square feet of floor space. It features 17 tracks, two exhibit rooms and many railroad displays. On view are actual railcars and locomotive engines, some of which you can step inside for a closer look. There are also rooms of railroad memorabilia.

For art lovers, the **ARTS & SCIENCE CENTER FOR SOUTHEAST ARKANSAS** makes a perfect stop. The Center features art galleries with a rotating schedule of exhibitions that include works from the permanent collection and works from around the country. In addition to the visual arts, the Center has a 232-seat theater for the performing arts. Opening this fall are the ARTSpace on Main and the ARTWorks on Main featuring a multipurpose community arts and events space, with a gallery; workshop and classroom space; a wood shop, scene shop and costume shop; a small pottery studio and an outside "ART Yard."

The next stop on a tour of Pine Bluff should be the **GOVERNOR MIKE HUCKABEE DELTA RIVERS NATURE CENTER**. The Nature Center is located within 130 acres of a bottomland forest, surrounded by the Black Dog Bayou and Lake Langhofer. The Center offers more than two miles of trails through the forest, providing an opportunity to see geese, ducks, snakes, rabbits or even deer. Once inside the Center, the Delta and its rivers are a main focus. The Center's exhibits describe how meandering waterways have changed this land and why swamps are incredibly valuable ecosystems. A model of the Arkansas River reveals how oxbow lakes form.

Everything on view at the Center is a perfect example of the terrain to be enjoyed along this southeast Arkansas Scenic Byway. 



Map created by Don Dailey, ARDOT Senior Geospatial Specialist



Inside the gallery at the Arts & Science Center for Southeast Arkansas



Governor Mike Huckabee Delta Rivers Nature Center

PRESERVING ARKANSAS' HISTORIC BRIDGES

BY DAVID NILLES

THERE IS SOMETHING ABOUT GRAND BRIDGES THAT JUST SEEMS TO WARM THE HEART.

Who hasn't looked in wonder at the majesty of the Highway 82 Greenville Bridge as you approach it near Lake Village? Or, admired the new Highway 70 Broadway Bridge in Little Rock. Crossing the Highway 187 Beaver Bridge just outside of Eureka Springs is a memory you never forget once you experience the "clickity-clack" of the one-lane suspension bridge. All are different, but they hold the same romanticism for all of us.

At ARDOT, we find it important not only to maintain our bridges for safe travel, but also to evaluate our bridges and maintain records about them as they become older and phase into the historic category. ARDOT's Environmental Division evaluates and documents Arkansas' older bridges. Some may be replaced; others may be dismantled and placed in a new location. During their lifetimes, some may even find their way into the National Register of Historic Places (NRHP).

A HISTORY OF BRIDGE PRESERVATION

Federal legislation to protect cultural resources, including bridges, began more than a century ago. In the 1960s, Congress passed legislation that guides our process today. The unfortunate Silver Bridge collapse in West Virginia in 1967 triggered state bridge inventories and later historic bridge inventories. Beginning in 1971, bridge inventories and inspection requirements were



Historical photo of Big Piney Creek Bridge



Big Piney Creek Bridge (2020)

mandated along with funding and other guidance.

Focus shifted to historic bridges in the 1980s. The Federal Government directed each state to create an inventory of historic bridges. Section 106 of the National Historic Preservation Act (NHPA) requires that federal agencies identify and assess the effects its actions may have on historic structures. Under Section 106, each agency must consider public views and concerns about historic preservation issues when making final project decisions. A bridge is deemed "historic" under the NHPA, Section 106, if it is eligible for or listed on the National Register of Historic Places.

Requirements to be named to the Register include:

- The bridge must be over 50 years old, and
- Be exceptionally significant possessing association with a person, trend or exhibiting

exceptional architecture or exceptional engineering.

The Section 106 process aims to avoid or reduce the severity of adverse effects to historic bridges that are programmed for replacement. Documentation is a very important part of the process to ensure that the historical value of the bridge is not lost, even if the physical structure does not endure.

ARKANSAS' HISTORIC BRIDGE PROGRAM

The Department's Historic Bridge Program was designed to balance the traffic and safety needs of the motoring public with historic preservation. The purpose of the program is twofold: first is to produce a statewide inventory of historic bridges, second is to document, rehabilitate or preserve historic bridges that are programmed for replacement by ARDOT.

ARDOT's program was started in

1987 to address the requirements of federal law, and to develop a statewide inventory of bridges eligible for inclusion in the National Register of Historic Places (NRHP).

The Department's first inventory was completed in 1987 with a follow up in 1996.

"While previous bridge inventories were completed in the 1980s, 1990s and some small collections by type in 2005-2007, we have run across several bridges not previously evaluated for the NRHP in jobs over the last 5 years," stated Nikki Senn, Advanced Architectural Historian for ARDOT.

"As a result, we have contracted with Wood PLC to complete an up-to-date, all-inclusive historic bridge inventory of bridges dating to 1975 or older. It is a five-year project that kicked off in December 2019, and it will include documentation on over 5,000 bridges. With the five-year project information, we should be able to have an accurate historic bridge database."

NATIONAL REGISTER OF HISTORIC PLACES

ARDOT's list of historic bridges will include many that are eligible for or already on the National Register of Historic Places. The National Register documents the appearance and importance of districts, sites, buildings, structures (including bridges) and objects significant in our history.

How does a bridge become eligible? The following criteria are evaluated for inclusion on the Register:

- Properties must possess significance in American history, architecture, archeology, engineering and culture that retain aspects of integrity, and:
 - A) be associated with an event, broad patterns or trends of history;
 - B) be associated with an important person(s);
 - C) embody typical features of a type, period or construction method that represent the

work of a master or possess high artistic values; or

D) have yielded, or will likely yield, significant information for history or prehistory.

Integrity, mentioned above, is the ability of a property to show its significance. The seven elements for evaluating integrity are:

- 1) location
- 2) design
- 3) setting
- 4) materials
- 5) workmanship
- 6) feeling of a period
- 7) association.

"Generally, design and materials are the most important ones," Senn stated. "If a bridge has been altered to destroy the integrity of the original design and materials, then it is easily determined not eligible, but we review all elements of integrity in our process."

TAKING A LOOK AT SOME OF ARKANSAS' HISTORIC BRIDGES

Arkansas' list of historic bridges is lengthy. *Arkansas Highways* magazine asked Senn to share a few that stand out.

(continued on page 20)



The Cotter Bridge over the White River



Highway 187 Beaver Bridge near Eureka Springs

BIG PINEY CREEK BRIDGE:

The Big Piney Creek Bridge, also known to some as the Sugar Creek Bridge carries motorists on Arkansas Highway 123 across the water where the Big Piney Creek meets Sugar Creek, northeast of Hagarville. The Big Piney Creek Bridge was listed in the National Register of Historic Places in 1990. It is significant due to its design, as well as to its association with the development of roads and bridges in Arkansas in the early twentieth century. Fred Luttjohann of Topeka, Kansas, built the bridge in 1931. It features the Warren truss design and displays pin-connected end chords indicative of the period. It is the only true Warren through truss bridge surviving in the state.

The bridge is also the oldest in-service “through truss bridge” associated with the first bridge engineer at ARDOT, Neal Bryant Garver. Garver was integral in Arkansas’ early 20th Century transportation development.

HIGHWAY 187 BEAVER BRIDGE:

Pioneer Construction Company, Inc. of

Malvern constructed the Highway 187 Beaver Bridge in 1947-1949, following the previous bridge being destroyed by a flood. The bridge is significant for its design as one of two wire-cable suspension bridges still in vehicular use in Arkansas. The bridge retains timber decking and rails adding to its nostalgia. The one-lane bridge is located just a few miles outside of Eureka Springs on Highway 187 over the White River. The bridge was listed in the National Register of Historic Places in 1990. Fun Fact: it was featured in the 2005 movie “Elizabethtown.”

HIGHWAY 62B COTTER BRIDGE:

U.S. Highway 62B cuts through the town of Cotter on the White River in Baxter County. The Cotter Bridge, named after the town, is an outstanding example of the Marsh Rainbow Arch design. It is listed in the National Register of Historic Places and was designated in 1986 as Arkansas’ only National Historic Civil Engineering Landmark. The Marsh Construction Company designed the unique bridge.

Measuring approximately 1,850 feet, it is the longest Marsh Rainbow Arch bridge in the country and the longest ever designed by James B. Marsh’s company. Bateman Contracting Company submitted the low bid on the bridge in September 1929, and completed construction in 1930. Hardy Construction Company rehabilitated the bridge in 2002.

HIGHWAY 12 BEAVER LAKE BRIDGE:

The Highway 12 Bridge over Beaver Lake in Benton County is significant for its simplistic mid-century design. At the time of its completion, this bridge was the tallest in the state until the Beaver Dam was completed, creating Beaver Lake. Guy H. James Company built the bridge in 1963 from a design by the Howard, Needles, Tammen & Bergendoff Consulting Engineers firm. The Army Corps of Engineers contracted the project. The bridge is a continuous steel plate girder and floor beam system design with a concrete deck and reinforced concrete posts and

metal guardrail. It was named the “Most Beautiful Steel Bridge” of 1963 by the American Institute of Steel Construction for its simplicity in the ribbon of steel and its tall, slender piers, which are now covered by the lake. This terminology is classic to the “mid-century modern” mindset; the bridge illustrates how architectural styles can also be applied to bridges. It also contains an example of pin and hanger connections representing the distinctive mid-century era engineering in bridges.

SAYING GOODBYE TO OLDER BRIDGES

Unfortunately, nothing lasts forever. With no other alternatives, it is sad to see some bridges come down. But these bridges in question are carefully scrutinized before they are dismantled.

ARDOT’s Historic Bridge Analysis Committee is comprised of eight members including: the Division Heads of Bridge, Construction, Environmental, Right of Way, Roadway Design and Surveys along with a Heavy Bridge Maintenance Engineer and the Architectural Historian.

The committee directs historic bridge projects using federal guidelines. The group first discusses the possibility of rehabilitation before demolition is considered.

If the committee’s alternative evaluation process determines that there are no feasible or prudent options to demolition of a bridge, regulations require that a bridge first be made available for donation to a state, local or responsible private entity.

With marketing and advertising of the bridge underway, if an interested entity is found, that entity must agree to:

- A) maintain the bridge and the features that give the bridge its historic significance, and
- B) assume all future legal and financial responsibility for the bridge.

There are examples across the state of bridges that have been accepted by local governments or groups.

A good example is the Springfield-Des Arc Bridge, which spanned Cadron Creek near Springfield for over 140 years. Today, the refurbished bridge

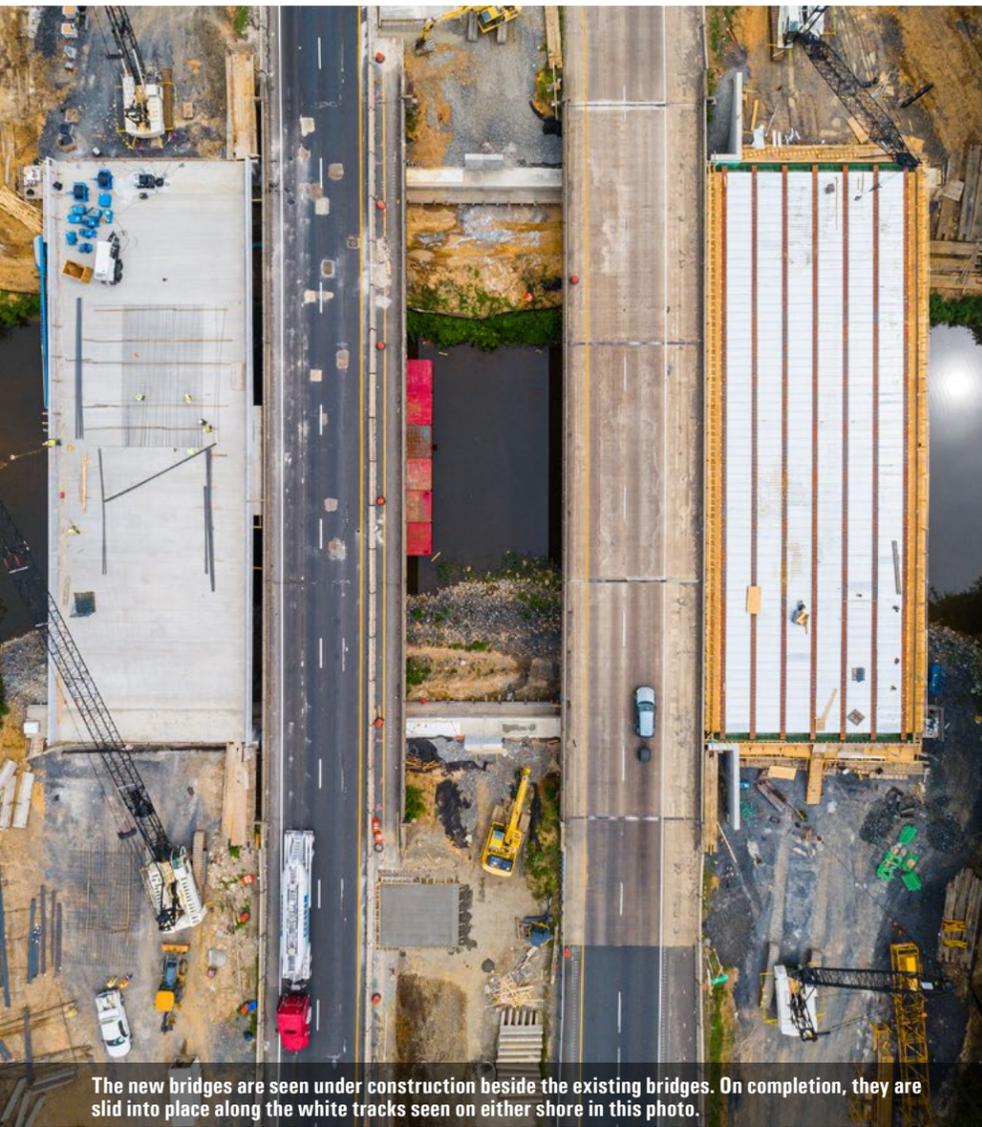
lives on in a cove in Beaverfork Lake Park north of Conway. (See the March/April 2018 issue of *Arkansas Highways*.)

However, if there are no options available to save a bridge, documentation of that bridge becomes an important part of the process to ensure that the history of the structure is not lost. From a bridge, we can learn valuable information about the development of construction methods and materials from a certain period and study trends in design.

“For mitigation, if we impact or demolish a structure, we regularly laser scan those bridges to collect important data,” Senn added. “We also preserve available bridge plans and take photographs. Other creative mitigation used over the years includes creating exhibits, videos, historic bridge markers and descriptive brochures.”

Through mitigation, even if the physical bridge is lost, important information is documented and made readily available for future generations. Though lost, ARDOT staff make certain that the bridges of our past are never forgotten. ■

A CONSTRUCTION FIRST FOR ARDOT NEW INTERSTATE 30 BRIDGES SLID INTO PLACE



The new bridges are seen under construction beside the existing bridges. On completion, they are slid into place along the white tracks seen on either shore in this photo.

Cutting the ribbon on a newly completed bridge can be a cause for celebration, especially if that bridge spans a large body of water, features unique design or replaces a historic bridge structure. The new bridge opens with Highway Commissioners present, television cameras in place and articles in the newspaper the next day.

However, what about two new bridges under construction that measure 170

feet in length and cross De Roche Creek in a rural area on Interstate 30? They may not get quite as much attention when they are completed, but these two bridges will be just as significant. The reason? Construction crews used "slide-in bridge construction" (SIBC) that represents a first for ARDOT.

The contract to replace the two bridges was awarded to Manhattan Road & Bridge Company in June of 2019 for \$12.6 million.

Under the slide-in accelerated construction method, the new bridges were constructed on temporary supports immediately adjacent to the existing bridges, one for eastbound traffic and one for westbound traffic. During construction, traffic continued uninterrupted on the existing bridges. Once the westbound bridge and foundations were completed, a crossover lane was built that allowed westbound traffic, for example, to cross over to the eastbound bridge which traffic in both directions shared for a week while the existing westbound bridge was removed and crews slid the new bridge into place and completed the approaches.

DECIDING ON SLIDE-IN BRIDGE CONSTRUCTION

"Slide-in bridge construction has been used as far back as 1992," Bridge Division Head Rick Ellis shared. "It has probably been used 100 times around the nation including one bridge that measures over 2,400 feet long."

In 2009, the Federal Highway Administration (FHWA) launched "Every Day Counts" in cooperation with the American Association of State Highway and Transportation Officials (AASHTO) to speed up project delivery and address challenges presented by limited budgets. The intent was to identify and deploy under utilized innovations to shorten project delivery, enhance safety and reduce congestion.

"Several years ago, Carl Fuselier (former State Bridge Engineer) and I attended showcase events and peer exchanges around the nation to observe some of these innovations," Ellis shared.

"In 2013, Carl and Terry Daniel (former FHWA Bridge Engineer in Little Rock) formed an Accelerated Bridge Construction (ABC) Committee consisting of FHWA and ARDOT

personnel along with industry experts including design consultants, city and county personnel, contractors and fabricators. During these committee meetings, we developed a Procedure for Assessing the Use of Accelerated Bridge Construction that was approved by Ralph Hall, former Deputy Director and Chief Engineer at ARDOT. We also studied ABC methods that we thought would be beneficial to Arkansas. One of these methods was the slide-in bridge."

THE ADVANTAGES OF SLIDE-IN CONSTRUCTION

The advantages of slide-in bridge construction, like many ABC techniques, include enhanced safety, lower construction and road user costs, reduced mobility impacts, shorter on site construction time, improved quality and better constructability.

"Motorist and worker safety is improved greatly by shortening travel lane restrictions and road closure durations and by performing construction further from traffic," according to Ellis.

ZEROING IN ON INTERSTATE 30

It is well known that construction on Interstate 30 and Interstate 40 is made very difficult by the extremely high truck and traffic volumes.

"When this project was programmed, we were well into the construction of three bridges on Interstate 40 in District One," Ellis recalled.

The construction method used in District 1 was similar to a traditional stage construction, involving construction in the median of Interstate 40 and multiple traffic shifts.

"The degree of difficulty, time of construction and disruption to traffic was extreme," Ellis commented.

"When we started plan preparation for this slide-in job, we had already completed most of our FHWA/ARDOT ABC Committee investigations. Knowing about the construction difficulties at the bridges constructed on Interstate 40, having learned about SIBC and personally witnessing SIBC

on Interstate 84 in Echo, Utah, at an FHWA Showcase event in 2013, I believed this would provide a good location for our first SIBC. ARDOT administration agreed and here we are."

ON THE JOB SITE

"The benefit of the slide-in type construction is minimal traffic disruption," stated District 7 Engineer David Archer. "Interstate 30 has 32,000 vehicles per day at this location."

Both the eastbound and westbound bridges were constructed on temporary supports on the outside of the existing bridges with little to no disruption to traffic.

"Some minor construction took place in the existing median, meanwhile, the permanent bridge supports were constructed under the existing bridges," Ellis explained.

After the foundation was complete and the bridge superstructures were ready to carry traffic, plans for the actual slide sprang into action.

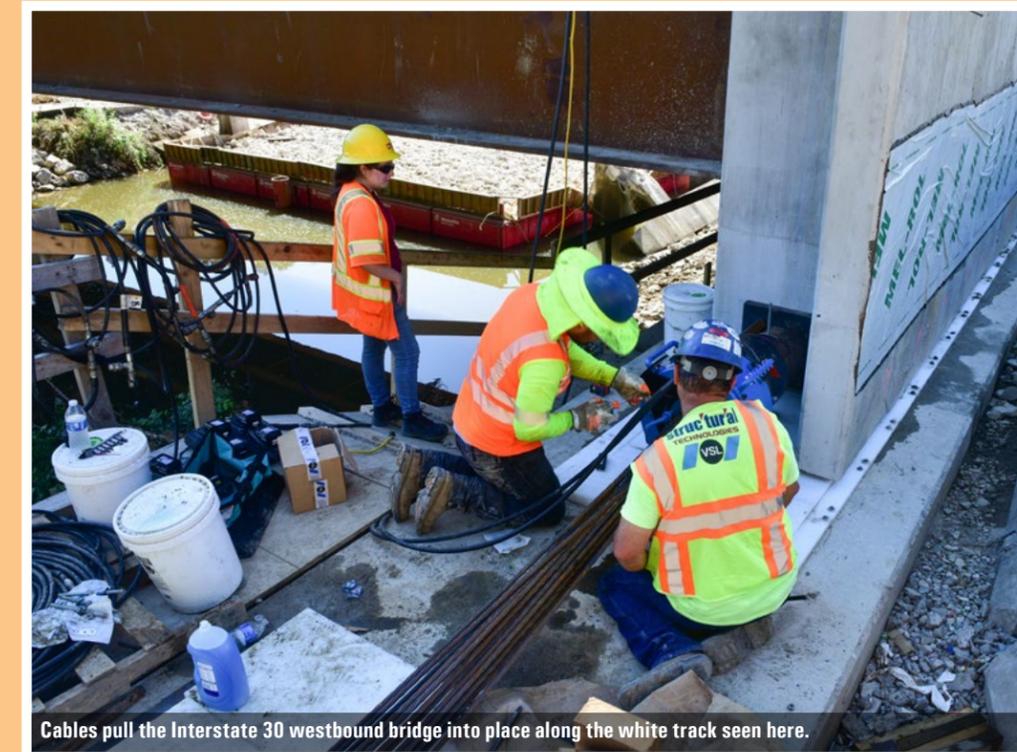
"All traffic was placed on both of the eastbound lanes on Monday morning," Archer shared. "Demolition of the existing westbound bridge was

completed by Tuesday morning and the new bridge was slid into position moving at six feet per hour in about 9 hours. Weighing in at 12,000 tons, the structure was pulled by multiple cables along a temporary track. It was completed Tuesday evening. The approaches and final work were completed and traffic returned to normal operations by the end of the weekend. Travelers only had to endure one week of traffic disruption rather than the months conventional construction would have taken.

The same process is being undertaken to remove the eastbound existing bridge and to slide its replacement into place."

"Overall, this has been a smooth process so far and we look forward to an even quicker completion for the eastbound bridge," Archer added.

Completion of the bridges over De Roche Creek is expected in November of 2020. With an obvious reduction in the time that traffic is interrupted, chances are ARDOT may use the slide-in construction method again on another highway around the State in the future. ■



Cables pull the Interstate 30 westbound bridge into place along the white track seen here.



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