



Lorie Tudor, P.E.
Director

National Roadshow Series
February 17, 2022





1998 AHTD ENGINEERING INTERN ORIENTATION CLASS

Left to right; Row 1: Michael Klamm, Jayson Lang, Damon Johnson, Shawna Bowen, Lucas Griggs, Susan Wimberly, Erica Michael, Bruce Wells. Row 2: Steve Schiebel, Natoya Hill, Camille Dykes, Cathy Atkinson, Trinity Smith, Mery Turner, Marc Maurer. Row 3: Dennis Birge, Thomas Drye, Casey Daniel, Keith Goff, Nathan Young, Walt Manis, Jason Bruce, Alan Pugh. Row 4: Jakob Wimer, Dwayne Cale, William Johnson, Zac Lacy, Andy Brown, Kyle Salyer, Jonathan Foster, Pete Nierengarter. Row 5: Robert Moore, Bill Linton, Todd Mueller, Bryan Gregory, Jason Dupree, Joe Knight, John Coleman, Brian Teague



I-40 Mississippi River Bridge

Interstate 40 Hernando DeSoto Bridge



Fracture Discovered

May 11, 2021 - Closed

Emergency Repair Team assembled
within 24 hours

August 2, 2021 – Opened

Cost - \$10 Million

Interstate 40 Hernando DeSoto Bridge

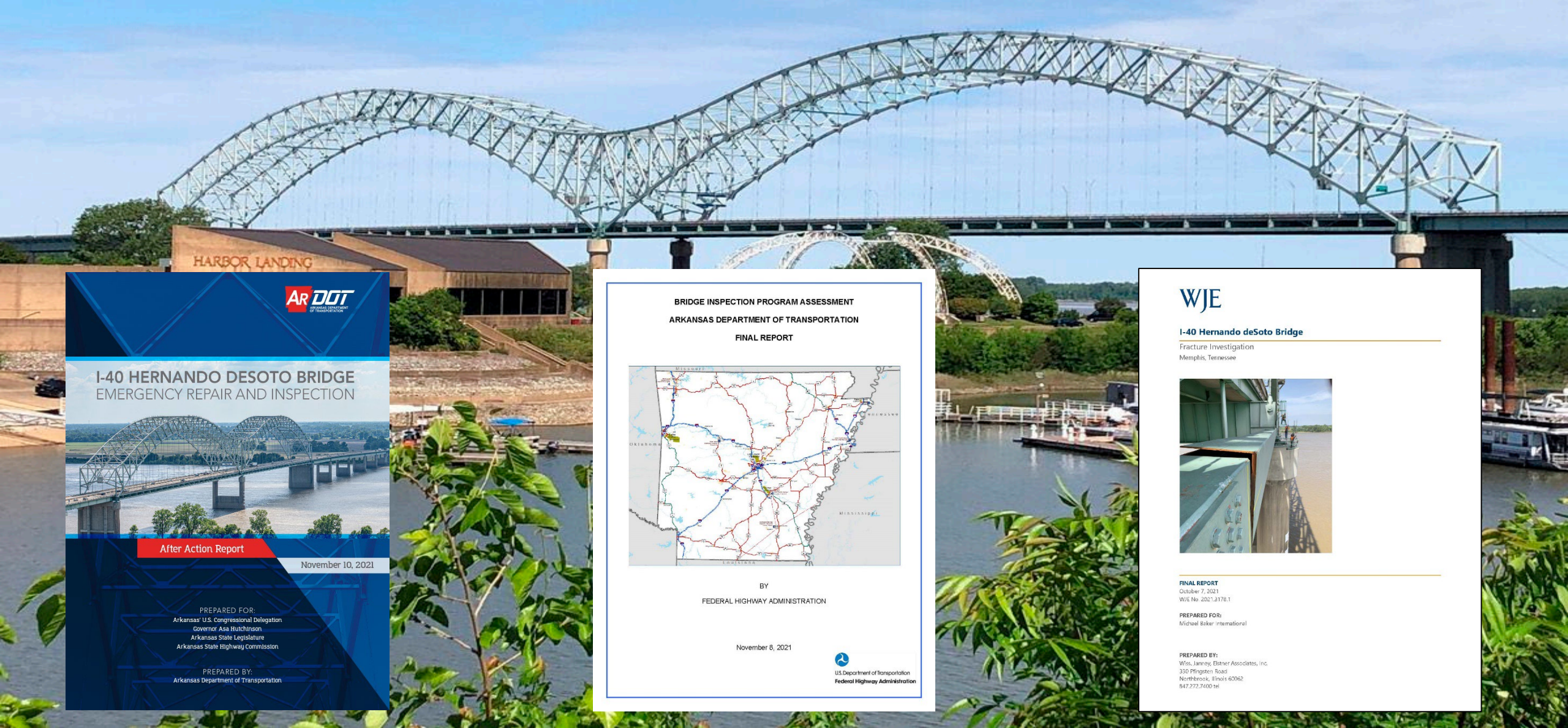




Investigations

- ARDOT Bridge Inspection Program
 - ✓ ARDOT Internal Investigation
 - ✓ FHWA Assessment
- Fracture Analysis
 - ✓ Wiss, Janney, Elstner Associates, Inc. (WJE)





AR DOT
ARKANSAS DEPARTMENT OF TRANSPORTATION

**I-40 HERNANDO DESOTO BRIDGE
EMERGENCY REPAIR AND INSPECTION**


After Action Report

November 10, 2021

PREPARED FOR:
Arkansas' U.S. Congressional Delegation
Governor Asa Hutchinson
Arkansas State Legislature
Arkansas State Highway Commission

PREPARED BY:
Arkansas Department of Transportation

**BRIDGE INSPECTION PROGRAM ASSESSMENT
ARKANSAS DEPARTMENT OF TRANSPORTATION
FINAL REPORT**




BY
FEDERAL HIGHWAY ADMINISTRATION

November 8, 2021

U.S. Department of Transportation
Federal Highway Administration

WJE

I-40 Hernando de Soto Bridge
Fracture Investigation
Memphis, Tennessee



FINAL REPORT
October 7, 2021
WJE No. 2021.2178.1

PREPARED FOR:
Michael Baker International

PREPARED BY:
Wiss, Janney, Elstner Associates, Inc.
330 Pfingsten Road
Northbrook, Illinois 60062
947.272.7400 tel.

www.ardot.gov



I-40 HERNANDO DESOTO BRIDGE EMERGENCY REPAIR AND INSPECTION



After Action Report

November 10, 2021

PREPARED FOR:
Arkansas' U.S. Congressional Delegation
Governor Asa Hutchinson
Arkansas State Legislature
Arkansas State Highway Commission

PREPARED BY:
Arkansas Department of Transportation



BRIDGE INSPECTION PROGRAM ASSESSMENT
ARKANSAS DEPARTMENT OF TRANSPORTATION
FINAL REPORT



BY
FEDERAL HIGHWAY ADMINISTRATION

November 8, 2021



■ 18 Recommendations

- ✓ Quality Control and Quality Assurance
- ✓ Inspection Procedures
- ✓ Load Rating Procedures
- ✓ Scour Appraisals
- ✓ Inspection Resources

■ 18 Commendations



I-40 Hernando deSoto Bridge

Fracture Investigation
Memphis, Tennessee



FINAL REPORT

October 7, 2021
WJE No. 2021.3178.1

PREPARED FOR:

Michael Baker International

PREPARED BY:

Wiss, Janney, Elstner Associates, Inc.
330 Pflingsten Road
Northbrook, Illinois 60062
847.272.7400 tel

- Wiss, Janney, Elstner Associates, Inc. (WJE)
- Removed Fractured Portion

Removal of Fractured Pieces from the Tie Girder

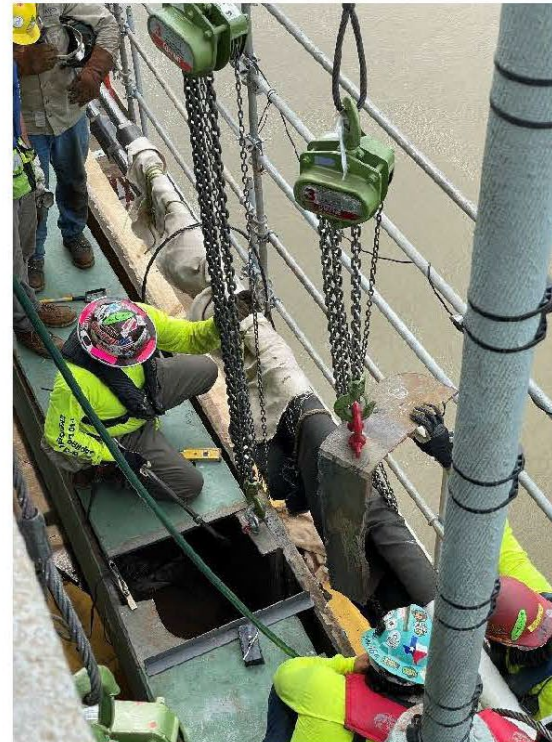
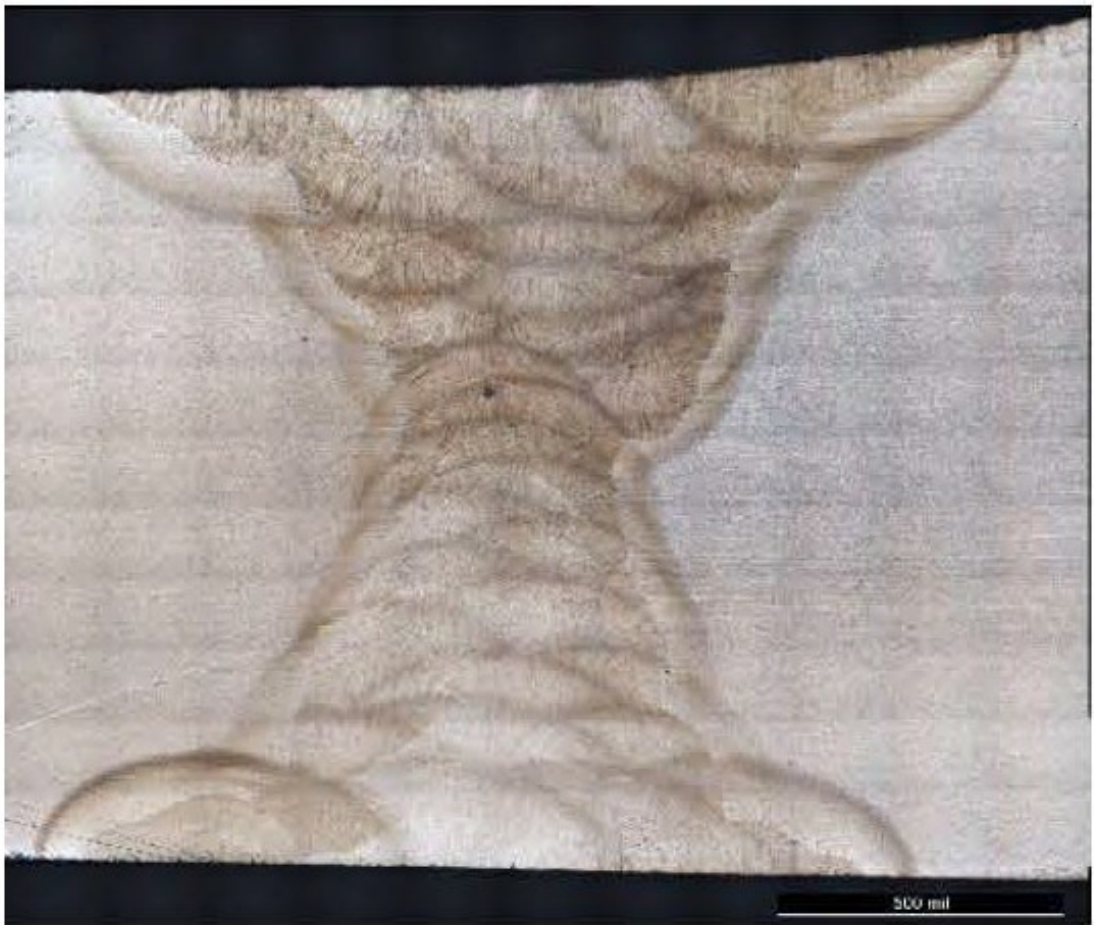


Figure 14. Removal of fractured pieces from tie.

Core Sample Removed



Figure 15. View from inside tie showing core sample removed from groove weld.



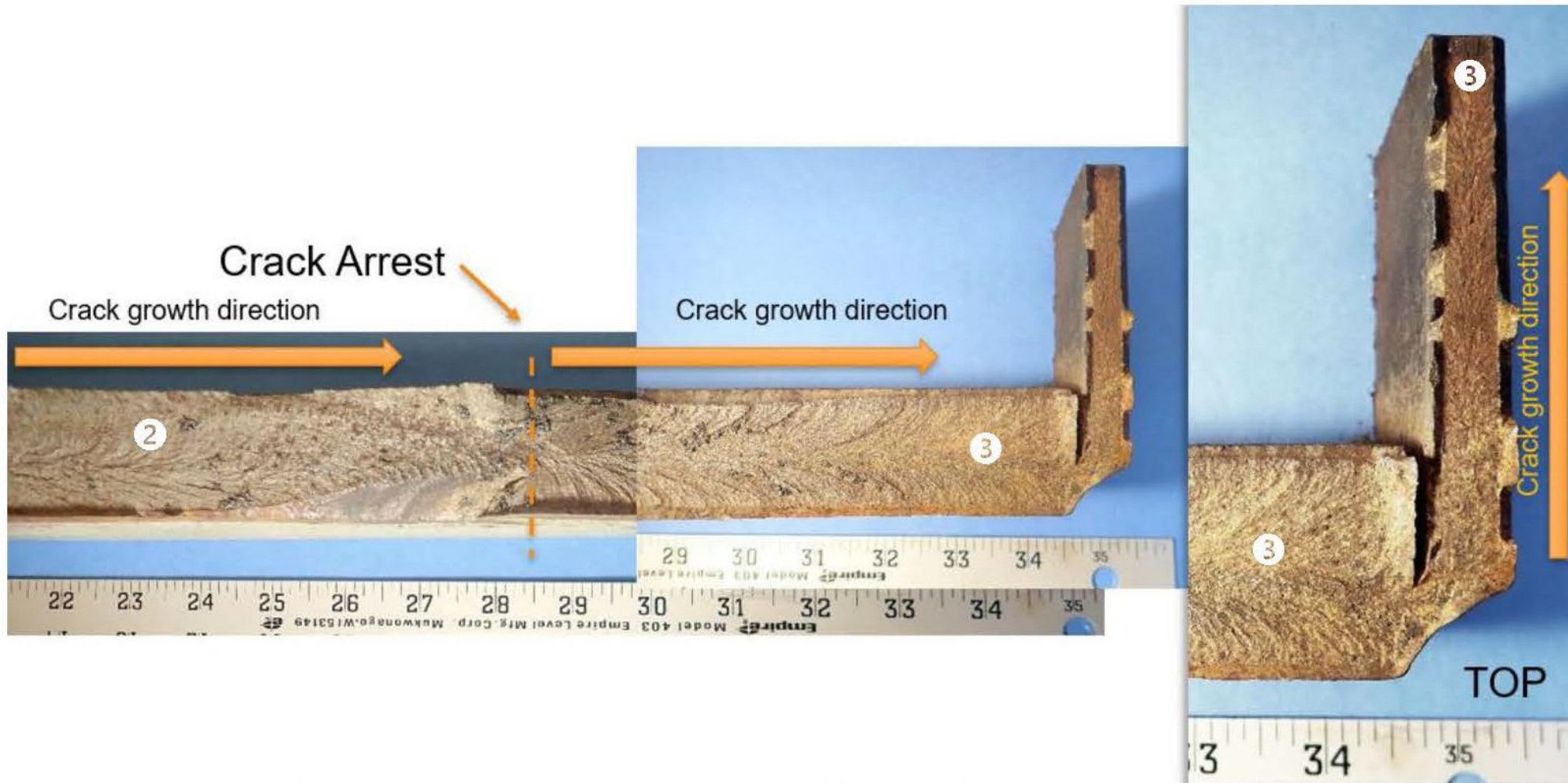
Good Weld



Defective Weld

Welds Repairs During Fabrication

Defect - Undetected



- Three Phases
- Cold Temperatures, Stress, Live Loads
- Reoccurrence Unlikely
- Ultrasonic Testing

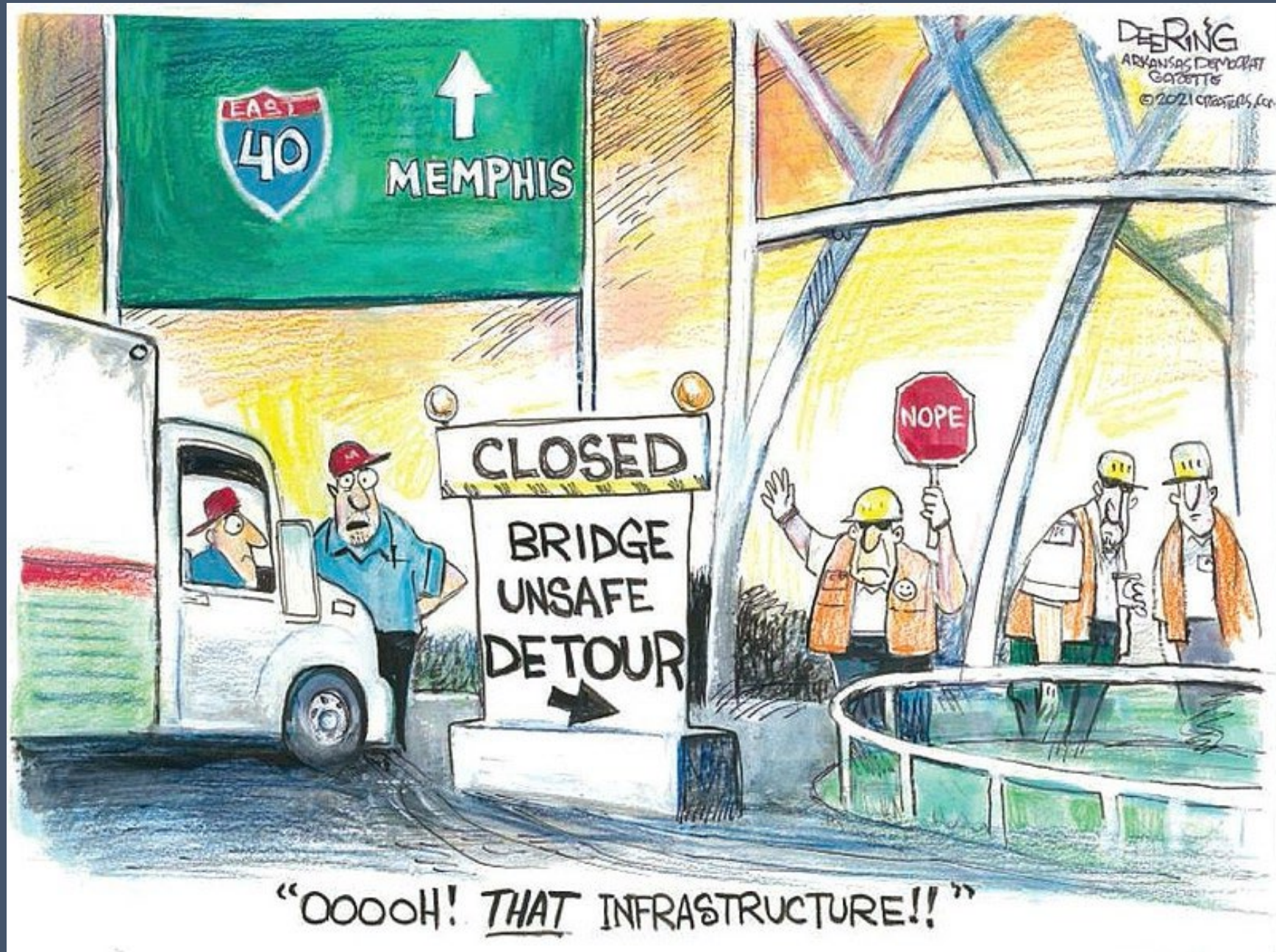
Moving Forward

- New Management
- Reorganize
- Create Oversight Committees
- Additional Personnel
- Professional Engineers
- Shall Rotate Inspectors
- FHWA Recommendations
- Consultants
- Ultrasonic Testing



“Never let a good crisis go to waste”

~Winston Churchill





Funding

- **Federal**
- **State**
- **Renew Arkansas Highways Program**

Infrastructure Investment and Jobs Act



Roads and
Bridges
\$110B



Electric Grid
Upgrade
\$73B



Passenger
and Freight
Rail
\$66B



Broadband
\$65B



Improved
Water
Quality
\$55B



Climate
Change
Protection
\$50B



Airports
& Ports
\$42B



Public
Transit
\$39B



Environmental
Clean-Up
\$21B



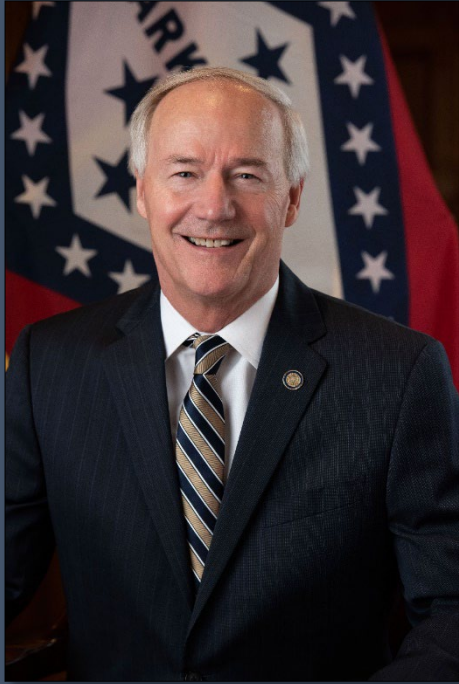
Electric
Vehicles
\$15B



Transportation
Safety
\$11B



Reconnecting
Communities
\$1B



Governor Asa Hutchinson



STATE OF ARKANSAS
EXECUTIVE DEPARTMENT

PROCLAMATION

EO 21-19

TO ALL TO WHOM THESE PRESENTS COME – GREETINGS:

**EXECUTIVE ORDER TO ESTABLISH THE GOVERNOR'S
INFRASTRUCTURE PLANNING ADVISORY COMMITTEE**

WHEREAS: President Joe Biden signed the Infrastructure Investment and Jobs Act into law on November 15, 2021; and

WHEREAS: The Infrastructure Investment and Jobs Act provides \$1.2 trillion in both grants and dedicated spending for infrastructure projects, capital assets, and workforce development; and

WHEREAS: The Infrastructure Investment and Jobs Act includes provisions that allow for disbursements to entities and individuals through various programs operated by agencies of the State of Arkansas; and

WHEREAS: It is in the best interest of the state and its citizens to identify best practices and procedures for ensuring that the State of Arkansas, its citizens, and businesses realize the maximum relief and benefits available under the Infrastructure Investment and Jobs Act;



\$54 million

Electric Vehicle Chargers



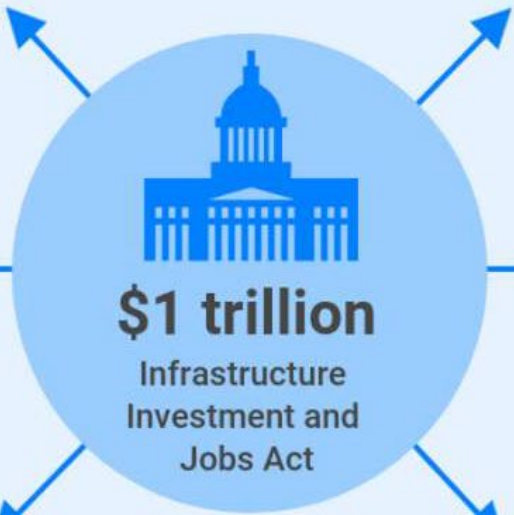
\$3.5 billion

Roads



\$279 million

Bridges



\$244 million

Transit



\$31.1 million

Motor Carrier Safety
Assistance Program



\$203 million

Safety Improvements

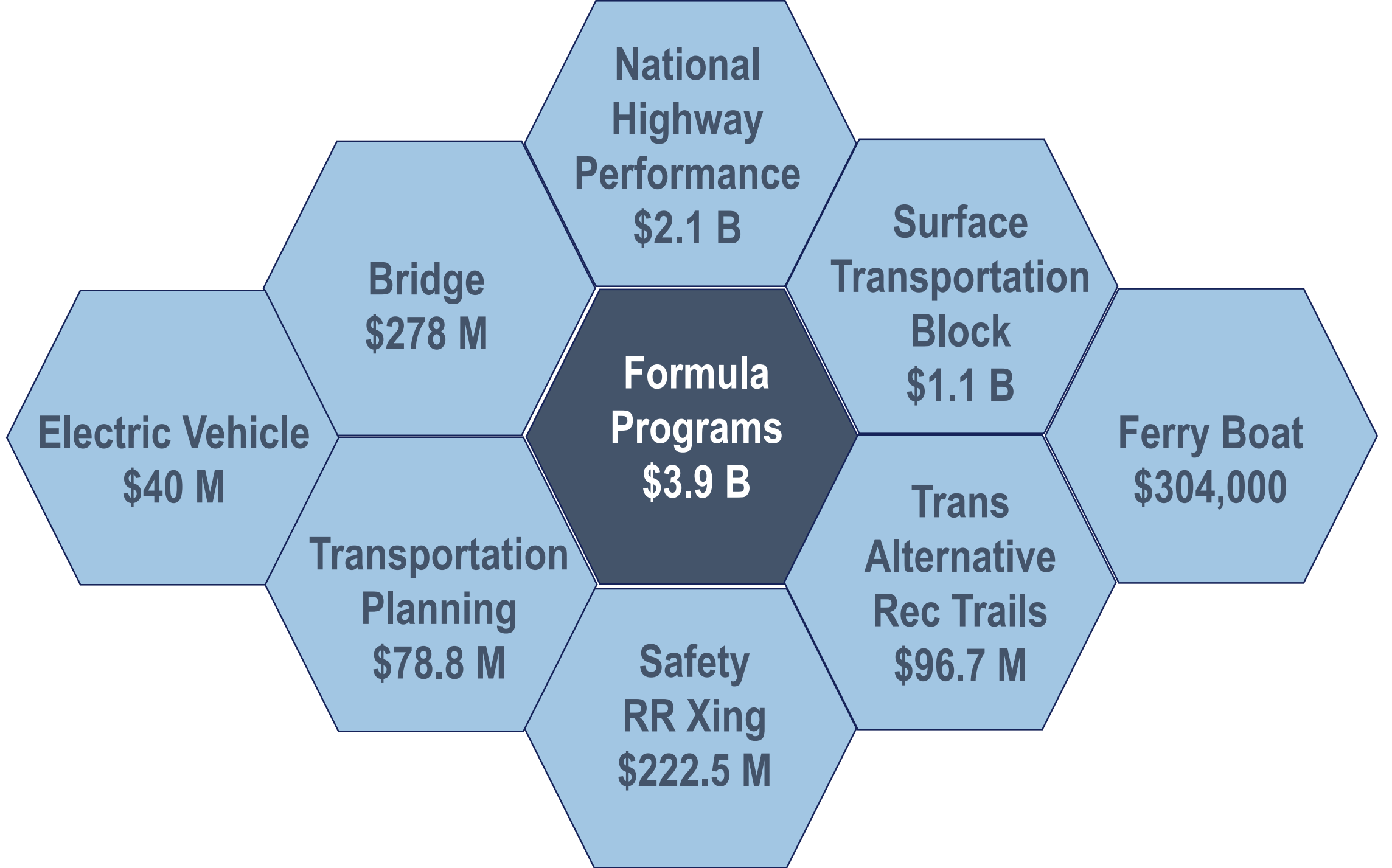
Department of
Transportation

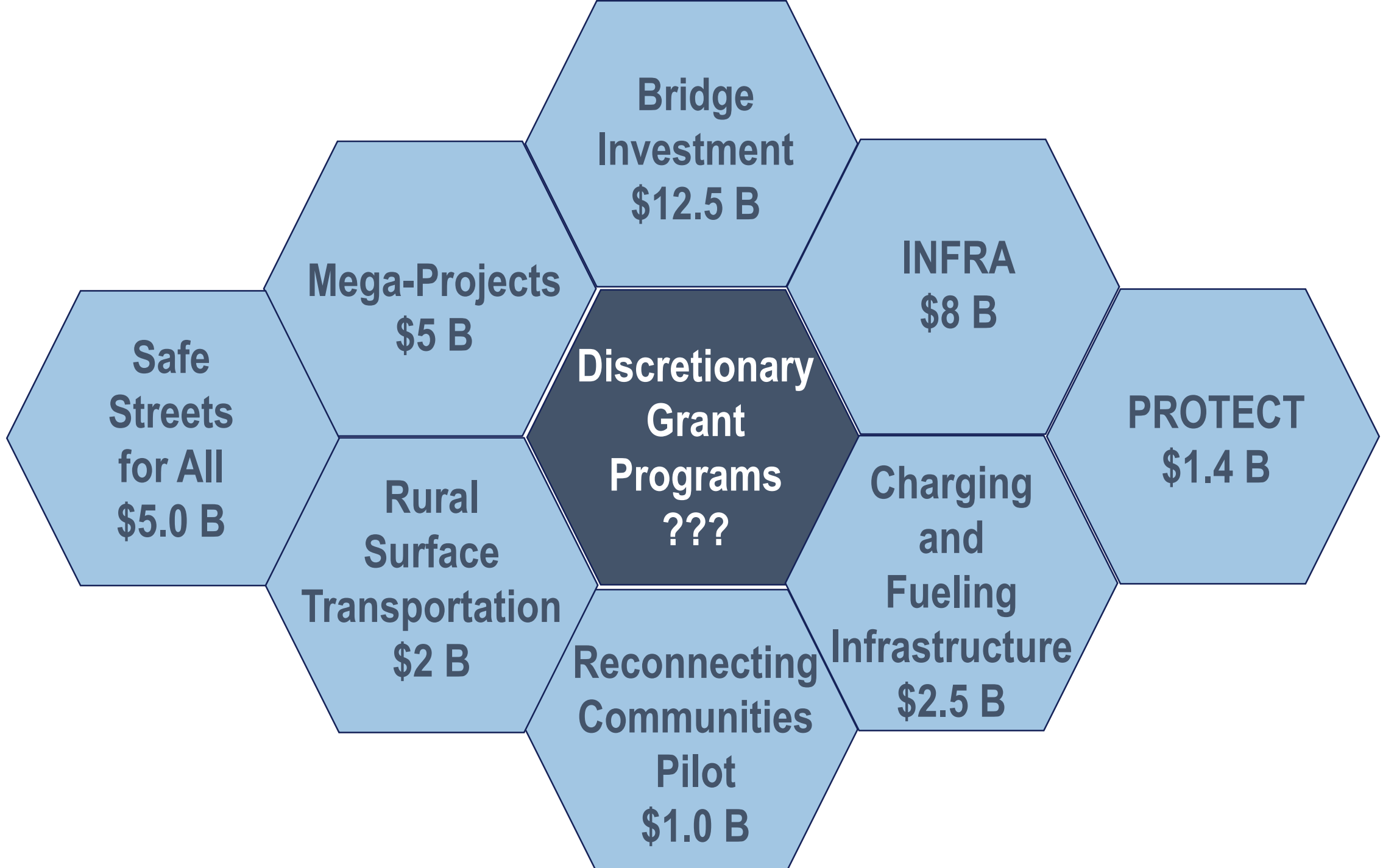
- ✓ Fed Highway
- ✓ Fed Motor Carrier Safety
- ✓ Fed Transit

Arkansas

5 Years

FFYs 2022-2026





State Highways

Act 416

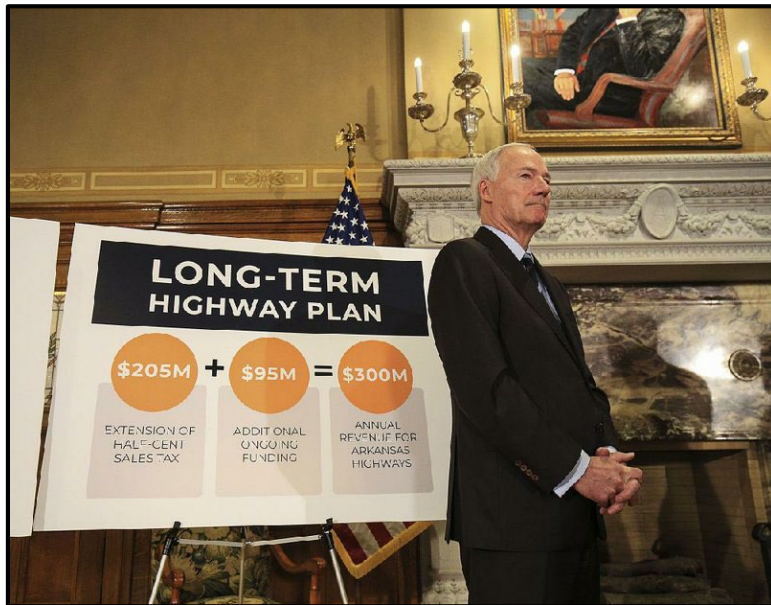
\$ 95 Million

Issue 1

\$205 Million

Total to ARDOT

\$300 Million





- Preservation
 - ✓ Pavement
 - ✓ Bridges
- Safety
- Capital and Capacity Needs



Public Service Campaigns



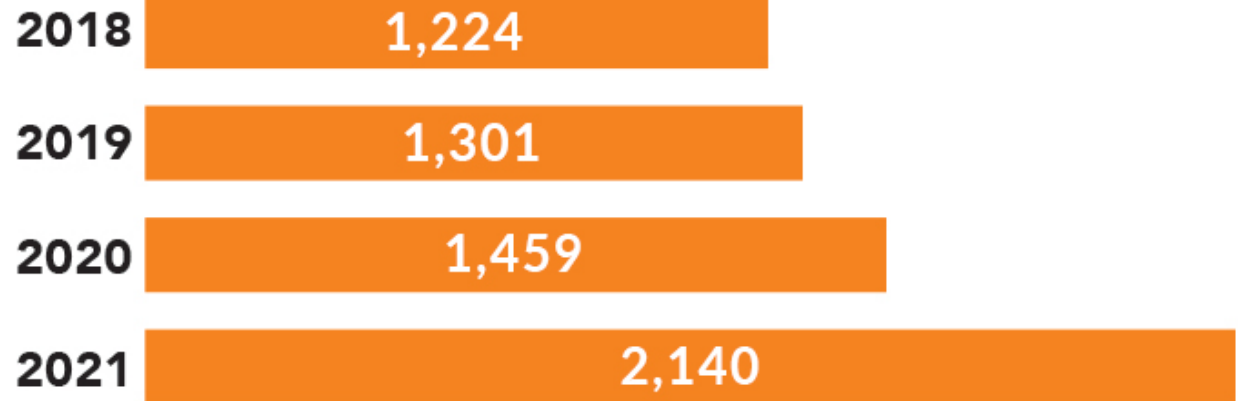


SLOW DOWN PHONE DOWN in work zones

- **Slow Down, Phone Down:** a statewide work zone safety campaign
- Arkansas Highway Police and Arkansas State Police **cracking down on distracted and reckless driving**
- **Education and awareness** around work zone laws



WORK ZONE CRASHES





NEW YEAR, NEW ARDOT!

We're now on Facebook and Instagram: @myardot





Lorie Tudor, P.E.
Director

National Roadshow Series
February 17, 2022

