

Planning Makes Perfect —
Addressing Construction Issues
Before the Project Begins

Overcoming Barriers:
Motorcycle Roadside Safety

Ribbon Cutting Marks
Completion of I-35 Waco Project

TEXAS TRANSPORTATION

VOL. 59 | NO. 1 | 2023

Researcher

A Job Well Done



Texas A&M
Transportation
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ON THE COVER: The I-35 Waco Project is officially complete with a ribbon-cutting ceremony held Nov. 9. The \$341 million project finished on budget and ahead of schedule, beating its originally estimated end date by approximately 18 months.



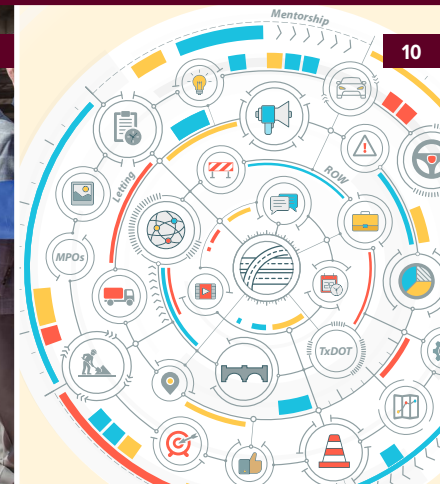
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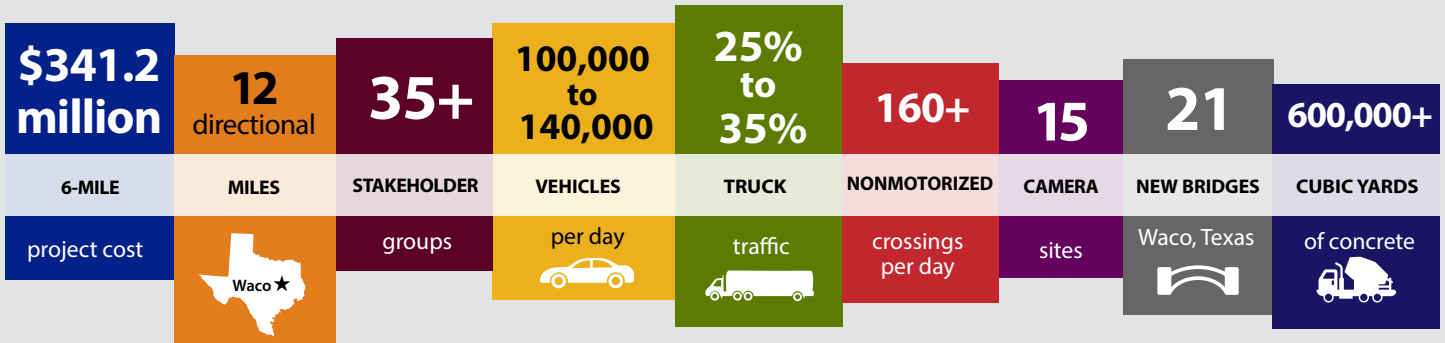
I-35 Waco PROJECT OVERVIEW

This project will improve I-35 in Waco from 12th Street to North Loop 340 by improving safety and mobility, adding capacity, incorporating technology, and enhancing aesthetics. Improvements include widening main lanes to four lanes in each direction, improving frontage roads and ramps, reconstructing bridges, improving interchanges, adding U-turns, and improving bicycle and pedestrian access.

The Texas Department of Transportation (TxDOT) has planned a comprehensive communication effort to provide local, visiting and long-distance travelers with real-time information about construction activities, incidents, work zones and lane closures. Smart work zone transportation systems will be in place during this reconstruction effort. Throughout the project, TxDOT is using a comprehensive approach to help maximize the safety and minimize the travel disruptions for affected travelers and businesses. ■



By the Numbers



PLANNING MAKES PERFECT —

Addressing Construction Issues *Before the Project Begins*



Highlighting the revised design (extended portion) of the retaining wall on TX 360 north of IH 30. This portion of the retaining wall was extended due to a change in the foundation design to mitigate a conflict with a utility duct bank.

Noise walls and retaining walls serve different purposes but have similarities in terms of the design and construction process. However, construction of these walls may face issues with utilities, phases of construction, and access. Manuals and design guides mention these concerns but fail to lay out applicable solutions.

A common sight on Texas roadways is noise walls and retaining walls. Noise walls, or barriers, are helpful in keeping the sound of a busy highway out of neighborhoods and business districts. Retaining walls reduce the need for a sloped area at grade changes and are used extensively for highway overpasses.

Noise walls and retaining walls serve different purposes but have similarities in terms of the design and construction process. However, construction of these walls may face issues with utilities, phases of construction, and access. Manuals and design guides mention these concerns but fail to lay out applicable solutions.

Research from the Texas A&M Transportation Institute (TTI) and the Texas Department of Transportation (TxDOT) aims to assist noise wall and retaining wall constructability by resolving issues with sequencing and placement.

“The research started with discussions with TxDOT utility coordination staff at the Dallas and San Antonio Districts,” says Kris Harbin, TTI assistant research scientist. “There were issues between utility relocations and noise wall placements being set in the same area of the right of way.”

Harbin's study, titled Sequencing and Placement of Noise Walls and Retaining Walls on TxDOT Projects, seeks to provide guidance on the best ways to install these types of walls to benefit ease of travel and save on construction costs.

"A smoother process happens when TxDOT and utility companies work closely to determine where lines are before the project starts," Harbin says. "You have to make sure you have your ducks in a row during design, or it's going to cause issues during construction."

As with many plans, changes will need to be addressed during execution. Existing lines for gas, sewer or other utilities may require TxDOT to rethink the original design.

"One location had a crossing for an existing utility duct bank, which is used to consolidate utility cabling," Harbin says. "During construction, TxDOT realized the utility was shallower than what the utility company provided to TxDOT, putting it in conflict with the proposed retaining wall. Estimated relocation of the utility would take about two years and cost \$2 million; TxDOT decided not to relocate it. It would have been better to clear the conflict during design, but the foundation of the retaining wall was revised during construction to allow the utility facility to stay in place."

The utility coordination process at TxDOT of avoid, minimize, and accommodate comes into effect: do what is needed to ensure a successful completion of the project.

"If we do it right the first time, it's going to make everyone's life easier. This research makes the process better, not only for a current project but for projects to come."

*Kris Harbin
TTI Assistant Research Scientist*

One result of this research to address problems during design is a guidebook to assist organizations in sequencing and placement of noise walls and retaining walls. The guidebook provides recommendations, preferred methods and best practices for sequencing, placement, design and construction for reducing issues with structures during construction and maintenance.

This 38-page guidebook, condensing the original 420-page research document, is available for use by other departments of transportation.

"I don't want it to sit on a shelf," Harbin says. "I want it to get out there and be used. There's so much good infor-

mation squeezed down to fit into the guidebook so it's easier to use."

Information in the guidebook is divided into sections.

"We laid out the guidebook to make it easy to find the information because we are going to have multiple stakeholders and users of this guidebook," Harbin says. "If you are looking for noise wall design recommendations, go to page 15. If you're interested in right of way, go to page 22. If you're interested in utilities, go to page 19."

A key benefit of the research is recommendations for designers and other stakeholders. Harbin would also like to work with TxDOT districts to help implement best practices in the guide.

"If we do it right the first time, it's going to make everyone's life easier," Harbin says. "This research makes the process better, not only for a current project but for projects to come." ■

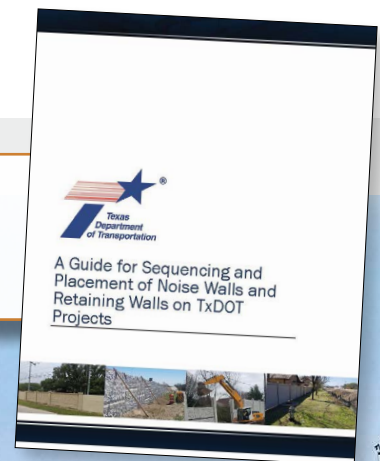


For more information, contact **Kris Harbin** at k-harbin@tti.tamu.edu.

Retaining wall widening to facilitate the addition of main lanes on IH 45 near FM 1765 in the Houston District.



The guidebook may be accessed at <https://tti.tamu.edu/documents/0-7014-P1.pdf>.



Overcoming Barriers: Motorcycle Roadside Safety



A group of motorcyclists travel down a two-lane highway separated by a concrete roadside safety barrier.

Roadside safety barriers in the United States are not designed, tested or evaluated with motorcyclists in mind although impacts against roadside safety systems represent a higher risk of fatality for motorcyclists.

Although motorcyclists make up only 3 percent of all registered vehicles, motorcyclists accounted for 14 percent of all traffic fatalities in 2020 in the United States. As these numbers have risen over the years, several state departments of transportation (DOTs) are taking matters into their own hands to address these related issues.

In partnership with the Texas Department of Transportation (TxDOT), the Texas A&M Transportation Institute (TTI) is participating in the Development and Evaluation of Roadside Safety Systems for Motorcyclists Pooled-Fund Study to address the significant safety issues in the roadside environment associated with motorcyclist impacts. Currently, the study involves the contribution and collaboration of seven states.

“Motorcycle roadside safety in the United States is an issue that has gone unaddressed for a long time,” explains TTI Research Scientist Chiara Silvestri Dobrovoly. “With this pooled-fund study, what we are trying to do is fill the gaps in these safety standards to reduce the loss of life that occurs each year as a result of motorcycle roadway departure crashes. Essentially, we are asking, how can we develop consistent methods for evaluating motorcyclist-friendly solutions?”

A gap in roadside safety testing today is the lack of testing standards aimed toward addressing motorcyclist safety relative to roadside barriers. While other international crash-testing standards include consideration of motorcyclists in barrier design, the American Association of State Highway and Transportation Officials *Manual for Assessing Safety Hardware* used in the United States lacks protocols for these matters. Roadside safety barriers in the United States are not designed, tested or evaluated with motorcyclists in mind although impacts against roadside safety systems represent a higher risk of fatality for motorcyclists.

Due to the magnitude of this safety issue, several state DOTs have taken independent action to address the problem by coming together through the pooled-fund study. As one of the

first motorcyclist-focused projects in the United States to address roadside safety barriers, the motorcycle pooled-fund study provides a cooperative approach to conducting research about these issues. The three-year study aims to analyze data and best practices demonstrated in other countries, investigate methods to reduce crashes and impacts, and develop guidelines for the implementation of motorcyclist-friendly roadside safety treatments.

According to Dobrovolny, “One thing that we have been trying to do so far in our research has been to find what is and isn’t working through reviewing data, precedents and examples in areas that have already developed solutions to this growing issue. Fortunately, there are solutions out there, and in the future, we hope to be able to develop uniform methods that state DOTs can adopt and implement.”

Phase I of the first project in the motorcycle pooled-fund study was recently completed. It involved a review of best practices being conducted along with a data investigation to address potential roadway design countermeasures to limit the encroachment of

“Motorcycle roadside safety in the United States is an issue that has gone unaddressed for a long time. With this pooled-fund study, what we are trying to do is fill the gaps in these safety standards to reduce the loss of life that occurs each year as a result of motorcycle roadway departure crashes. Essentially, we are asking, how can we develop consistent methods for evaluating motorcyclist-friendly solutions?”

Chiara Silvestri Dobrovolny
TTI Research Scientist

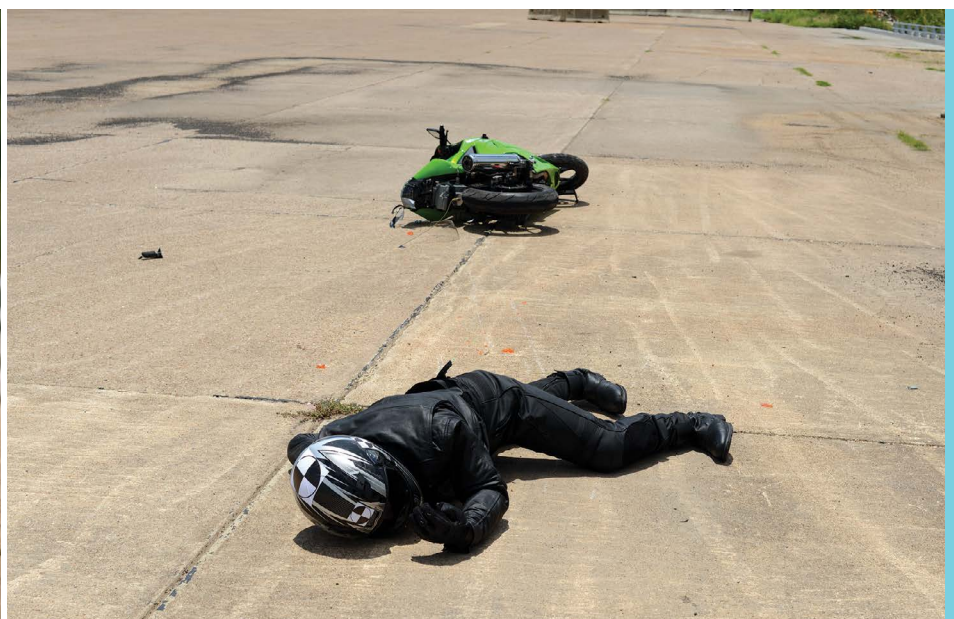
motorcyclists. Four projects are upcoming for the 2023 fiscal year under the motorcycle pooled-fund study:

- Investigation of Available Data Toward the Development of Hardware Installation Guidance for Motorcycle Roadside Safety,
- Evaluation of a Prioritized Design of a Lower Rail Element for Installation to the MGS System to Address Motorcycle Safety,
- Investigation of Roadway Design Methods to Decrease Likelihood of Roadway Departures for Motorcyclists — Phase 2, and
- Development and Full-Scale Crash Testing of an Improved Railing System for Use on Top of Barriers.

“The seven states with extensive experience in motorcyclist safety, coupled with the research capabilities and experience of TTI in roadside safety and roadside safety hardware, will provide a synergy in the development of approaches to reduce motorcyclist fatalities,” notes TxDOT Roadway Design Section Director Kenneth Mora. “This study is a huge stepping stone in the United States that will give the public nationwide guidance about roadside safety hardware to improve safety for motorcyclists and all users of the roadway.” ■



For more information, contact **Roger Bligh** at r-bligh@tti.tamu.edu.



Similar crash tests have been done at TTI in the past, testing trajectory and interaction between the motorcycle rider and the net system during an impact event.

RIBBON CUTTING

MARKS COMPLETION OF I-35 WACO PROJECT



Texas Transportation Commission Chair J. Bruce Bugg praised the teamwork of all involved in the success of the I-35 Waco Project. The project came in on budget and was completed a year and a half ahead of schedule.



Dignitaries at the event included, from left to right Baylor University President Linda Livingstone, Texas Rep. Doc Anderson, Bellmead City Manager Yost Zakhary, Texas Transportation Commission Chair J. Bruce Bugg and Waco Mayor Dillon Meek.

The I-35 Waco Project is officially complete with a ribbon-cutting ceremony held Nov. 9. The \$341 million project finished on budget and ahead of schedule, beating its originally estimated end date by approximately 18 months. The I-35 Waco Project is part of the larger My35 Waco District Construction Plan, begun in 2012, comprised of 17 separate construction efforts along a 96-mile corridor from Hillsboro to Salado in Central Texas.

Dignitaries from around the Lone Star State gathered under one of the project's 21 newly constructed bridges to celebrate the formal opening of the roadway. Texas Department of Transportation (TxDOT) Waco District Engineer Stan Swiatek opened the ceremony, welcoming everyone and praising the interagency teamwork that made the construction effort so successful. "This project is one of the most complex the Waco District has ever undertaken," Swiatek said. "But we did it!"

Begun in spring 2019, the project entailed TxDOT's partnering with greater Waco stakeholders to improve 12 directional miles of I-35 traveled by up to 140,000 vehicles per day. A few of the new features are expansion from three to four lanes (in each direction), 13 additional U-turns to facilitate access along the corridor, and new signalized and marked

Bugg called the I-35 Waco Project "one of the most vital" roadway improvement projects in Texas, noting the crucial role Waco's enhanced corridor will play in helping TxDOT meet its mission of "connecting you with Texas."



TxDOT Waco District Engineer Stan Swiatek welcomes attendees at the Nov. 9 ribbon cutting for the I-35 Waco Project. The event was held under the 4th and 5th Street bridge, newly constructed as part of the project.

pedestrian and bicycle facilities. The Texas A&M Transportation Institute (TTI) helped TxDOT coordinate communications with local citizens and businesses during construction.

Texas Transportation Commission Chair J. Bruce Bugg reinforced Swiatek’s recognition of interorganizational cooperation, praising the fiscal responsibility and get-it-done attitude that brought the project in so far ahead of schedule. Bugg called the I-35 Waco Project “one of the most vital” roadway improvement projects in Texas, noting the crucial role Waco’s enhanced corridor will play in helping TxDOT meet its mission of “connecting you with Texas.”

The project team implemented a number of innovations to promote mobility and safety during construction. For example, a traveler information system, which included 15 live-streaming cameras (viewable 24 hours a day via YouTube), helped keep travelers up to date on the latest corridor events, like traffic slowdowns and crashes. Other communication channels included a district newsletter, Twitter feed, real-time map, email updates and text messages.

The project also evolved, adding needed features as they were identified. Baylor University and Waco have grown in the last decade — and have grown together symbiotically. As a result, students often cross I-35 between the university and downtown, and that required adding a focus on

bicyclist and pedestrian safety. To highlight new safety enhancements, TxDOT implemented the Be Safe Be Seen campaign to increase awareness. New pavement decals were placed in construction zones, for example, to ensure pedestrians and bicyclists were aware of new crossings.

“So many things went right with this project, and even when the unexpected happened, our team was resilient in dealing with those challenges. Going forward, we have an excellent template for achieving success in future projects.”

*John Habermann
TTI Research Engineer and
Mobility Coordinator*

At the ceremony, Waco Mayor Dillon Meek applauded local staff from his office, as well as the chamber of commerce and the Waco City Council. All parties working together, he said, helped keep the lines of communication open with local residents and businesses to ensure construction caused “as little difficulty as possible.”

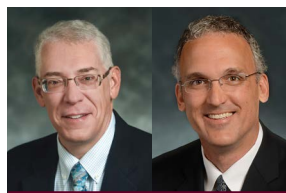
Meek’s nod to keeping the community informed is representative of the larger My35 philosophy, which seeks community

involvement early on to ensure the final product meets local mobility needs.

“Helping local folks participate in the process rather than simply having to suffer through the inconveniences of construction is part of the My35 philosophy of public engagement,” says TTI’s John Habermann, TxDOT’s mobility coordinator to local businesses and citizens.

This ribbon cutting was a cause for celebration for TxDOT. The Waco District’s population continues to grow, and commercial travel continues to increase. In the future, the district will maintain communication with its partners to study, plan and construct transportation infrastructure to promote safe travel to and through Waco. TxDOT is currently discussing the expansion of I-14, I-35 in south Waco, Texas 317 between Crawford and Temple, and Business 77. District staff are confident that once the projects come to fruition, staff will have a set of best practices in hand to guide these projects.

“So many things went right with this project,” Habermann says, “and even when the unexpected happened, our team was resilient in dealing with those challenges. Going forward, we have an excellent template for achieving success in future projects.” ■



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SPOTLIGHT ON

Caroline Golden

From TTI Intern to Communications Professional

Caroline Golden and John Habermann at the I-35 Waco Project ribbon cutting. Golden credits Habermann's mentorship during her TTI internship with helping her become the young professional she is today.



Caroline Golden and Linda Livingstone, president of Baylor University, at the I-35 Waco Project ribbon cutting. President Livingstone handed Golden her diploma upon graduation in 2019.

“Part of TTI’s mission is to provide educational opportunities and real-life experiences to help students become young professionals.”

*John Habermann
TTI Research Engineer*



The ribbon cutting celebrating the completion of the I-35 Waco Project on Nov. 9 had personal significance for Caroline Golden, who's done some construction of her own as a result of the project. In 2019, when the project began, Golden was a senior at Baylor University in Waco. Thanks to innate talent, opportunity and a Texas A&M Transportation Institute (TTI) internship, she's launched a career that already seems destined for success.

For Golden, the road that brought her to Baylor University extended around the globe. "My father works for Chevron, and I traveled a lot growing up," she says. "But Texas seemed like a good place for college since we have family here."

Waco, she notes, has a strong feeling of community about it. "The people are friendly and definitely helped me feel at home."

At Baylor University, Golden gravitated toward communications, an affinity she attributes to her international travel growing up. When you move to a new place, you have to learn fast how to talk to new people about the things that matter to them. Golden says those are surprisingly similar, regardless of creed, culture or national origin. "What unites is more common than we sometimes realize," she says.

Golden was a senior when the I-35 Waco Project broke ground. TTI Research Engineer John Habermann visited one of Golden's classes looking for a student interested in a public relations internship to help him with outreach to the Waco community on behalf of the Texas Department of Transportation (TxDOT) during construction. "Part of TTI's mission is to provide educational opportunities and real-life experiences to help students become young professionals," Habermann notes.

Golden's innate appreciation for bringing differing viewpoints to the table made her an ideal candidate for the internship. After joining Habermann in TTI's Waco Office, she earned high praise for her amiable attitude and positive professionalism. "Caroline has a natural resolve and graciousness about her that exudes confidence with humility," Habermann says. "It was a delight to work with her during her internship year."

Golden notes how her TTI experience crystallized classroom theory by dropping her into the deep end of the pool of real-world experience. She half-jokes that the most challenging part of the job early on was learning all the transportation acronyms that went with it.

"My internship was the perfect training ground for what I'm doing now. John taught me how to translate complex engineering subjects into everyday language for people, to help them understand why construction is happening and how they'll eventually benefit from it."

Caroline Golden
CD&P Community Engagement
Specialist

"John's mentorship was instrumental in that too," she says. "He always encouraged questions and took the time to answer them."

As Golden's internship wound down, Habermann reached out to a colleague at CD&P, a public relations and communications firm in Austin, Texas, to see if the company might need someone full-time. (TxDOT's Waco District hired CD&P to handle its public outreach during the I-35 Waco Project.) Combined with Habermann's recommendation, Golden's experience with the project made hiring her a no-brainer. And after her first year with CD&P, Golden quickly earned a promotion.

"Caroline is extremely perceptive and insightful, and brings an exceptional level of professionalism and compassion to her work," says Jacqie Wilson, her supervisor at CD&P. "She inspires me to be better at what I do professionally and personally."



Jacqie Wilson (left) and Caroline Golden at the I-35 Waco Project ribbon cutting. Wilson credits Golden with pushing her to become "better at what I do professionally and personally."

Golden gives a lot of credit for her advancement at CD&P to her experience working with TTI.

"My internship was the perfect training ground for what I'm doing now," Golden says. "John taught me how to translate complex engineering subjects into everyday language for people, to help them understand why construction is happening and how they'll eventually benefit from it."

But Golden's future isn't solely career focused. Married in June, the next chapter of her personal life is also well underway. When asked to jump forward 50 years and look back on what she'd like her professional legacy to be, Golden takes a moment to consider her response.

"I've been blessed with a lot of people in my corner my whole life," she says. "My parents, my community here in Waco, my instructors and friends at Baylor, John and Jacqie... without them, I wouldn't have had so many opportunities to learn what I wanted to do professionally — and to learn to enjoy it. So, I want to mentor others in the same way — help them find their perfect fit professionally, if I can, as I go along in my own career. I can't wait to help others like others have helped me." ■



For more information, contact **John Habermann** at j-habermann@tti.tamu.edu.

Dennis Christiansen Inducted into Texas Transportation Hall of Honor



Speakers at the event were, left to right, David Laney, Mike Behrens, Katie Turnbull, Dennis Christiansen, Chancellor John Sharp, Marc Williams and Rep. John Raney.

Dr. Dennis L. Christiansen, P.E., agency director emeritus, was inducted into the Texas Transportation Hall of Honor at a reception and dinner at Traditions Club in Bryan on Sept. 14. During his 50-year career of transportation leadership and innovation, he served in numerous leadership roles over four decades at TTI, including as agency director for 10 years. He retired in 2016.

Christiansen — described at the event as a pioneer of the high-occupancy vehicle (HOV) lane concept in several Texas cities — conducted groundbreaking research in traffic operations, transportation planning and transit planning. He led, for example, the development of the extensive barrier-separated HOV system in Houston, a system that millions of commuters use daily throughout the country. Since his retirement from TTI, Christiansen has continued to lead in the transportation arena, notably in the creation and operation of the Brazos County Regional Mobility Authority and as chair of the College Station Planning and Zoning Commission.

About 200 guests were welcomed to the event by TTI Senior Research Fellow Katie Turnbull, Christiansen's longtime colleague at the Institute. Speakers included Texas A&M University System Chancellor John Sharp; David Laney, former chair of the Texas Transportation Commission and former chair of the Board of Amtrak; Michael Behrens, former executive director of the Texas Department of Transportation (TxDOT) and client services advisor at Volkert Inc.; and Marc Williams, TxDOT's current executive

director. All praised Christiansen's various contributions to Texas transportation throughout his career, and Texas Rep. John Raney read a state resolution in his honor.

"Dennis, TTI and its analytical muscle guided the work of the Texas 2030 Committee, which proved to be an invaluable contribution to Texas transportation," said Laney, referring to the TTI-led landmark study assessing the state's transportation infrastructure and mobility needs from 2009 to 2030.

Williams credited Christiansen and TTI for TxDOT's reputation as a leader and innovator among its peer state departments of transportation nationwide, a distinction owing partly to the Institute's strong participation in the TxDOT research program.

"Dennis is the best that there is," said Sharp. Referring to the honoree's volunteer community leadership positions, the chancellor noted that Christiansen "took TTI from good to the absolute best and is now providing his expertise throughout the Brazos Valley."

Christiansen credited the 700-plus employees and retirees at TTI for his professional successes. "I got

to work with scores of outstanding people on a multitude of projects over many years," he said. "The partnership between TTI, TxDOT and The Texas A&M University System is a winning combination for Texas transportation."

In the course of his career, Christiansen has received numerous awards and recognitions, including being designated by the A&M System as a Regents Fellow and receiving TxDOT's Road Hand Award, the department's highest honor bestowed upon individuals who drive the state forward in the area of transportation. He has been involved in many professional organizations and served as international president of the Institute of Transportation Engineers, president of the Council of University Transportation Centers, and president of the Research and Education Division of the American Road and Transportation Builders Association.

Christiansen was inducted as the 48th member of the Texas Transportation Hall of Honor, which TTI established in 2000 to recognize select individuals who played pivotal roles in the advancement of transportation in Texas and the nation. Each individual is recognized by a plaque on permanent display in the Hall of Honor located at TTI's headquarters in Bryan, Texas. ■

Barry Goodman Inducted into Texas Transportation Hall of Honor

A transformational leader in the Texas transportation industry for more than 45 years, Barry Goodman was inducted into the Texas Transportation Hall of Honor at a reception at the Omni Houston Hotel on Sept. 28. He was recognized for his decades-long career of building effective partnerships to develop, fund and implement innovative transit systems throughout urban and rural Texas.

Former Houston Mayor Fred Hofheinz recruited Goodman in the mid-1970s to significantly upgrade transit services in the city. As head of Houston's Office of Public Transportation, Goodman was instrumental in leading a coalition of Texas cities to draft legislation that established the Texas Public Transit Trust Fund. He was a key founder of the Metropolitan Transit Authority of Harris County (Houston Metro) and served as its first executive director. Goodman was also instrumental in developing Houston's first regional mobility plan. He began his transit career as a senior legal counsel with the Urban Mass Transit Administration, the predecessor of today's Federal Transit Administration.

Goodman's groundbreaking efforts in Houston and surrounding communities — as well as through the Goodman Corporation, the engineering and planning consulting firm he founded in 1980 — have resulted in billions of dollars in transportation-related capital improvements throughout the state, benefitting the Texas transit industry. He has assisted cities in Texas and around the United States in providing creative mobility solutions that have enhanced public transit and air quality and created economic development. His life's work has been "connecting capital to communities" for the betterment of all.

TTI Agency Director Greg Winfree welcomed about 100 guests to the event. Speakers at the

ceremony who enumerated Goodman's career accomplishments were Thomas Lambert, president and CEO of Houston Metro; Douglas Matthews, assistant vice president of government relations at The University of Texas Medical Branch; Robert Heineman, former vice president of planning and design at The Woodlands Development Company; Robert Eury, former president and CEO of Central Houston Inc.; and Jim Webb, CEO of the Goodman Corporation. Andy Icken, chief development officer for the City of Houston, read a tribute letter from former City of Houston Mayor Fred Hofheinz.

"Barry has been a trailblazer, understanding Houston Metro's vision and mission and working collaboratively with every level of government to move people in this region," said Lambert. "Because of Barry and others that worked closely with him, we enjoy all the benefits that public transit brings to a community, including less congestion, an improved economy, better air quality and time saved to spend with our families."

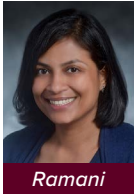
"Going through the era with the people who were instrumental in transforming Houston from a mobility standpoint has been a thrill," Goodman said. "I appreciate everything that everyone in this room has done to contribute to my body of work and the recognition that I am receiving tonight."

Overseen by a five-member board comprised of senior transportation professionals, the Texas Transportation Hall of Honor, located at TTI, provides the opportunity to annually recognize exceptional transportation leaders and their significant contributions to the state. Each individual is recognized by a plaque on permanent display in the Hall of Honor at TTI's headquarters in Bryan, Texas. ■



Left to right, Andy Icken, Tom Lambert, Douglas Matthews, Greg Winfree, Barry Goodman, Robert Heineman, Robert Eury and Jim Webb.

TTI's Ramani Appointed to U.S. EPA Subcommittee



Ramani

TTI Associate Research Engineer and Division Head of Air Quality, Energy and Health Tara Ramani was recently appointed to serve as a member of the Mobile Sources Technical Review Subcommittee (MSTRS) of the U.S. Environmental Protection Agency's (EPA's)

Air Act Advisory Committee. As a representative member from an academic institution, Ramani will be joining a list of MSTRS members from EPA; state, local and tribal governments; unions; environmental and public interest groups; trade associations; utilities; and industry.

"I am honored to have been appointed to the MSTRS," notes Ramani. "I'm looking forward to representing TTI and sharing my knowledge and experience to tackle the important area of mobile source air pollution."

The MSTRS provides the Clean Air Act Advisory Committee with independent advice and recommen-

dations on the scientific and technical aspects of EPA programs related to mobile-source air pollution and motor vehicles and engine fuels. Through its expert members from diverse stakeholder groups and from its various workgroups, the subcommittee reviews and addresses a wide range of developments, issues and research areas such as emissions modeling, emission standards and standard setting, air toxins, innovative and incentive-based transportation policies, onboard diagnostics, heavy-duty engines, diesel retrofit, and fuel quality.

"Tara's tremendous work ethic and dedication to advancing research has helped position TTI as a leader in the area of transportation air quality," says Joe Zietsman, TTI deputy director. "She is very deserving of this appointment and will without a doubt be an invaluable asset to EPA's MSTRS." ■

TTI's Aldrete and Dixon Selected as 2022–2023 Regents Fellow Service Award Winners

Two senior researchers from TTI have been designated Regents Fellows by The Texas A&M University System Board of Regents for 2022–2023. Established in 1988, the award recognizes and honors service, extension and research professionals who have provided exemplary professional service to society that has created large and lasting benefits to Texas and beyond.

Senior Research Scientist Rafael Aldrete and Senior Research Engineer Karen Dixon were among the 11 staff members chosen from the A&M System's agencies to be designated Regents Fellows.

"It's difficult for me to express how humbled and grateful I am for this award," says Aldrete. "I consider myself very lucky to work with my colleagues and serve our sponsors at the A&M System and elsewhere."

Aldrete, who specializes in transportation management,

cross-border transportation and technology applications, and infrastructure finance and economics, helped launch TTI's office in El Paso in 2006 to expand TTI's footprint and capabilities. Since then, Aldrete has served as a member of the Texas Border Trade Advisory Committee and as the director of the Center for International Intelligent Transportation Research at TTI.

"It's this environment that enables us researchers to strive for excellence in service. The A&M System Regents Fellow Service Award gives me purpose and energy to continue doing so," notes Aldrete.

Dixon serves as associate agency director for TTI's Transportation Operations Group and has worked on numerous research initiatives for university, federal, national, state and local agencies. Having worked in the transportation field for 38 years and at TTI for 10 years, Dixon has been a key contributor to many high-profile projects, including the development of the *United States Highway Safety Manual*,



Aldrete



Dixon

the National Academies' of Sciences Transportation Research Board's (TRB's) *Access Management Manual*, TRB's *Access Management Application Guidelines* and more.

"I'm sincerely honored to be selected as a Texas A&M University System Regents Fellow," says Dixon. "As an employee of TTI, it's important to note that the work we do has regional and national impacts and cannot be accomplished by a single person. For this reason, I am accepting this honor on behalf of my many hardworking colleagues at TTI." ■



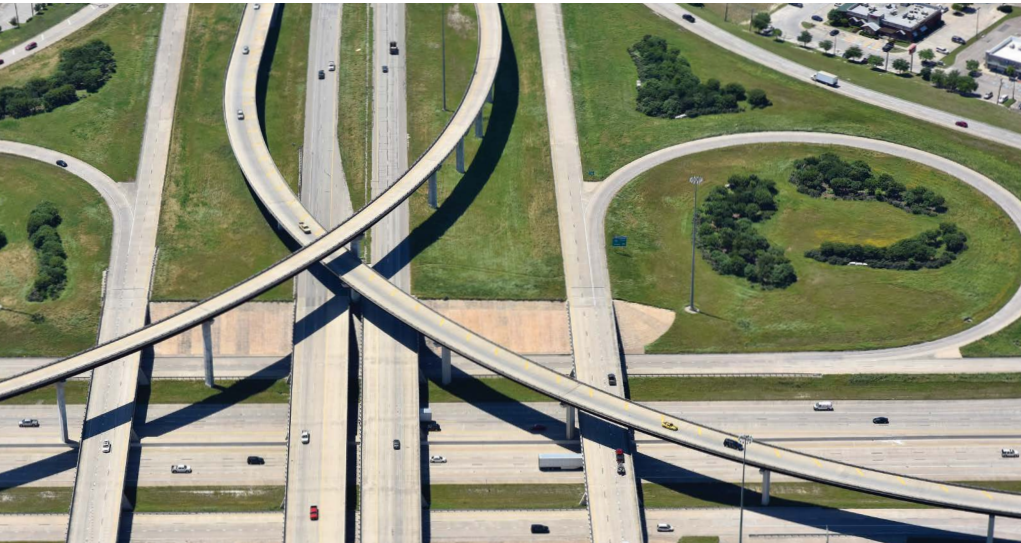
For more information, contact **Bernie Fette** at b-fette@tti.tamu.edu.



THE LAST STOP

with Greg Winfree, Agency Director

CONNECTED MOBILITY, IN ALL ITS FORMS, IS HERE TO STAY



In the world of highway construction, where myriad factors can upend even the most meticulously planned project, there are no sweeter words than “on time and on budget.”

“On time and on budget”

The massive Interstate 35 reconstruction effort achieved its latest milestone — a year and a half early — with a new 7-mile stretch of expanded freeway lanes, U-turns, and bicycle/pedestrian interchanges.

That’s the refrain being sung by a chorus of community partners in Waco, Texas, where the massive Interstate 35 reconstruction effort achieved its latest milestone — a year and a half early — with a new 7-mile stretch of expanded freeway lanes, U-turns, and bicycle/pedestrian interchanges.

The Waco section is but one among more than a dozen projects along a 96-mile span that kicked off a decade ago. Even so, it’s arguably the most consequential, given the complexities of rebuilding one of America’s busiest highways even as 140,000 cars and trucks continued to use it daily. Whether traveling straight through or accessing hundreds of sites along the way, travelers couldn’t afford to lose their connections.

In practical terms, staying connected meant that vehicle pathway links were always reliable even as construction

activity created the disruptions that are part and parcel of any major highway rebuilding endeavor. We salute the Texas Department of Transportation (TxDOT) and its many contractors who gave vivid new meaning to the metaphor about building an airplane while it’s airborne.

In digital terms, staying connected meant that travelers always had access to the most current traffic information available when planning or adjusting their journeys in response to daily lane closures. Kudos to TTI Senior Research Scientist Bob Brydia and his team for optimizing these technology applications to not only make travel easier and simpler but also help improve work zone safety and warn travelers of hazards that may lie ahead.

In personal terms, staying connected meant that every person or organization with skin in the game

— whether of the public or private sector — was treated with full respect and consideration of their concerns throughout the entire reconstruction process. Bravo to TTI Research Engineer John Habermann and his team for recognizing that every affected party had a vested interest in our collective success, and for managing those relationships accordingly.

Accomplishing the I-35 rebuild in Waco was a triumph of engineering, no doubt about that. But it was no less a supreme feat of collaboration, one that will long serve as a model for other major reconstruction efforts throughout America and beyond. The era of connected mobility is clearly here to stay, with Texas leading the charge and TxDOT living its mission: Connecting you with Texas. ■



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Download, listen, and subscribe wherever you get your podcasts. Every other week, we interview a TTI expert or special guest on a wide range of transportation topics and discuss how those topics impact the average person.

<https://tti.tamu.edu/thinking-transportation/>



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It Takes a (Big) Village:
How a community of transportation pros is making mobility better.

The Institute of Transportation Engineers is wrapping up a pivotal year in its history. Jeff Paniati, the organization's CEO, and Beverly Kuhn, its outgoing president, talk about lessons learned from the past 12 months and how the transportation profession is evolving — along with society.



Big and Bright:
The view from TxDOT CEO Marc Williams' chair.

Despite some Texas-sized mobility challenges and worldwide supply-chain obstacles, the guy in charge of the Texas Department of Transportation wants you to know he's never been more optimistic about our transportation future.



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