



Raleigh Worker to the Rescue

Young Bald Eagle Rescued Thanks to Quick Actions by City Employee

Reprinted from the City of Raleigh 2023

For Chris Ray, it was just another day at work... until it wasn't. Ray, a Senior Utility Specialist with Raleigh Water, was recently at the Wrenn Road Facility when something caught his eye.

"I saw this large bird on the ground. I thought it was unusual for a bird that size, but I didn't want to disturb it, so I went about my work," said Ray. "A bit later, I went back and it was still there. It didn't take off flying and was trying to hop away."

That's when Ray called the American Wildlife Refuge, a local non-profit that helps with rescue and rehabilitation of wild birds. He was worried the injured bird would become easy prey for coyotes.

It turns out the large bird was a young female bald eagle.

Ray says in his 24 years working for the City of Raleigh, he'd never come across something like that. He estimates the bird's wingspan at four to five feet.

The rescue group tells Ray the young bird has an injured wing but they expect her to make a full recovery, thanks to his efforts.

As for Ray, he's just glad he could help.

"It was amazing, the size of the talons and beak were so impressive. I'd never seen a bald eagle up close. It was definitely an exciting day at work."



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*transportation*TRACKS

Technology Transfer Newsletter
Published by the North Carolina
Local Technical Assistance
Program
at the Institute for Transportation
Research and Education at North
Carolina State University



Nighttime Visibility for Safety

Reprinted from EDC News

In our last issue, we learned about the challenge that poor nighttime visibility poses, and how well-designed lighting can reduce crashes at intersections. With 76 percent of pedestrian fatalities occurring in hours of darkness we also need to ensure that pedestrians and other vulnerable users can see and be seen, especially at crosswalks and in other high pedestrian activity areas.

Crosswalk visibility enhancements are being promoted by the **Nighttime Visibility for Safety** initiative to help reduce pedestrian fatalities and serious injuries. These enhancements include three separate improvements: high-visibility crosswalks, lighting, and signing and pavement markings. These improvements help make crosswalks and the people that use them more visible to drivers. Agencies can implement these features as standalone or in combination.

High-visibility crosswalks use patterns (i.e., bar pairs, continental, ladder) and highly reflective materials that are visible to drivers and pedestrians from farther away when compared to traditional crosswalk striping. These should be considered at all midblock pedestrian crossings and uncontrolled intersections.

Improved lighting at crosswalks seeks to better illuminate pedestrians and leverage contrast to make it easier for a driver to visually identify pedestrians.

While a marked crosswalk or pedestrian warning sign can improve safety for pedestrians crossing the road, more can be done to help drivers visibly locate crossing locations and yield to pedestrians. Enhanced signing and pavement markings, such as, "YIELD Here to Pedestrians" or "STOP Here for Pedestrians" signs placed ahead of marked crosswalks indicate where drivers should stop or yield to pedestrians, depending on State law. To supplement signing, agencies can also install a STOP or YIELD bar (commonly referred to as "shark's teeth") pavement markings.

Agencies can install rectangular rapid flashing beacons (RRFBs) to accompany pedestrian warning signs to further enhance visibility. These devices, which flash when activated, are particularly effective at multilane crossings with speed limits less than 40 miles per hour. Research suggests RRFBs can result in motorist yielding rates as high as 98 percent at marked crosswalks. These beacons can also accompany school or trail crossing warning signs.

To stay up-to-date on this initiative, subscribe to the team's **e-newsletter**. If you have additional questions on these or other crosswalk enhancements, please contact a member of the team: **Joseph Cheung**, FHWA Office of Safety, or **George Merritt** or **Tori Brinkly**, FHWA Resource Center.

FTA Issues Advisory to Improve Safety for Pedestrians and Cyclists Around Buses

The Federal Transit Administration (FTA) has issued a safety advisory to address bus-to-person collisions, a major concern responsible for 15 percent of transit fatalities from 2008 to 2021. Transit agencies are urged to identify hazards, assess risks, and implement safety measures. The FTA offers resources and will host a webinar on October 5, 2023, to assist agencies in improving pedestrian and cyclist safety around buses.

[Click Here for More Information](#)

Settling the Score (Board)

In the early days of college football, fans at NC State College had no way of knowing the score or remaining time in the game. However, in 1911, the school's student-run wood shop created Riddick Field's first scoreboard. Fast forward to 2023, and fans at Carter-Finley Stadium witnessed a stark contrast—a state-of-the-art \$15 million videoboard and sound system during NC State's home opener against Notre Dame, offering a vastly improved game-day experience. [Click here to read more!](#)

[Click Here for More Information](#)

Weather-Responsive Management Strategies

Reprinted from the Department of Transportation

The Atlantic hurricane season, extending from June 1 until November 30 each year, produces numerous severe weather events that present various challenges for State DOTs. These challenges aren't limited to the States where these storms make landfall, but include many other States included in the storm's path which may not normally be associated with hurricane events.



Hurricanes and other severe weather events can impact areas far inland from where they make landfall, such as seen here with flooding along I-676 in Philadelphia. (Credit: PennDOT)

Weather-responsive management strategies (WRMS) offer States methods to respond to severe weather events through preparation activities that use existing data and tools and leverage State and local partnerships. By preparing for the impacts of severe weather events, State and local agencies are better positioned to support response and recovery efforts after an event.

An 'Introspective' AI Finds Diversity Improves Performance

A new study has shown that artificial intelligence (AI) capable of self-improvement through meta-learning performs better when it prioritizes diversity within its neural network. The research, led by William Ditto, a physics professor at North Carolina State University, and his team at the Nonlinear Artificial Intelligence Laboratory, allowed the AI to adjust the composition of its neural network, creating sub-networks with diverse neuron types and connection strengths. The AI consistently chose diversity over homogeneity, resulting in up to 10 times greater accuracy in solving complex problems compared to conventional AI. The findings suggest that AI that can adapt its neural network structure to embrace diversity can significantly enhance its problem-solving capabilities

[Click Here for More Information!](#)

2022 Public Power Award of Excellence!

We celebrate the 15 public power communities in the state of NC that received the 2022 Public Power Award of Excellence! If you would like to read more about the award and its recipients, click the link!

[Click Here to Read More!](#)

FHWA documented several States' WRMS preparation and response efforts around Hurricane Ida in [this case study](#). This storm made landfall as a category 4 hurricane in Louisiana in August, 2021. The case study highlights the experiences and lessons learned from the Louisiana Department of Transportation and Development (LaDOTD), Pennsylvania Department of Transportation (PennDOT), and New Jersey Department of Transportation (NJDOT) while managing major flooding events resulting from the storm. The case study also provides insight into the tools and resources used as well as the relationships leveraged to prepare for and respond to Hurricane Ida in the summer of 2021.

One example of the type of planning included in the case study is LaDOTD's contraflow planning—their plan to safely evacuate residents by reversing traffic flow on certain road segments—in advance of the storm's landfall. LaDOTD met with State and local personnel to discuss the contraflow plan and revised it to alleviate traffic issues that would be caused by funneling evacuees from I-10 and I-12 through Baton Rouge. They created an alternate route to divert traffic to U.S. Route 61, and this change has since been made permanent. After making this change, the DOTD also reviewed the contraflow plan and its potential effects with personnel from the Mississippi DOT.

Read about this and more in the [full case study](#). To learn more about WRMS and how it can help your agency prepare for adverse weather events, contact [David Johnson](#), FHWA Office of Operations.

Pedestrian Crossings at Roundabouts – Improving Driver Yielding Behavior

Roundabouts are known for their safety benefits, but some pedestrians, especially those with sight limitations, face challenges due to non-yielding vehicles. Vehicle speed plays a crucial role, with slower speeds promoting better yielding behavior. Design considerations include smaller roundabouts, shorter crossing distances, buffers between sidewalks and roads, pedestrian-scale lighting, advance vehicle speed signs, and tactile indicators for those with vision limitations. Enhanced design features should be considered for all roundabouts, particularly those used by elderly or visually impaired individuals.

[Click here for more information!](#)



What's Wrong With This Picture?

Can you tell what's wrong with this picture? See answer on page 9.

Building Maintenance Tailgate Talk

Information You Can Use to Prevent Accidents & Injuries



USE OF PROPER TOOLS AND EQUIPMENT IS ESSENTIAL TO EFFICIENT AND EFFECTIVE BUILDING MAINTENANCE. HERE ARE SOME TIPS FOR USE AND CARE OF EQUIPMENT AND TOOLS:

Keep all tools and equipment in good condition with regular maintenance. Check for damage before each job. Don't use damaged items. Recycle, dispose, or label damaged items as "Do Not Use" and turn them in for repair.

Use the right tool or equipment for the job and according to the manufacturer's recommendations as provided in the owner's manual. For example, don't use knives or screwdrivers to open paint cans. There is a special tool to do this.

- Make sure the tool or equipment fits the user. For examples, handles on brooms and rakes may need to be longer or shorter depending on the body size.
- Make sure that you have secure footing and balance when working with equipment or tools and keep all people not involved with the work at a safe distance from the work area.
- Certain personal protective equipment (PPE) may be needed to safely work with certain types of tools or equipment (ie, hearing protection if the equipment is very loud, respirators if the equipment produces dusts or vapors, safety glasses or goggles if the equipment produces chips or sparks) Supervisors must take the responsibility to assign the appropriate PPE for the work at hand.

SPECIFIC EQUIPMENT & TOOLS

Ladders and Step-Stools. Make sure that ladders and step-stools are rated for the weight of the user plus tools or other items that will be taken on the ladder or step-stool. Make sure that ladders and step-stools are in good condition and are appropriate for the work to be performed. (ie, don't use metal ladders or step-stools for work on electrical fixtures).

Keep ladders and step-stools in good condition. Position them close to the work and don't extend your body or make long reaches. If you need to put a ladder or step-stool next to a door, another person needs to stand by to make sure the door is not opened. Use a tool belt while carrying tools when working on a ladder.

Carts and Dollies. Inspect equipment carts and dollies regularly to ensure they are in good condition and roll easily. When moving a cart or dolly, use a push action whenever possible, rather than a pull action.

Be especially careful when moving carts on uneven surfaces (ie, into or out of elevators) and get help if you have difficulty. Don't overload a cart or dolly beyond its rated capacity or in a manner that blocks your view or creates a hazard for items falling.

Electrical Equipment. Carry equipment and tools properly, not by the cord. Firmly grasp the plug to disconnect electrical equipment from the power source. Never jerk or yank on the cord.

Keep cords away from heat, oil, and sharp edges. Disconnect equipment and tools from their power source when not in use before cleaning or servicing, and when changing accessories such as vacuum bags, buffing wheels, and so forth.

Sharp Tools. When working with sharp tools, stay alert. Keep sharp edges sharp. Let the tool surface do the cutting. Don't force the tool. Cut or scrape away from your body. Carry knives in a sheath. Dispose of razor blades properly in a sturdy container.

Users of this tailgate talk are advised to determine the suitability of the information as it applies to local situations and work practices and its conformance with applicable laws and regulations.

Build a Better Mousetrap

The Federal Highway Administration's Local Aid Support team in the Office of Transportation Innovation and Workforce Solutions announces the 2023 recipients of the Build a Better Mousetrap National Recognition Program for Transportation Innovation. Each year, FHWA recognizes and celebrates local government and tribal agencies who pioneer innovations that improve transportation performance. Previous winners have been recognized for a range of innovations that save time and money while improving safety and customer service in their communities. FHWA received another record number of exciting nominations this year from 20 state, local and Tribal agencies. The national winners are recognized for their innovations in four categories: Innovative Project; Smart Transformation; Bold Steps; and Pioneer. The winners were recently announced during the National Local and Tribal Technical Assistance Program Association's Annual Meeting in Columbus, Ohio. See the video announcement: <https://youtu.be/ZZWbcD6lCZE>

Congratulations to the Build a Better Mousetrap 2023 recipients.

Innovative Project Award (Any solution that addresses any or all phases of the 'project' lifecycle - Planning, Design/Engineering, Construction, Operations and Maintenance. This project introduces new ideas, is locally relevant, original, and creative in thinking.)

Winner: Confederated Tribes and Bands of the Yakama Nation

Innovation: "The Mobile Unit Sensing Traffic (MUST) Device"

Description: Specifically designed and implemented for use along rural roads to monitor traffic, detect dangerous events, and provide real-time warning messages to users.

Bold Steps Award (A locally relevant high-risk project or process showing a break-through solution with demonstrated high-reward.)

Winner: New Jersey Department of Transportation

Innovation: "Route 71 over Shark River Road Diet"

Description: A road diet project to preserve an old historic bridge while improving safety and saving money.

Smart Transformation Award (A locally relevant significant change in any transportation activity or process that is SMART "Specific, Measurable, Achievable, Realistic and Time-bound" in nature that results in improved efficiencies.)

Winner: St. Louis County Public Works Department, Minnesota

Innovation: "Solar-powered Remote Cameras"

Description: The cameras provide more accurate and immediate access to information on road conditions that assists with emergency response while requiring less maintenance.

Pioneer Award (A locally relevant product/tool that is among the first to solve a maintenance problem with a home-grown solution.)

Winner: City of Walnut Creek, California

Innovation: "Safe Sightings of Signs and Signals (SSOSS) Software"

Description: An automated process for identifying and addressing obstructed traffic signals saving time and money while increasing data accuracy.

The Federal Highway Administration Local Aid Support team supports the use of innovative solutions to improve transportation performance by working through the local and Tribal Technical Assistance Centers to provide training and access to subject matter experts. For more information on Build a Better Mousetrap and other national initiatives visit, <https://www.fhwa.dot.gov/clas/babm/>.

Project Kitty Hawk: Removing Workforce Barriers, Reaching Adult Learners

Reprinted from the NC Chamber

On August 8th, during the NC Chamber's Education & Workforce Conference, NC Chamber Foundation President Meredith Archie held a fireside chat-style session with Project Kitty Hawk CEO Wil Zemp.

In this session, attendees learned how the organization, Project Kitty Hawk, is striving to assist adult degree seekers break through the unique barriers that they face while trying to earn their degree.

For background, in 2021, the state budget appropriated \$97 million for the launch of Project Kitty Hawk, which is a nonprofit ed-tech startup that will partner with UNC System universities to serve adult learners. The project will leverage best practices from the private sector, lessons from other state system initiatives, and proven strategies from leading online institutions.

Zemp said Project Kitty Hawk is focused on the state's attainment goal which is for 2 million North Carolinians to have a high-quality credential or a postsecondary degree by 2030. Within five years, he hopes Project Kitty Hawk will have 32,000 adult learners back in the education system.

"When you couple the immediate needs of employers and long-term projections for the state's workforce, we simply cannot afford to leave anyone on the sidelines," said Archie. "Removing barriers to entering the workforce is a significant area of focus for the NC Chamber Foundation – which importantly includes adult learners, veterans, those who are justice involved, among others."

This is an area where the NC Chamber Foundation and Project Kitty Hawk are aligned in their missions – recognizing the need for innovative, outcome-based solutions. The two organizations plan to work with one another toward the same goal of reaching adult learners.

In the session, Zemp explained that the barrier to adult learners is a social economic problem. "If we don't take these necessary steps now, people will come out of the employment force, and it takes a lot more effort to get them back in," he said

The three major issues are that: working adults are a large underserved market in North Carolina, most UNC System schools lack the services and infrastructure to serve working adults, and current private sector offerings do not meet the needs.

Biden-Harris Administration Making \$100 Million Available to Improve EV Charger Reliability

The Biden-Harris Administration is offering \$100 million to fix and replace non-working electric vehicle (EV) charging stations. This funding, part of the Bipartisan Infrastructure Law, aims to enhance the reliability and accessibility of EV charging, create jobs, and build a reliable national EV charging system. Both public and private chargers accessible to the public can apply, with a deadline of November 13, 2023. This supports the administration's broader efforts to promote EV adoption and American-made EV technology.

[For more details, click here!](#)

Biden-Harris Administration Announces Next Phase of Thriving Communities Grant Program to Help More Communities Unlock Access to Historic Infrastructure Investments

The Biden-Harris Administration is launching the next phase of the Thriving Communities Grant Program, providing \$22 million to help under-resourced communities access federal funding for infrastructure projects. The program offers technical assistance and support, prioritizing projects that improve health, reduce costs, preserve jobs, and enhance mobility for disadvantaged households. This initiative ensures all communities can benefit from federal infrastructure funding, with recipients to be announced in early 2024.

[Click Here to Learn More!](#)

Project Kitty Hawk is working to address those challenges and will help universities design workforce-aligned online programs, as well as attract, enroll, and support learners through graduation. UNC System university faculty and staff will deliver quality instruction, assess student learning, and award credentials to adult degree seekers.

The organization will also facilitate improved collaboration among campuses, better connections with employers, and improved success for nontraditional learners who are currently not enrolled or are enrolled with out-of-state providers. The organization is also looking at ways to reskill and upskill adult learners.

“What we are finding in North Carolina is that the future is already here, it’s just not evenly distributed,” said Zemp.

Conference emcee Government Affairs Director Debra Derr closed out the session saying it best with this summation, “Breaking down barriers to access, partnership with employers—this is what this day is all about.”

For more information on Project Kitty Hawk: <https://www.northcarolina.edu/project-kitty-hawk/>



L-R: Wil Zemp, CEO of Project Kitty Hawk and Meredith Archie, President of the NC Chamber Foundation

North Carolina Traffic Safety Conference Awards

The North Carolina Traffic Safety Conference Awards Subcommittee is now accepting nominations for the 2024 Traffic Safety Awards! Nominations are due December 15th!

[Click Here For More Information](#)

“Coolest Thing Made in NC”

The NC Chamber announced 130 nominees for its “Coolest Thing Made in NC” competition, spotlighting the state’s innovative manufacturing industry. The contest recognized winners in two categories: businesses with fewer than 100 employees and businesses with 100+ employees. It aimed to celebrate and raise awareness about North Carolina’s manufacturing community, which significantly contributes to the state’s economy and workforce. The 2023 winners are C.R. Onsrud Q-Series 5-Axis CNC Machine for Medium-to-Large Business and Static Rope Edge Protection (STREP) by Fjord Inc. for Small Business! Join us in congratulating the winners of this year’s “Coolest Thing Made in NC”!

[Click Here to Read More!](#)

What’s Wrong With This Picture?

Craig Baird

We often see temporary roadway work zones during our daily commute and vacation travel adventures. As a motorist, it’s very important to be aware of these work zones and be prepared to recognize, read and understand the advance warning signs and follow their instructions.

I recently observed this work zone and wanted to share it with you. This roadway work zone is on a secondary or sometimes called a “service road” along a larger state highway located in North Carolina. The work zone detail that caught my interest is that the service road traffic is being controlled by an Automated Flagger Assistance Device. Or AFAD, for short. We are seeing more of these AFAD traffic control devices on our temporary roadway work zones in North Carolina.

In this situation, there is another AFAD unit at the other end of the work zone and it controls the traffic coming from the other direction. These two units work as a pair and are synchronized and controlled by one certified human operator, or Flagger. Their primary responsibility is to actively observe and control both AFADS using the remote control device they carry with them. They must also step into action in case a problem occurs. If you look closely, the Flagger or operator is standing in the background and is on the grassy shoulder on the right side of the road and is near the tree. Do you see them now? They are wearing their hard hat and hi-vis safety vest?

As a motorist approaching this work zone, you should first actually be focusing your attention on the temporary advance warning signs alerting you of the construction work that is occurring ahead! They are the bright orange signs placed on the shoulder of the road and are in advance of the work zone. Those signs are there to alert the approaching motorists and typically say “Road Work Ahead”, then “One Lane Road Ahead”, then “Be Prepared to Stop” and then the “Flagger Symbol Sign”. Just like the one in the picture above. These advance warning signs are the signs used when a human Flagger, (or multiple Flaggers) are actively controlling the vehicle traffic that is moving through the work zone. But, when an Automated Flagger Assistance Device(s) is being used, the “Flagger Symbol Sign” is not used in this situation! Why? Because there are not actually any active human flaggers controlling traffic. But instead, they are actually, let’s say, “behind the scenes” controlling the AFAD unit*.



So in this picture, the “Flagger Symbol Sign” should not be used and must be removed from the advance warning sign sequence when an AFAD is in operation and is controlling the vehicle traffic. Do you see any other problems with this picture? Look closer. There may be more! Be safe and be aware during your travels this holiday season!

*Technically, the reason is because the Federal Highway Administration’s Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways says so. (see page 68, Figure 6E-2.”Example of the Use of a Red/Yellow Lens Automated Flagger Assistance Device (AFAD) Section 6E.06)

NC LTAP News & Updates

To update your mail information, add a colleague to the database, or obtain information about Roads Scholar Program complete the form online at go.ncsu.edu/ncltapcontactform.



For more special offers and news, like us on [Facebook](#) and follow us on [Twitter](#).

Your Name _____

Company/Organization _____

Address _____

City _____ **State** _____ **Zip** _____

Phone _____

Check Appropriate Items

- Add/Update email information to NCLTAP listserv NCTROADS
- Send information about Roads Scholar program
- Send schedule of training opportunities

NCTROADS Listserv

Subscribe to the NC LTAP listserv. It is free and easy. Send a message to kbdaviso@ncsu.edu or call Kate Davison at 919-515-3983 and ask to be added to NCTROADS.

This is an informal network for the exchange of news about current research, discussion of problems and solutions, request for advice and assistance, and announcements of upcoming conferences, events and training opportunities for transportation personnel. Once you are subscribed, you can send a message all the listserv members at NCTROADS@lists.ncsu.edu

NC Local Technical Assistance Program November – December 2023 Schedule

For Online Registration see calendar at: <https://itre.ncsu.edu/training/ltap-training/>

Questions or Email Registration: wewoods@ncsu.edu or kbdaviso@ncsu.edu

Date	Class Title	RS/ARS/MRS	Cost	Location	To Sign Up
November 6-7, 2023 9am-12pm	Designing Pedestrian Facilities For Accessibility	ARS	\$150	ONLINE	Click Here
November 6, 2023	Trenching Competent Person and Hands-On Soil Classification	ARS	\$175	Raleigh	Click Here
November 7, 2023	Asphalt Pavement Maintenance	RS	\$150	Raleigh	Click Here
November 7-9, 2023 1-3pm	Basic Concepts of Supervision	RS	\$150	ONLINE	Click Here
November 7, 2023	Fall Protection	ARS	\$150	High Point	Click Here
November 7-8, 2023 1-4pm	How to Keep Yourself and Your Agency Out of Court	ARS	\$150	ONLINE	Click Here
November 8-9, 2023 9am-12pm	Reducing Roadway Departure Crashes	ARS	\$150	ONLINE	Click Here
November 9-10, 2023 1-4pm	Traffic Calming	ARS	\$150	ONLINE	Click Here
November 14, 2023	Basic Work Zone Installer	RS	\$150	Raleigh	Click Here
November 15, 2023	Managing Conflict with the Public and Employees	RS	\$150	High Point	Click Here
November 20-21, 2023	OSHA 10-Hour Safety Training	ARS	\$175	Charlotte	Click Here
November 21, 2023	Flagger Training	RS	\$100	Raleigh	Click Here
November 28-30, 2023	Work Zone Traffic Control Supervisor	ARS	\$450	Raleigh	Click Here
December 4-5, 2023 8:30am-12:30pm	Basic Drainage/ Roadway Drainage Maintenance	RS	\$150	ONLINE	Click Here

LTAP Links on the Web

Transportation Information at your fingertips!

NC LTAP	https://itre.ncsu.edu/focus/ltap/
National LTAP/TTAP	http://www.nltapa.org/
NC Department of Transportation (NCDOT)	https://www.ncdot.gov/
Rural Road Safety Center	https://ruralsafetycenter.org/
Federal Highway Administration (FHWA)	https://www.fhwa.dot.gov/
US Department of Transportation (USDOT)	https://www.transportation.gov/
UNC School of Government	https://www.sog.unc.edu/
Institute of Transportation Engineers	http://www.ite.org/
NC Section of ITE (NCSITE)	http://ncsite.org/
APWA - NC Chapter	http://northcarolina.apwa.net/
NLTAPA Tailgate Talks	https://nltapa.org/information-exchange/nltapa-tailgate-talks/
Conversations in Transportation	https://ncsite.org/conversations



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