

## Coming to Raleigh for NC LTAP Training? New Parking Permit process starts July 1

by Kate Davison

It's summer time, which means sun screen, beach trips, and a new term for campus parking passes. While parking may not be your first thought this summer, there are important new changes that students, staff, and guests should all be aware of.

Starting July 1st NC State University will be moving to a new virtual permit system based off your vehicle's license plate number. This new system uses License Plate Recognition (LPR), an advanced system that uses mounted cameras to check your license plate against their records, to increase parking efficiency on campus and reduce the amount of paper and plastic waste the university produces. That means no more stickers, hangtags, or printed permits.



For most of you, who will be parking as guests, these changes mean that while you'll still receive an email with a link to our parking permit website, there won't be anything to print out and bring with you to class. Instead you'll enter the license plate number of the vehicle you plan to drive to campus.

If you don't know your license plate number or can't enter the number before you get to class for some reason, you should be able to enter your information even after you're on campus. NC State offers free wifi using NCSU-Guest so you can access the website through your smart phone while still at your vehicle, or you can write down the license number and bring it with you to class.

In order for the LPR vehicles to capture your license plate information, all vehicles will need to be parked front-in. Vehicles can be back-in parked only if they have a front license plate. We know that some of you are required by your employers to back-in park and we are currently discussing this standard with the NC State Parking Office, but we have not yet come to a resolution at this time.

This system is still very new for NC State and we'll be working on keeping you updated with information as it becomes available. Thank you for being patient with us. We're all going through these changes together!

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## Getting A Jumpstart on Safer Intersections

by U.S. Department of Transportation Federal Highway Administration

Replacing an intersection with a roundabout reduces traffic crashes, but it can take 2 years or more to design and build a roundabout project. When crashes at a congested northern Virginia intersection rose to nine per year, with nearly half involving injury, the Virginia Department of Transportation (VDOT) sought a faster solution.

VDOT engineers evaluated several forms of traffic control for the two-way stop intersection in Loudoun County, including all-way stop signs and traffic signals, but they determined that the best remedy was a roundabout. There are more than 200 roundabouts throughout Virginia that enhance safety and reduce congestion at intersections.

VDOT wanted to address the immediate safety problem while developing a roundabout project, so engineers came up with an "instant roundabout" using off-the-shelf markings, tubular markers, and plastic curb sections. Engineering, material, and labor costs totaled \$90,000, 95 percent less than the cost of a permanent roundabout. Project design took about 6 months and installation took less than 6 days in 2013.

The results were dramatic: Overall crashes decreased 30 percent and injury crashes dropped 89 percent, about what would be expected of a permanent roundabout. A 3-minute-long traffic queue during rush hours also disappeared. The project won a 2017 National Roadway Safety Award from the Roadway Safety Foundation and Federal Highway Administration.

### Winning Community Support

The project was not without challenges, though. "The hardest part was getting the community to accept the roundabout idea," said VDOT District Traffic Engineer Ivan Horodyskyj.

While engineers designed the project, the agency's public liaison team reached out to the area's county officials and homeowners associations to explain the benefits of roundabouts. Homeowners expressed concerns about the appearance of a roundabout made of plastic parts and its effect on property values.

"We said this is temporary, we expect it will provide immediate relief on crashes, and we'll revisit it after the construction is over," said Horodyskyj. The homeowners associations eventually agreed to the project and, after residents saw crashes diminish, asked VDOT to make the roundabout permanent.

Another challenge is that the plastic components occasionally break or become dislodged and must be repaired, particularly after snowplows come through. "That's one thing we would do differently in the future," said Horodyskyj. "We would look for more durable components."

Construction is underway on a permanent roundabout at the Loudoun County intersection. Meanwhile, VDOT plans to consider using instant roundabouts at other locations as an immediate fix to prevent crashes

while permanent solutions are implemented.

"It's definitely part of our toolbox," said Horodyskyj. "The concept of putting in an instant roundabout until we get a permanent one designed is valid, but it's a short-term solution."

#### Testing a Modular Solution

VDOT is also working with FHWA on a temporary modular mini-roundabout at a Fairfax County intersection. Mini-roundabouts offer the safety benefits of regular roundabouts in a smaller footprint, making them appropriate for areas with limited rights-of-way.

The Fairfax County pilot is part of an FHWA research project to evaluate accelerated-deployment mini-roundabouts constructed of prefabricated panels made from recycled composite material. The Georgia Department of Transportation installed this modular mini roundabout system near Atlanta in 2017 and is now evaluating its effectiveness.

VDOT chose the Fairfax County intersection for the pilot because it meets the thresholds for a controlled intersection and a roundabout can be installed there without the need for new pavement, right-of-way approvals, utility relocation, or drainage work. VDOT expects the roundabout to take a few days to install in the spring.

VDOT and FHWA will evaluate the roundabout for ease of implementation and impacts on maintenance, such as how well snowplows negotiate the structure. If the project is successful, the roundabout could remain as a permanent structure.



## Get the Picture!

Can you tell what's wrong with this picture? Turn to page 5 to see what the problem is.

## Proven Safety Countermeasures Initiative

Check out this recorded webinar for an Update of the Proven Safety Countermeasures Initiative.

We'll be highlighting few countermeasures in each of our newsletter for the rest of the year and 2019 but this currently available webinar will get you up to speed that much faster!

<https://connectdot.connectsolutions.com/p6ajqbx8rx8>

## Installer Certification Requirement

by Scott Tison

As we approach the summer months, we are reminding our clients regarding the pending requirement of Basic Work Zone Installer. Effective July 2018, NCDOT will require those installing work zones on their highway construction projects to be certified. Per NCDOT, this is intended for people on NCDOT highway projects, all personnel involved with installation of lane closures or road closures on interstates and high speed freeways will be trained in an NCDOT approved installer course. Each member of a traffic control crew that installs lane closures or road closures in highly developed urban work zones will also be required to be trained.

Per the NCDOT definition, this type of installer certification is for locations that are "highly-developed urban areas" with a population over 50,000. Currently, eighteen (18) cities/towns meet the criteria. These cities include: Charlotte, Raleigh, Greensboro,

Durham, Winston-Salem, Fayetteville, Cary, Wilmington, High Point, Greenville, Asheville, Concord, Gastonia, Jacksonville, Chapel Hill, Rocky Mount, Burlington and Huntersville.

NCDOT is still requiring Flagger Certification for anyone flagging on their roads. Also, Work Zone Supervisor Certification is mandatory for those overseeing work zone traffic control in their company, agency, or department. The responsibility of each employer is to ensure that the most accurate records are maintained. NCDOT will not be keeping records or issuing cards on the Certification/Recertification of employees. Upon award of a contract and before work begins, the Contractor shall provide to the Engineer the work zone installer certifications with expiration dates for all employees. A card issued by the certifying firm that shows the dates of certification/expiration or the employer certification will suffice

## Factors That Put Workers at Greater Risk

### Environmental:

- High temperature and humidity
- Radiant heat sources
- Contact with hot objects
- Direct sun exposure (with no shade)
- Limited air movement (no breeze, wind or ventilation)

### Job-Specific:

- Physical exertion
- Use of bulky or non-breathable protective clothing and equipment

## Overview: Working in Outdoor and Indoor Heat Environments

by United States Department of Labor OSHA

Many people are exposed to heat on the job, in both indoor and outdoor heat environments. Operations involving high air temperatures, radiant heat sources (e.g., sunlight, hot exhaust), high humidity, direct physical contact with hot objects, or strenuous physical activities have a high potential for causing heat-related illness.

**Indoor workplaces** with hot conditions may include iron and steel foundries, brick-firing and ceramic plants, glass products facilities, electrical utilities (particularly boiler rooms), bakeries, commercial kitchens, laundries, chemical plants, material handling and distribution warehouses, and many other environments.

**Outdoor workplaces** with work in hot weather and direct sun, such as farm work, construction, oil and gas well operations, landscaping, emergency response operations, and hazardous waste site activities, also increase the risk of heat-related illness in exposed workers.

Every year, thousands of workers become sick from occupational heat exposure, and some are fatally injured. **These illnesses and fatalities are preventable.**

### Who could be affected by heat?

Workers exposed to hot indoor environments or hot and humid conditions outdoors are at risk of heat-related illness, especially those doing heavy work tasks or using bulky or non-breathable protective clothing and equipment. Some workers might be at greater risk than others if they have not built up a tolerance to hot conditions, or if they have certain health conditions. The table below shows some environmental and job-specific factors that increase the risk of heat-related illness.

Workers who are suddenly exposed to working in a hot environment face additional, but generally avoidable hazards to their safety and health. New workers and those returning from time away are especially vulnerable. That's why it is important to prepare for the heat: educate workers about the dangers of heat, and acclimatize workers by gradually increasing the workload or providing more frequent breaks to help new workers and those returning to a job after time away build up a tolerance for hot conditions.

### How do I know if it's too hot?

The heat index, which takes both temperature and humidity into account, is a useful tool for outdoor workers and employers (see [Using the Heat Index: A Guide for Employers](#)).

Wet Bulb Globe Temperature (WBGT) is the most accurate tool to measure heat hazards for outdoor workers. It takes temperature, humidity, wind speed, and radiant heat into account. The [OSHA Technical Manual Heat Stress Chapter](#) provides WBGT information and calculations, and the National Weather Service provides a prototype [WBGT location tool](#) and work/rest recommendations.

### How can heat-related illness be prevented?

Heat-related illnesses can be prevented. Important ways to reduce heat exposure and the risk of heat-related illness include engineering controls, such as air conditioning and ventilation, that make the work environment cooler, and work practices such as work/rest cycles, drinking water often, and providing an opportunity for workers to build up a level of tolerance to working in the heat.

Employers should include these prevention steps in worksite training and plans. Also, it's important to know and look out for the symptoms of heat-related illness in yourself and others during hot weather. Plan for an emergency and know what to do — **acting quickly can save lives!**

Heat Index	Risk Level	Protective Measures
< 91°F	Caution	Basic heat safety and planning
91°F to 103°F	Moderate	Implement precautions and heighten awareness
103°F to 115°F	High	Additional precautions to protect workers
> 115°F	Very High	Triggers even more aggressive protective measures



OSHA is a Weather-Ready Nation Ambassador committed to working with NOAA and other Ambassadors to strengthen national preparedness for and resilience against extreme weather.



## What's Wrong With This Picture?

by Scott Tison

Here's the situation, utility work is being done near One Lane of a Two Lane, Two Way Road. Needing to shut down part of One Lane, the operation becomes a One Lane, Two Way Road. Traffic will need to be alternated by a Flagger on each end. So, what's wrong with this picture?

If you've been through our Flagger Training, I am hoping that you remember to stand on the shoulder of the road. Beyond any legal implications, your safety, the safety of the crew and that of the motoring public is more important than the job being performed.

Also, if you've been through our work zone training, you will remember that a Be Prepared to Stop sign can be added in a regular three (3) sign sequence. Sometimes though, especially when doing

mobile operations, it is crucial to adjust your sign locations. As you can see, our Flagger is located between the Be Prepared to Stop Sign and the Flagger Symbol Sign.

If you haven't been through our training, we would like to see you. Again, it's more than legal liability, it's about giving our workers tools for doing their tasks as safely as possible. It's also about keeping your family and my family safe as they traverse our work zones. If you haven't heard about our work zone and flagger training, see the article in this Tracks newsletter for information about our program.

If you have any questions about worker's safety or work zone traffic control, give me a call at (919) 515-6949, or you can email me at [sitison@ncsu.edu](mailto:sitison@ncsu.edu).



## Five Little Known Fish

by Kate Davison

Having recently moved to Raleigh from the Outer Banks the biggest thing I miss is the fresh fish. And it's not all tuna or shrimp! There are some amazingly delicious, and fun to fish for, fish right off our coast that most people don't know about. Luckily, Jeff Buckel, a fisheries researcher, thinks so too and has put together a great list of these lesser known fish for you to check out. My favorite for cooking on the list is cobia, but if you like a mild flavor you can't go wrong with a sheepshead filet either.

[Read all about it in the NC State University News](#)

## NC LTAP News & Updates

To update your mail information, add a colleague to the database, or obtain information about Roads Scholar Program fax this sheet to 919-515-8897 or complete online at [go.ncsu.edu/NCLTAPcontact](http://go.ncsu.edu/NCLTAPcontact).



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### 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 [linda\\_collier@ncsu.edu](mailto:linda_collier@ncsu.edu) 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](mailto:NCTROADS@lists.ncsu.edu)

## NC Local Technical Assistance Program 2018 Schedule

Questions or Email Registration: [kbdaviso@ncsu.edu](mailto:kbdaviso@ncsu.edu)

For Online Registration: [itre.ncsu.edu/training/ltap-training/](http://itre.ncsu.edu/training/ltap-training/)

Date	Class Title	RS/ ARS/ MRS	Cost	Location	To Sign Up
July 31, 2018	Basic GIS	MRS	\$ 150	Raleigh	<a href="#">Click Here</a>
August 7, 2018	Writing Skills for Transportation Personnel	ARS	\$ 125	Charlotte	<a href="#">Click Here</a>
August 21, 2018	Basic Concepts of Supervision	RS	\$ 125	Charlotte	<a href="#">Click Here</a>
August 22, 2018	Management Techniques for Experienced Supervisors	ARS	\$ 125	Charlotte	<a href="#">Click Here</a>
August 28, 2018	Asphalt Pavement Maintenance	RS	\$ 125	Mooresville	<a href="#">Click Here</a>
August 29, 2018	Maintenance and Repair of Utility Cuts	RS	\$ 90	Mooresville	<a href="#">Click Here</a>
September 11, 2018	Basic Work Zone Installer Safety	RS	\$ 125	Kings Mountain	<a href="#">Click Here</a>
September 12, 2018	Basic Work Zone Installer Safety	RS	\$ 125	Kings Mountain	<a href="#">Click Here</a>
September 13, 2018	Intermediate Work Zone Safety	RS	\$ 150	Kings Mountain	<a href="#">Click Here</a>
September 17, 2018	Basic Roadway Drainage Maintenance	RS	\$ 125	Kings Mountain	<a href="#">Click Here</a>
September 18, 2018	Guardrail Installation and Maintenance	ARS	\$ 125	Kings Mountain	<a href="#">Click Here</a>
September 18- 19, 2018	OSHA 10 Hour Safety Training	ARS	\$ 175	Raleigh	<a href="#">Click Here</a>
September 20- 21, 2018	Flagging Instructor Training	ARS	\$ 225	Kings Mountain	<a href="#">Click Here</a>
October 5, 2018	Managing Conflict with Public and Employees	RS	\$ 125	Raleigh	<a href="#">Click Here</a>
October 8, 2018	Construction Mathematics for Transportation Personnel	RS	\$ 125	Concord	<a href="#">Click Here</a>

## LTAP Links on the Web

### Transportation Information at your fingertips!

NC LTAP	<a href="https://itre.ncsu.edu/focus/ltap/">https://itre.ncsu.edu/focus/ltap/</a>
Narional LTAP/TTAP	<a href="http://www.ltap.org/">http://www.ltap.org/</a>
NC Department of Transportation (NCDOT)	<a href="https://www.ncdot.gov/">https://www.ncdot.gov/</a>
Federal Highway Administration (FHWA)	<a href="https://www.fhwa.dot.gov/">https://www.fhwa.dot.gov/</a>
US Department of Transportation (USDOT)	<a href="https://www.transportation.gov/">https://www.transportation.gov/</a>
UNC School of Government	<a href="https://www.sog.unc.edu/">https://www.sog.unc.edu/</a>
Institute of Transportation Engineers	<a href="http://www.ite.org/">http://www.ite.org/</a>
NC Section of ITE (NCSITE)	<a href="http://ncsite.org/">http://ncsite.org/</a>
Summer Driving Tips - staying safe	<a href="https://icsw.nhtsa.gov/nhtsa/tips/summer/">https://icsw.nhtsa.gov/nhtsa/tips/summer/</a>

## NC LTAP Advisory Board

Tracy Anderson (NCSU/ITRE)	Eric Keravuori (Town of Wake Forest)
Jonathan Boone (City of Rocky Mount)	Barry Lowry (Town of Chapel Hill)
Downey Brill (NCSU/ITRE)	James Martin (NCSU/ITRE)
Derrick Bunn (City of Wilson)	Neil Mastin (NCDOT)
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