

TXLTAP MONTHLY NEWSLETTER

Safety Circles: Embracing Roundabouts for Safer Roads

"Texas has not had a deathless day on its roadways since November 7, 2000." Startling facts according to the Texas Strategic Highway Safety Plan (SHSP) website. The Road to Zero was adopted in 2019 with the goal to eliminate roadway fatalities in the state of Texas by the year 2050. The SHSP is the key planning document that pulls together strategies and countermeasures to make this vision possible.

One of the countermeasures that is growing in popularity is the roundabout. Roundabouts, sometimes called traffic circles or rotaries, have been around in Texas for some time. The oldest traffic circle in Texas was built in Waco in 1935. "The Circle" as locals call it, was often referred to as "The Circle of Confusion". Not much has changed since then. Most research shows that during the construction of a roundabout, users often have less favorable feelings about it. However, shortly after the roundabout has been completed, positive user opinion dramatically increases. By the time it's been operational for a year, those numbers rise dramatically again.

Why does user opinion skyrocket? That's simple. Roundabouts have many benefits that are realized as soon as they are completed. They are one of the evidence-based safety countermeasures supported by the Federal Highway Administration.

BENEFITS include:

- Safer alternative to traffic signals and stop signs.
- Improve traffic flow.
- Better for the environment.
- Safer for pedestrians.
- Safer and easier for older drivers with proper signage and road markings.

What makes a roundabout safer than a traffic signal or a stop sign? First, the tight run of the circle naturally makes drivers reduce their speed. The

In this issue:

Safety Circles:
Embracing Roundabouts
for Safer Roads

PAGE 01



Safety Circles:
Embracing Roundabouts
for Safer Roads
Continued...

PAGE 02



EDC 7: EPDs for
Sustainable Project
Delivery

PAGE 03



Focus on Training/
Upcoming Conferences/
Instructor Spotlight

PAGE 04



Instructors Wanted

PAGE 05



Safety Circles: Embracing Roundabouts for Safer Roads Continued...

larger the center island, the greater the focus of the driver on their immediate actions as they are unable to see the exits ahead. Well defined lanes, approach and exit lane islands, clear signage all contribute to a safer transition. The roundabout makes head-on, right-angle and left-turn accidents very unlikely. The Insurance Institute for Highway Safety website sites studies showing that US intersections converted to a roundabout have seen reductions of injury crashes of 72-80% and 35-37% for total crashes. Does this decrease hold true for higher speed rural roadways that are so common in Texas? In fact, it does. Research showed that the decreases in both injury and total number of crashes was just as significant (or even more so) than a standard suburban intersection conversion.

IIHS cites further studies done on traffic flow at converted intersections. 14 intersections in 4 states showed significant reductions in delays and vehicle stops. Some decreases as large as 89%. Of course, when you reduce delays and stops, you also reduce vehicle emissions and fuel consumption. Both of which have significant impact on our health and environment, not to mention our wallets.

In roundabouts, pedestrians use sidewalks along the circle's outer edge. When crossing the roadway, they do so one direction of travel at a time, there are usually only one or two travel lanes and vehicle speeds are generally low. The fewer number of lanes in a roundabout, the greater reduction in pedestrian accidents. Placing approach and exit lane islands also offers pedestrian refuge.

Advanced age drivers (80 years and up) are twice as likely to be involved in fatal accidents in intersections than drivers ages 16-59. Older drivers typically fail to yield right of way. In a roundabout, having clearly marked lanes, proper signage, reduced speeds and only one direction of travel, the consequences for failing to yield are much less extreme.

In case you aren't convinced yet that roundabouts are the better option, consider this...Maintenance for roundabouts are less expensive than traffic signal intersections and have a service life of roughly 25 years compared to a traffic signal, which only lasts about 10 years.



Insurance Institute for Highway Safety (2023, June 1). Roundabouts. [Www.iihs.org](https://www.iihs.org/topics/roundabouts). Retrieved July 31, 2023, from <https://www.iihs.org/topics/roundabouts>

Texas Strategic Highway Safety Plan (n.d.). Countermeasure: Roundabouts. [Www.Texasshsp.com](https://www.texasshsp.com). Retrieved July 31, 2023, from <https://www.texasshsp.com/emphasis-areas/intersection-safety/strategy-2/roundabouts-action-plan/>



Every Day Counts 7: EPDs for Sustainable Project Delivery

Environmental Product Declarations (EPDs) are reports produced to show the environmental impact of products so that users may make informed decisions about the materials they're using during construction and/or production. EPDs are also referred to as Type III Environmental Declarations. When we talk about EPDs for construction, we're considering every aspect from production to transportation, and eventually on to the final product and its lifespan. EPDs are based on a report called a Life Cycle Assessment (LSA). The LSAs map the entire ecological footprint of materials in over 15 impact outcomes.

If you're thinking that these reports sound very similar to each other, you're correct. Think of it this way, LSAs may contain sensitive company information specific to their material that they may not want published, similar to proprietary information. This information is not included in the more general EPD. However, you cannot create the EPD without first creating the LSA. The LSAs will show the amount of raw materials needed to produce the material, water and power consumption, air polluting emissions, amount of waste and any possible health effects on people.

As of 2022, California, Colorado and Oregon have enacted "Buy Clean" legislation, with Washington, Texas, New York, New Jersey and Minnesota considering the movement. President Biden has also made a commitment to buying clean through the Federal Sustainability Plan and the Buy Clean Task Force.

EPDs are collected in programs that designers/builders can use to help them choose sustainable materials. Architects designing with sustainable building certificate programs in mind, rely heavily on EPDs when making material decisions. In the last few years, the transportation industry has begun to require the use of EPDs as well. The reduction of greenhouse gas emissions is also steadily becoming a component of the procurement process.

Benefits

- **Sustainable Procurement:** EPDs encourage the demand and supply of products that promote the more sustainable use of resources and create less stress on the environment.
- **Sustainable Design:** EPDs provide critical information for use in design decisions and allow for meaningful information of environmental performance for construction materials.
- **Sustainable Asset Management:** EPD data can be included in databases used in asset management systems to perform evaluations for environmental performance improvement.





Focus on Training: Managing Conflict in the Workplace

Managing Conflict in the Workplace, LTP400, is an 8-hour course and a critical part of our management curriculum. Whenever two or more people come together, there is bound to be conflict. It's just human nature. This course will give participants a seven-step conflict resolution process that they can use and modify to resolve disputes of any size. Participants will also be provided with a set of skills in solution building and finding common ground. Upon completion of this course, participants will be able to:

- Identify common conflict styles and discuss when they are appropriate.
- Practice a set of helpful conflict management steps.
- Increase communication that escalates and de-escalates conflict.
- Practice supportive communication through role playing.

Upcoming Conferences and Events

Visit Our Exhibit and Meet Our Team:

October 2-4: County Judges and Commissioners Association of Texas

October 4-5: Highways USA

October 4-6: Texas Municipality League Annual Conference

October 18-19: West Texas Rural Counties Association Conference

October 23-25: Texas Association of County Engineers and Road Administrators

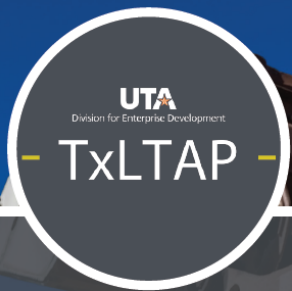
Instructor Spotlight

ANDREA CARAWAY (AK)



AK is a proud mother of two and has been instructing a variety of Safety and Heavy Equipment Training courses the past several years. Before assuming the role of instructor, AK was a student under the guidance of her mentor, Jack Pettyjohn, who is widely regarded as an exemplary craft instructor. During her decade-long tenure with the City of Houston, AK achieved multiple certifications from UTA. Among these, crane operator certification, stood out as being the most influential, impactful and rewarding. AK's primary mission is to revitalize the construction industry, which is predominantly male-oriented. She connects to her students through demonstration, introduction and proper preparation. AK is guided by the following principles: "Trust the process, life is a journey. Run at your own pace, extend grace. What you don't water, don't grow. Never Be satisfied with I don't know."

Most Valuable part of this course? "(Andrea's) experience."
"AK made the course enjoyable and entertaining."
"Relatable instructor, offers a comfortable, relaxed atmosphere."
"Very open to questions...helpful, hands-on."
"Instructor really friendly and informative!"



INSTRUCTORS WANTED

Are you looking for your next
adventure in the great state
of Texas?



TxLTAP IS LOOKING FOR EXPERTS IN:

Email Your Resume and
Letter of Interest to:
TxLTAP@uta.edu



- ✓ Work Zone
- ✓ Infrastructure
- ✓ Safety
- ✓ Heavy Equipment
- ✓ Management
- ✓ Flagging
- ✓ Environmental
- ✓ Electrical



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