IACC Conference 2022

INDIANA LTAP RESOURCES & UPDATES

PURDUE.EDU/INLTAP

TODAY'S DISCUSSION

- Research Program and Innovation Program
- Demonstration of the New Local Asset Management Website
- Overview of New CDL Requirements
- Crash Data for Each County and Heat Maps
- Update on the Road Scholar Program and the Learning Management System (LMS)

INDIANA LTAP RESEARCH PROGRAM

Jennifer L. Sharkey, PE
Lead Research Engineer

To facilitate a research program that enhances and improves **public agency management and delivery** of local transportation systems.

PURDUE UNIVERSITY | Local Technical Assistance Program

GOALS OF PROGRAM

01 Driven by local agency needs

02 Timely delivery of content

03 Benefits entire local transportation industry

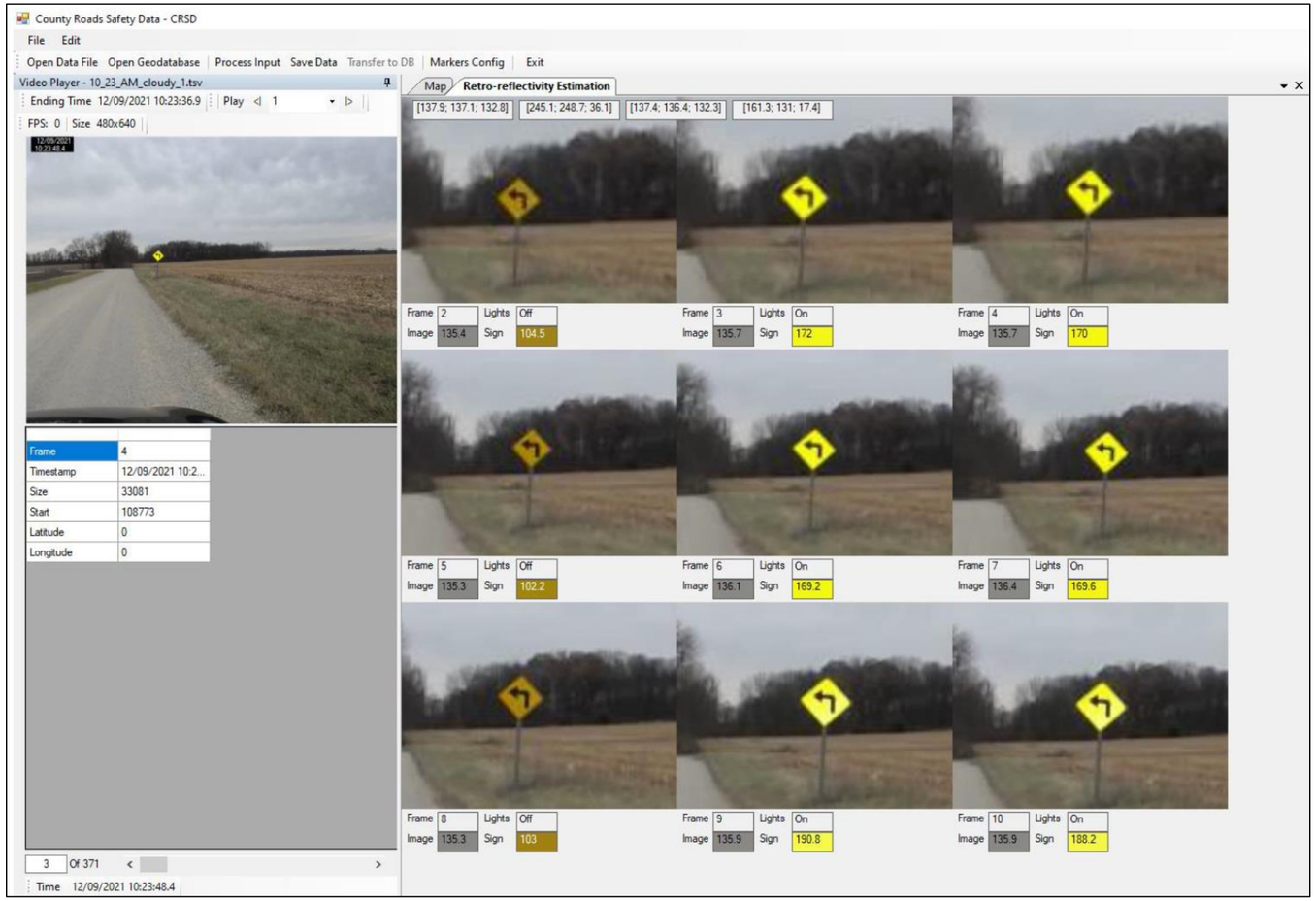
04 Implemented by local agencies

05 Provides content for training and technical resources

PAST PROJECTS

A Practical Method for Measuring Sign Retroreflectivity on Local Roads

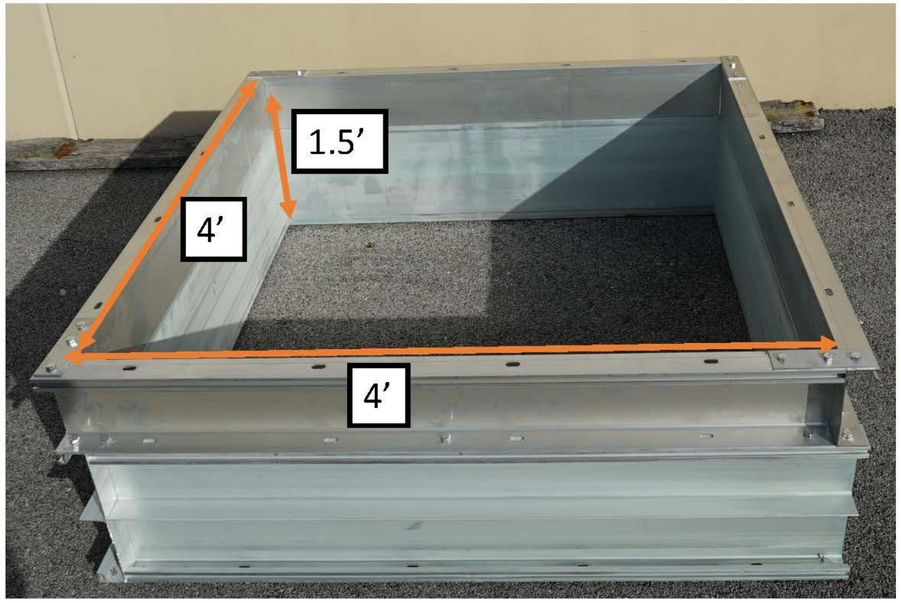
Item	
USB Relay board	
USB A to B cable	
Light Wiring Harness	
GPS Receiver	
Magnetic Mount Bracket	
Laptop	



PAST PROJECTS

A Practical Method for Calibrating Salt/Sand Spreaders for Highway Snowplows

Calibration Bin Dimension and Calculations



$$Volume\ of\ Calibration\ Box = 1.5' x\ 4' x\ 4' = 24\ ft^3$$

$$Assumed\ Density\ of\ Salt = 80\ \frac{lb}{ft^3}$$

$$Approximate\ Weight\ of\ Salt\ in\ Bin = 24\ ft^3 x\ 80\ \frac{lb}{ft^3} = 1{,}920\ lbs$$

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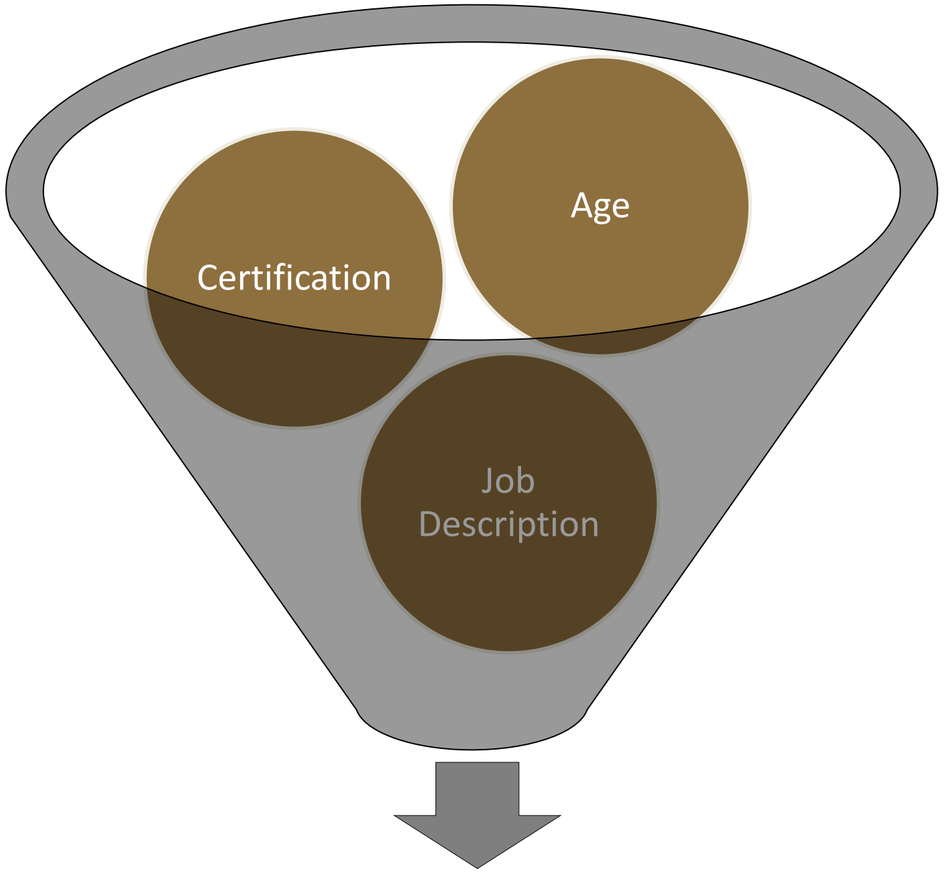
CURRENT PROJECT

Local Agency Workforce Analysis – Snapshot, Challenges, and Opportunities

CDL

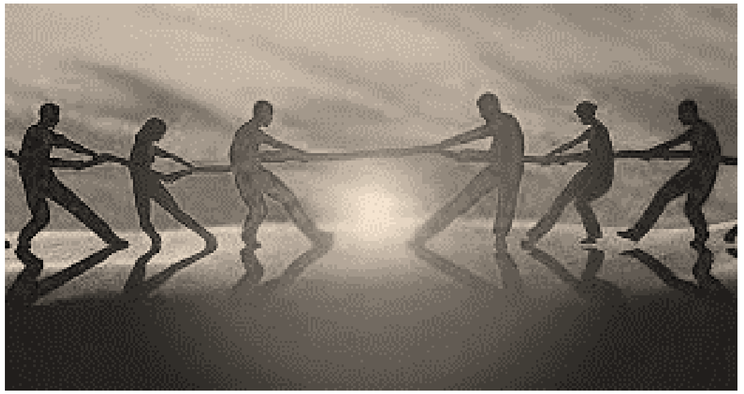


Local Agency Workforce Snapshot

Workplace Culture

Wages or Work Schedule

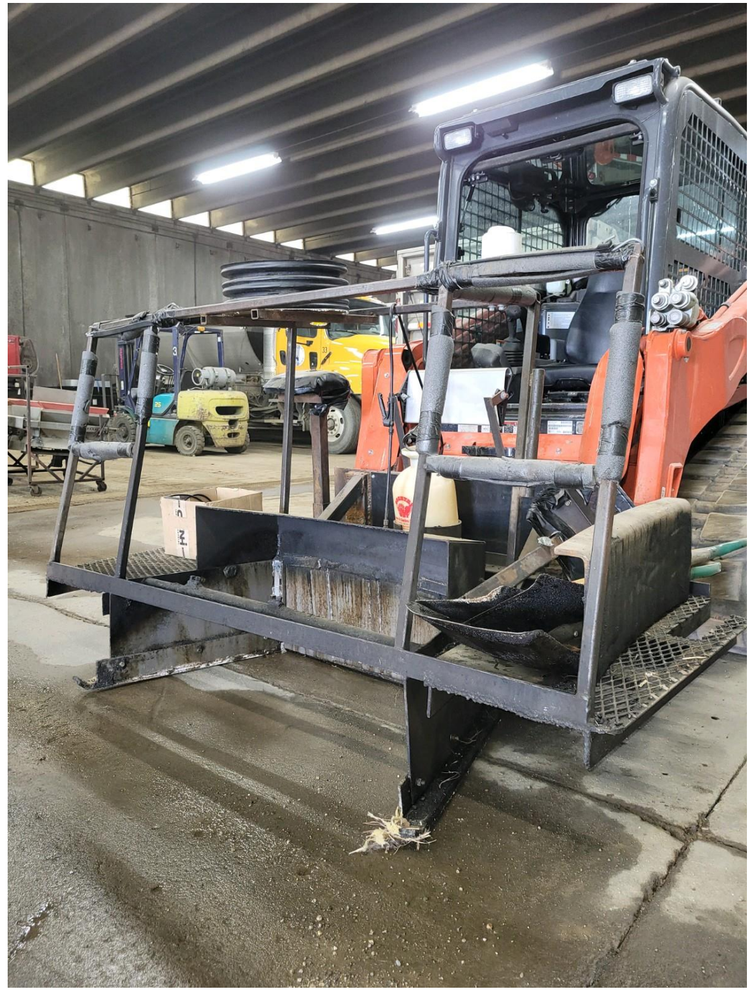
SURVEY COMING SOON!



Market Competition

FUTURE PROJECT

Hot Mix Asphalt Design for Horse & Buggy Use in Indiana



HOW CAN I GET INVOLVED?

Idea Generation / Research Problem Statements

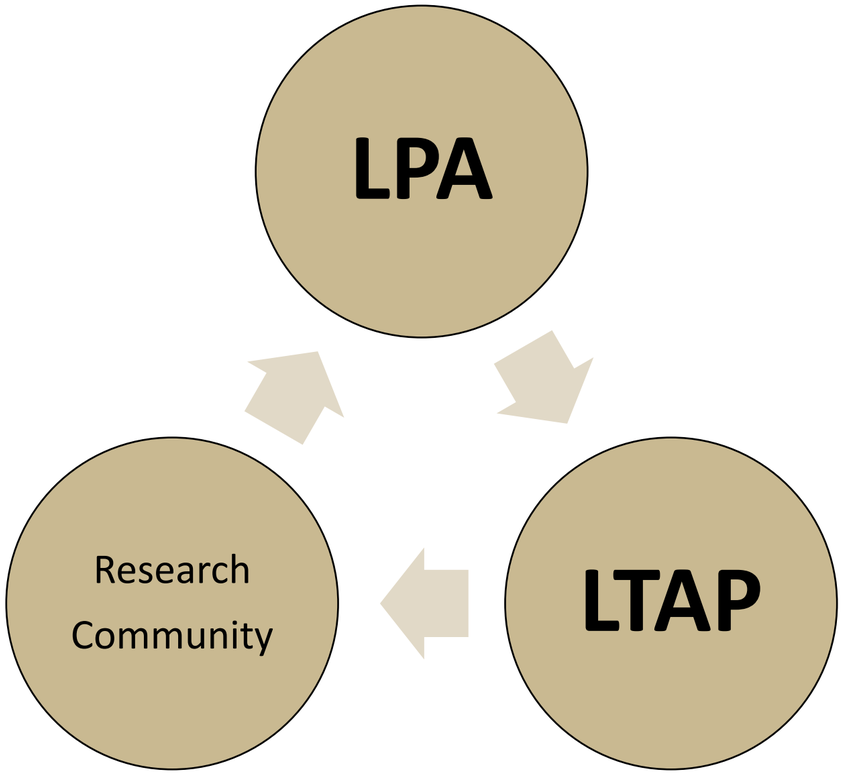
- What are you struggling with?
- What ideas do you have that you need help to develop?
- How can LTAP support you in your everyday work life?

Local Agency Champion

- Be the partner agency for the researcher to work with directly

Implementation Feedback

- Use the deliverables from the project and provide feedback



INDIANA LOCAL INNOVATION PROGRAM

Jennifer L. Sharkey, PE
Lead Research Engineer

To accelerate local public agency operations through **crowdsourcing solutions** that provide more **effective, efficient, and safer** transportation facilities and services.

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Dubois County – Mobile Elevated Wash Platform

Problem: Washing top of equipment after snow events and other operations. Employees had to climb on top of equipment with a high pressure sprayer which was an unsafe operation.

Solution: Mobile wash platform. Engineer designed structure, Mechanics welded and assembled structure, and Bridge Crew sandblasted and painted the platform.

Benefit: Safer environment for highway personnel, cleaner equipment for longer life span and more efficient operations.

Cost: $3,109.28

Hamilton County – Underbody Truck Wash

Problem: Cleaning underneath vehicles/equipment

Solution: 3” metal pipe, 9’ long. Cap on one end & elbow w/ firehouse coupler on other. 3/16” holes drilled in center of pipe at different angles

Benefit: Cleaner truck/equipment that yielded longer life span of service and cleaner work environment for mechanics

Cost: Under $1,000

White County – Road Salt & Sand Mixing

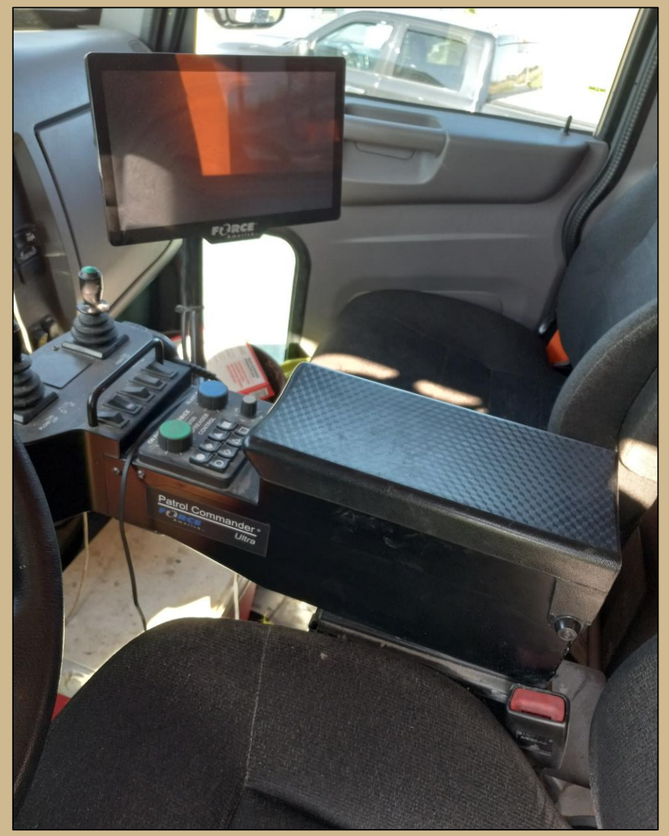
Problem: Inefficient mixing of material that was labor intensive and resulted in poor mixes and applications

Solution: Repurposing of agriculture equipment for mixing of salt and sand material

Benefit: Material not being diluted, reduced material usage, reduced handling time with loader, more precise mixture, consistent mixture

Cost: Under $115,000

White County – Truck Hand Control Center



Problem: Drivers taking eyes off road to see/adjust control knobs. Old control arm was stationary and drivers of different heights/sizes had difficulties

Solution: Redesigned control arm to fully functioning with seat mobility. Attached control arm to air ride seat.

Benefit: Ergonomics (driver comfort) and safety (eyes kept on road)

Cost: Under $500

White County – Snow Plow & Salt Spreader Storage

Problem: Damaged equipment from removal/installation from storage and inefficient operations for locating and retrieving equipment

Solution: Welded two hooks and added a chain to hand salt spreader to front of plow

Benefit: Reduced damage to spreader, hydraulic hoses, lights, etc. and more efficient operations for removal and installation. Annual savings of $17,500 in damage repairs

Cost: Under $200

White County – Fuel Depot Usage Monitoring System

Problem: Fuel shortages and inaccurate documentation of product

Solution: Installation of a fuel tracking system with identification capability

Benefit: Accountability for every gallon, ease of access to data, tracking ability for fuel usage that translates to better fuel contracting

Cost: Under $14,000

LOGISTICS

Indiana LTAP Website

↓

Innovation Tab

↓

Masterminds Challenge

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Indiana Local Innovation Project Application

Every day, you find a better way to do your job as a local street or highway department. Whether it's a new gadget that improves the quality and safety of a project, or an innovative process that reduces costs and improves efficiency, it is typically those on the front lines who discover the latest and best practices.

We are looking for submissions from employees of local public agencies (cities, towns, and counties) that have created different solutions to problems or found better ways of doing things. Submissions must reflect implemented products, procedures, or processes. We will gather the best entries from around the state and judge them using a 5-point rating system (cost, benefits to the community, ingenuity, ease of transferability, and effectiveness.)

Are you an Innovation Mastermind? Fill out the entry form below to submit your innovation!

Organization: _____ **Contact Person:** _____

Phone Number: _____ **Email:** _____

Address: _____

City: _____ **State:** _____ **Zip Code:** _____

Entry Title: _____

Please check the category that this entry is being nominated for (*if unsure, leave blank and LTAP Staff will assist*):

1. ☐ **Innovative Project**
   Any solution that addresses any or all phase(s) of the 'project' life cycle – Planning, Design/Engineering, Construction, Operations and Maintenance. This project shall introduce new ideas, is locally relevant, original, and creative in thinking.
2. ☐ **Bold Steps**
   Any locally relevant high-risk project or process showing a break-through solution with demonstrated high-reward.
3. ☐ **Smart Transformation**
   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.
4. ☐ **Pioneer**
   A locally relevant product/tool that is among the first to solve a maintenance problem with a home-grown solution.

Problem Statement	
Discussion of Solution	
Labor, Equipment, Materials Used	
Savings/Benefits to the Community	
Cost	

Please include a photo of your project with submission. Please add additional pages if needed.

THANK YOU

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DEMO OF THE NEW LOCAL ASSET MANAGEMENT WEBSITE

Patrick Conner, PE
Lead Asset Management Engineer

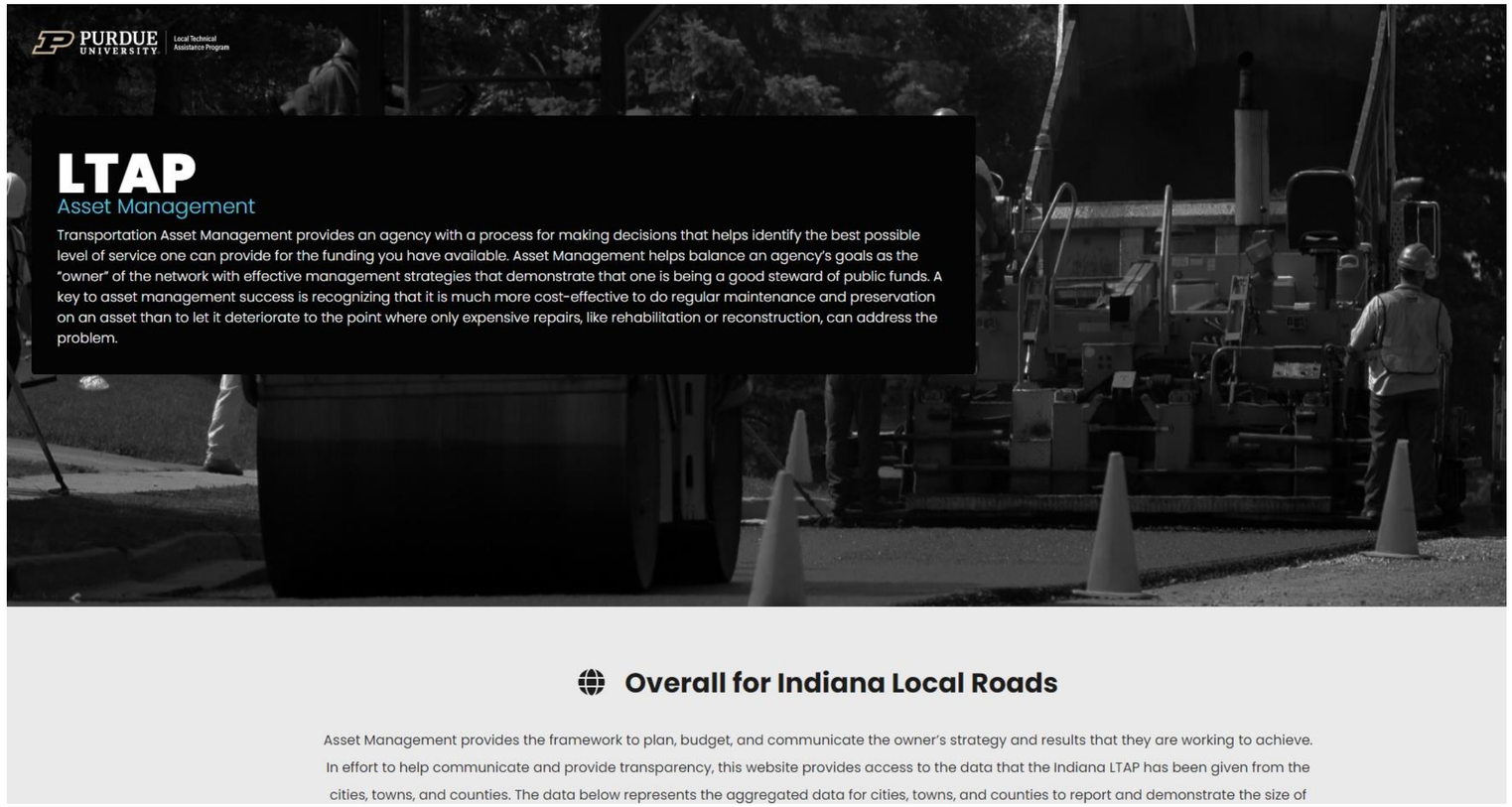
STATE STATUTE: IC 8-23-30-9

HB 1576

IC 8-23-30-9 **Electronic availability of local asset management plans**

Sec. 9. Not later than July 1, 2022, the department shall make asset management plans of local units approved under this chapter available in an electronic format specified by the department on an Internet web site maintained by:
(1) the department; or
(2) an entity contracted by the department to approve asset management plans.

Website



WE WANT TO HEAR FROM YOU

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Lead Asset Management Engineer

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INDIANA LTAP MUNICIPAL CDL TRAINING PROGRAM (CDL-01)

ENTRY LEVEL DRIVER TRAINING (ELDT) PROGRAM

Richard Domonkos
Program Manager

WHAT IS IT?

The Federal Motor Carrier Safety Administration’s (FMCSA) ELDT regulations set the baseline for training requirements for entry-level drivers.

This applies to those seeking to

- Obtain a Class A or Class B CDL (Commercial Driver's License) for the first time;
- Upgrade an existing Class B CDL to a Class A CDL; or
- Obtain a school bus (S), passenger (P), or hazardous materials (H) endorsement for the first time.

WHEN DOES IT GO INTO EFFECT?

February 7, 2022

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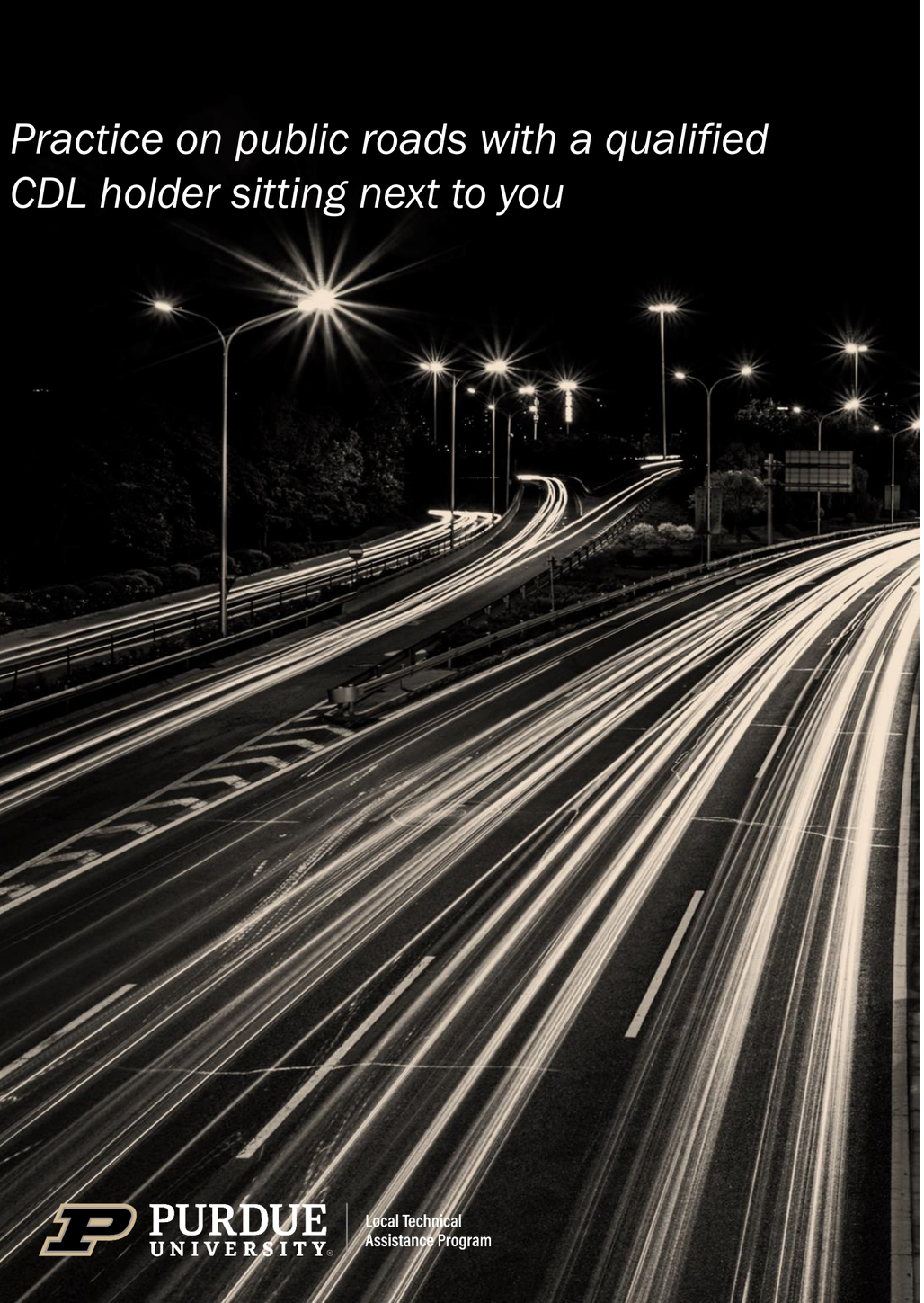
HOW DOES IT WORK? THE 4-STEP PROCESS

STEP 1: Getting Started

- Get a copy of Indiana's Commercial Driver's Licensing (CDL) Manual.
- Decide which type of vehicle and what kind of driving will be required (Class A, Class B, or special endorsement).



HOW DOES IT WORK? THE 4-STEP PROCESS

STEP 2: Get the Commercial Learner's Permit (CLP)

- **Pass all the knowledge tests** for the type of vehicle and driving you want to do.
- **Have an eligible driving record** your driving record is checked for the past 10 years for all 50 states and the District of Columbia.
- **Bring proof of medical qualifications** (often in the form of a DOT medical card obtained by getting a DOT physical by a qualified physician).
- **Pay any associated fees.**

HOW DOES IT WORK? THE 4-STEP PROCESS

STEP 3: Complete the Entry-Level Driver Training

This consists of two main components: **Theory and Behind the Wheel (BTW)**.

- **Training must be provided by a Registered Training Provider** (theory and BTW can be conducted by two different providers).
- Once training is completed, the provider will **electronically submit the certification** of your training completion to the Training Provider Registry.

HOW DOES IT WORK? THE 4-STEP PROCESS

STEP 4: Get the Commercial Driver's License (CDL)

To obtain a CDL you must

- **Possess the CLP for 14 days and complete applicable entry-level driver training (ELDT)** to be eligible to take the CDL skills test.
- **Pass all 3 parts of the CDL skills test.**

1. Vehicle Inspection Test
2. Basic Controls Test
3. Road Test

ROADMAP TO LTAP'S CDL/ELDT PROGRAM

Indiana LTAP plans to address several areas of the new CDL Entry-Level Driver's Training Program through the following activities.

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- Develop content for the theory portion of the ELDT program to provide to local agencies at no charge.
- Offer the theory portion in hybrid format with instruction available online and in-person
- Offer the theory portion fully online and self-paced to local agencies through our Learning Management System (LMS)

- Develop a Train-the-Trainer course for the Behind-the-Wheel (BTW) instruction portion. (Local agencies will have to perform the behind the wheel portion in-house)
- Use CDL simulator for training behind-the-wheel (BTW) instructors
- Develop CDL specific website for local agencies to access.

- Develop a community of local agency behind-the-wheel trainers who have completed the LTAP Train-the-Trainer program for behind-the-wheel instruction. This community of Indiana trainers will meet annually at Road School to collaborate and share experiences
- Conduct a meeting at Road School for behind-the-wheel instructors and provide continuing education for local agency in-house trainers

TIMELINE FOR DELIVERY

DATE	DELIVERABLE
Winter 2022-23	Website and LTAP CDL ELDT content.
Winter 2022-23	Online/self-paced content in the LMS.
Winter 2022-23	Theory portion in hybrid instruction.
Winter 2022-23	Incorporation of CDL driving simulator into theory instruction.
Winter 2022-23	CDL specific website for local agencies to access LTAP CDL training and resources.
Spring/Summer 2023	Train-the-Trainer course for the Behind-the-Wheel (BTW) instruction portion.
Spring Summer 2023	CDL simulator for behind-the-wheel (BTW) instructors training.
Fall 2023	Support a community of local agency behind-the-wheel trainers who have completed the LTAP Train-the-Trainer program for behind-the-wheel instruction.
Spring 2024	Host a meeting at Road School for behind-the-wheel instructors and provide continuing education for local agency in-house trainers.

WE WANT TO HEAR FROM YOU

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INDIANA LTAP HELPERS PROGRAM

CRASH DATA & HEAT MAPS

Laura Slusher, PE
Lead Transportation Safety Engineer

FOR MORE INFORMAITON

LAURA SLUSHER

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ROAD SCHOLAR PROGRAM & LMS

Meredith Camp
Senior Training Specialist

INDIANA LTAP ONSITE INITIATIVE

Fall

Snowplow Safety Onsites- 24 trainings

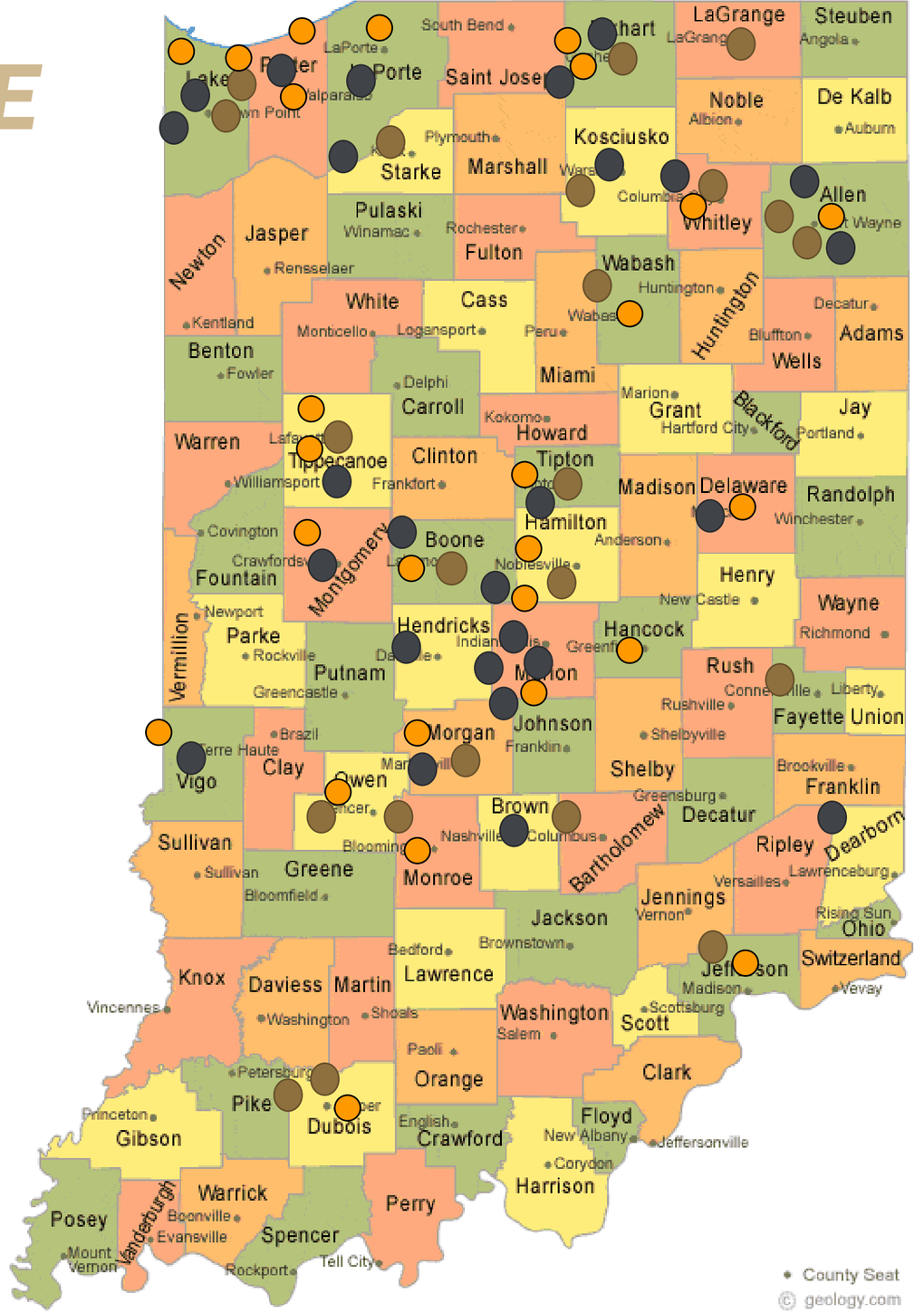
Chainsaw Safety Onsites- 14 trainings

Spring

Drainage Safety Onsites- 22 trainings

Aerial Lift Safety Onsites- 27 trainings

Work Zone Safety Onsites- 26 trainings



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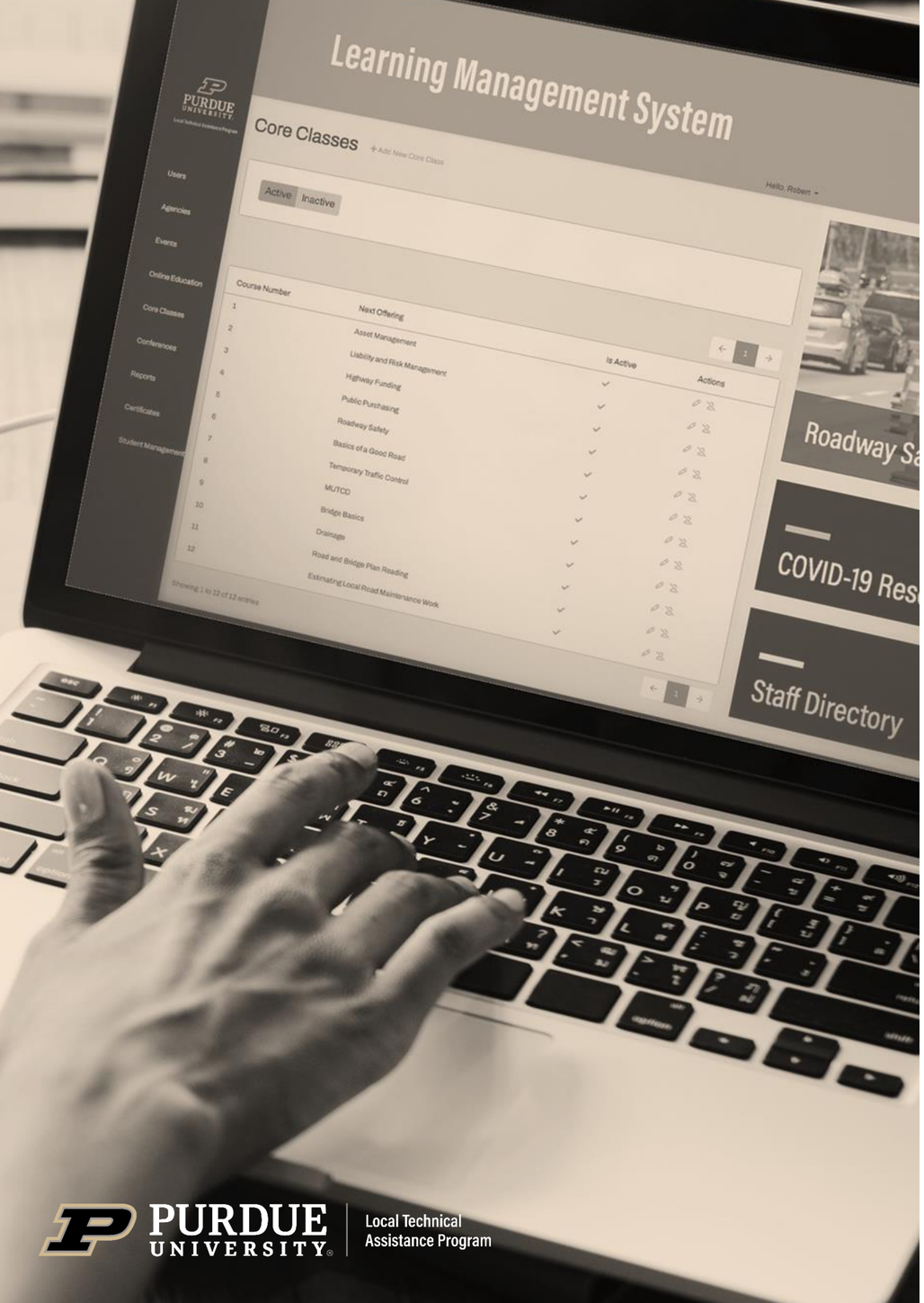

THE CORE COURSES

#01 Asset Management COMPLETED

#02 Liability and Risk Management

#03 Highway Funding COMPLETED

#04 Public Purchasing

#05 Roadway Safety COMPLETED

#06 Basics of a Good Road COMPLETED

#07 Temporary Traffic Control COMPLETED

#08 MUTCD COMPLETED

#09 Bridge Basics

#10 Drainage

#11 Road and Bridge Plan Reading COMPLETED

#12 Estimating Local Maintenance Work COMPLETED

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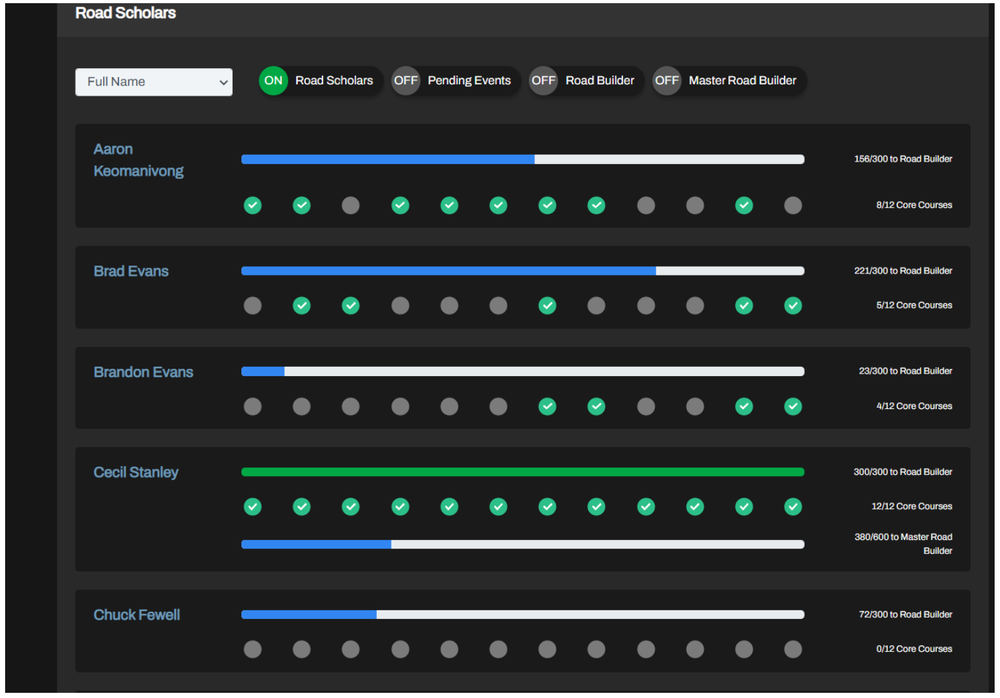
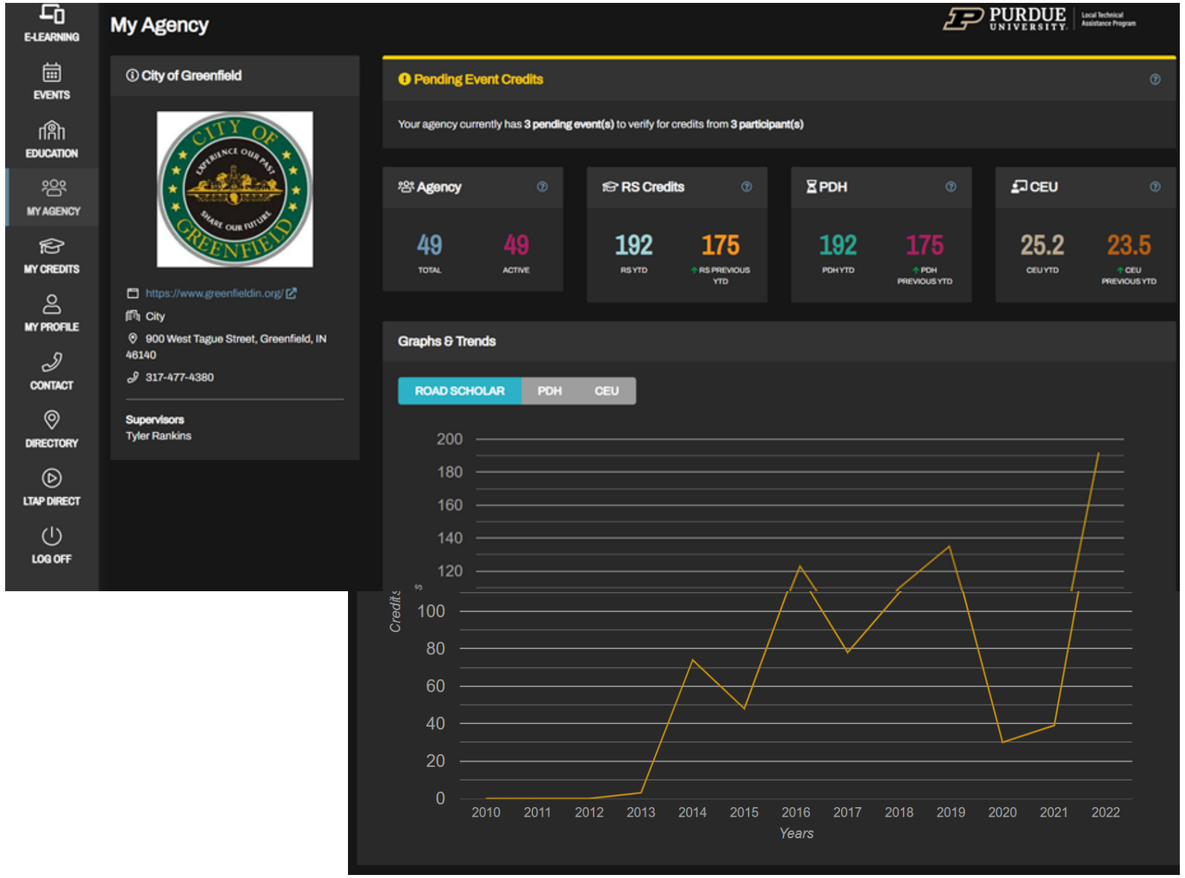
AGENCY SUPPORT- MAKE ROAD SCHOLAR WORK FOR YOU

LMS has the ability to help supervisors manage crew development and track agency's progress tracking individuals





ADDITIONAL TRAINING RESOURCES

Can be found in the App Store or Google Play

LTAP Direct is Indiana LTAP's micro-learning app, is free and available to download on your iPhone or Android. This innovative app offers expert advice, training and troubleshooting tips right at your fingertips.

WE WANT TO HEAR FROM YOU

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