

| UTC Project Information | |
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| Project Title | Evaluation of Work Zone Mobility by Utilizing Naturalistic Driving Study Data, Phase II (Project I3) |
| University | Auburn University |
| Principal Investigator | Huaguo Hugo Zhou Professor Department of Civil Engineering |
| PI Contact Information | zhouhugo@auburn.edu 334-844-1239 |
| Funding Source(s) and Amounts Provided (by each agency or organization) | STRIDE: \$56,101 Auburn: \$56,101 |
| Total Project Cost | \$56,101 |
| Agency ID or Contract Number | 69A3551747104 |
| Start and End Dates | January 1, 2020 – March 31, 2021 |
| Brief Description of Research Project | The objective of the second phase of this research is to evaluate the work zone mobility by studying complete Naturalistic Driving Study (NDS) work zone trip data. The NDS data provide a unique opportunity to study car-following models for different driver types in different work zone configurations. The time series data, forward view, and radar data from NDS can provide variables such as speed, acceleration rates, gas and brake pedal status at 0.1-second intervals, driver's vision, and headways in seconds. In this study, first, the headway selection tables for different driver types (gender, age group, risk perception, etc.) at three work zones (lane closure (LC) 2-1, shoulder closure (SC) 2-2, and 3-3) and all level of service (LOS) will be developed. Second, the headway distributions before, during, and after work zone areas (500 ft upstream, advanced warning area, transition area, activity area, termination area, and 500 ft downstream) will be compared. Next, the speed-flowdensity relationships of different work zone configurations will be identified by applying the fundamental traffic flow theory, and work zone capacity method in the Highway Capacity Manual (HCM). The results of this study |

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| | will be applied to calibrate and improve work zone related planning and simulation tools. |
| Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here | Not available. Research is in progress. |
| Impacts/Benefits of Implementation (actual, not anticipated) | Not available. Research is in progress. |
| Web Links <ul style="list-style-type: none">• Reports• Project website | https://stride.ce.ufl.edu/project-i3/ |