UTC Project Information	
Project Title	MPC-409 – Identification of Fatigue Countermeasures for Adjusted Work Schedules Designed to Manage Fatigue During Peak Service Demand Periods in the Shortline Railroad Industry, Year 2
University	University of Denver
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Funding Agencies	USDOT, Research and Innovation Technology Administration
Agency ID or Contract Number	DTRT13-G-UTC38
Project Cost	$188,312
Start and End Dates	September 30, 2013 to September 30, 2018
Project Duration	September 30, 2013 to September 30, 2018
Brief Description of Research Project	Evaluating the effects of fatigue countermeasures inserted in the work schedules will provide evidence as to the effectiveness of these countermeasures and also hopefully lead to a safer and more productive and therefore more economically competitive transportation system. Accordingly, by gathering data on hours worked, hours of sleep, alertness and fatigue prior to, during, and after implementation of fatigue countermeasures for a period of at least ninety days we will be able to evaluate the effectiveness of the countermeasures. Data collection will consist of three 30 day periods using sleep diaries and other self-report techniques, as well as observations and data gathered through sleep monitoring techniques. In addition, the fatigue models approved by the FRA will be utilized to evaluate the effectiveness of the interventions (Hursh, Raslear, Kaye, & Fanzone, 2009). Thus, the proposed study will, based on previous research, identify various fatigue countermeasures that will be tested in the operational environment. Ultimately, the schedules and the appropriate countermeasures will be posted on the web sites and distribute to the Short Line Railroad Association.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	Railroads have decided to study these recommendations and participate in field testing of these countermeasures.
Impacts/Benefits of Implementation (actual, not anticipated)	Fatigue has been considered a factor in most of the major transportation accidents in recent years. Successful implementation of fatigue countermeasures will hopefully lead to a safer rail transportation system.

Web Links • Reports • Project Website	https://www.ugpti.org/resources/reports/details.php?id=943