

Proposed Positive Protection Guidance for Kansas: Synthesis of Work Zone Positive Protection Devices and State Practice

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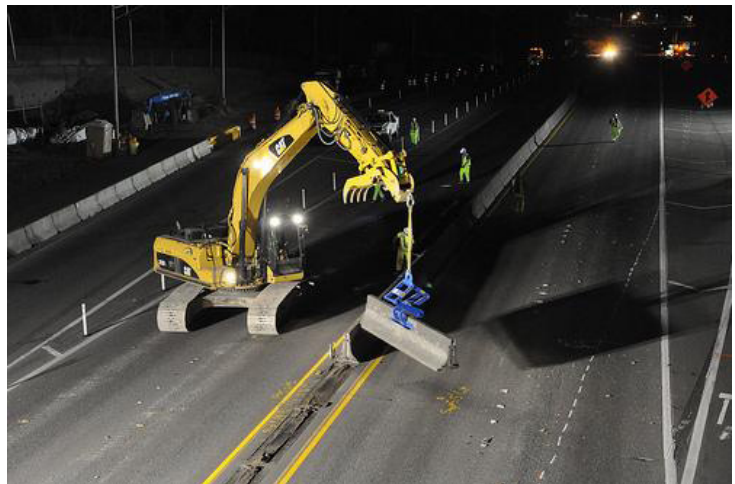
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Introduction

The United States experiences over 700 fatalities and over 37,000 injuries each year in temporary construction and maintenance work zones. The Federal Highway Administration (FHWA) has implemented Temporary Traffic Control Devices 23 CFR 630 Subpart K, which specifies a state highway agency must amend their state safety and mobility plan by 2008 to include a description for positive protection in work zones and implementation guidelines for federal funded highway projects.

Project Description

This research study first investigated temporal trends in national and Kansas work zone related crash trends, specifically crashes involving striking a construction vehicle or fixed object. Additionally, current work zone TL-3 and TL-2 approved positive protection devices were summarized including longitudinal barriers, mobile barriers, vehicle arresting systems and end protection systems. Next, a nation-wide survey of state highway agencies was conducted to summarize current guidance relating to positive protection or



Jersey Barrier System Being Installed in Medina, WI

changes in guidance to comply with Temporary Traffic Control Devices 23 CFR 630 Subpart K.

Project Results

This research study provided preliminary work zone positive protection guidance for the Kansas Department of Transportation based on the findings of the survey and currently available products. A draft work zone positive protection guidance was developed and is divided into four sections including:

- Written guidance was developed for work zone positive protection that is expected to meet federal Temporary Traffic Control Devices 23 CFR 630 Subpart K. Guidance is broken down into four sections.
- A decision flowchart was created to assist an engineer in determining and documenting how to limit, reduce, or eliminate exposure in temporary work zones. Additionally, the flowchart provides decision points where work zone positive protection is required.
- A table describing work zone exposure control measures was created. This table describes commonly used KDOT exposure control measures along with approved guidance for each measure that an engineer can reference.
- A table describing possible positive protection devices was created. This report assumes that engineers will be interested in TL-3 approved positive protection devices as well as TL-2 end-treatments and truck-mounted attenuators. The devices listed are devices approved at the time of this report and it is the assumption that future developments or changes to guidelines will supersede this report.

One important aspect KDOT wanted in the development of guidance was to help an engineer with the decision process in determining if positive protection is needed for a temporary work zone. Additionally, the guidance was setup to provide an engineer with existing documents approved by KDOT to limit, reduce or eliminate exposure at work zones through various methods before considering positive protection.

Project Information

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