

## EXPERIMENTAL PROJECTS WORK PLAN

### EVALUATION OF TD5200 BOOMERANG AND THE SDR3036 SUPER DUCK REBOUNDABLE SURFACE MOUNT DELINEATORS FOR CENTERLINE TWO-WAY, TWO-LANE TRAFFIC CONTROL

**Location:** Interstate 15 (C000015), Lewis & Clark County, Great Falls District

**Project Name:** I-15: Augusta Interchange - Craig (CN 6531001)

**Project Number:** IM 15-4(129)129

**Type of Project:** Reboundable Delineator Evaluation

**Principal Investigators:** Craig Abernathy, Experimental Program Manager (ExPM)  
Kris Christensen, Experimental Project Manager (ExPM)

#### **Objective**

Determine the cost effectiveness, durability, and increased safety of using reboundable surface mount delineators for two-way two-lane traffic control on an interstate construction project.

#### **Description**

In order to facilitate the flow of very low, wide loads and reduce damage to the delineation on a project currently under construction, the contractor removes the top from the base as the wide load pass through. This causes concerns with safety, both for the traveling public and the contractor crews. Incorporating a reboundable surface mount delineator may eliminate the need to remove and reset the tube during a wide load pass, decreasing the contact of contractor crews with vehicular traffic. There is also a potential of lowering project costs and requiring fewer wide load closures.

## **Experimental Design**

Two products selected for use on the project will be the Carsonite SDR3036 Super Duck and the TrafficWorks TD5200 Boomerang. The delineators will be installed homogeneously throughout the detour length in a consecutive sequence of one (1) Super Duck and three (3) Boomerangs, respectively. The Super Duck is the conventional delineator used for these types of detours. Since it currently is being removed and replaced for a wide load pass it has not been evaluated as a reboundable device. Manufacturer supplied information places greater confidence in the durability of the Boomerang, hence the 3:1 ratio in delineator placement.

## **Evaluation Procedures**

Research will document the installation for best practice and any installation concerns germane to the performance of the product. Weekly inspections will report on delineator integrity and any other measurable outcomes. Additional site inspections may supplement the weekly visits based on need.

**Construction Documentation:** Documentation will include information specific to the installation events of the delineator placement.

**Detour Project Phase:** Research will document the general condition of the delineator placements throughout the project length. The data elements for condition performance will include cracking, fraying, splitting, kinks, average degree of list, and estimated loss of reflective sheeting, and the number of replaced or repaired (reset) delineators. There will be an attempt to digitally document an actual pass of a wide load if possible.

**Cost Analysis:** Research has requested information to detail the cost of a conventional detour phase (related to the length and duration of the project) as compared to the final cost of the proposed experiment.

## **Evaluation Schedule**

Research will monitor performance for the duration of the project or as long as the delineators are in place. This is in accordance with the Department's "Experimental Project Procedures". Delivery of a construction/installation report and final project report will be the responsibility of Research. A web page will be dedicated to display all reporting from the project.

Since installation and project duration will be approximately three (3) months a combined construction and final report is proposed.