

# MEMORANDUM

# STATE OF ALASKA

Department of Transportation & Public Facilities  
Design & Engineering Services – Statewide RD&T2

**TO:** Charles Deininger  
Chief Contracts Officer

**DATE:** August 4, 2016

**THRU:** Dave Kemp, P.E. PMP  
Director, Central Region

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**FROM:** Anna Bosin, P.E.  
Research Engineer

**SUBJECT:** Approval to Use State Furnished  
Materials on Anti-Skid Traffic Marking  
Research Project Z640060000/4000(133)  
**Public Interest Finding 25-17-001-PIF**

## Introduction

The Alaska Department of Transportation and Public Facilities (DOT&PF) is seeking a Public Interest Finding (PIF) to use State furnished materials on an Anti-Skid Traffic Markings Research Project (Project). This is a no-cost state furnished material PIF request.

The goal of the Project is to provide a “test deck” application of (3) manufacturers’ latest products in anti-skid methyl methacrylate (MMA) inlaid traffic markings at an intersection in Anchorage. The materials will be installed for crosswalk application and then be monitored by DOT&PF to evaluate long term anti-skid performance following seasonal freeze/thaw cycles, plowing, and studded tire wear. The DOT&PF plans to test the markings once installed (fall 2016) and again in spring 2017 using both a British Pendulum Unit and Dynamic Friction Tester to analyze wear performance. The contractor will be required to install all (3) supplied products per manufacturers’ recommended means and methods.

The three manufacturers are: 1) Ennis Flint; 2) Aexcel; and 3) Transpo Industries  
All three manufacturers have agreed to each supply materials to complete one full crosswalk at an intersection in Anchorage during fall 2016 per DOT&PF Standard Drawing T-23.00 at no cost to the DOT&PF.

## Project Background

The friction value of MMA markings is less than adjacent paved surfaces at nearly all locations markings are installed. Since crosswalks and other symbols applied to the asphalt have application widths of 2 feet or more, pedestrians and motorists in motion have temporary contact points with MMA that provide differential friction resistance compared to adjacent asphalt, this sometimes results in footing and tire slippage.

Scott Thomas, Central Region Traffic Engineer approached all three manufacturers over recent years requesting they provide DOT&PF with improved friction values for inlaid methyl methacrylate (MMA) used in traffic markings as a counter measure for motorcycle crashes and pedestrian safety. Specifically, during the 2014 Dimond Blvd. Resurfacing Project (Project No. EAP-0520(14)/53801), an incentive

payment option was included in the contract to encourage contractors to install traffic markings that met or exceeded adjacent pavement friction values, however the contractor chose not to participate.

In 2015, DOT&PF increased the standard aggregate amount required by the project specifications for inlaid MMA traffic markings and crosswalks as part of the 5<sup>th</sup> and 6<sup>th</sup> Avenue Paving Project (Project No. 0001508/57835), in a separate attempt to improve friction values. However, when DOT&PF tested the friction values using the Dynamic Friction Tester, the values were no higher than traditional inlaid MMA.

Since these two projects, the Central Region Traffic Engineer has discussed the DOT&PF's continued desire to improve friction values with MMA manufacturers and they have agreed to participate in a test deck application project by supplying no-cost materials and direction to the DOT&PF for developing installation specifications for a local contractor to install and DOT&PF to evaluate.

#### **Justification for Public Interest Finding**

As part of DOT&PF Research, we want to be able to test the most innovative products on the market in a controlled environment prior to considering long term investment. Once these anti-skid MMA products are installed and their performance is tested, DOT&PF Research will be able to make recommendations to CR traffic regarding materials, means and methods to consider for adopting anti-skid inlaid MMA traffic marking properties into the Standard Specifications.

#### **Key Advantages of the State Furnished Material:**


- Overall cost of the research project is reduced
- Contractor is not choosing to buy the cheapest option to install
- Equal participation by all three manufacturers available to the Alaska market and each will provide their best available product for performance evaluation
- Costs of the installation will be known for each material and installation method for engineers to use when creating future engineers estimates

DOT&PF Materials Lab will house the materials at the Tudor Road Lab facility ready for the contractor to pick up at the time of installation. Construction bids will not be solicited until the products from all three manufacturers' is in DOT&PF possession.

The Project will be funded from Phase 8 Rapid Research Funding and includes 80% federal funds. These dedicated funds are FHWA approved for projects that fall within the scope: "Initiate short term, generally limited scope research, development, and/or technology deployment projects to provide immediate or rapid-turnaround solutions for the Department." The construction cost estimate for the installation project is less than \$15,000 and contracting will follow the Small Procurement Manual for Construction Projects.

#### **Finding of Public Interest**

This Public Interest Finding is hereby found to be in the Public's best interest and consistent with the Code of Federal Regulations Title 23, Section 635.407 & 2 AAC 12.760 and DOT&PF Policy and Procedure 10.02.013 Public Interest Finding for DOT&PF.

Submitted by:   
Anna Bosin, P.E.  
Research Engineer

8/5/16  
Date

Recommended by:   
Dave Kemp, P.E. PMP  
Regional Director

8-5-2016  
Date

Submitted by:   
Charlie Deininger  
Chief Contracts Officer

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Date