Montana Department of Transportation
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Michael T. Tooley, Director
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zero deaths | zero serious injuries on Montana roadways

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MONTANA DIVISION

January 9, 2017

Kevin McLaury
Montana Division Administrator
Federal Highway Administration
585 Sheperd Way
Helena, MT 59601

Subject: Finding of Public Interest
3M Pavement Marking Tape

Pursuant to 23 CFR 635.411, we are requesting your Finding of Public Interest for MDT's use of 3M Pavement Marking Tape for statewide installation on concrete roadways.

Background

MDT conducted testing using various traffic marking materials on multiple concrete roadway situations in two MDT maintenance areas.

- Waterborne High Durable Traffic Paint was applied in 2015 at the following intersections: Highway 12 and South Montana Avenue – Highway 12 and Lane Avenue both in East Helena. These are repainted annually.
- Ennis/Flint Preformed Thermoplastic was applied in 2014 on the overpass at the intersection of Lincoln Road and I-15 in Helena. It was reapplied in 2016.
- Epoxy Traffic Paint was inlaid in 2015 on sections of Reserve Street in Missoula. It failed and was replaced with 3M Tape in 2016.
- 3M Pavement Marking Tape was inlaid in 2016 on sections of Reserve Street in Missoula after the inlaid 2015 Epoxy Traffic Paint failed. It is still in use.
- Swarco Permanent Pavement Marking Tape was inlaid in 2014 at the intersection of Euclid/Lyndale Avenue and North Benton Avenue in Helena. It is still in use.
- 3M Pavement Marking Tape was inlaid in 2014 at the intersection of West Lyndale Avenue and Last Chance Gulch in Helena. It is still in use.

Results

MDT testing on the concrete roadway in high traffic areas showed:

- Waterborne High Durable Traffic Paint shows signs of deterioration the day after installation and with total failure usually occurring within three months.

- Epoxy Traffic Paint will start to degrade within two months, with total failure usually occurring between 4 to 6 months.

- Ennis/Flint Preformed Thermoplastic shows signs of tearing after 4 months of installation with significant wear in the high traffic areas after 20 months with replacement required usually within 21 to 24 months.

- Swarco Permanent Pavement Marking Tape showed sign of tearing and delamination after 4 months of installation with prevalent delamination and adhesion loss from the concrete after about 18 months.

- 3M Pavement Marking Tape showed signs of tearing after 4 months of installation with significant wear in the high traffic areas after 22 months. To date; this tape appears to be more durable than the other traffic marking products MDT tested on concrete surfaces.

Benefits

- Durable, clear, and visible concrete traffic markings are pertinent to the safety of motorists and pedestrians alike.

- With the use of 3M Pavement Marking Tape MDT spends less time reapplying traffic markings which reduces costs and the time roadways and commerce will be restricted for maintaining these traffic markings.

- Reduced cost of training for repair and maintenance as knowledge of only 3M Pavement Marking Tape is required.

- Reduced cost of maintaining multiple different repair or replacement parts inventories as only 3M Pavement Marking Tape items will be stocked.

Conclusion

Traffic markings on concrete are difficult to maintain. MDT testing shows 3M Pavement Marking Tape is the longest lasting concrete traffic marking material available at this time. MDT believes the use of 3M Pavement Marking Tape as described above should be conferred proprietary item status due to the cost benefits, safety benefits, and lack of availability of other longer lasting options. If approved, MDT will reevaluate the renewal pursuant to 23 CFR 635.411 as soon as there are two additional viable options available for concrete applications.

Lesly Tribelhorn, P.E.
Highways Engineer
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FHWA Concurrence: _____ Date 01/17/17

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