

EVALUATION OF PAVEMENT MARKING MATERIALS IN A TRANSVERSE TEST DECK EXPERIMENTAL FEATURE No. 2005-01

By:
Jay Goldbaum
CDOT Pavement Design Program Manager

Purpose

This report summarizes the data collected as part of the field evaluation of various pavement marking materials used throughout Colorado roadways. The Colorado Department of Transportation (CDOT) allowed the various suppliers of pavement marking material to use their current products and experiment with new formulations. After reviewing the retro reflectivity data, a recommendation on minimum values for the initial construction of white and yellow pavement marking material will be given.

Introduction

Due to the dated CDOT specifications, Region Traffic Engineers are hesitant to approve products for use solely based on a review of certified test reports (CTRs) and other supplemental documents from other states. Many of the roads in Colorado are exposed to UV and freeze-thaw like few other states, with the added abrasive effect of sanding the roads, plow blades, tire chains, and de-icing chemicals, it makes a difficult comparison even more challenging.

CDOT, in an effort to upgrade their specifications as part of the product evaluation program for various pavement marking materials, sponsored two locations to monitor the retro reflectivity. This research did not attempt to approve materials; it only rated them according to performance.

The evaluation was conducted over a nine-month period from September 2005 to May 2006. This data spanned one winter season. The materials described in this report were placed south of Denver, Colorado on Interstate 25. This report presents a summary of the field retro reflectivity data.

Procedure

On July 28, 2005, CDOT met with the manufacturers to discuss the work plan and layout of the test deck. At this meeting, it was agreed that the manufacturers would place their products in the transverse direction of the right lane and 10-foot shoulder of the selected sites. There were two white and two yellow lines all separated and grouped together by product type. CDOT allowed the manufacturers to schedule so that they were able to install their products under the appropriate weather conditions. Surface preparation was done by CDOT maintenance forces and limited to cleaning dust and debris from the roadway prior to applying products. Products were installed at least 12 mils thick to the surface of the roadway without any recess into the pavement. These products were installed at night from approximately 9:00 PM to 5:00 AM.

CDOT provided the traffic control and monitored the retro reflectivity. Reflectivity readings were taken using a Delta LTL-X pavement marking retro-reflectometer on a monthly basis for the first six months after placement and thereafter; every other month for a total of eight readings. CDOT tracked the traffic, temperature, amount of deicing chemicals used and the number of blade passes.

Site Locations

The test decks on both Portland cement concrete (PCC) and hot mix asphalt (HMA) surfaces were evaluated. The decks were selected using the guidelines of ASTM D-713. South bound I-25 at the Lincoln Avenue interchange (Milepost 194.8) as the HMA site and the Happy Canyon interchange (Milepost 190.2) as the PCC site were selected for this assessment. These field sites are free rolling with no significant grades, curves, or access points near enough to cause excessive braking or turning movements. These sites were determined to have good drainage and were open to traffic at least five years before placing the products. The wear was uniform and the surfaces represented pavements constructed throughout Colorado.

Materials Used

All materials were installed on the test decks between August 22nd, 2005 and September 16th, 2005. Initial field measurements of retro reflectivity were made within two weeks of application. A total of 96 materials samples were evaluated on the PCC and HMA test sections including: 22 Preformed Plastic Tapes, 4 Methyl-Methacrylated, 5 Polyureas, 2 Urethanes, 6 Solvent Paints, 8 Waterborne Paints, 6 Hot Applied Thermoplastics, 12 Preformed Thermoplastics, 15 Epoxies and 16 Experimental. A listing of the materials placed in Colorado in 2005 is given in Table 1.

Installation

The manufacturer supplied all the necessary equipment to install the striping materials. CDOT forces supervised the installation of the products and paid for the essential traffic control.

Each manufacturer supplied representative marking materials including; primers, sealers or adhesives from their current stock on the site. These samples were stored by CDOT for any needed future studies. Immediately prior to placing the materials, 8 1/2" x 11" aluminum plates were placed on the surface to obtain samples of all the materials. These samples were stored in a controlled environment by CDOT to be used as future comparators.

Unless otherwise noted, the glass beads used in the study met AASHTO M 247 Type I specifications. In specific instances, requests were made to use another glass bead for a specific marking material. Samples of the different types of beads were taken. A summary of all the products applied along with their location and the date applied is provided in Table 2 and Table 3. Two stripes were placed for all samples on both the HMA and PCC pavements. The test lines were transverse lines running from the shoulder to the skip line. Refer to Figure 1 for an example of placement.



Figure 1. Applying the Lines

Unless otherwise noted, liquid materials were applied at a minimum wet film thickness of 15 mils with a dry film thickness of at least 12 mils. Glass beads were applied at a rate of 6 plus or minus 0.2 pounds per gallon of paint. The glass beads for epoxy paint were applied at a rate of 25 plus or minus 0.5 pounds. Manufacturers were responsible for machine calibration and incidental materials for calibration purposes. Each manufacturer notified CDOT staff when they were ready to commence installation. A check stripe was placed on tar paper to calibrate their equipment prior to placing the test lines. Refer to Figure 2 for an example of the test stripe.



Figure 2. Test Strip

Weather Data

Maximum and minimum air temperatures along with rainfall and snowfall amounts were recorded during the material installation period. The weather data collected during the material installation period are presented in Figures 3A, 3B, 4A and 4B. **Note:** The 2005-2006 winter season was below average when compared to the average winter season for Denver. Temperature data for the asphalt site was taken from a weather station located at the site. The data for the concrete site was taken from a reasonably close weather station less than 2 miles.

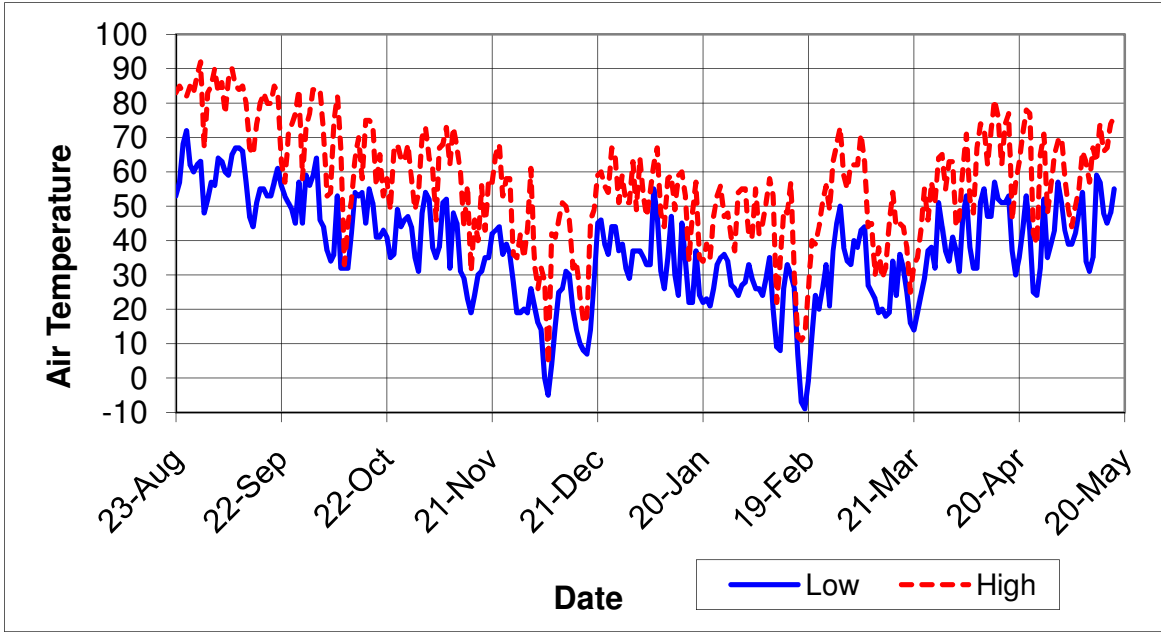


Figure 3A, Air Temperatures at the asphalt site

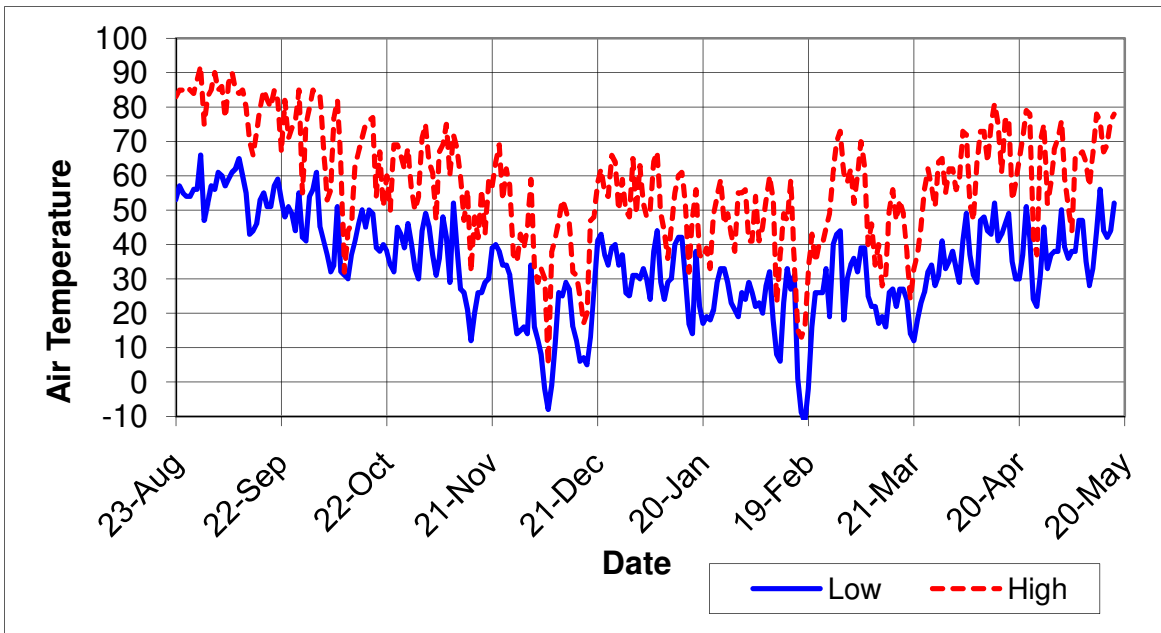


Figure 3B, Air Temperatures at the concrete site

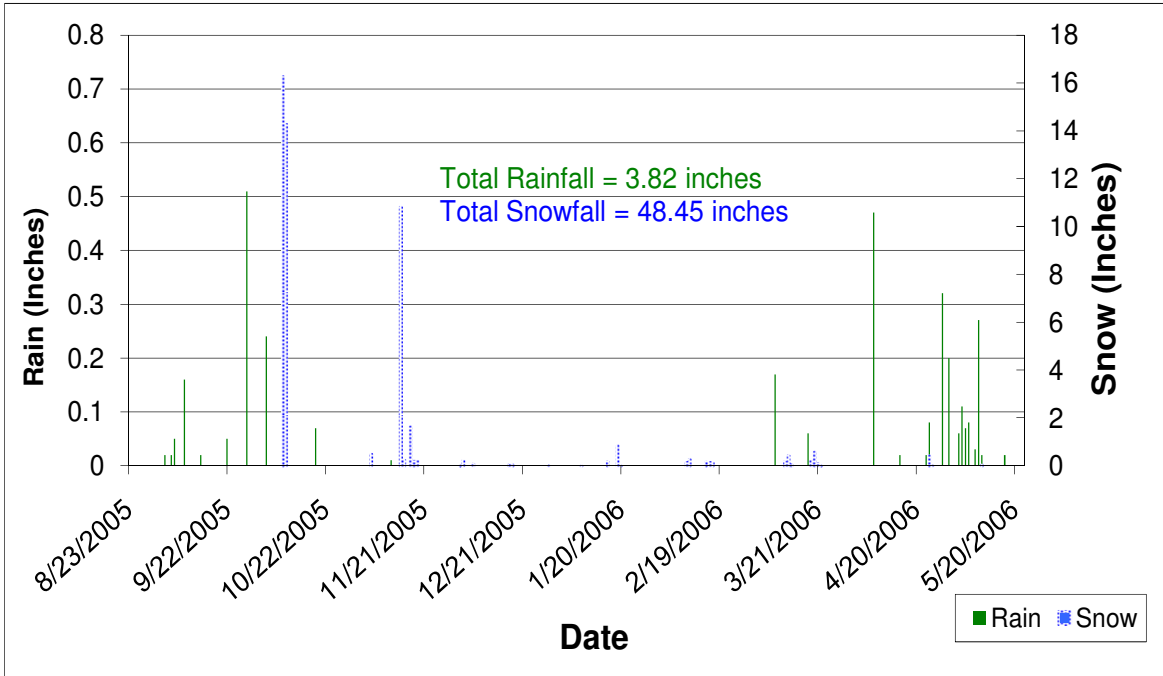


Figure 4A, Precipitation at the asphalt site

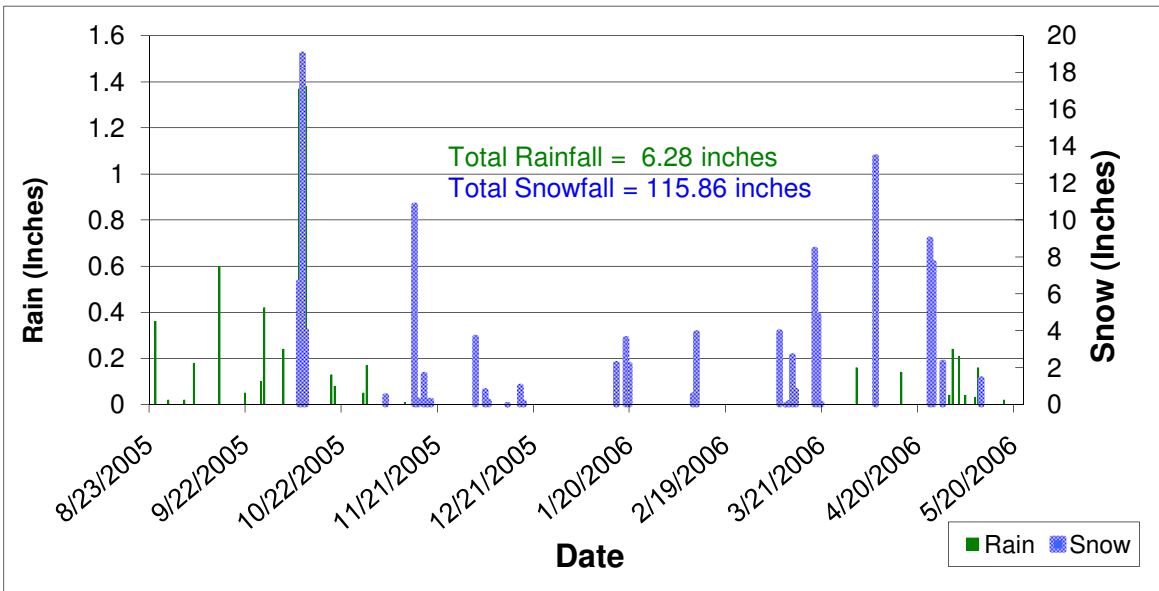


Figure 4B, Precipitation at the concrete site

Snow Removal Efforts

The number of snow plow passes along with the solid or liquid deicing chemicals that were applied over the test decks during the material installation period are presented in Figures 5A and B. **Note:** This is the number of times the plows went over the lines in the snow removal mode, it is unknown if the plow was up in the air or down scrapping. Also, the application rate of deicing materials over the two sites is unknown therefore; the average rate for each application was used.

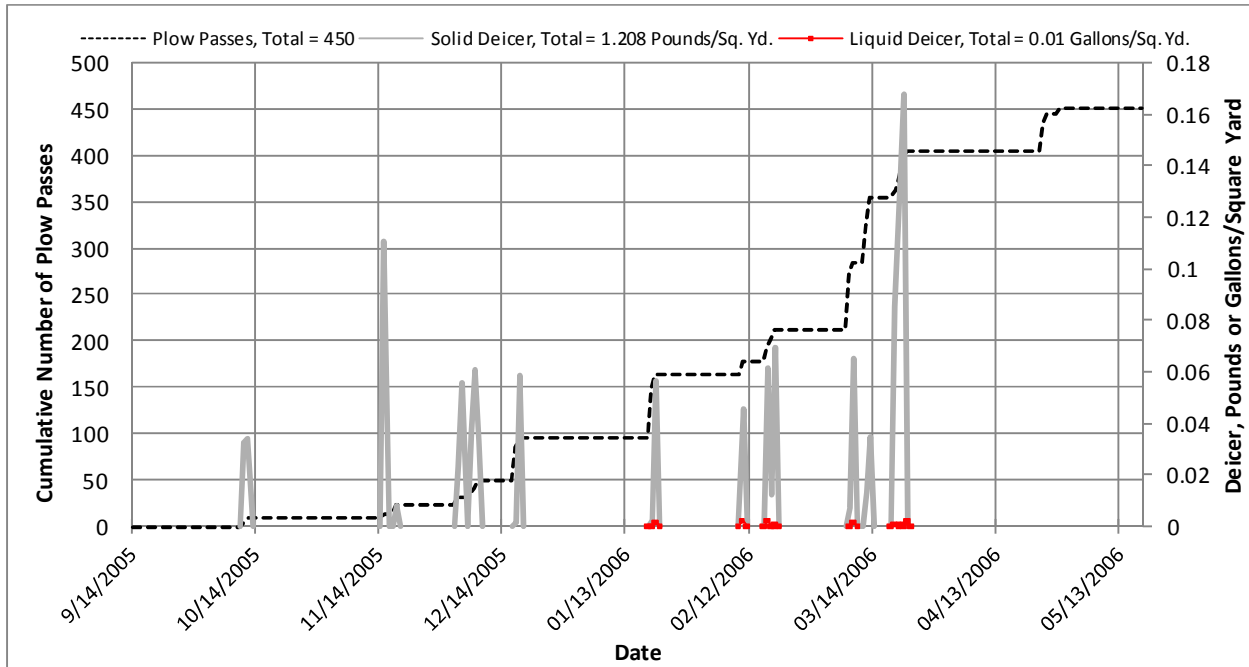


Figure 5A, Asphalt Site, Winter Snow Removal Efforts

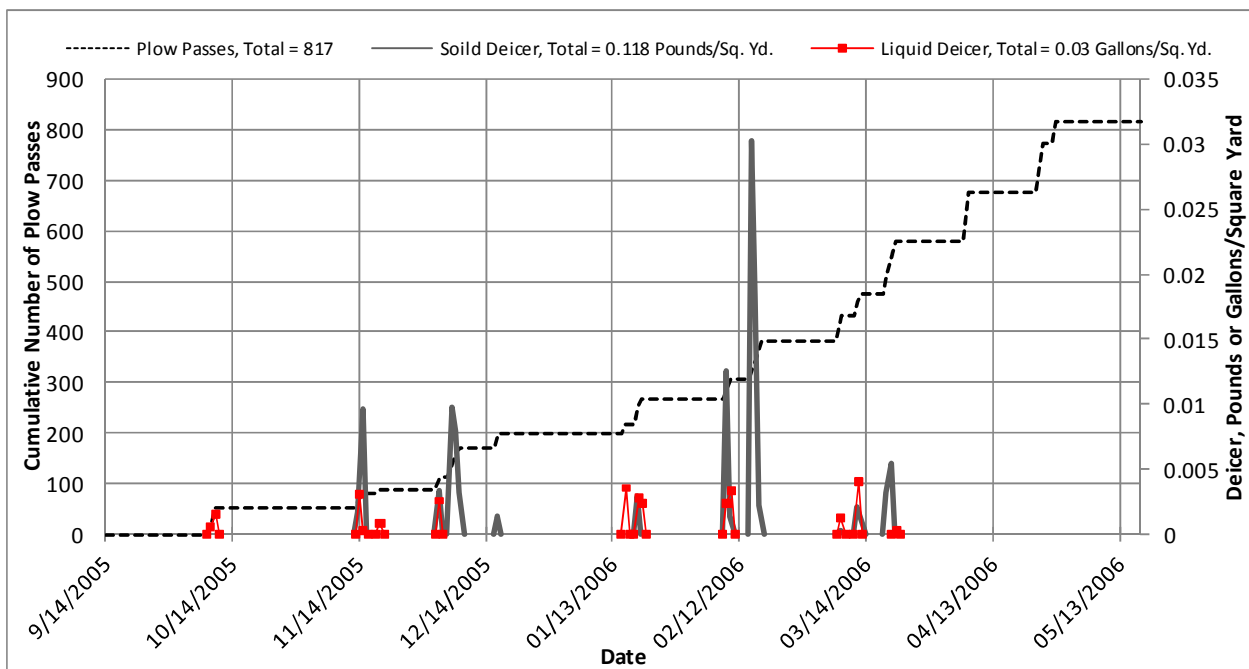


Figure 5B, Concrete Site, Winter Snow Removal Efforts

Traffic Data

The number of vehicles that passed over the decks is presented in Figure 6. No major interchanges are present between the two sites therefore, traffic volumes were considered to be the same. Traffic data was obtained from a weigh-in-motion station that is located between the two sites on Interstate 25 at milepost 191.2.

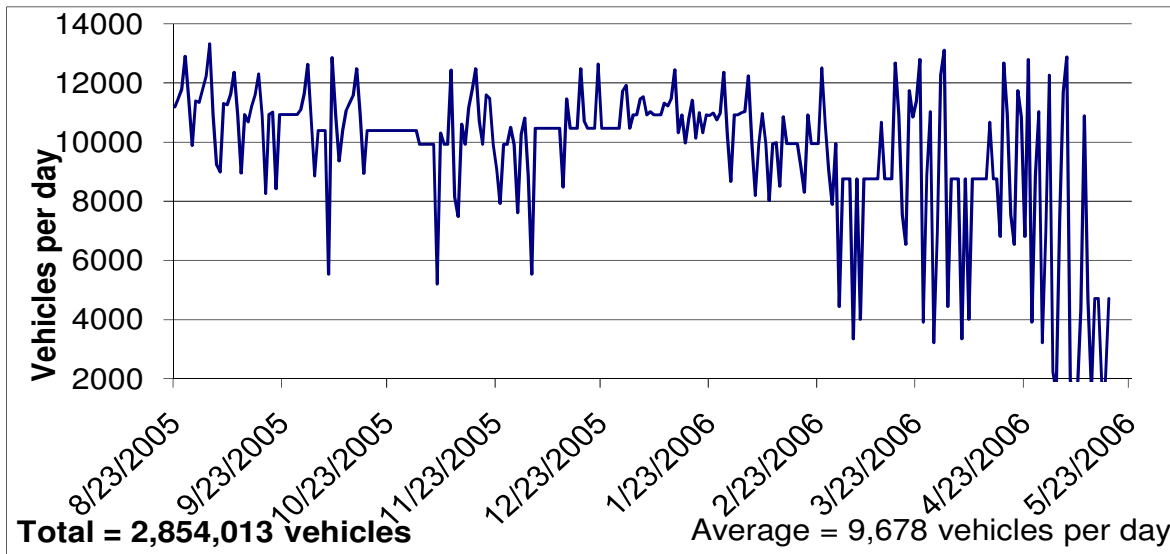


Figure 6, Traffic Volume

Field Data Collection

The Field Testing Procedures are based on ASTM D-713, “Conducting Road Service Tests on Traffic Paint.” Initial field data was collected within two weeks of material application. Subsequent measurements were made at monthly intervals for the first six months and bimonthly for the next four months.

All reflective readings were made using a portable Delta LTL-X pavement marking retro-reflectometer. Retro reflectivity measurements were made in the shoulder, left wheel path and between wheel paths of each transverse stripe. Refer to Figure 7 for an example of retro reflectivity testing. The average of the six results was reported in Tables 4 and 5 for the asphalt and concrete pavements at the Colorado sites. The materials are grouped by the manufacturer/supplier.



Figure 7. Retro reflectivity Testing

Findings

Based on data from these test decks, initial retro-reflectivity values frequently dropped precipitously over the winter months during first year of service. Typically, this is caused by the high initial retro-reflectivity values because many glass beads are loaded on the top of the marking. These beads are worn off shortly after installation. Ideally, the average retro-reflectivity should be based on retro-reflectivity readings that track the change in retro-reflectivity over the service life of each marking under similar conditions.

The Traffic Engineers make the decision to replace markings based on a schedule derived from experience and/or visual observations. Retro-reflectivity measurements are not routinely made as part of remarking decisions. Tracking the change in retro-reflectivity over the service life of each marking under similar conditions would be of value in determining the service life.

The depiction of the degradation in reflectance of the various types of pavement marking materials applied on the CDOT test sections are presented in Figures 8 through 32. The recommended minimum value for construction noted in these figures and given in Table 6 is based on experience, expectations from the Traffic Engineers, and from data collected from these test sections.

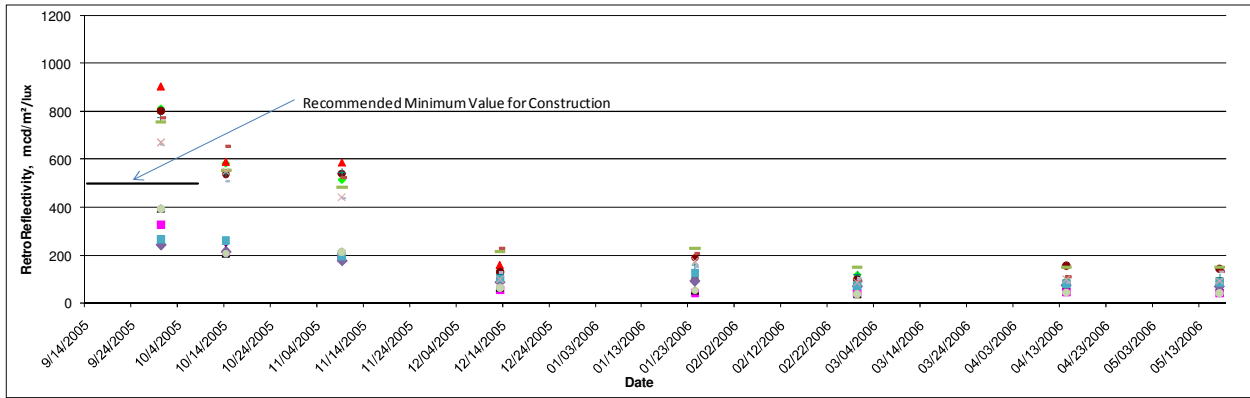


Figure 8, White Type I Preformed Plastic Tape Products

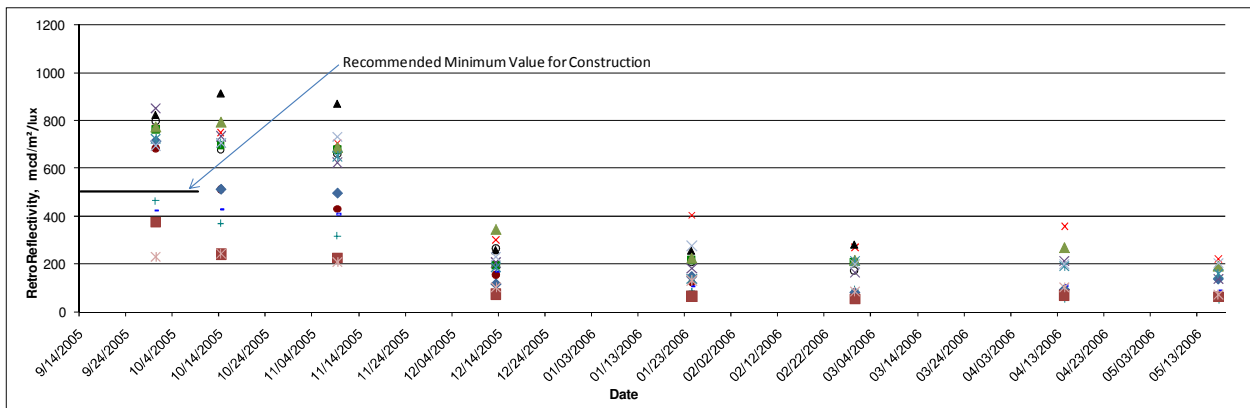


Figure 9, White-on-Black Type II Preformed Plastic Tape Products

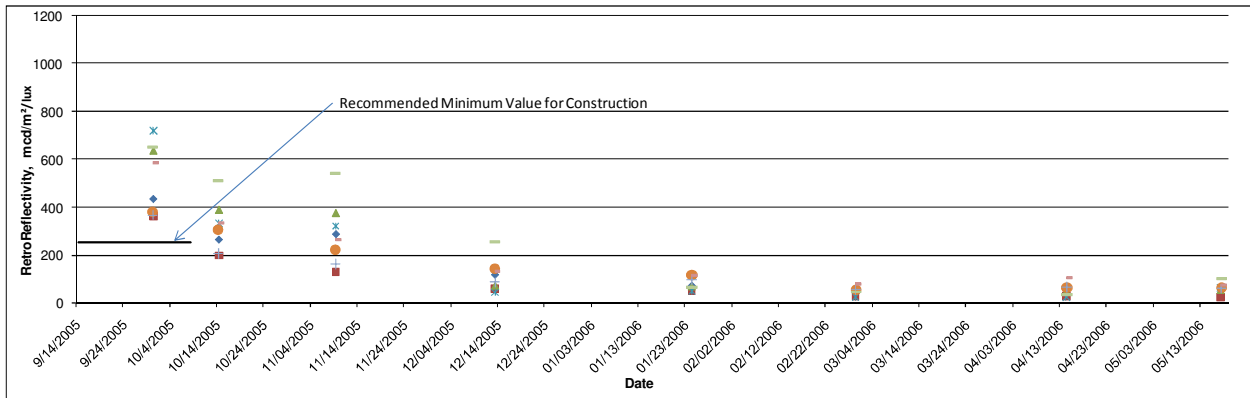


Figure 10, White Type III Preformed Plastic Tape Products

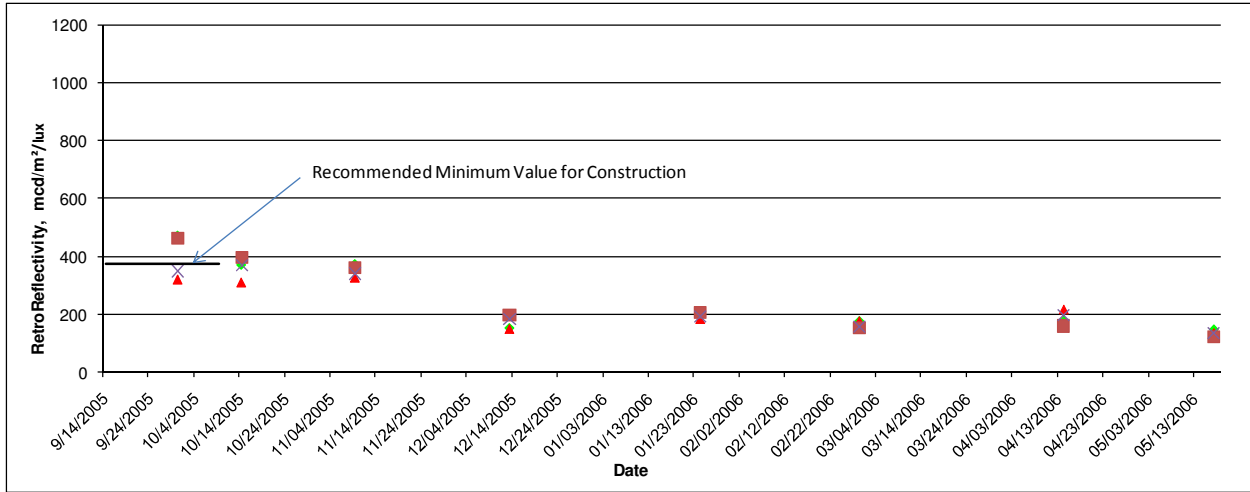


Figure 11, White Methyl Methacrylate Products

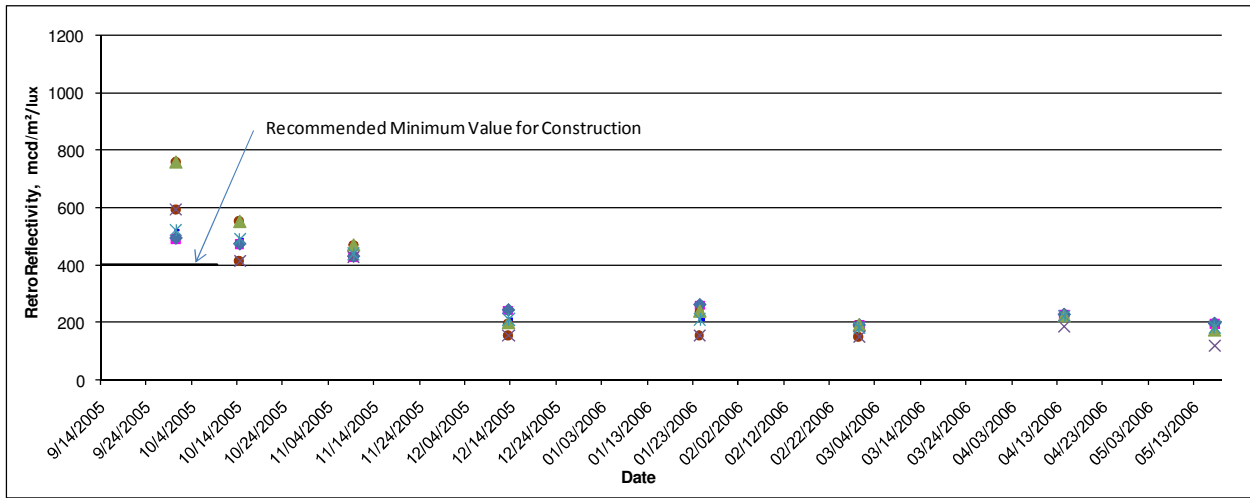


Figure 12, White Polyurea Products

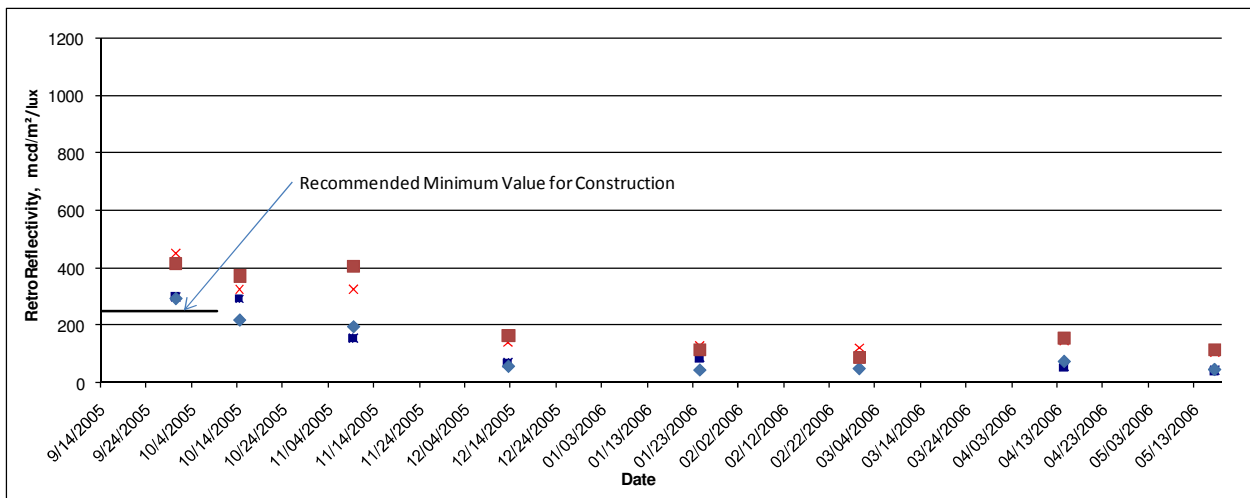


Figure 13, White Urethane Products

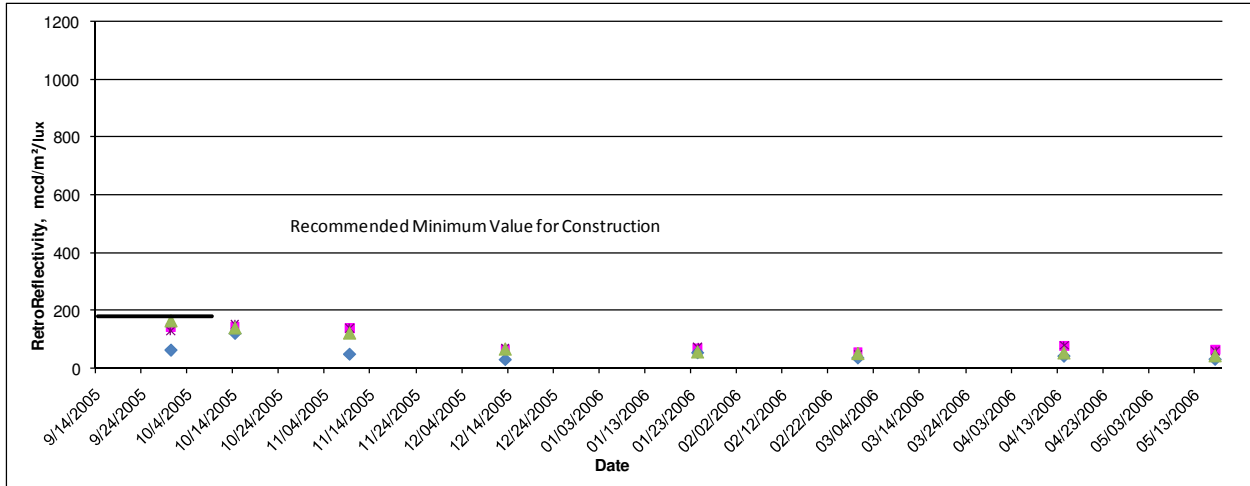


Figure 14, White Solvent borne Products

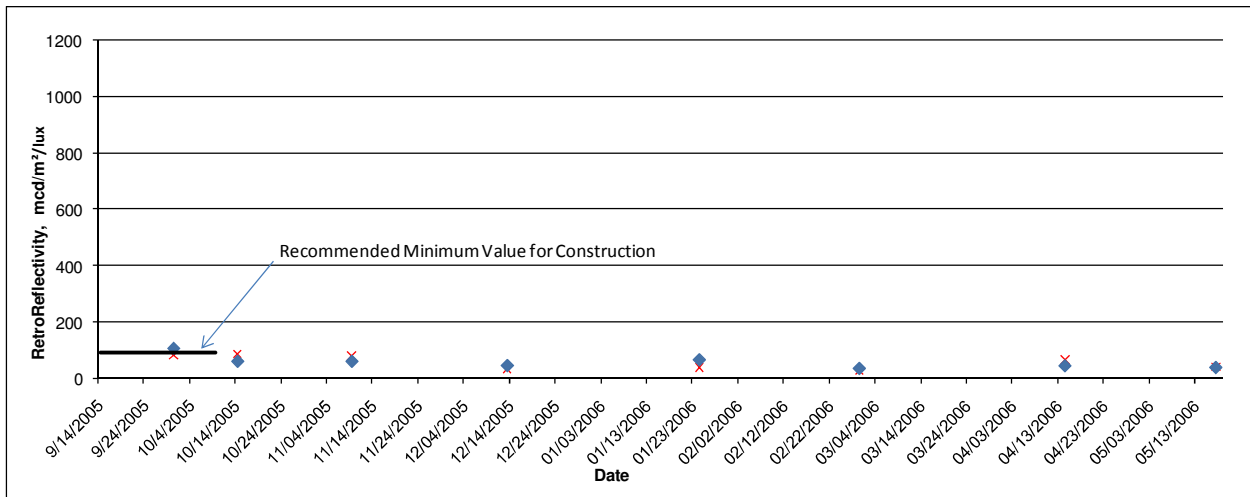


Figure 15, White Low VOC Products

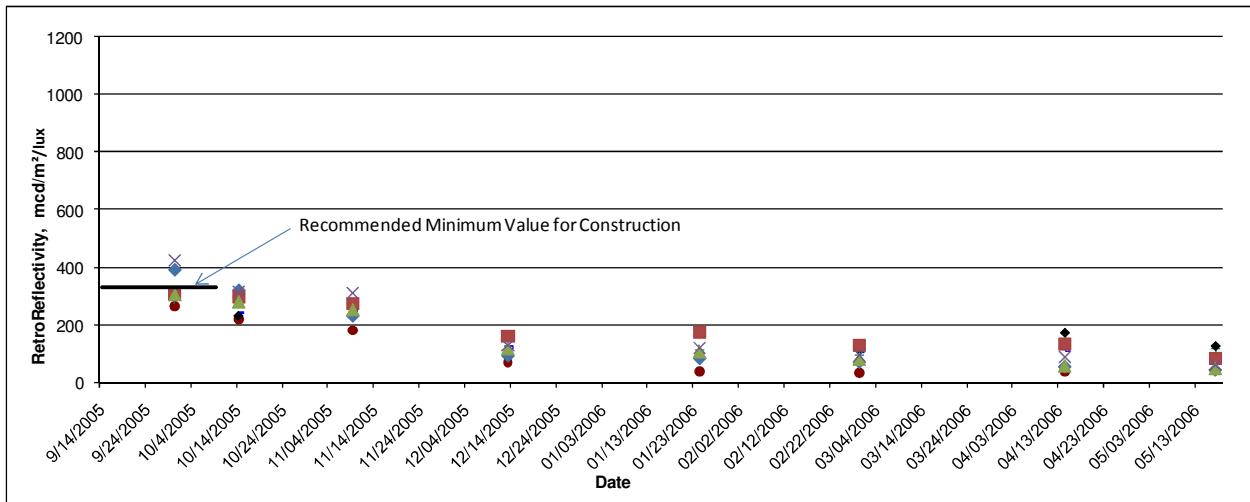


Figure 16, White Waterborne Products

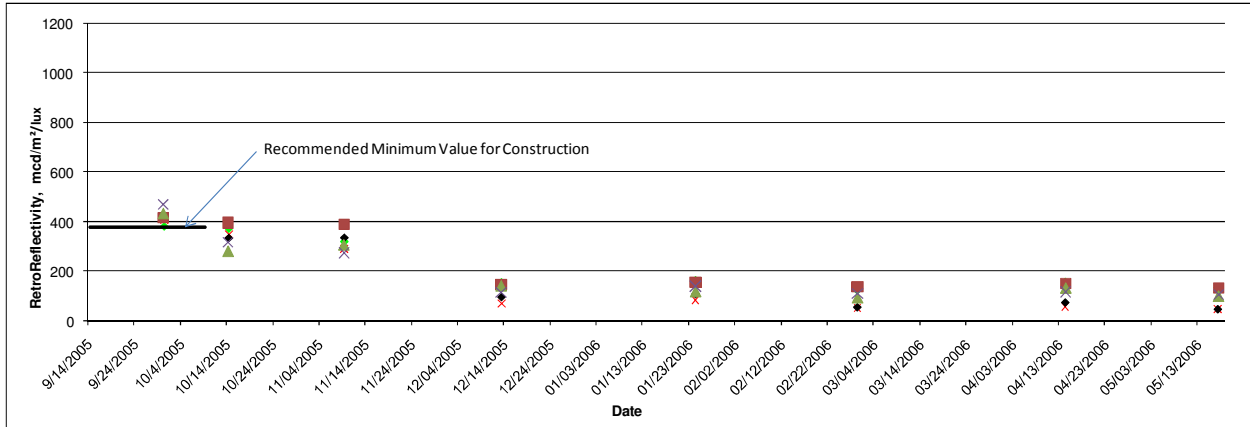


Figure 17, White Hot-Applied Thermoplastic Products

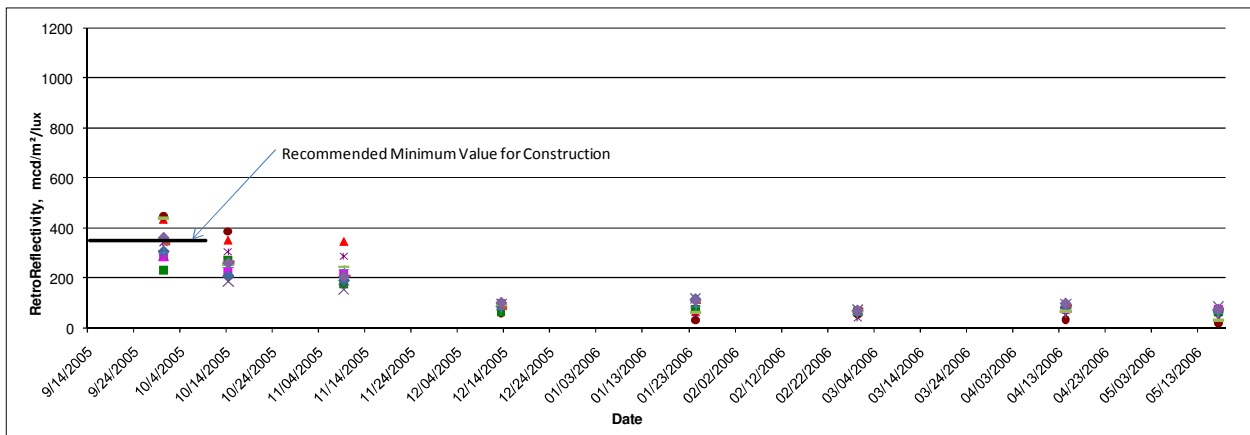


Figure 18, White Preformed Thermoplastic Products

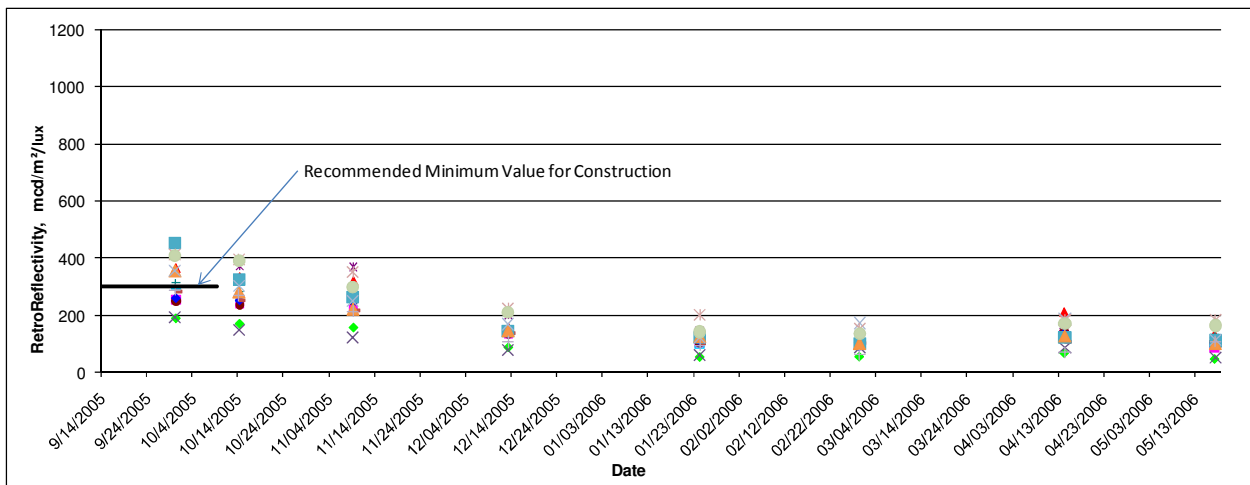


Figure 19, White Epoxy Products

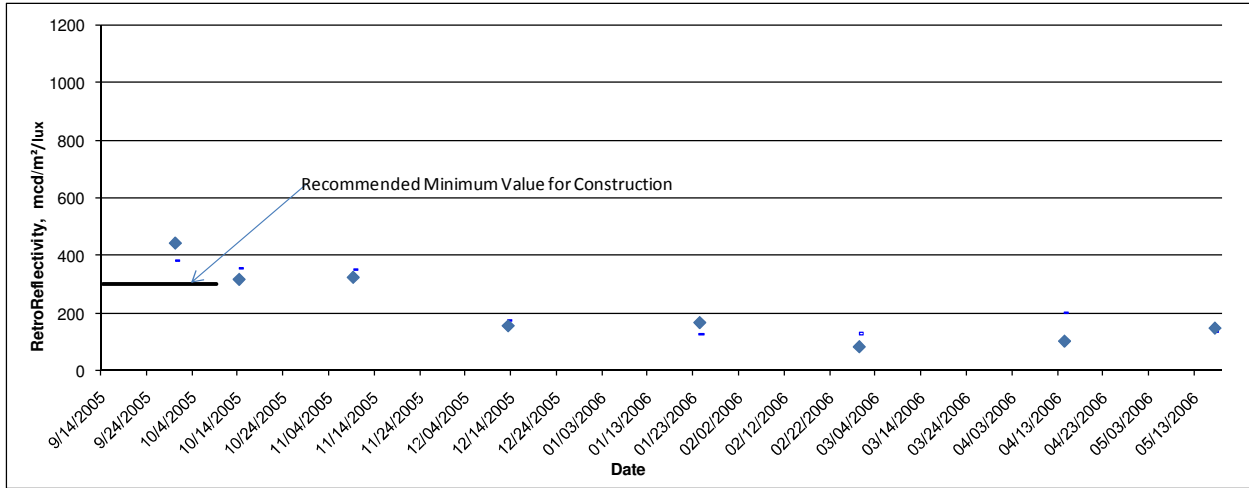


Figure 20, White-on-Black Epoxy Products

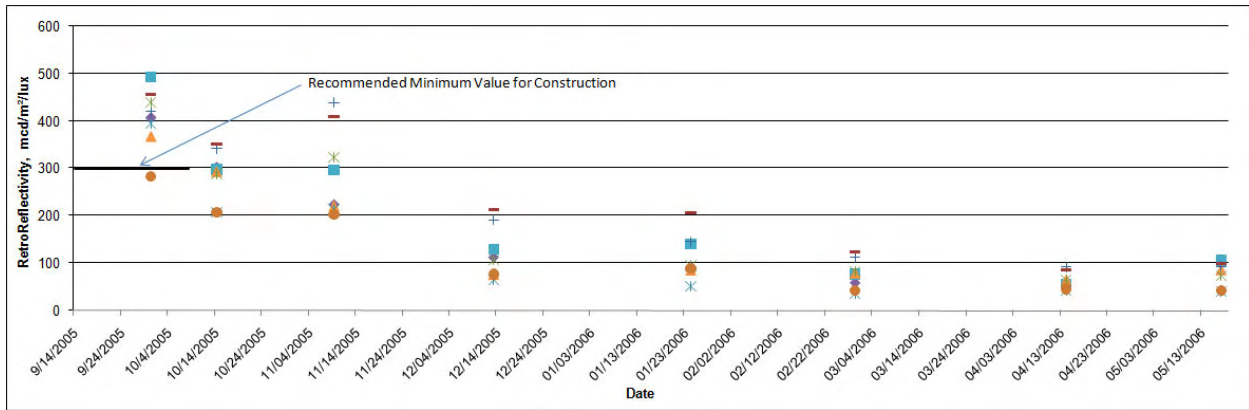


Figure 21, Yellow Type I Preformed Plastic Tape Products

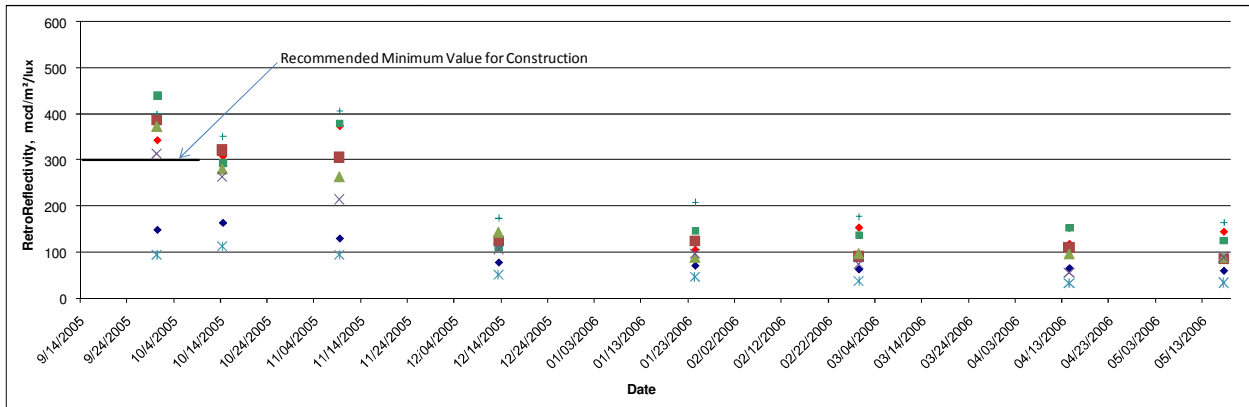


Figure 22, Yellow-on-Black Type II Preformed Plastic Tape Products

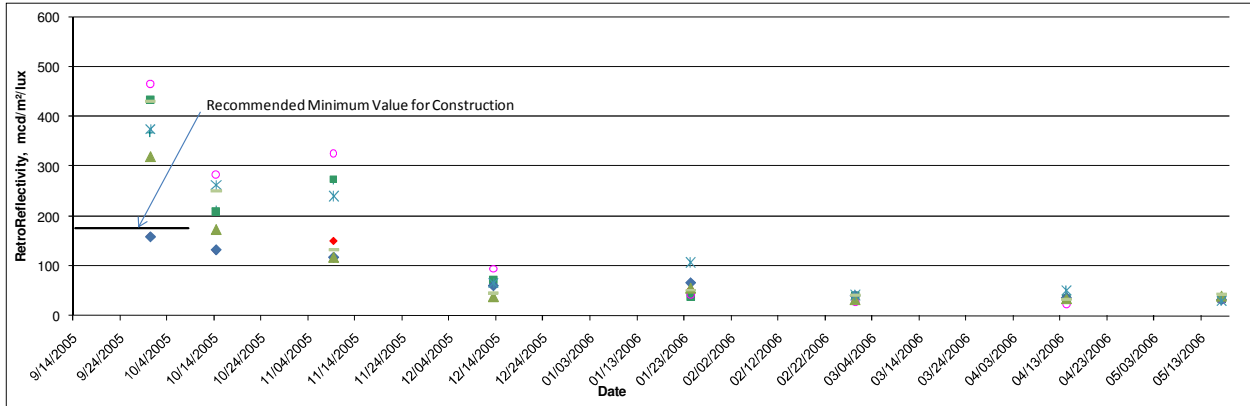


Figure 23, Yellow Type III Preformed Plastic Tape Products

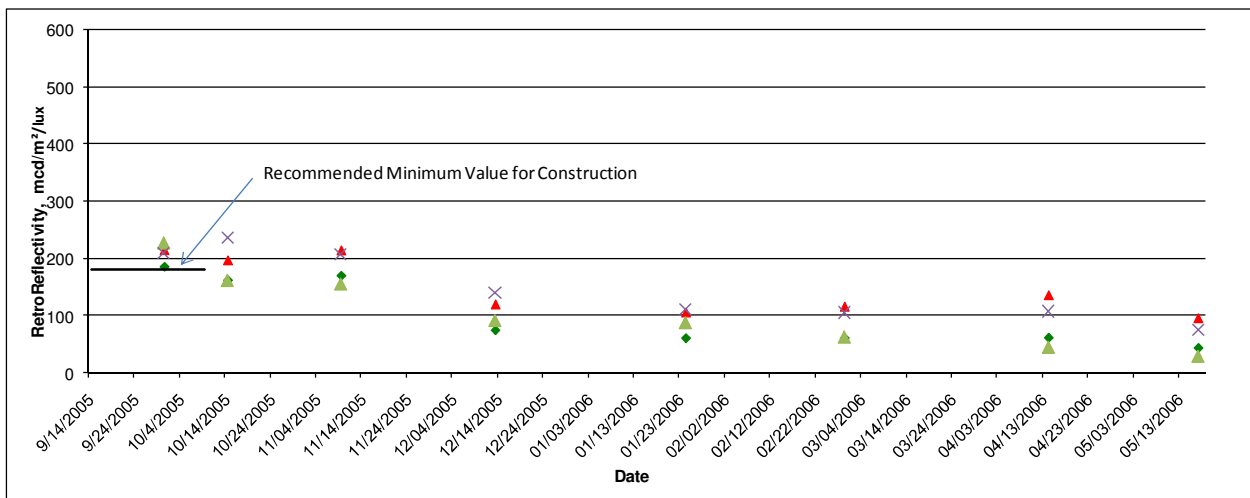


Figure 24, Yellow Methyl Methacrylate Products

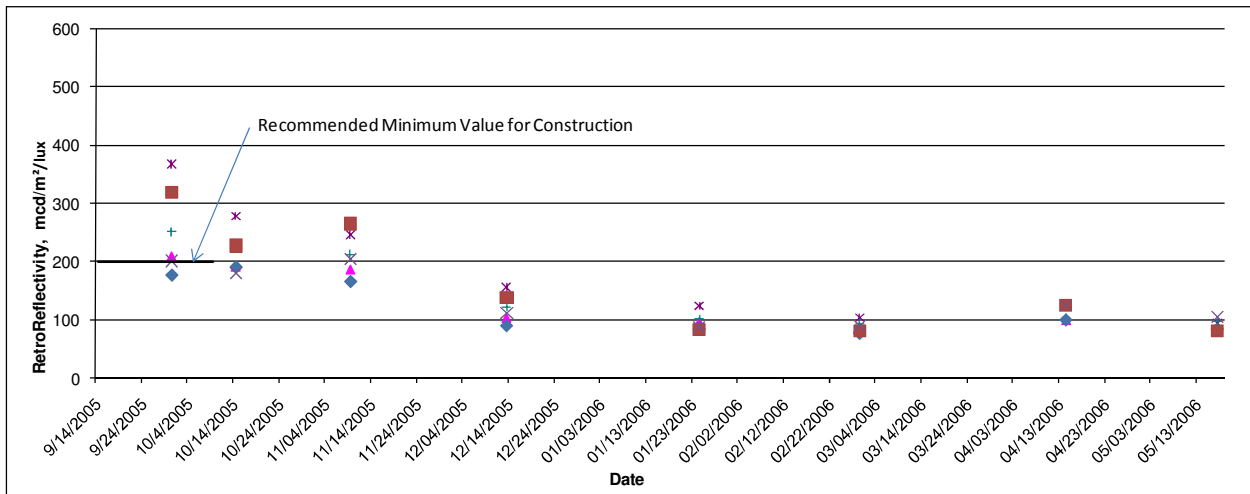


Figure 25, Yellow Polyurea Products

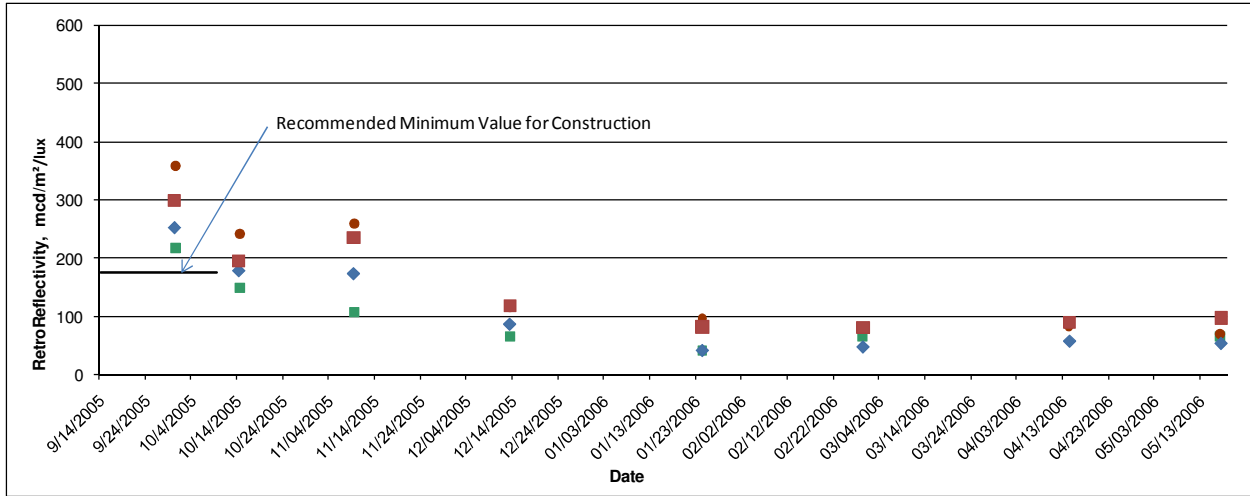


Figure 26, Yellow Urethane Products

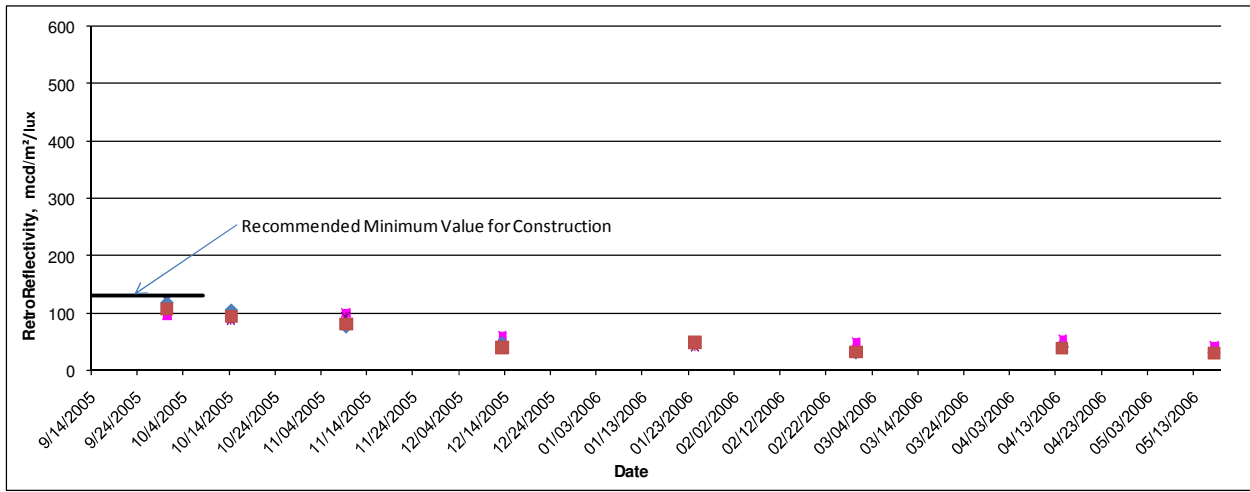


Figure 27, Yellow Solvent borne Products

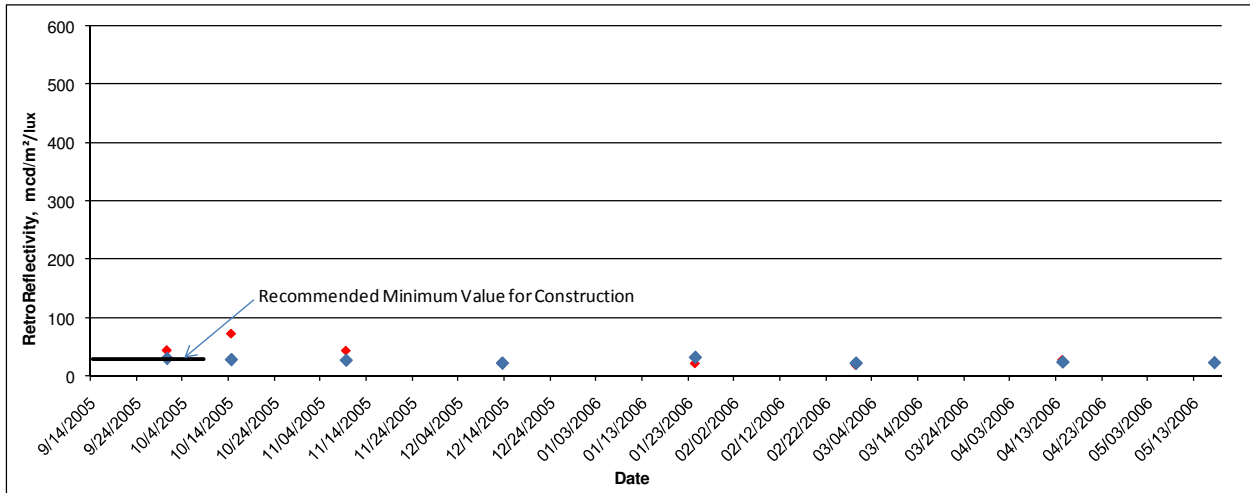


Figure 28, Yellow Low VOC Products

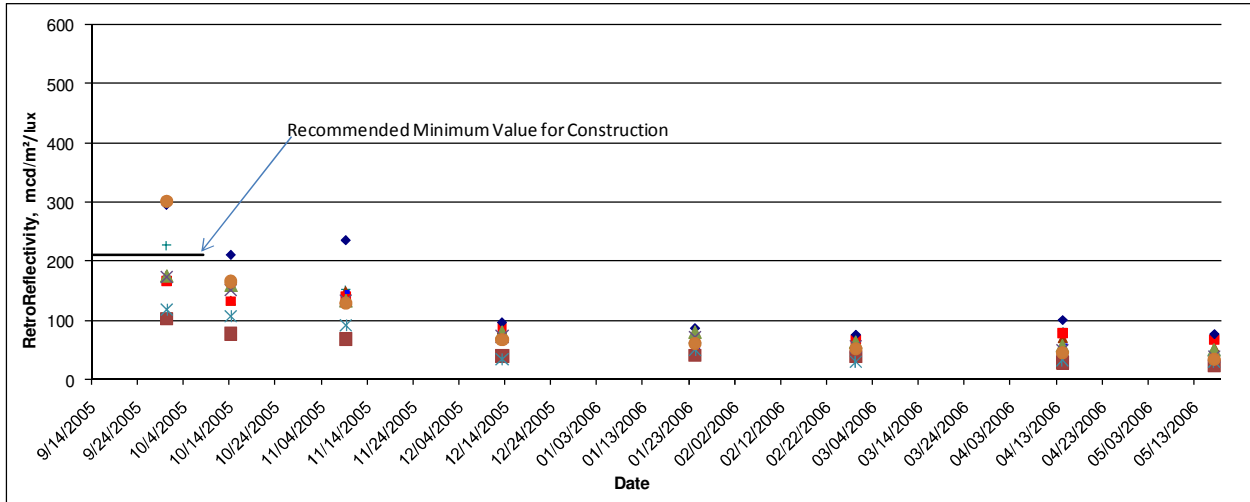


Figure 29, Yellow Waterborne Products

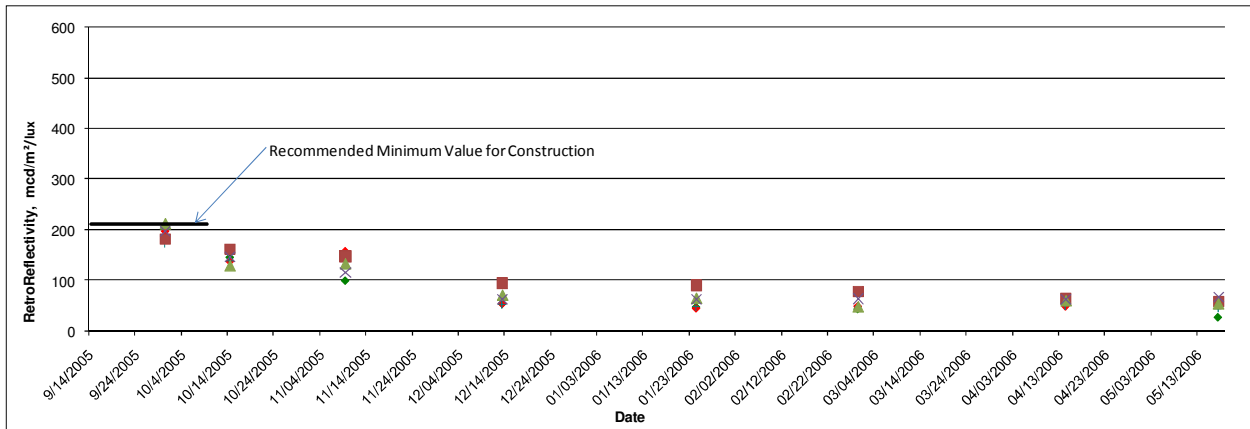


Figure 30, Yellow Hot-Applied Thermoplastic Products

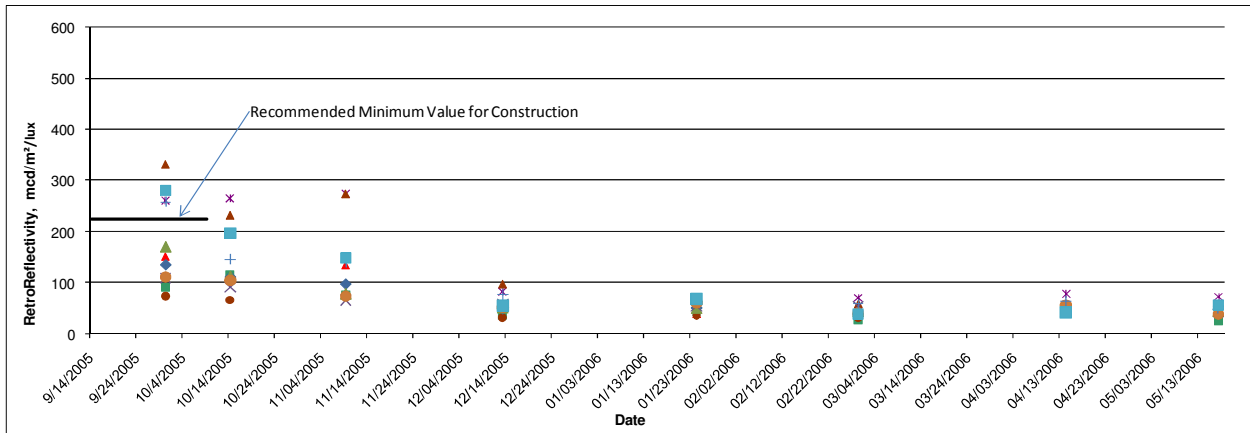


Figure 31, Yellow Preformed Thermoplastic Products

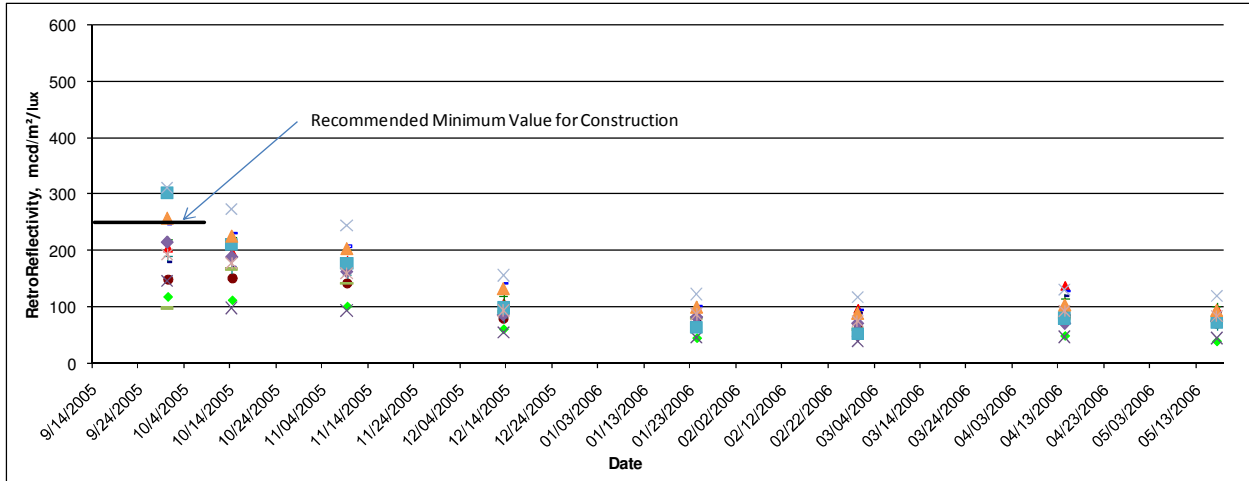


Figure 32, Yellow Epoxy Products

RECOMMENDATIONS

- CDOT should use durable markings for roads with higher volumes and higher levels of service.
- CDOT should consider a performance-based specification for durable markings. Any pavement marking policy should consider performance-based criteria.
- CDOT should specify minimum reflective values for acceptance and to determine when a stripe needs replacement. Refer to Table 6 on page 50 for the recommended minimum values.
- To validate reflectivity values from this report, CDOT should conduct a longitudinal test decks on asphalt and concrete pavements.
- CDOT should investigate the use of a recess in the pavement to reduce the wear from the blades of the snow plows.
- Should data from other independent tests be available, these independent values should be considered when updating the minimum retro-reflectance values for the construction specification.

Table 1**Striping Materials Tested**

August 26, 2005

CDOT Test Deck # 1 Southbound I-25

Hot Mix Asphalt Section Approximate Milepost 194.8 (Lincoln Avenue Interchange)
 Portland Cement Concrete Section Approximate Milepost 187.2 (Happy Canyon Interchange)

<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Categorization</u>	<u>APL Ref.</u>	
3M	Stamark, High Perform. (Series 380I)	White	Plastic Tape, Preformed	2217	
	Stamark, High Perform. (Series 381I)	Yellow	Plastic Tape, Preformed	2218	
	Stamark, High Perform. (Series 380I ES)	White	Plastic Tape, Preformed	2219	
	Stamark, High Perform. (Series 381I ES)	Yellow	Plastic Tape, Preformed	2220	
	Stamark, High Perform. (Series 380I-5 ES)	W-on-B	Plastic Tape, Preformed	2221	
	Stamark, High Perform. (Series 381I-5 ES)	Y-on-B	Plastic Tape, Preformed	2222	
	Stamark, High Perform. (Series 380I-5)	W-on-B	Plastic Tape, Preformed	2224	
	Stamark, High Perform. (Series 381I-5)	Y-on-B	Plastic Tape, Preformed	2225	
	Stamark, Intersection Grade (Series 420)	White	Plastic Tape, Preformed	2223	
	Stamark, Pavement Marking (Series 270 ES)	White	Plastic Tape, Preformed		
	Stamark, Wet Reflect. (Series 380WR)	White	Plastic Tape, Preformed		
	Stamark, Wet Reflect., Contrast (Series 380WR-5)	W-on-B	Plastic Tape, Preformed		
	Stamark, Wet Reflect., (Series 380WR ES)	White	Plastic Tape, Preformed		
	Stamark, Wet Reflect., (Series 381WR ES)	Yellow	Plastic Tape, Preformed		
	Stamark, Wet Reflect., (Series 380WR-5 ES)	W-on-B	Plastic Tape, Preformed		
	Stamark, Wet Reflect., (Series 381WR-5 ES)	Y-on-B	Plastic Tape, Preformed		
	Stamark, Wet Reflect.Elements on High Build	White	Waterborne, Durable		
	Stamark, Wet Reflect.Elements on High Build	Yellow	Waterborne, Durable		
	ATM (Advance Traffic Markings)	ATM 300	White	Plastic Tape, Preformed	2052
		ATM 300	Yellow	Plastic Tape, Preformed	2053
		ATM 300-C	W-on-B	Plastic Tape, Preformed	2054
		ATM 400	White	Plastic Tape, Preformed	2055
ATM 400		Yellow	Plastic Tape, Preformed	2056	
Brite-Line Technologies	Series 1000	White	Plastic Tape, Preformed	2695	
	Series 1000 Brite-Line Contrast Tape	Yellow W-on-B	Plastic Tape, Preformed Plastic Tape, Preformed	2696	

Table 1**Striping Materials Tested**

<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Categorization</u>	<u>APL Ref.</u>	
Colorado Paint Company	1180 Series Two-Part Epoxy	White	Epoxy	2364	
	1186LF Series Two-Part Epoxy	Yellow	Epoxy	2365	
	1160 Series Fast-Dry Waterborne	White	Acrylic Waterborne		
	1166LF Series Fast-Dry Waterborne	Yellow	Acrylic Waterborne		
	1120 Series	White	Low VOC Solvent-Base		
	1120 Series	Yellow	Low VOC Solvent-Base		
	UC 100	White	Urethane		
	UC 100	Yellow	Urethane		
	Ennis Paint	FlameTape	White	Thermoplastic, Preform.	
		FlameTape	Yellow	Thermoplastic, Preform.	
FlameTape (LF Yellow)		Yellow	Thermoplastic, Preform.		
886001 Series, Thermoplastic		White	Thermoplastic, Hot-App.		
886002 Series, Thermoplastic		Yellow	Thermoplastic, Hot-App.		
884490 Series, Thermoplastic		White	Thermoplastic, Hot-App.		
885035 Series, Thermoplastic		Yellow	Thermoplastic, Hot-App.		
980601 Series, Colorado White Waterborne		White	Waterborne		
980602 Series, Colorado L/F Yellow Waterborne		Yellow	Waterborne		
980631 Series, Colorado White, Waterborne		White	Waterborne		
980632 Series, Colorado L/F Yellow, Waterborne		Yellow	Waterborne		
980621 Series, Colorado White, Waterborne		White	Waterborne, Durable (RH)		
980622 Series, Colorado L/F Yellow, Waterborne		Yellow	Waterborne, Durable (RH)		
980691 Series, Colorado White, VOC Compliant		White	Solventborne, Acrylic		
980692 Series, Colorado L/F Yellow, VOC Compl.		Yellow	Solventborne, Acrylic		
980681 Series, Colorado White, VOC Compliant		White	Solventborne, Acrylic		
980682 Series, Colorado L/F Yellow, VOC Compl.		Yellow	Solventborne, Acrylic		
999311 Series, Epoxy		White	Epoxy		
999312 Series, LF Epoxy	Yellow	Epoxy			
Duraset Pathfinder	White	MMA			
Duraset Pathfinder	Yellow	MMA			
Duraset #__(1-8 selected at date of application)	White	MMA			
Duraset #__(1-8 selected at date of application)	Yellow	MMA			

Table 1**Striping Materials Tested**

<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Categorization</u>	<u>APL Ref.</u>
Epoplex	Epoplex LS50 (Standard)	White	Epoxy	2486
	Epoplex LS50 (Standard)	Yellow	Epoxy	2487
	Epoplex LS50 (Double Drop)	White	Epoxy	
	Epoplex LS50 (Double Drop)	Yellow	Epoxy	
	Epoplex LS90 (Single Drop)	White	Polyurea	2488
	Epoplex LS90 (Single Drop)	Yellow	Polyurea	
	Epoplex LS90 (Double Drop)	White	Polyurea	2489
	Epoplex LS90 (Double Drop)	Yellow	Polyurea	
Flint Trading, Inc.	PreMark Plus	White	Thermoplastic, Preform.	2490
	PreMark Plus	Yellow	Thermoplastic, Preform.	2491
	PreMark Plus	W-on-B	Thermoplastic, Preform.	
	PreMark Plus	Y-on-B	Thermoplastic, Preform.	
	ViziGRIP	White	Thermoplastic, Preform.	
	PreMark Plus (2-component sealer on PCCP)	White	Thermoplastic, Preform.	
IPS (Innovative Performance Sys)	HPS-3 (NTPEP version)	White	Epoxy	2010
	HPS-3 (NTPEP version)	Yellow	Epoxy	
	HPS-3 (CDOT version)	White	Epoxy	2011
	HPS-3 (CDOT version)	Yellow	Epoxy	
	HPS-4 (Beads, Standard)	White	Urethane	
	HPS-4 (Beads, Premium)	White	Urethane	
	HPS-4 (Beads, Standard)	Yellow	Urethane	
	HPS-4 (Beads, Premium)	Yellow	Urethane	
	HPS-5 (Beads, Premium)	White	Polyurea	
	HPS-5 (Beads, Premium)	Yellow	Polyurea	
Poly-Carb, Inc.	Mark-55.3 CO	White	Epoxy -Fast Set	2299
	Mark-55.3 CO	Yellow	Epoxy -Fast Set	2300
	Mark-55.2 CO	White	Epoxy	
	Mark-55.2 CO	Yellow	Epoxy	
	Mark-544 CO	White	Hybridized Polymer Contrast	
	Mark-544 CO	Yellow	Hybridized Polymer Contrast	
	Mark-75 CO	White	Polyurea/Urethane Hybrid	
	Mark-75 CO	Yellow	Polyurea/Urethane Hybrid	

Table 1**Striping Materials Tested**

<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Categorization</u>	<u>APL Ref.</u>
Swarco	Director 35, Intersection Marking Tape	White	Plastic Tape, Preformed	2679
	Director 35, Intersection Marking Tape	Yellow	Plastic Tape, Preformed	2680
	Director 60, Pavement Marking Tape	White	Plastic Tape, Preformed	
	Director 60, Pavement Marking Tape	Yellow	Plastic Tape, Preformed	
	Swarcotherm Alkyd-Based Thermoplastic	White	Thermoplastic, Hot-App	2681
	Swarcotherm Alkyd-Based Thermoplastic	Yellow	Thermoplastic, Hot-App	2682
Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 90 mil	White	Thermoplastic, Preform.	2484
	HotTape, High Optic, Highway Series, 90 mil	Yellow	Thermoplastic, Preform.	2485
	HotTape, High Optic, Highway Series, 125 mil	White	Thermoplastic, Preform.	2484
	HotTape, High Optic, Highway Series, 125 mil	Yellow	Thermoplastic, Preform.	2485

Table 2

I-25 @ Lincoln Avenue (Asphalt)

<u>Total Distance</u>	<u>Reference Mark</u>	<u>Distance from Reference Mark</u>	<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Date Installed</u>
0	A1					
4	A1	4	3M	Stamark, High Perform. (Series 380I)	White	8/23/2005
8	A1	8	3M	Stamark, High Perform. (Series 380I ES)	White	8/23/2005
12	A1	12	3M	Stamark, Intersection Grade (Series 420)	White	8/23/2005
16	A1	16	3M	Stamark, Pavement Marking (Series 270 ES)	White	8/24/2005
20	A1	20	3M	Stamark, Wet Reflect. (Series 380WR)	White	8/24/2005
24	A1	24	3M	Stamark, Wet Reflect., (Series 380WR ES)	White	8/24/2005
28	A1	28	Swarco	Director 60, Intersection Marking Tape	White	8/31/2005
32	A1	32	Swarco	Director 35, Pavement Marking Tape	White	8/31/2005
36	A1	36	ATM (Advance Traffic Markings)	ATM 300	White	8/31/2005
40	A1	40	ATM (Advance Traffic Markings)	ATM 400	White	8/31/2005
44	A1	44	Brite-Line Technologies	Series 1000	White	8/23/2005
52	B1					
56	B1	4	Ennis Paint	Duraset Pathfinder	White	9/12/2005
60	B1	8	Ennis Paint	Duraset (#1 - #8, not specified)	White	9/12/2005
72	C1	4	Epoplex	Epoplex LS90 (Single Drop) Ground	White	9/12/2005
76	C1	8	Epoplex	Epoplex LS90 (Double Drop) Ground	White	9/12/2005
80	C1	12	IPS (Innovative Performance Sys)	HPS-5 (Beads, Premium)	White	9/12/2005
84	C1	16	Poly-Carb, Inc.	Mark-75 CO	White	9/12/2005
88	C1	20	Colorado Paint Company	UC 100 Ground	White	9/6/2005
96	C1	28	IPS (Innovative Performance Sys)	HPS-4 (Beads, Premium)	White	9/12/2005
104	D1					
108	D1	4	Ennis Paint	980691 Series, Colorado White, VOC Compliant	White	8/29/2005
112	D1	8	Ennis Paint	980681 Series, Colorado White, VOC Compliant	White	8/29/2005
116	D1	12	Colorado Paint Company	1120 Series	White	9/6/2005
124	E1					
132	E1	8	Ennis Paint	980601 Series, Colorado White Waterborne	White	8/29/2005
136	E1	12	Ennis Paint	980631 Series, Colorado White, Waterborne	White	8/29/2005
140	E1	16	Ennis Paint	980621 Series, Colorado White, Waterborne	White	8/29/2005
144	E1	20	3M	Stamark, Wet Reflect.Elements on High Build	White	9/6/2005
152	F1					
156	F1	4	Swarco	Swarcotherm Alkyd-Based Thermoplastic	White	8/31/2005
160	F1	8	Ennis Paint	886001 Series, Thermoplastic	White	9/6/2005
164	F1	12	Ennis Paint	884490 Series, Thermoplastic	White	9/6/2005

Table 2

I-25 @ Lincoln Avenue (Asphalt)

<u>Total Distance</u>	<u>Reference Mark</u>	<u>Distance from Reference Mark</u>	<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Date Installed</u>
172	G1					
176	G1	4	Ennis Paint	FlameTape	White	9/6/2005
180	G1	8	Flint Trading, Inc.	PreMark Plus	White	8/23/2005
184	G1	12	Flint Trading, Inc.	ViziGRIP	White	8/23/2005
192	G1	20	Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 90 mil	White	9/12/2005
196	G1	24	Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 125 mil	White	9/12/2005
204	H1					
208	H1	4	ATM (Advance Traffic Markings)	ATM 300-C	W-on-B	8/31/2005
212	H1	8	Brite-Line Technologies	Brite-Line Contrast Tape	W-on-B	8/23/2005
216	H1	12	3M	Stamark, High Perform. (Series 380I-5 ES)	W-on-B	8/23/2005
220	H1	16	3M	Stamark, High Perform. (Series 380I-5)	W-on-B	8/23/2005
224	H1	20	3M	Stamark, Wet Reflect., Contrast (Series 380WR-5)	W-on-B	8/24/2005
228	H1	24	3M	Stamark, Wet Reflect., (Series 380WR-5 ES)	W-on-B	8/24/2005
232	H1	28	Flint Trading, Inc.	PreMark Plus	W-on-B	8/23/2005
240	A2					
244	A2	4	3M	Stamark, High Perform. (Series 380I)	White	8/23/2005
248	A2	8	3M	Stamark, High Perform. (Series 380I ES)	White	8/23/2005
252	A2	12	3M	Stamark, Intersection Grade (Series 420)	White	8/23/2005
256	A2	16	3M	Stamark, Pavement Marking (Series 270 ES)	White	8/24/2005
260	A2	20	3M	Stamark, Wet Reflect. (Series 380WR)	White	8/24/2005
264	A2	24	3M	Stamark, Wet Reflect., (Series 380WR ES)	White	8/24/2005
268	A2	28	Swarco	Director 35, Intersection Marking Tape	White	8/31/2005
272	A2	32	Swarco	Director 60, Pavement Marking Tape	White	8/31/2005
276	A2	36	ATM (Advance Traffic Markings)	ATM 300	White	8/31/2005
280	A2	40	ATM (Advance Traffic Markings)	ATM 400	White	8/31/2005
284	A2	44	Brite-Line Technologies	Series 1000	White	8/23/2005
292	B2					
296	B2	4	Ennis Paint	Duraset Pathfinder	White	9/12/2005
300	B2	8	Ennis Paint	Duraset (#1 - #8, not specified)	White	9/12/2005
308	C2					
312	C2	4	Epoplex	Epoplex LS90 (Single Drop)	White	9/12/2005
316	C2	8	Epoplex	Epoplex LS90 (Double Drop)	White	9/12/2005
320	C2	12	IPS (Innovative Performance Sys)	HPS-5 (Beads, Premium)	White	9/12/2005
324	C2	16	Poly-Carb, Inc.	Mark-75 CO	White	9/12/2005
328	C2	20 (18)	Colorado Paint Company	UC 100	White	9/6/2005
336	C2	28	IPS (Innovative Performance Sys)	HPS-4 (Beads, Premium)	White	9/12/2005

Table 2

I-25 @ Lincoln Avenue (Asphalt)

<u>Total Distance</u>	<u>Reference Mark</u>	<u>Distance from Reference Mark</u>	<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Date Installed</u>
344	D2					
348	D2	4	Ennis Paint	980691 Series, Colorado White, VOC Compliant	White	8/29/2005
352	D2	8	Ennis Paint	980681 Series, Colorado White, VOC Compliant	White	8/29/2005
356	D2	12	Colorado Paint Company	1120 Series	White	9/6/2005
364	E2					
372	E2	8	Ennis Paint	980621 Series, Colorado White Waterborne	White	8/29/2005
376	E2	12	Ennis Paint	980631 Series, Colorado White, Waterborne	White	8/29/2005
380	E2	16	Ennis Paint	980601 Series, Colorado White, Waterborne	White	8/29/2005
384	E2	20	3M	Stamark, Wet Reflect.Elements on High Build	White	9/6/2005
392	F2					
396	F2	4	Swarco	Swarcotherm Alkyd-Based Thermoplastic	White	8/31/2005
400	F2	8	Ennis Paint	886001 Series, Thermoplastic	White	9/6/2005
404	F2	12	Ennis Paint	884490 Series, Thermoplastic	White	9/6/2005
412	G2					
416	G2	4	Ennis Paint	FlameTape	White	9/6/2005
420	G2	8	Flint Trading, Inc.	PreMark Plus	White	8/23/2005
424	G2	12	Flint Trading, Inc.	ViziGRIP	White	8/23/2005
432	G2	20	Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 90 mil	White	9/12/2005
436	G2	24	Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 125 mil	White	9/12/2005
444	H2					
448	H2	4	ATM (Advance Traffic Markings)	ATM 300-C	W-on-B	8/31/2005
452	H2	8	Brite-Line Technologies	Brite-Line Contrast Tape	W-on-B	8/23/2005
456	H2	12	3M	Stamark, High Perform. (Series 380I-5 ES)	W-on-B	8/23/2005
460	H2	16	3M	Stamark, High Perform. (Series 380I-5)	W-on-B	8/23/2005
464	H2	20	3M	Stamark, Wet Reflect., Contrast (Series 380WR-5)	W-on-B	8/24/2005
468	H2	24	3M	Stamark, Wet Reflect., (Series 380WR-5 ES)	W-on-B	8/24/2005
472	H2	28	Flint Trading, Inc.	PreMark Plus	W-on-B	8/23/2005
480	I1					
484	I1	4	Ennis Paint	Duraset Pathfinder	Yellow	9/12/2005
488	I1	8	Ennis Paint	Duraset (#1 - #8, not specified)	Yellow	9/12/2005
492	I1	12	Epoplex	Epoplex LS90 (Single Drop) Ground	Yellow	9/12/2005
496	I1	16	Epoplex	Epoplex LS90 (Double Drop) Ground	Yellow	9/12/2005
504	I1	24	Poly-Carb, Inc.	Mark-75 CO Ground	Yellow	9/12/2005
516	I1	36	IPS (Innovative Performance Sys)	HPS-4 (Beads, Premium)	Yellow	9/12/2005
524	J1					
528	J1	4	Ennis Paint	980692 Series, Colorado L/F Yellow, VOC Compl.	Yellow	8/29/2005
532	J1	8	Ennis Paint	980682 Series, Colorado L/F Yellow, VOC Compl.	Yellow	8/29/2005
536	J1	12	Colorado Paint Company	1120 Series	Yellow	9/6/2005

Table 2

I-25 @ Lincoln Avenue (Asphalt)

<u>Total Distance</u>	<u>Reference Mark</u>	<u>Distance from Reference Mark</u>	<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Date Installed</u>
544	K1					
548	K1	4 (7)	Swarco	Swarcotherm Alkyd-Based Thermoplastic	Yellow	8/31/2005
552	K1	8(10)	Ennis Paint	886002 Series, Thermoplastic	Yellow	9/6/2005
556	K1	12 (11)	Ennis Paint	885035 Series, Thermoplastic	Yellow	9/6/2005
560	K1	16	Ennis Paint	FlameTape	Yellow	9/6/2005
564	K1	20	Ennis Paint	FlameTape (LF Yellow)	Yellow	9/6/2005
568	K1	24	Flint Trading, Inc.	PreMark Plus	Yellow	9/6/2005
576	K1	32	Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 90 mil	Yellow	8/23/2005
580	K1	36	Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 125 mil	Yellow	9/12/2005
588	L1					
596	L1	8	Ennis Paint	980602 Series, Colorado L/F Yellow Waterborne	Yellow	9/6/2005
600	L1	12	Ennis Paint	980632 Series, Colorado L/F Yellow, Waterborne	Yellow	8/29/2005
604	L1	16	Ennis Paint	980622 Series, Colorado L/F Yellow, Waterborne	Yellow	8/29/2005
608	L1	20	3M	Stamark, Wet Reflect.Elements on High Build	Yellow	8/29/2005
616	M1					
620	M1	4	3M	Stamark, High Perform. (Series 381I)	Yellow	8/23/2005
624	M1	8	3M	Stamark, High Perform. (Series 381I ES)	Yellow	8/23/2005
628	M1	12	3M	Stamark, Wet Reflect., (Series 381WR ES)	Yellow	8/23/2005
632	M1	16	Swarco	Director 35, Intersection Marking Tape	Yellow	8/24/2005
636	M1	20	Swarco	Director 60, Pavement Marking Tape	Yellow	8/31/2005
640	M1	24	ATM (Advance Traffic Markings)	ATM 300	Yellow	8/31/2005
644	M1	28	ATM (Advance Traffic Markings)	ATM 400	Yellow	8/31/2005
648	M1	32	Brite-Line Technologies	Series 1000	Yellow	8/31/2005
656	N1					
660	N1	4	3M	Stamark, High Perform. (Series 381I-5 ES)	Y-on-B	8/23/2005
664	N1	8	3M	Stamark, High Perform. (Series 381I-5)	Y-on-B	8/23/2005
668	N1	12	3M	Stamark, Wet Reflect., (Series 381WR-5 ES)	Y-on-B	8/23/2005
672	N1	16	Flint Trading, Inc.	PreMark Plus	Y-on-B	8/24/2005
680	I2					
684	I2	4	Ennis Paint	Duraset Pathfinder	Yellow	9/12/2005
688	I2	8	Ennis Paint	Duraset (#1 - #8, not specified)	Yellow	9/12/2005
692	I2	12	Epoplex	Epoplex LS90 (Single Drop) Ground	Yellow	9/12/2005
696	I2	16	Epoplex	Epoplex LS90 (Double Drop) Ground	Yellow	9/12/2005
704	I2	24	Poly-Carb, Inc.	Mark-75 CO Ground	Yellow	9/12/2005
708	I2	28	Colorado Paint Company	UC 100	Yellow	9/12/2005
716	I2	36	IPS (Innovative Performance Sys)	HPS-4 (Beads, Premium)	Yellow	9/12/2005

Table 2

I-25 @ Lincoln Avenue (Asphalt)

<u>Total Distance</u>	<u>Reference Mark</u>	<u>Distance from Reference Mark</u>	<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Date Installed</u>
724	J2					
728	J2	4	Ennis Paint	980692 Series, Colorado L/F Yellow, VOC Compl.	Yellow	8/29/2005
732	J2	8	Ennis Paint	980682 Series, Colorado L/F Yellow, VOC Compl.	Yellow	8/29/2005
736	J2	12	Colorado Paint Company	1120 Series	Yellow	8/29/2005
744	K2					
748	K2	4 (6)	Swarco	Swarcotherm Alkyd-Based Thermoplastic	Yellow	8/31/2005
752	K2	8	Ennis Paint	886002 Series, Thermoplastic	Yellow	8/31/2005
756	K2	12 (10.5)	Ennis Paint	885035 Series, Thermoplastic	Yellow	9/6/2005
760	K2	16	Ennis Paint	FlameTape	Yellow	9/6/2005
764	K2	20	Ennis Paint	FlameTape (LF Yellow)	Yellow	9/6/2005
768	K2	24	Flint Trading, Inc.	PreMark Plus	Yellow	9/6/2005
776	K2	32	Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 90 mil	Yellow	8/23/2005
780	K2	36	Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 125 mil	Yellow	9/12/2005
788	L2					
792	L2	4	Colorado Paint Company	1166LF Series Fast-Dry Waterborne	Yellow	8/29/2005
796	L2	8	Ennis Paint	980602 Series, Colorado L/F Yellow Waterborne	Yellow	9/6/2005
800	L2	12	Ennis Paint	980632 Series, Colorado L/F Yellow, Waterborne	Yellow	8/29/2005
804	L2	16	Ennis Paint	980622 Series, Colorado L/F Yellow, Waterborne	Yellow	8/29/2005
808	L2	20	3M	Stamark, Wet Reflect.Elements on High Build	Yellow	8/29/2005
816	M2					
820	M2	4	3M	Stamark, Wet Reflect., (Series 381WR ES)	Yellow	8/23/2005
824	M2	8	3M	Stamark, High Perform. (Series 381I ES)	Yellow	8/23/2005
828	M2	12	3M	Stamark, High Perform. (Series 381I)	Yellow	8/23/2005
832	M2	16	Swarco	Director 35, Intersection Marking Tape	Yellow	8/24/2005
836	M2	20	Swarco	Director 60, Pavement Marking Tape	Yellow	8/31/2005
840	M2	24	ATM (Advance Traffic Markings)	ATM 300	Yellow	8/31/2005
844	M2	28	ATM (Advance Traffic Markings)	ATM 400	Yellow	8/31/2005
848	M2	32	Brite-Line Technologies	Series 1000	Yellow	8/31/2005
856	N2					
860	N2	4	3M	Stamark, High Perform. (Series 381I-5 ES)	Y-on-B	8/23/2005
864	N2	8	3M	Stamark, High Perform. (Series 381I-5)	Y-on-B	8/23/2005
868	N2	12	3M	Stamark, Wet Reflect., (Series 381WR-5 ES)	Y-on-B	8/23/2005
872	N2	16	Flint Trading, Inc.	PreMark Plus	Y-on-B	8/24/2005

Table 2

I-25 @ Lincoln Avenue (Asphalt)

<u>Total Distance</u>	<u>Reference Mark</u>	<u>Distance from Reference Mark</u>	<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Date Installed</u>
880	O1					
884	O1	4	Colorado Paint Company	1180 Series Two-Part Epoxy	White	9/13/2005
892	O1	12	Epoplex	Epoplex LS50 (Standard)	White	9/14/2005
896	O1	16	Epoplex	Epoplex LS50 (Double Drop)	White	9/12/2005
900	O1	20	IPS (Innovative Performance Sys)	HPS-3 (NTPEP version)	White	9/12/2005
904	O1	24	IPS (Innovative Performance Sys)	HPS-3 (CDOT version)	White	9/12/2005
908	O1	28	Poly-Carb, Inc.	Mark-55.2 CO	White	9/12/2005
912	O1	32	Poly-Carb, Inc.	Mark-55.3 CO	White	9/12/2005
916	O1	36	Poly-Carb, Inc.	Mark-544 CO	White	9/12/2005
920	O1	40	IPS (Innovative Performance Sys)	HPS-6	White	9/12/2005
924	O2					
928	O2	4	Colorado Paint Company	1180 Series Two-Part Epoxy	White	9/13/2005
936	O2	12	Epoplex	Epoplex LS50 (Standard)	White	9/14/2005
940	O2	16	Epoplex	Epoplex LS50 (Double Drop)	White	9/12/2005
944	O2	20	IPS (Innovative Performance Sys)	HPS-3 (NTPEP version)	White	9/12/2005
948	O2	24	IPS (Innovative Performance Sys)	HPS-3 (CDOT version)	White	9/12/2005
952	O2	28	Poly-Carb, Inc.	Mark-55.2 CO	White	9/12/2005
956	O2	32	Poly-Carb, Inc.	Mark-55.3 CO	White	9/12/2005
960	O2	36	Poly-Carb, Inc.	Mark-544 CO	White	9/12/2005
964	O2	40	IPS (Innovative Performance Sys)	HPS-6	White	9/12/2005
968	P1					
972	P1	4	Colorado Paint Company	1186LF Series Two-Part Epoxy	Yellow	9/13/2005
980	P1	12	Epoplex	Epoplex LS50 (Standard)	Yellow	9/12/2005
984	P1	16	Epoplex	Epoplex LS50 (Double Drop)	Yellow	9/12/2005
992	P1	24	IPS (Innovative Performance Sys)	HPS-3 (CDOT version)	Yellow	9/12/2005
996	P1	28	Poly-Carb, Inc.	Mark-55.2 CO Ground	Yellow	9/12/2005
1000	P1	32	Poly-Carb, Inc.	Mark-55.3 CO	Yellow	9/12/2005
1004	P1	36	Poly-Carb, Inc.	Mark-544 CO Ground	Yellow	9/12/2005
1012	P2					
1016	P2	4	Colorado Paint Company	1186LF Series Two-Part Epoxy	Yellow	9/13/2005
1024	P2	12	Epoplex	Epoplex LS50 (Standard)	Yellow	9/12/2005
1028	P2	16	Epoplex	Epoplex LS50 (Double Drop)	Yellow	9/12/2005
1036	P2	24	IPS (Innovative Performance Sys)	HPS-3 (CDOT version)	Yellow	9/12/2005
1040	P2	28	Poly-Carb, Inc.	Mark-55.2 CO Ground	Yellow	9/12/2005
1044	P2	32	Poly-Carb, Inc.	Mark-55.3 CO	Yellow	9/12/2005
1048	P2	36	Poly-Carb, Inc.	Mark-544 CO Ground	Yellow	9/12/2005

Table 3

I-25 @ Happy Canyon (Concrete)

<u>Reference Mark</u>	<u>Distance from Reference Mark</u>	<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Categorization</u>	<u>Date Installed</u>
A1						
A1	4	3M	Stamark, High Perform. (Series 380I)	White	Plastic Tape, Preformed	8/23/2005
A1	8	3M	Stamark, High Perform. (Series 380I ES)	White	Plastic Tape, Preformed	8/23/2005
A1	12	3M	Stamark, Intersection Grade (Series 420)	White	Plastic Tape, Preformed	8/23/2005
A1	16	3M	Stamark, Pavement Marking (Series 270 ES)	White	Plastic Tape, Preformed	8/24/2005
A1	20	3M	Stamark, Wet Reflect. (Series 380WR)	White	Plastic Tape, Preformed	8/24/2005
A1	24	3M	Stamark, Wet Reflect., (Series 380WR ES)	White	Plastic Tape, Preformed	8/24/2005
A1	28	Swarco	Director 60, Intersection Marking Tape	White	Plastic Tape, Preformed	8/31/2005
A1	32	Swarco	Director 35, Pavement Marking Tape	White	Plastic Tape, Preformed	8/31/2005
A1	36	ATM (Advance Traffic Markings)	ATM 300	White	Plastic Tape, Preformed	8/31/2005
A1	40	ATM (Advance Traffic Markings)	ATM 400	White	Plastic Tape, Preformed	8/31/2005
A1	44	Brite-Line Technologies	Series 1000	White	Plastic Tape, Preformed	8/23/2005
B1						
B1	4	Ennis Paint	Duraset Pathfinder	White	MMA	9/12/2005
B1	8	Ennis Paint	Duraset (#1 - #8, not specified)	White	MMA	9/12/2005
C1						
C1	4	Epoplex	Epoplex LS90 (Single Drop) Ground	White	Polyurea	9/12/2005
C1	8	Epoplex	Epoplex LS90 (Double Drop) Ground	White	Polyurea	9/12/2005
C1	12	IPS (Innovative Performance Sys)	HPS-5 (Beads, Premium)	White	Polyurea	9/12/2005
C1	16	Poly-Carb, Inc.	Mark-75 CO Ground	White	Polyurea/Urethane Hybrid	9/12/2005
C1	20	Colorado Paint Company	UC 100	White	Urethane	9/6/2005
C1	28	IPS (Innovative Performance Sys)	HPS-4 (Beads, Premium)	White	Urethane	9/12/2005
D1						
D1	4	Ennis Paint	980691 Series, Colorado White, VOC Compliant	White	Solventborne, Acrylic	8/29/2005
D1	8	Ennis Paint	980681 Series, Colorado White, VOC Compliant	White	Solventborne, Acrylic	8/29/2005
D1	12	Colorado Paint Company	1120 Series	White	Low VOC Solvent-Base	9/6/2005
E1						
E1	4	Colorado Paint Company	1160 Series Fast-Dry Waterborne	White	Acrylic Waterborne	9/6/2005
E1	8	Ennis Paint	980621 Series, Colorado White Waterborne	White	Waterborne	8/29/2005
E1	12	Ennis Paint	980631 Series, Colorado White, Waterborne	White	Waterborne	8/29/2005
E1	16	Ennis Paint	980601 Series, Colorado White, Waterborne	White	Waterborne	8/29/2005
E1	20	3M	Stamark, Wet Reflect.Elements on High Build	White	Waterborne, Durable	9/6/2005
F1						
F1	4	Swarco	Swarcotherm Alkyd-Based Thermoplastic	White	Thermoplastic, Hot-App	8/31/2005
F1	8	Ennis Paint	886001 Series, Thermoplastic	White	Thermoplastic, Hot-App.	9/6/2005
F1	12	Ennis Paint	884490 Series, Thermoplastic	White	Thermoplastic, Hot-App.	9/6/2005

Table 3

I-25 @ Happy Canyon (Concrete)

<u>Total Distance</u>	<u>Reference Mark</u>	<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Categorization</u>	<u>Date Installed</u>
G1						
G1	4	Ennis Paint	FlameTape	White	Thermoplastic, Preform.	9/6/2005
G1	8	Flint Trading, Inc.	PreMark Plus	White	Thermoplastic, Preform.	8/23/2005
G1	12	Flint Trading, Inc.	ViziGRIP	White	Thermoplastic, Preform.	8/23/2005
G1	16	Flint Trading, Inc.	PreMark Plus (2-component sealer on PCCP)	White	Thermoplastic, Preform.	8/23/2005
G1	20	Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 90 mil	White	Thermoplastic, Preform.	9/12/2005
G1	24	Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 125 mil	White	Thermoplastic, Preform.	9/12/2005
H1						
H1	4	ATM (Advance Traffic Markings)	ATM 300-C	W-on-B	Plastic Tape, Preformed	8/31/2005
H1	8	Brite-Line Technologies	Brite-Line Contrast Tape	W-on-B	Plastic Tape, Preformed	8/23/2005
H1	12	3M	Stamark, High Perform. (Series 380I-5 ES)	W-on-B	Plastic Tape, Preformed	8/23/2005
H1	16	3M	Stamark, High Perform. (Series 380I-5)	W-on-B	Plastic Tape, Preformed	8/23/2005
H1	20	3M	Stamark, Wet Reflect., Contrast (Series 380WR-5)	W-on-B	Plastic Tape, Preformed	8/24/2005
H1	24	3M	Stamark, Wet Reflect., (Series 380WR-5 ES)	W-on-B	Plastic Tape, Preformed	8/24/2005
H1	28	Flint Trading, Inc.	PreMark Plus	W-on-B	Thermoplastic, Preform.	8/23/2005
A2						
A2	4	3M	Stamark, High Perform. (Series 380I)	White	Plastic Tape, Preformed	8/23/2005
A2	8	3M	Stamark, High Perform. (Series 380I ES)	White	Plastic Tape, Preformed	8/23/2005
A2	12	3M	Stamark, Intersection Grade (Series 420)	White	Plastic Tape, Preformed	8/23/2005
A2	16	3M	Stamark, Pavement Marking (Series 270 ES)	White	Plastic Tape, Preformed	8/24/2005
A2	20	3M	Stamark, Wet Reflect. (Series 380WR)	White	Plastic Tape, Preformed	8/24/2005
A2	24	3M	Stamark, Wet Reflect., (Series 380WR ES)	White	Plastic Tape, Preformed	8/24/2005
A2	28	Swarco	Director 35, Intersection Marking Tape	White	Plastic Tape, Preformed	8/31/2005
A2	32	Swarco	Director 60, Pavement Marking Tape	White	Plastic Tape, Preformed	8/31/2005
A2	36	ATM (Advance Traffic Markings)	ATM 300	White	Plastic Tape, Preformed	8/31/2005
A2	40	ATM (Advance Traffic Markings)	ATM 400	White	Plastic Tape, Preformed	8/31/2005
A2	44	Brite-Line Technologies	Series 1000	White	Plastic Tape, Preformed	8/23/2005
B2						
B2	4	Ennis Paint	Duraset Pathfinder	White	MMA	9/12/2005
B2	8	Ennis Paint	Duraset (#1 - #8, not specified)	White	MMA	9/12/2005
C2						
C2	4	Epoplex	Epoplex LS90 (Single Drop) Ground	White	Polyurea	9/12/2005
C2	8	Epoplex	Epoplex LS90 (Double Drop) Ground	White	Polyurea	9/12/2005
C2	12	IPS (Innovative Performance Sys)	HPS-5 (Beads, Premium)	White	Polyurea	9/12/2005
C2	16	Poly-Carb, Inc.	Mark-75 CO Ground	White	Polyurea/Urethane Hybrid	9/12/2005
C2	20	Colorado Paint Company	UC 100	White	Urethane	9/6/2005
C2	28	IPS (Innovative Performance Sys)	HPS-4 (Beads, Premium)	White	Urethane	9/12/2005

Table 3

I-25 @ Happy Canyon (Concrete)

<u>Total Distance</u>	<u>Reference Mark</u>	<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Categorization</u>	<u>Date Installed</u>
D2						
D2	4	Ennis Paint	980691 Series, Colorado White, VOC Compliant	White	Solventborne, Acrylic	8/29/2005
D2	8	Ennis Paint	980681 Series, Colorado White, VOC Compliant	White	Solventborne, Acrylic	8/29/2005
D2	12	Colorado Paint Company	1120 Series	White	Low VOC Solvent-Base	9/6/2005
E2						
E2	4	Colorado Paint Company	1160 Series Fast-Dry Waterborne	White	Acrylic Waterborne	9/6/2005
E2	8	Ennis Paint	980601 Series, Colorado White Waterborne	White	Waterborne	8/29/2005
E2	12	Ennis Paint	980631 Series, Colorado White, Waterborne	White	Waterborne	8/29/2005
E2	16	Ennis Paint	980621 Series, Colorado White, Waterborne	White	Waterborne	8/29/2005
E2	20	3M	Stamark, Wet Reflect.Elements on High Build	White	Waterborne, Durable	9/6/2005
F2						
F2	4	Swarco	Swarcotherm Alkyd-Based Thermoplastic	White	Thermoplastic, Hot-App	8/31/2005
F2	8	Ennis Paint	886001 Series, Thermoplastic	White	Thermoplastic, Hot-App.	9/6/2005
F2	12	Ennis Paint	884490 Series, Thermoplastic	White	Thermoplastic, Hot-App.	9/6/2005
G2						
G2	4	Ennis Paint	FlameTape	White	Thermoplastic, Preform.	9/6/2005
G2	8	Flint Trading, Inc.	PreMark Plus	White	Thermoplastic, Preform.	8/23/2005
G2	12	Flint Trading, Inc.	ViziGRIP	White	Thermoplastic, Preform.	8/23/2005
G2	16	Flint Trading, Inc.	PreMark Plus (2-component sealer on PCCP)	White	Thermoplastic, Preform.	8/23/2005
G2	20	Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 90 mil	White	Thermoplastic, Preform.	9/12/2005
G2	24	Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 125 mil	White	Thermoplastic, Preform.	9/12/2005
H2						
H2	4	ATM (Advance Traffic Markings)	ATM 300-C	W-on-B	Plastic Tape, Preformed	8/31/2005
H2	8	Brite-Line Technologies	Brite-Line Contrast Tape	W-on-B	Plastic Tape, Preformed	8/23/2005
H2	12	3M	Stamark, High Perform. (Series 380I-5 ES)	W-on-B	Plastic Tape, Preformed	8/23/2005
H2	16	3M	Stamark, High Perform. (Series 380I-5)	W-on-B	Plastic Tape, Preformed	8/23/2005
H2	20	3M	Stamark, Wet Reflect., Contrast (Series 380WR-5)	W-on-B	Plastic Tape, Preformed	8/24/2005
H2	24	3M	Stamark, Wet Reflect., (Series 380WR-5 ES)	W-on-B	Plastic Tape, Preformed	8/24/2005
H2	28	Flint Trading, Inc.	PreMark Plus	W-on-B	Thermoplastic, Preform.	8/23/2005
I1						
I1	4	Ennis Paint	Duraset Pathfinder	Yellow	MMA	9/12/2005
I1	8	Ennis Paint	Duraset (#1 - #8, not specified)	Yellow	MMA	9/12/2005
I1	12	Epoplex	Epoplex LS90 (Single Drop) Ground	Yellow	Polyurea	9/12/2005
I1	16	Epoplex	Epoplex LS90 (Double Drop) ground	Yellow	Polyurea	9/12/2005
I1	24	Poly-Carb, Inc.	Mark-75 CO ground	Yellow	Polyurea/Urethane Hybrid	9/12/2005
I1	28	Colorado Paint Company	UC 100	Yellow	Urethane	9/6/2005
I1	36	IPS (Innovative Performance Sys)	HPS-4 (Beads, Premium)	Yellow	Urethane	9/12/2005

Table 3

I-25 @ Happy Canyon (Concrete)

<u>Total Distance</u>	<u>Reference Mark</u>	<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Categorization</u>	<u>Date Installed</u>
J1						
J1	4	Ennis Paint	980692 Series, Colorado L/F Yellow, VOC Compl.	Yellow	Solventborne, Acrylic	8/29/2005
J1	8	Ennis Paint	980682 Series, Colorado L/F Yellow, VOC Compl.	Yellow	Solventborne, Acrylic	8/29/2005
J1	12	Colorado Paint Company	1120 Series	Yellow	Low VOC Solvent-Base	9/6/2005
K1						
K1	4	Swarco	Swarcotherm Alkyd-Based Thermoplastic	Yellow	Thermoplastic, Hot-App	8/31/2005
K1	6	Swarco	Swarcotherm Alkyd-Based Thermoplastic	Yellow	Thermoplastic, Hot-App	8/31/2005
K1	8	Ennis Paint	886002 Series, Thermoplastic	Yellow	Thermoplastic, Hot-App.	9/6/2005
K1	12	Ennis Paint	885035 Series, Thermoplastic	Yellow	Thermoplastic, Hot-App.	9/6/2005
K1	16	Ennis Paint	FlameTape	Yellow	Thermoplastic, Preform.	9/6/2005
K1	20	Ennis Paint	FlameTape (LF Yellow)	Yellow	Thermoplastic, Preform.	9/6/2005
K1	24	Flint Trading, Inc.	PreMark Plus	Yellow	Thermoplastic, Preform.	8/23/2005
K1	28	Flint Trading, Inc.	PreMark Plus (2-component sealer on PCCP)	Yellow	Thermoplastic, Preform.	8/23/2005
K1	32	Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 90 mil	Yellow	Thermoplastic, Preform.	9/12/2005
K1	36	Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 125 mil	Yellow	Thermoplastic, Preform.	9/12/2005
L1						
L1	4	Colorado Paint Company	1166LF Series Fast-Dry Waterborne	Yellow	Acrylic Waterborne	9/6/2005
L1	8	Ennis Paint	980602 Series, Colorado L/F Yellow Waterborne	Yellow	Waterborne	8/29/2005
L1	12	Ennis Paint	980632 Series, Colorado L/F Yellow, Waterborne	Yellow	Waterborne	8/29/2005
L1	16	Ennis Paint	980622 Series, Colorado L/F Yellow, Waterborne	Yellow	Waterborne	8/29/2005
L1	20	3M	Stamark, Wet Reflect.Elements on High Build	Yellow	Waterborne, Durable	9/6/2005
M1						
M1	4	3M	Stamark, High Perform. (Series 3811)	Yellow	Plastic Tape, Preformed	8/23/2005
M1	8	3M	Stamark, High Perform. (Series 3811 ES)	Yellow	Plastic Tape, Preformed	8/23/2005
M1	12	3M	Stamark, Wet Reflect., (Series 381WR ES)	Yellow	Plastic Tape, Preformed	8/24/2005
M1	16	Swarco	Director 35, Intersection Marking Tape	Yellow	Plastic Tape, Preformed	8/31/2005
M1	20	Swarco	Director 60, Pavement Marking Tape	Yellow	Plastic Tape, Preformed	8/31/2005
M1	24	ATM (Advance Traffic Markings)	ATM 300	Yellow	Plastic Tape	8/31/2005
M1	28	ATM (Advance Traffic Markings)	ATM 400	Yellow	Plastic Tape	8/31/2005
M1	32	Brite-Line Technologies	Series 1000	Yellow	Plastic Tape	8/23/2005
N1						
N1	4	3M	Stamark, High Perform. (Series 3811-5 ES)	Y-on-B	Plastic Tape, Preformed	8/23/2005
N1	8	3M	Stamark, High Perform. (Series 3811-5)	Y-on-B	Plastic Tape, Preformed	8/23/2005
N1	12	3M	Stamark, Wet Reflect., (Series 381WR-5 ES)	Y-on-B	Plastic Tape, Preformed	8/24/2005
N1	16	Flint Trading, Inc.	PreMark Plus	Y-on-B	Thermoplastic, Preform.	8/23/2005

Table 3

I-25 @ Happy Canyon (Concrete)

<u>Total Distance</u>	<u>Reference Mark</u>	<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Categorization</u>	<u>Date Installed</u>
I2						
I2	4	Ennis Paint	Duraset Pathfinder	Yellow	MMA	9/12/2005
I2	8	Ennis Paint	Duraset (#1 - #8, not specified)	Yellow	MMA	9/12/2005
I2	12	Epoplex	Epoplex LS90 (Single Drop) Ground	Yellow	Polyurea	9/12/2005
I2	16	Epoplex	Epoplex LS90 (Double Drop) Ground	Yellow	Polyurea	9/12/2005
I2	24	Poly-Carb, Inc.	Mark-75 CO Ground	Yellow	Polyurea/Urethane Hybrid	9/12/2005
I2	36	IPS (Innovative Performance Sys)	HPS-4 (Beads, Premium)	Yellow	Urethane	9/12/2005
J2						
J2	4	Ennis Paint	980692 Series, Colorado L/F Yellow, VOC Compl.	Yellow	Solventborne, Acrylic	8/29/2005
J2	8	Ennis Paint	980682 Series, Colorado L/F Yellow, VOC Compl.	Yellow	Solventborne, Acrylic	8/29/2005
J2	12	Colorado Paint Company	1120 Series	Yellow	Low VOC Solvent-Base	9/6/2005
K2						
K2	4	Swarco	Swarcotherm Alkyd-Based Thermoplastic	Yellow	Thermoplastic, Hot-App	8/31/2005
K2	8	Ennis Paint	886002 Series, Thermoplastic	Yellow	Thermoplastic, Hot-App.	9/6/2005
K2	12	Ennis Paint	885035 Series, Thermoplastic	Yellow	Thermoplastic, Hot-App.	9/6/2005
K2	16	Ennis Paint	FlameTape	Yellow	Thermoplastic, Preform.	9/6/2005
K2	20	Ennis Paint	FlameTape (LF Yellow)	Yellow	Thermoplastic, Preform.	9/6/2005
K2	24	Flint Trading, Inc.	PreMark Plus	Yellow	Thermoplastic, Preform.	8/23/2005
K2	28	Flint Trading, Inc.	PreMark Plus (2-component sealer on PCCP)	Yellow	Thermoplastic, Preform.	8/23/2005
K2	32	Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 90 mil	Yellow	Thermoplastic, Preform.	9/12/2005
K2	36	Zumar Industries, Inc.	HotTape, High Optic, Highway Series, 125 mil	Yellow	Thermoplastic, Preform.	9/12/2005
L2						
L2	4	Colorado Paint Company	1166LF Series Fast-Dry Waterborne	Yellow	Acrylic Waterborne	9/6/2005
L2	8	Ennis Paint	980602 Series, Colorado L/F Yellow Waterborne	Yellow	Waterborne	8/29/2005
L2	12	Ennis Paint	980632 Series, Colorado L/F Yellow, Waterborne	Yellow	Waterborne	8/29/2005
L2	16	Ennis Paint	980622 Series, Colorado L/F Yellow, Waterborne	Yellow	Waterborne	8/29/2005
L2	20	3M	Stamark, Wet Reflect.Elements on High Build	Yellow	Waterborne, Durable	9/6/2005
M2						
M2	4	3M	Stamark, High Perform. (Series 381I)	Yellow	Plastic Tape, Preformed	8/23/2005
M2	8	3M	Stamark, High Perform. (Series 381I ES)	Yellow	Plastic Tape, Preformed	8/23/2005
M2	12	3M	Stamark, Wet Reflect., (Series 381WR ES)	Yellow	Plastic Tape, Preformed	8/24/2005
M2	16	Swarco	Director 35, Intersection Marking Tape	Yellow	Plastic Tape, Preformed	8/31/2005
M2	20	Swarco	Director 60, Pavement Marking Tape	Yellow	Plastic Tape, Preformed	8/31/2005
M2	24	ATM (Advance Traffic Markings)	ATM 300	Yellow	Plastic Tape	8/31/2005
M2	28	ATM (Advance Traffic Markings)	ATM 400	Yellow	Plastic Tape	8/31/2005
M2	32	Brite-Line Technologies	Series 1000	Yellow	Plastic Tape	8/23/2005

Table 3

I-25 @ Happy Canyon (Concrete)

<u>Total Distance</u>	<u>Reference Mark</u>	<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Categorization</u>	<u>Date Installed</u>
N2						
N2	4	3M	Stamark, High Perform. (Series 381I-5 ES)	Y-on-B	Plastic Tape, Preformed	8/23/2005
N2	8	3M	Stamark, High Perform. (Series 381I-5)	Y-on-B	Plastic Tape, Preformed	8/23/2005
N2	12	3M	Stamark, Wet Reflect., (Series 381WR-5 ES)	Y-on-B	Plastic Tape, Preformed	8/24/2005
N2	16	Flint Trading, Inc.	PreMark Plus	Y-on-B	Thermoplastic, Preform.	8/23/2005
O1						
O1	4	Colorado Paint Company	1180 Series Two-Part Epoxy	White	Epoxy	9/13/2005
O1	8	Ennis Paint	999311 Series, Epoxy	White	Epoxy	9/14/2005
O1	12	Epoplex	Epoplex LS50 (Standard) Ground	White	Epoxy	9/12/2005
O1	16	Epoplex	Epoplex LS50 (Double Drop) Ground	White	Epoxy	9/12/2005
O1	20	IPS (Innovative Performance Sys)	HPS-3 (NTPEP version)	White	Epoxy	9/12/2005
O1	24	IPS (Innovative Performance Sys)	HPS-3 (CDOT version)	White	Epoxy	9/12/2005
O1	28	Poly-Carb, Inc.	Mark-55.2 CO Ground	White	Epoxy	9/12/2005
O1	32	Poly-Carb, Inc.	Mark-55.3 CO Ground	White	Epoxy -Fast Set	9/12/2005
O1	36	Poly-Carb, Inc.	Mark-544 CO Ground	White	Hybridized Polymer Contrast	9/12/2005
O1	40	IPS (Innovative Performance Sys)	HPS-6			
O2						
O2	4	Colorado Paint Company	1180 Series Two-Part Epoxy	White	Epoxy	9/13/2005
O2	12	Epoplex	Epoplex LS50 (Standard) Ground	White	Epoxy	9/12/2005
O2	16	Epoplex	Epoplex LS50 (Double Drop) Ground	White	Epoxy	9/12/2005
O2	20	IPS (Innovative Performance Sys)	HPS-3 (NTPEP version)	White	Epoxy	9/12/2005
O2	24	IPS (Innovative Performance Sys)	HPS-3 (CDOT version)	White	Epoxy	9/12/2005
O2	28	Poly-Carb, Inc.	Mark-55.2 CO Ground	White	Epoxy	9/12/2005
O2	32	Poly-Carb, Inc.	Mark-55.3 CO Ground	White	Epoxy -Fast Set	9/12/2005
O2	36	Poly-Carb, Inc.	Mark-544 CO Ground	White	Hybridized Polymer Contrast	9/12/2005
O2	40	IPS (Innovative Performance Sys)				
P1						
P1	4	Colorado Paint Company	1186LF Series Two-Part Epoxy	Yellow	Epoxy	9/13/2005
P1	12	Epoplex	Epoplex LS50 (Standard) Ground	Yellow	Epoxy	9/12/2005
P1	16	Epoplex	Epoplex LS50 (Double Drop) Ground	Yellow	Epoxy	9/12/2005
P1	24	IPS (Innovative Performance Sys)	HPS-3 (CDOT version)	Yellow	Epoxy	9/12/2005
P1	28	Poly-Carb, Inc.	Mark-55.2 CO Ground	Yellow	Epoxy	9/12/2005
P1	32	Poly-Carb, Inc.	Mark-55.3 CO Ground	Yellow	Epoxy -Fast Set	9/12/2005
P1	36	Poly-Carb, Inc.	Mark-544 CO Ground	Yellow	Hybridized Polymer Contrast	9/12/2005

Table 3***I-25 @ Happy Canyon (Concrete)***

<u>Total Distance</u>	<u>Reference Mark</u>	<u>Manufacturers / Suppliers</u>	<u>Product Name</u>	<u>Color</u>	<u>Categorization</u>	<u>Date Installed</u>
P2						
P2	4	Colorado Paint Company	1186LF Series Two-Part Epoxy	Yellow	Epoxy	9/13/2005
P2	12	Epoplex	Epoplex LS50 (Standard) Ground	Yellow	Epoxy	9/12/2005
P2	16	Epoplex	Epoplex LS50 (Double Drop) Ground	Yellow	Epoxy	9/12/2005
P2	24	IPS (Innovative Performance Sys)	HPS-3 (CDOT version)	Yellow	Epoxy	9/12/2005
P2	28	Poly-Carb, Inc.	Mark-55.2 CO Ground	Yellow	Epoxy	9/12/2005
P2	32	Poly-Carb, Inc.	Mark-55.3 CO Ground	Yellow	Epoxy -Fast Set	9/12/2005
P2	36	Poly-Carb, Inc.	Mark-544 CO Ground	Yellow	Hybridized Polymer Contrast	9/12/2005

Table 4

I-25 @ Lincoln Avenue (Asphalt Retro-reflectivity Readings)

3M

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	Shoulder Reading	Midline Reading	Wheel Track Reading	Readings 93005			Readings 101445			Readings 110906			Readings 121306			Readings 124106			Readings 22006			Readings 41406			Readings 51706												
									Average Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Average Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Average Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Average Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Average Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Average Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Average Reading	Shoulder Reading	Wheel Track Reading	Midline Reading						
4	A1	4	Stamark, High Perform. (Series 300)	White	Plastic Tape, Preformed	633	754	779	728	508	1045	916	829	307	1060	537	877	507	777	438	594	126	180	148	151	83	94	45	74	42	83	112	79	67	97	71	79	89	71	48	89	
244	A2	4	Stamark, High Perform. (Series 300)	White	Plastic Tape, Preformed	638	848	820	702	513	904	878	798	289	934	384	329	454	471	383	426	52	182	130	121	95	92	274	134	228	151	99	159	129	136	61	109	118	78	143	110	
								Average =	720			Average =	811			Average =	380			Average =	916			Average =	136			Average =	104			Average =	119			Average =	94			Average =	81	
8	A1	8	Stamark, High Perform. (Series 300 ES)	White	Plastic Tape, Preformed	639	833	792	741	686	1116	946	916	256	1006	824	828	694	787	495	109	205	163	103	177	33	79	28	47	22	63	28	39	29	85	31	48	48	67	23	46	
248	A2	8	Stamark, High Perform. (Series 300 ES)	White	Plastic Tape, Preformed	681	714	691	665	616	1048	1006	880	308	1023	314	548	530	593	349	512	113	194	102	138	42	304	160	169	92	31	72	62	75	40	109	21	65	71	87	70	79
								Average =	716			Average =	900			Average =	386			Average =	365			Average =	157			Average =	108			Average =	57			Average =	32			Average =	42	
12	A1	12	Stamark, Intersection Grade (Series 420)	White	Plastic Tape, Preformed	304	386	420	370	322	251	427	307	325	193	246	265	402	104	295	267	75	28	82	62	33	25	93	50	60	23	65	42	41	31	62	45	60	28	37	42	
252	A2	12	Stamark, Intersection Grade (Series 420)	White	Plastic Tape, Preformed	309	357	314	332	323	242	430	332	120	249	103	157	181	77	92	117	53	32	46	44	23	35	39	32	24	33	33	33	46	37	45	44	38	33	46	39	
								Average =	348			Average =	329			Average =	206			Average =	190			Average =	53			Average =	41			Average =	40			Average =	40			Average =	40	
16	A1	16	Stamark, Pavement Marking (Series 270 ES)	White	Plastic Tape, Preformed	278	289	222	263	200	323	286	270	191	326	280	259	238	250	208	235	121	96	32	83	284	62	109	132	36	52	44	44	58	117	25	61	36	74	55	55	
256	A2	16	Stamark, Pavement Marking (Series 270 ES)	White	Plastic Tape, Preformed	235	282	219	239	141	311	301	251	138	308	183	210	183	169	180	177	49	88	82	73	93	94	70	86	81	87	17	62	117	89	21	75	73	89	65	76	
								Average =	258			Average =	268			Average =	204			Average =	206			Average =	78			Average =	119			Average =	53			Average =	71			Average =	65	
20	A1	20	Stamark, Wet Reflect. (Series 300WR)	White	Plastic Tape, Preformed	822	912	844	883	579	860	917	860	222	877	851	571	642	695	596	646	251	123	48	141	221	55	105	157	94	80	77	84	51	177	41	91	207	96	56	120	
260	A2	20	Stamark, Wet Reflect. (Series 300WR)	White	Plastic Tape, Preformed	965	971	812	783	403	833	934	723	247	788	493	469	418	482	420	440	86	125	153	121	93	189	393	295	89	194	64	116	538	90	58	229	186	76	247	101	
								Average =	763			Average =	800			Average =	542			Average =	542			Average =	100			Average =	181			Average =	258			Average =	258			Average =	145	
24	A1	24	Stamark, Wet Reflect. (Series 300WR ES)	White	Plastic Tape, Preformed	1021	1154	948	1045	732	818	794	815	157	892	849	386	767	718	512	668	172	141	99	137	89	81	295	152	214	73	17	101	112	150	25	36	56	115	58	78	
264	A2	24	Stamark, Wet Reflect. (Series 300WR ES)	White	Plastic Tape, Preformed	1039	1183	1019	1063	429	799	954	737	297	761	433	467	431	312	534	425	65	106	129	102	180	182	147	163	224	161	22	106	211	71	21	101	109	173	138	107	
								Average =	1063			Average =	771			Average =	546			Average =	546			Average =	119			Average =	157			Average =	98			Average =	98			Average =	107	
144	E1	20	Stamark, Wet Reflect. Elements on High Build	White	Waterborne, Durable				288	341	314	238	288	220	324	63	202	263	256	291	270	57	108	65	77	86	145	65	56	72	133	113	106	173	173	142	163	176	69	120	122	
384	E2	20	Stamark, Wet Reflect. Elements on High Build	White	Waterborne, Durable				315	297	317	331	315	168	307	302	259	238	211	328	259	113	152	128	131	43	150	131	138	102	134	119	118	171	202	174	182	126	144	125	131	
								Average =	306			Average =	321			Average =	265			Average =	265			Average =	104			Average =	102			Average =	112			Average =	112			Average =	127	
216	H1	12	Stamark, High Perform. (Series 300 S ES)	W-on-S	Plastic Tape, Preformed	483	558	478	556	584	933	945	621	545	920	890	785	579	775	781	712	164	384	258	261	216	401	660	435	226	121	232	193	467	397	298	307	291	73	252	235	
456	H2	12	Stamark, High Perform. (Series 300 S ES)	W-on-S	Plastic Tape, Preformed	624	498	542	711	395	924	815	711	581	903	800	768	571	828	895	105	154	421	445	380	93	539	508	380	367	503	233	384	502	273	208	328	207	227	273	206	
								Average =	581			Average =	766			Average =	747			Average =	700			Average =	302			Average =	403			Average =	279			Average =	358			Average =	221	
220	H1	16	Stamark, High Perform. (Series 300 S)	W-on-S	Plastic Tape, Preformed	691	633	566	794	531	927	934	794	551	782	587	640	717	494	467	599	140	126	275	204	81	243	133	162	46	82	64	57	14	77	107	66	52	54	81		
460	H2	16	Stamark, High Perform. (Series 300 S)	W-on-S	Plastic Tape, Preformed	488	632	477	632	533	961	833	804	428	934	782	715	694	861	781	759	188	286	518	284	101	355	326	281	323	254	232	286	289	189	185	214	178	94	128	123	
								Average =	581			Average =	789			Average =	677			Average =	659			Average =	264			Average =	207			Average =	172			Average =	140			Average =	93	
224	H1	20	Stamark, Wet Reflect. Contrast (Series 300WR S)	W-on-S	Plastic Tape, Preformed	694	786	624	747	333	1017	872	747	309	983	707	667	505	777	612	631	32	106	316	151	104	188	341	204	76	707	111	27	71	102	108	31	79	156	56	37	
464	H2	20	Stamark, Wet Reflect. Contrast (Series 300WR S)	W-on-S	Plastic Tape, Preformed	808	938	907	884	516	887	938	780	227	920	1000	726	508	745	924	726	104	171	438	288	60	307	330	233	207	444	399	348	364	227	331	307	342	71	241	218	
								Average =	789			Average =	784			Average =	686			Average =	679			Average =	195			Average =	219			Average =	210			Average =	193			Average =	161	
228	H1	24	Stamark, Wet Reflect. (Series 300WR S ES)	W-on-S	Plastic Tape, Preformed	1063	1121	1046	1078	484	608	662	648	454	1036	794	875	718	797	741	782	98	139	403	210	117	297	165	193	220	202	332	251	313	221	184	259	228	54	160	147	
468	H2	24	Stamark, Wet Reflect. (Series 300WR S ES)	W-on-S	Plastic Tape, Preformed	811	877	887	882	380	1171	1413	895	277	1171	1386	945	622	969	1356	982	115	204	578	288	71	283	590	380	338	358	221	385	559	127	286	324	136	73	303	171	
								Average =	910			Average =	820			Average =	887			Average =	887			Average =	256			Average =	254			Average =	382			Average =	382			Average =	179	
808	L1	20	Stamark, Wet Reflect. Elements on High Build	Yellow	Waterborne, Durable				210	302	297	304	210	161	247	230	210	288																								

Table 4

I-25 @ Lincoln Avenue (Asphalt Retro-reflectivity Readings)

Advanced Traffic Markings, Inc.

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	Readings 9:30:05			Note:	Readings 10:14:05			Note:	Readings 11:09:05			Note:	Readings 12:13:05			Note:	Readings 12:40:06			Note:	Readings 2:28:06			Note:	14-Apr-06			Note:	17-May-06			Note:			
						Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading
36	A1	36	ATM 300	White	Plastic Tape, Preformed	866	864	860		837	452	826		853	141	161		218	30	34		118	72	44		149	25	29		107	37	14		41	31	113				
276	A2	36	ATM 300	White	Plastic Tape, Preformed					631	441	613		664	163	160		58	44	47		65	42	71		73	42	24		85	44	13		27	41	72				
											Average =	633			Average =	387			Average =	374			Average =	72			Average =	69			Average =	57			Average =	50			Average =	54
40	A1	40	ATM 400	White	Plastic Tape, Preformed	833	693	1018		853	634	883		891	147	87		118	32	11		90	80	40		39	26	11		16	35	14		35	33	223				
280	A2	40	ATM 400	White	Plastic Tape, Preformed					804	516	628		336	202	248		24	46	8		29	36	4		12	27	6		14	36	8		8	47	14				
											Average =	720			Average =	331			Average =	319			Average =	40			Average =	47			Average =	20			Average =	21			Average =	60
208	H1	4	ATM 300-C	W-on-B	Plastic Tape, Preformed	878	857	868		699	639	881		467	274	547		315	52	168		204	74	136		25	34	111		29	58	118		71	41	25				
448	H2	4	ATM 300-C	W-on-B	Plastic Tape, Preformed					411	597	670		49	102	232		49	102	232		37	92	177		100	55	102		114	76	89		81	49	61				
											Average =	663			Average =	509			Average =	429			Average =	153			Average =	120			Average =	71			Average =	81			Average =	55
640	M1	24	ATM 300	Yellow	Plastic Tape	469	494	505		383	392	561		369	217	188		36	79	7		21	70	3		36	34	12		15	37	7		6	38	36				
640	M2	24	ATM 300	Yellow	Plastic Tape					286	387	596		187	199	454		41	114	163		13	62	62		50	59	53		113	27	7		7	40	83				
											Average =	434			Average =	210			Average =	274			Average =	73			Average =	39			Average =	41			Average =	34			Average =	35
644	M1	28	ATM 400	Yellow	Plastic Tape	591	623	578		413	411	630		498	183	177		36	74	121		22	48	72		24	25	32		18	34	9		7	29	27				
844	M2	28	ATM 400	Yellow	Plastic Tape					346	404	598		374	187	530		283	57	10		18	58	33		36	31	17		43	26	8		29	30	67				
											Average =	465			Average =	283			Average =	325			Average =	94			Average =	42			Average =	28			Average =	23			Average =	32

Brite-Line Technologies, Inc.

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	Readings 8:30:05			Note:	Readings 9:30:05			Note:	Readings 10:14:05			Note:	Readings 11:09:05			Note:	Readings 12:13:05			Note:	Readings 12:40:06			Note:	Readings 2:28:06			Note:	14-Apr-06			Note:	17-May-06			Note:			
						Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading
0																																												
44	A1	44	Series 1000	White	Plastic Tape, Preformed	445	399	425		365	389	511		239	311	154		480	217	124		122	45	51		90	24	48		35	23	43		46	48	52		44	35	46				
284	A2	44	Series 1000	White	Plastic Tape, Preformed	405	414	412		315	353	431		110	275	149		127	237	92		21	66	53		22	76	48		28	72	6		43	51	10		8	61	39				
											Average =	417			Average =	394			Average =	206			Average =	213			Average =	63			Average =	51			Average =	35			Average =	42			Average =	38
212	H1	8	Brite-Line Contrast Tape	W-on-B	Plastic Tape, Preformed	431	468	468		441	431	583		400	326	418		250	218	389		46	57	239		31	60	125		131	53	81		10	58	56		76	35	30				
452	H2	8	Brite-Line Contrast Tape	W-on-B	Plastic Tape, Preformed	339	421	394		322	509	523		337	440	298		456	315	274		64	135	178		45	122	132		87	91	100		81	75	20		12	42	85				
											Average =	424			Average =	465			Average =	370			Average =	317			Average =	120			Average =	86			Average =	91			Average =	50			Average =	47
648	M1	32	Series 1000	Yellow	Plastic Tape	278	265	247		190	343	338		105	306	126		216	247	142		87	132	28		15	94	80		25	41	34		38	44	98		52	63	30				
848	M2	32	Series 1000	Yellow	Plastic Tape	270	280	280		182	270	308		209	243	250		273	153	181		76	92	44		15	207	121		22	107	29		44	30	23		56	27	31				
652											Average =	267			Average =	282			Average =	207			Average =	202			Average =	77			Average =	69			Average =	43			Average =	46			Average =	43

Table 4

I-25 @ Lincoln Avenue (Asphalt Retro-reflectivity Readings)

Colorado Paint Co.

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	Shoulder Reading	Midlane Reading	Wheel Track Reading	Note	Readings 9/30/05			Readings 10-14-05			Readings 11/09/05			Readings 12/13/05			Readings 1/24/06			Readings 2/28/06			14-Apr-06			17-May-06			
										Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading
88	C1	20	UC 100 Ground	White	Urethane					388	281	317	375	147	248	512	49	84	72	14	21	75	32	31	77	14	15	95	17	20	12	10	33	
328	C2	20(18)	UC 100	White	Urethane	372	314	348		345	92	311	414	56	55	458	40	16	194	13	13	83	21	9	153	10	11	276	15	9	5	7	194	
											Average =		Average =				Average =			Average =		Average =		Average =		Average =		Average =		Average =		Average =		Average =
116	D1	12	1120 Series	White	Low VOC Solvent-Base					147	44	43	145	45	53	137	42	37	54	16	20	77	22	39	44	15	17	118	19	21	30	10	87	
356	D2	12	1120 Series	White	Low VOC Solvent-Base	74	98	59		155	49	67	151	61	64	135	51	55	59	23	28	30	28	38	45	19	26	184	28	34	27	17	73	
											Average =		Average =				Average =			Average =		Average =		Average =		Average =		Average =		Average =		Average =		Average =
884	O1	4	1180 Series Two-Part Epoxy	White	Epoxy					146	180	217	137	161	178	127	114	189	117	56	79	18	38	89	57	44	53	71	41	61	52	30	63	
928	O2	4	1180 Series Two-Part Epoxy	White	Epoxy					127	207	262	140	168	242	174	147	216	91	77	115	14	70	98	74	35	72	119	53	71	58	27	56	
											Average =		Average =				Average =			Average =		Average =		Average =		Average =		Average =		Average =		Average =		Average =
708	I2	28	UC 100	Yellow	Urethane	85	60	96		237	245	273	99	226	209	288	158	92	107	49	103	20	61	42	64	24	53	117	33	20	38	22	99	
											Average =		Average =				Average =			Average =		Average =		Average =		Average =		Average =		Average =		Average =		Average =
536	J1	12	1120 Series	Yellow	Low VOC Solvent-Base					72	67	34	35	163	145	73	63	28	37	31	19	16	40	32	22	17	19	40	33	18	20	16	36	
736	J2	12	1120 Series	Yellow	Low VOC Solvent-Base	169	262	260		48	19	21	35	31	29	44	32	19	25	13	11	17	2	21	17	14	17	30	19	22	19	13	29	
											Average =		Average =				Average =			Average =		Average =		Average =		Average =		Average =		Average =		Average =		Average =
792	L2	4	1186LF Series Fast-Dry Wax	Yellow	Acrylic Waterborne					226	252	204	181	220	95	252	133	75	138	47	44	25	67	36	56	55	32	190	27	26	18	28	99	
											Average =		Average =				Average =			Average =		Average =		Average =		Average =		Average =		Average =		Average =		Average =
972	P1	4	1186LF Series Two-Part Epoxy	Yellow	Epoxy					105	129	164	105	137	156	134	90	131	74	51	103	15	52	84	70	36	59	91	29	55	55	26	59	
1016	P2	4	1186LF Series Two-Part Epoxy	Yellow	Epoxy					70	112	127	79	96	99	94	75	81	39	46	47	12	48	54	31	43	53	58	23	34	35	17	35	
											Average =		Average =				Average =			Average =		Average =		Average =		Average =		Average =		Average =		Average =		Average =

Table 4

I-25 @ Lincoln Avenue (Asphalt Retro-reflectivity Readings)

Ennis Paint Co.

Total Distance	Reference Mark	Inn Distance	Product Name	Color	Categorization	Readings 8/20/15			Note:	Readings 9/20/15			Note:	Readings 10/14/15			Note:	Readings 11/09/15			Note:	Readings 12/13/15			Note:	Readings 1/24/16			Note:	Readings 2/28/16			Note:	Readings 4/14/16			Note:	Readings 5/11/16			Note:
						Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading		Shoulder Reading	Wheel Track Reading	Midlane Reading	
56	B1	4	Duraset Pathfinder	White	MMA					430	482	509	474	297	388	459	375	462	314	300	369	83	182	139	138	202	151	208	187	244	121	145	170	274	156	81	170	139	91	255	153
296	B2	4	Duraset Pathfinder	White	MMA					462	468	460	470	371	388	339	366	476	315	350	360	170	166	168	168	181	229	203	204	190	169	180	184	286	172	88	182	59	112	219	130
										Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =	
60	B1	8	Duraset (#1 - #8, not specifi	White	MMA					232	442	???	337	169	408	324	370	258	366	355	326	81	157	132	127	135	145	305	195	150	142	202	175	308	123	217	216	180	58	165	134
300	B2	8	Duraset (#1 - #8, not specifi	White	MMA					206	372	317	298	203	381	363	316	263	328	374	322	105	164	247	172	82	187	235	168	275	144	134	184	286	147	210	214	194	61	148	134
										Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =	
108	D1	4	880691 Series, Colorado W	White	Solventborne, Acrylic	284	248	250	261	139	120	129	129	131	127	137	132	152	113	121	129	57	56	63	58	54	65	57	58	58	51	40	53	136	16	94	83	73	11	92	58
348	D2	4	880691 Series, Colorado W	White	Solventborne, Acrylic				261	147	148	156	155	148	153	163	155	196	109	132	149	96	33	97	77	68	65	97	77	84	28	71	61	160	12	45	72	30	46	126	67
										Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =	
112	D1	8	880681 Series, Colorado W	White	Solventborne, Acrylic	180	174	113	156	120	114	130	121	127	161	158	149	142	114	135	130	77	55	78	71	59	51	109	70	31	22	39	128	28	45	67	55	14	84	51	
352	D2	8	880681 Series, Colorado W	White	Solventborne, Acrylic				156	109	143	155	136	118	184	163	155	156	124	148	143	84	41	83	68	26	71	109	68	85	36	55	162	34	73	91	48	59	97	68	
										Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =	
132	E1	8	880601 Series, Colorado W	White	Waterborne	255	233	219	236	199	288	293	260	185	313	222	240	225	210	210	217	108	55	67	71	48	51	52	50	45	33	45	54	46	22	41	97	27	46	57	
372	E2	8	880601 Series, Colorado W	White	Waterborne				236	146	319	351	272	84	348	172	201	92	210	142	182	30	25	126	68	18	27	35	27	20	33	19	28	33	45	35	23	22	30	25	
										Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =	
136	E1	12	880631 Series, Colorado W	White	Waterborne	331	332	375	346	236	281	307	275	224	298	310	261	279	222	266	256	131	114	150	133	90	138	133	120	139	55	126	107	219	96	183	169	171	41	154	122
376	E2	12	880631 Series, Colorado W	White	Waterborne				346	234	324	346	268	169	322	288	260	270	220	293	261	123	101	147	140	24	113	188	108	41	100	116	168	109	105	127	158	106	83	118	
										Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =	
140	E1	16	880621 Series, Colorado W	White	Waterborne	308	337	321	322	280	314	322	291	235	298	189	241	285	236	240	254	128	114	147	130	140	100	24	88	150	45	145	110	228	86	22	112	129	32	147	103
380	E2	16	880621 Series, Colorado W	White	Waterborne				322	216	316	322	285	143	292	303	246	218	224	288	240	98	98	133	110	65	95	98	88	108	110	84	101	112	95	123	110	86	87	85	88
										Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =	
160	F1	8	886001 Series, Thermoplas	White	Thermoplastic, Hdt-App.	321	275	206	267	353	423	450	409	388	346	405	343	478	111	333	307	59	115	96	70	46	119	98	67	21	123	14	23	136	20	19	108	27	46		
400	F2	8	886001 Series, Thermoplas	White	Thermoplastic, Hdt-App.				410	269	455	507	410	207	417	382	329	403	141	277	291	104	88	25	72	56	115	134	82	15	114	22	50	127	19	55	167	17	47		
										Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =	
164	F1	12	884490 Series, Thermoplas	White	Thermoplastic, Hdt-App.	379	191	109	226	325	430	467	407	288	346	475	370	459	157	423	346	72	121	99	91	151	133	84	123	41	122	24	62	153	22	91	14	114	17	48	
404	F2	12	884490 Series, Thermoplas	White	Thermoplastic, Hdt-App.				436	333	462	513	436	224	400	277	300	433	259	284	325	121	96	66	98	24	118	152	98	18	120	16	51	21	147	15	61	11	120	15	48
										Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =	
176	G1	4	Flame Tape	White	Thermoplastic, Preform.				218	276	146	231	218	93	129	127	216	119	129	195	59	88	27	58	27	104	95	75	22	85	70	50	60	98	84	67	82	15	39		
416	G2	4	Flame Tape	White	Thermoplastic, Preform.				246	346	203	190	246	256	554	480	430	236	242	107	165	38	109	60	68	12	133	79	75	14	119	84	42	105	92	80	110	114	67	97	
										Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =	
484	H1	4	Duraset Pathfinder	Yellow	MMA				186	180	202	158	193	180	132	275	198	209	182	170	175	59	77	118	64	42	82	103	75	77	86	77	52	88	78	50	71	16	46		
584	H2	4	Duraset Pathfinder	Yellow	MMA				186	206	173	187	186	93	140	182	162	178	153	146	162	59	80	48	64	23	75	33	44	15	61	64	17	99	35	50	65	16	41		
										Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =		Average =	Average =	Average =	
488	H1	8	Duraset (#1 - #8, not specifi	Yellow	MMA				214	139	268	233	214	232	112	133	178	226	234	199	220	77	97	160	111	56	96	155	102	171	63	106	211	68	124	134	101	74	111	96	
688	H2	8	Duraset (#1 - #8, not specifi	Yellow	MMA				214	133	268	240	214	206	181	232	148	206	181	232	200																				

Table 4

I-25 @ Lincoln Avenue (Asphalt Retro-reflectivity Readings)

Epoplex

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	Shoulder Reading	Wheel Track Reading	Midlane Reading	Note	Readings 9/30/05			Readings 10-14-05			Readings 11/09/05			Readings 12/13/05			Readings 1/24/06			Readings 2/28/06			14-Apr-06			17-May-06					
										Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading
72	C1	4	Epoplex LS90 (Single Drop) Ground	White	Polyurea					413	506	504	371	456	370	497	418	378	80	229	234	40	219	347	101	121	78	382	194	171	118	103	225			
312	C2	4	Epoplex LS90 (Single Drop)	White	Polyurea					352	494	454	278	468	448	399	400	421	146	198	238	78	197	139	190	94	181	342	197	207	198	14	190			
								Average =	454			Average =	399			Average =	419		Average =	188			Average =	170			Average =	123			Average =	269			Average =	141
76	C1	8	Epoplex LS90 (Double Drop) Ground	White	Polyurea					510	541	623	469	492	485	572	448	436	218	210	208	183	301	170	227	96	70	307	149	88	141	70	191			
316	C2	8	Epoplex LS90 (Double Drop)	White	Polyurea					465	596	607	459	571	559	643	377	523	344	163	118	183	259	269	237	125	155	446	229	203	184	131	249			
								Average =	557			Average =	506			Average =	500		Average =	210			Average =	228			Average =	152			Average =	237			Average =	161
492	I1	12	Epoplex LS90 (Single Drop) Ground	Yellow	Polyurea					143	188	188	170	152	347	162	161	175	50	85	99	41	106	85	72	54	79	121	69	86	79	94	75			
692	I2	12	Epoplex LS90 (Single Drop) Ground	Yellow	Polyurea					153	192	188	83	185	194	146	165	173	75	105	116	19	119	124	66	76	101	105	96	113	99	71	72			
								Average =	175			Average =	189			Average =	164		Average =	88			Average =	82			Average =	75			Average =	98			Average =	82
496	I1	16	Epoplex LS90 (Double Drop) Ground	Yellow	Polyurea					288	296	320	289	94	241	287	230	234	85	99	79	38	141	62	103	47	52	183	66	50	55	82	87			
696	I2	16	Epoplex LS90 (Double Drop) Ground	Yellow	Polyurea					285	409	303	180	328	225	316	250	267	187	154	222	16	132	110	131	58	92	218	93	134	99	56	107			
								Average =	317			Average =	226			Average =	264		Average =	138			Average =	83			Average =	81			Average =	124			Average =	81
892	O1	12	Epoplex LS50 (Standard)	White	Epoxy					157	267	323	169	256	283	175	214	222	122	100	163	35	124	141	78	95	130	130	117	104	86	55	80			
906	O2	12	Epoplex LS50 (Standard)	White	Epoxy					188	261	310	205	253	277	239	202	274	144	99	181	48	110	171	150	44	70	249	68	134	139	53	112			
								Average =	254			Average =	241			Average =	221		Average =	135			Average =	105			Average =	95			Average =	134			Average =	88
896	O1	16	Epoplex LS50 (Double Drop)	White	Epoxy					260	530	608	199	330	495	339	335	505	168	172	290	19	182	325	261	110	157	267	131	179	137	85	141			
940	O2	16	Epoplex LS50 (Double Drop)	White	Epoxy					270	490	553	363	345	485	328	303	393	205	130	231	47	138	149	115	54	72	197	76	142	111	51	108			
								Average =	492			Average =	370			Average =	387		Average =	199			Average =	143			Average =	128			Average =	165			Average =	106
980	P1	12	Epoplex LS50 (Standard)	Yellow	Epoxy					103	177	182	116	161	174	133	140	142	51	67	130	16	77	127	59	40	90	92	60	87	96	44	61			
1024	P2	12	Epoplex LS50 (Standard)	Yellow	Epoxy					137	168	122	151	158	148	182	117	136	105	58	82	31	76	93	82	35	94	133	52	82	84	35	93			
								Average =	148			Average =	151			Average =	142		Average =	79			Average =	70			Average =	63			Average =	84			Average =	69
984	P1	16	Epoplex LS50 (Double Drop)	Yellow	Epoxy					150	176	232	128	192	198	128	183	188	46	57	117	16	63	143	57	45	109	109	63	101	62	57	88			
1028	P2	16	Epoplex LS50 (Double Drop)	Yellow	Epoxy					131	219	218	141	168	170	178	124	156	87	58	107	15	78	76	82	42	93	165	64	82	78	37	87			
								Average =	188			Average =	186			Average =	156		Average =	156			Average =	79			Average =	65			Average =	94			Average =	65

Flint Trading Co.

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	Shoulder Reading	Wheel Track Reading	Midlane Reading	Note	Readings 9/30/05			Readings 10-14-05			Readings 11/09/05			Readings 12/13/05			Readings 1/24/06			Readings 2/28/06			14-Apr-06			17-May-06		
										Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading
180	G1	8	PreMark Plus	White	Thermoplastic, Preform.	236	506	588		369	278	478	304	265	373	100	94	131	30	98	15	26	54	76	44	95	65	71	78	70			
420	G2	8	PreMark Plus	White	Thermoplastic, Preform.	255	503	530		183	399	412	334	343	468	120	82	103	27	114	114	38	116	85	123	81	81	77	96	89			
								Average =	456			Average =	353			Average =	348		Average =	105			Average =	66			Average =	82			Average =	80	
184	G1	12	ViaGRIP	White	Thermoplastic, Preform.	192	167	299		209	107	177	194	90	116	57	68	67	56	101	59	45	75	77	84	93	46	78	95	61			
424	G2	12	ViaGRIP	White	Thermoplastic, Preform.	232	355	464		171	329	355	248	202	454	52	78	121	20	102	119	52	67	78	83	73	63	72	88	67			
								Average =	285			Average =	225			Average =	218		Average =	74			Average =	75			Average =	74			Average =	77	
232	H1	28	PreMark Plus	W-on-B	Thermoplastic, Preform.	330	421	598		437	474	521	530	264	459	147	98	248	88	102	174	220	55	18	426	117	12	11	50	227			
472	H2	28	PreMark Plus	W-on-B	Thermoplastic, Preform.	301	411	489		244	389	503	433	343	422	119	142	268	51	106	129	18	109	20	22	64	12	7	57	184			
								Average =	425			Average =	428			Average =	409		Average =	170			Average =	108			Average =	70			Average =	89	
568	K1	24	PreMark Plus	Yellow	Thermoplastic, Preform.	76	154	79		56	122	38	123	64	88	46	43	28	12	47	51	59	33	44	79	50	29	56	39	55			
768	K2	24	PreMark Plus	Yellow	Thermoplastic, Preform.	190	157	256		167	126	142	258	119	157	80	48	50	15	52	57	106	36	46	37	41	28	5	35	35			
								Average =	152			Average =	108			Average =	135		Average =	49			Average =	39			Average =	44			Average =	38	
672	N1	16	PreMark Plus	Y-on-B	Thermoplastic, Preform.	44	169	250		68	269	194	66	98	200	27	65	138	22	78	143	50	35	98	72	61	83	85	46	62			
872	N2	16	PreMark Plus	Y-on-B	Thermoplastic, Preform.	66	118	248		71	148	233	92	87	234	31	48	160	19	65	98	73	43	77	27	82	66	41	66	60			
								Average =	148			Average =	164			Average =	130		Average =	78			Average =	71			Average =	63			Average =	60	

Table 4

I-25 @ Lincoln Avenue (Asphalt Retro-reflectivity Readings)

Swarco

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	Shoulder Reading	Midline Reading	Wheel Track Reading	Note	Readings 9/30/05			Readings 10-14-05			Readings 11/09/05			Readings 12/13/05			Readings 12/4/06			Readings 2/28/06			14-Apr-06			17-May-06			
										Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading
288	A2	28	Director 35, Intersection Marking Tape	White	Plastic Tape, Preformed					409	258	471	177	246	189	100	118	114	31	38	59	13	41	59	13	43	21	14	64	11	6	44	14	
272	A2	32	Director 35, Intersection Marking Tape	White	Plastic Tape, Preformed					359	276	386	113	229	212	98	169	181	28	70	134	12	65	118	13	64	9	16	51	11	9	56	13	
										Average = 360			Average = 196			Average = 130			Average = 60			Average = 51			Average = 27			Average = 30			Average = 24			
28	A1	28	Director 60, Intersection Marking Tape	White	Plastic Tape, Preformed	517	536	377		465	348	536	94	226	268	521	124	222	166	28	60	78	99	38	40	31	50	54	57	26	60	46	55	
32	A1	32	Director 60, Intersection Marking Tape	White	Plastic Tape, Preformed	479	475	486		423	293	454	380	246	351	468	180	191	258	68	108	62	81	53	68	44	26	84	80	18	54	46	75	
										Average = 400			Average = 261			Average = 284			Average = 115			Average = 69			Average = 43			Average = 53			Average = 56			
156	F1	4	Swarcotherm Alkyd-Based Thermoplastic	White	Thermoplastic, Hot-App	240	193	460		327	491	494	404	474	444	266	345	396	75	173	160	145	162	175	115	153	114	150	178	82	111	139	115	
396	F2	4	Swarcotherm Alkyd-Based Thermoplastic	White	Thermoplastic, Hot-App					240	343	404	241	371	308	323	320	284	206	140	187	98	194	214	123	162	82	233	189	122	111	159	179	
										Average = 383			Average = 374			Average = 322			Average = 157			Average = 165			Average = 125			Average = 139			Average = 136			
548	K1	4 (7)	Swarcotherm Alkyd-Based Thermoplastic	Yellow	Thermoplastic, Hot-App								404	474	444																			
748	K2	4 (8)	Swarcotherm Alkyd-Based Thermoplastic	Yellow	Thermoplastic, Hot-App					159	208	240	60	197	180																			
										Average = 202			Average = 146			Average = 400/10			Average = 55			Average = 48			Average = 44			Average = 64			Average = 28			
632	M1	16	Director 35, Intersection Marking Tape	Yellow	Plastic Tape, Preformed	236	241	252		139	189	184	115	177	146	156	149	152	32	94	8	14	73	4	12	53	5	13	50	7	6	38	12	
832	M2	16	Director 35, Intersection Marking Tape	Yellow	Plastic Tape, Preformed					131	156	156	52	128	165	143	144	157	25	98	103	19	94	107	11	76	85	13	40	75	70	59	15	
										Average = 159			Average = 131			Average = 150			Average = 60			Average = 52			Average = 40			Average = 33			Average = 33			
636	M1	20	Director 60, Pavement Marking Tape	Yellow	Plastic Tape, Preformed	353	458	494		279	365	450	148	260	197	380	182	211	56	50	76	21	22	118	24	17	66	13	26	122	44	24	25	
836	M2	20	Director 60, Pavement Marking Tape	Yellow	Plastic Tape, Preformed					258	383	463	116	275	289	332	220	288	55	69	83	13	57	81	18	40	67	27	25	35	41	31	35	
										Average = 366			Average = 214			Average = 289			Average = 65			Average = 52			Average = 39			Average = 41			Average = 33			

Zumar Industries, Inc.

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	Shoulder Reading	Midline Reading	Wheel Track Reading	Note	Readings 9/30/05			Readings 10-14-05			Readings 11/09/05			Readings 12/13/05			Readings 12/4/06			Readings 2/28/06			14-Apr-06			17-May-06		
										Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading
192	G1	20	HotTape, High Optic, Highway Series, 90 ml	White	Thermoplastic, Preform.					291	263	411	329	277	215	410	225	143	129	103	120	14	96	18	10	61	82	11	66	79	7	65	14
432	G2	20	HotTape, High Optic, Highway Series, 90 ml	White	Thermoplastic, Preform.					233	290	576	24	341	644	95	275	571	42	90	125	15	120	35	15	78	6	49	88	9	6	100	24
										Average = 344			Average = 305			Average = 287			Average = 102			Average = 50			Average = 39			Average = 50			Average = 36		
196	G1	24	HotTape, High Optic, Highway Series, 125 ml	White	Thermoplastic, Preform.					351	442	524	280	451	204	440	17	167	37	7	117	15	5	76	163	6	67	12	13	88	5	9	14
436	G2	24	HotTape, High Optic, Highway Series, 125 ml	White	Thermoplastic, Preform.					323	360	636	129	563	685				24	100	90	10	89	4	13	88	6	14	88	8	5	79	12
										Average = 448			Average = 387			Average = 208			Average = 63			Average = 33			Average = 57			Average = 34			Average = 21		
576	K1	32	HotTape, High Optic, Highway Series, 90 ml	Yellow	Thermoplastic, Preform.					93	284	451	214	249	455	323	179	418	80	97	81	12	67	152	60	34	102	65	56	127	119	33	42
776	K2	32	HotTape, High Optic, Highway Series, 90 ml	Yellow	Thermoplastic, Preform.					129	322	283	150	229	294	217	212	294	70	90	74	41	69	58	61	46	123	46	64	117	104	58	81
										Average = 280			Average = 265			Average = 274			Average = 82			Average = 67			Average = 71			Average = 78			Average = 73		
580	K1	36	HotTape, High Optic, Highway Series, 125 ml	Yellow	Thermoplastic, Preform.					238	390	408	217	183	293	312	208	387	82	77	143	14	83	67	28	58	68	75	55	10	42	40	102
780	K2	36	HotTape, High Optic, Highway Series, 125 ml	Yellow	Thermoplastic, Preform.					207	329	420	123	239	336	177	197	383	124	79	74	35	90	102	53	49	93	17	98	30	53	70	34
										Average = 332			Average = 232			Average = 274			Average = 97			Average = 65			Average = 58			Average = 51			Average = 57		

Table 5

I-25 @ Happy Canyon (Concrete Retro-reflectivity Readings)

Advanced Traffic Markings, Inc.

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	Shoulder Reading	Midlane Reading	Wheel Track Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes				
36	A1	36	ATM 300	White	Plastic Tape, Preformed	612	981	1040		940	496	358		317	203	436		249	112	360		130	137	182		150	42	159		114	30	72		264	44	59		56	41	92	
276	A2	36	ATM 300	White	Plastic Tape, Preformed					664	728	353		322	250	455		304	182	373		135	39	146		97	54	155		131	37	62		140	47	58		67	42	125	
										Average = 565				Average = 311				Average = 263				Average = 128				Average = 110				Average = 74				Average = 102				Average = 71			
40	A1	40	ATM 400	White	Plastic Tape, Preformed	753	772	715		1038	653	478		865	381	649		825	107	653		419	32	343		14	44	174		14	34	153		13	52	58		64	50	17	
280	A2	40	ATM 400	White	Plastic Tape, Preformed					423	1004	305		657	204	239		681	193	785		483	37	207		53	55	53		16	36	22		19	56	14		9	49	429	
										Average = 650				Average = 508				Average = 541				Average = 254				Average = 66				Average = 46				Average = 35				Average = 103			
208	H1	4	ATM 300-C	W-on-B	Plastic Tape, Preformed	752	829	881		523	915	537		390	334	766		486	217	638		84	61	190		82	57	321		119	31	78		121	49	189		150	47	138	
448	H2	4	ATM 300-C	W-on-B	Plastic Tape, Preformed					843	937	524		800	306	478		678	229	732		82	55	223		90	93	240		122	35	103		50	52	94		89	45	355	
										Average = 713				Average = 512				Average = 486				Average = 116				Average = 147				Average = 61				Average = 93				Average = 157			
640	M1	24	ATM 300	Yellow	Plastic Tape	494	528	512		325	513	228		289	183	413		413	121	339		167	41	50		169	39	101		120	24	27		113	36	12		31	32	31	
840	M2	24	ATM 300	Yellow	Plastic Tape					569	290	314		244	156	303		223	83	253		12	50	67		215	38	75		17	23	29		73	33	33		33	30	18	
										Average = 373				Average = 281				Average = 228				Average = 65				Average = 106				Average = 40				Average = 50				Average = 29			
644	M1	28	ATM 400	Yellow	Plastic Tape	508	511	489		374	584	294		273	198	272		124	58	257		36	31	44		29	32	36		97	21	36		21	30	38		120	38	27	
844	M2	28	ATM 400	Yellow	Plastic Tape					582	413	332		311	233	218		170	76	107		94	35	28		124	32	53		58	21	19		52	29	27		26	26	18	
										Average = 430				Average = 251				Average = 132				Average = 45				Average = 51				Average = 42				Average = 33				Average = 43			

Brite-Line Technologies, Inc.

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	Shoulder Reading	Midlane Reading	Wheel Track Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes				
44	A1	44	Series 1000	White	Plastic Tape, Preformed					400	450	306		403	238	282		418	149	247		85	39	143		212	40	75		74	31	50		200	54	55		54	45	59	
284	A2	44	Series 1000	White	Plastic Tape, Preformed					317	501	245		170	187	202		158	135	191		72	34	86		67	49	94		45	33	72		60	51	56		56	46	186	
										Average = 370				Average = 247				Average = 216				Average = 77				Average = 68				Average = 51				Average = 79				Average = 74			
212	H1	8	Brite-Line Contrast Tape	W-on-B	Plastic Tape, Preformed					333	420	371		316	157	366		366	149	170		25	35	85		63	39	88		54	26	34		31	47	59		46	41	98	
452	H2	8	Brite-Line Contrast Tape	W-on-B	Plastic Tape, Preformed					401	461	250		156	145	286		156	127	383		137	29	121		66	41	86		136	26	42		181	43	42		38	43	99	
										Average = 373				Average = 238				Average = 223				Average = 72				Average = 64				Average = 53				Average = 67				Average = 61			
648	M1	32	Series 1000	Yellow	Plastic Tape					275	337	234		140	141	201		114	94	215		135	30	89		31	28	47		67	21	35		63	31	40		19	28	38	
848	M2	32	Series 1000	Yellow	Plastic Tape					329	316	326		103	225	319		87	172	213		117	72	86		80	37	122		71	21	27		52	33	30		37	28	55	
										Average = 303				Average = 188				Average = 148				Average = 88				Average = 58				Average = 40				Average = 42				Average = 34			

Table 5

I-25 @ Happy Canyon (Concrete Retro-reflectivity Readings)

Colorado Paint Co.

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	Shoulder Reading	Midlane Reading	Wheel Track Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes			
88	C1	20	UC 100	White	Urethane					497	255	109	Notes:	483	268	379		331	30	79	Notes:	104	10	10	Notes:	259	14	11	Notes:	214	11	15	Notes:	36	19	17	Notes:			
328	C2	20	UC 100	White	Urethane					465	305	176		373	65	192		322	34	136		261	11	19		198	14	27		241	11	12		208	19	19				
										Average = 301				Average = 283				Average = 155				Average = 69				Average = 87				Average = 84				Average = 53				Average = 41		
116	D1	12	1120 Series	White	Low VOC Solvent-Base					274	54	77		84	68	51		106	65	47		105	32	34		110	42	55		62	22	22		68	28	39				
356	D2	12	1120 Series	White	Low VOC Solvent-Base					134	41	54		73	47	42		67	45	37		45	30	29		68	59	59		57	26	26		65	30	40				
										Average = 106				Average = 61				Average = 61				Average = 46				Average = 66				Average = 36				Average = 45				Average = 39		
128	E1	4	1160 Series Fast-Dry Water	White	Acrylic Waterborne					381	384	139		246	31	159		272	202	228		237	9	30		170	17	53		85	11	24		64	21	20				
368	E2	4	1160 Series Fast-Dry Water	White	Acrylic Waterborne					280	302	120		247	76	129		210	39	65		122	10	18		179	14	20		170	11	12		38	21	16				
										Average = 268				Average = 148				Average = 169				Average = 71				Average = 76				Average = 52				Average = 30				Average = 28		
884	O1	4	1180 Series Two-Part Epoxy	White	Epoxy					264	202	166		218	106	143		170	70	119		119	39	59		122	31	49		108	26	27		95	28	43				
920	O2	4	1180 Series Two-Part Epoxy	White	Epoxy					227	177	124		173	124	104		170	76	129		139	47	67		73	30	44		233	39	74		228	47	60				
										Average = 193				Average = 148				Average = 122				Average = 78				Average = 58				Average = 85				Average = 84				Average = 50		
508	I1	28	UC 100	Yellow	Urethane					378	159	116		348	49	50		207	24	94		153	8	36		84	13	26		157	11	29		118	62	83				
										Average = 218				Average = 149				Average = 108				Average = 66				Average = 41				Average = 66				Average = 88				Average = 66		
536	J1	12	1120 Series	Yellow	Low VOC Solvent-Base					53	22	21		38	23	23		38	23	21		31	15	18		38	30	31		40	16	18		35	21	21				
736	J2	12	1120 Series	Yellow	Low VOC Solvent-Base					34	27	22		35	24	23		35	23	23		30	16	19		37	26	27		29	14	17		30	18	21				
										Average = 30				Average = 28				Average = 27				Average = 22				Average = 32				Average = 22				Average = 24				Average = 23		
592	L1	4	1166LF Series Fast-Dry Wax	Yellow	Acrylic Waterborne					146	94	49		172	24	30		108	19	49		71	8	17		84	14	16		100	11	13		47	20	15				
792	L2	4	1166LF Series Fast-Dry Wax	Yellow	Acrylic Waterborne					175	59	91		137	56	41		155	19	56		110	10	16		59	17	53		75	13	16		43	20	21				
										Average = 102				Average = 77				Average = 68				Average = 39				Average = 41				Average = 38				Average = 28				Average = 23		
972	P1	4	1186LF Series Two-Part Epoxy	Yellow	Epoxy					182	135	109		110	77	107		129	72	64		94	36	42		84	23	47		83	14	25		101	17	32				
1016	P2	4	1186LF Series Two-Part Epoxy	Yellow	Epoxy					201	141	100		132	77	87		165	64	71		93	32	32		69	23	30		74	19	22		87	24	22				
										Average = 145				Average = 98				Average = 94				Average = 55				Average = 45				Average = 40				Average = 47				Average = 45		

Table 5

I-25 @ Happy Canyon (Concrete Retro-reflectivity Readings)

Ennis Paint Co.

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Catalization	Shoulder Reading	Midlane Reading	Wheel Track Reading	30-Sep-05			14-Oct-05			5-Nov-05			13-Dec-05			24-Jan-06			28-Feb-06			Readings 4/14/06			Readings 5/17/06											
									Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading						
55	B1	4	Dursel Pathfinder	White	MMA				388	512	423	454	378	370	434	394	432	301	354	362	231	188	234	214	220	185	241	224	239	129	128	155	246	159	92	196	74	113	149	112	
296	B2	4	Dursel Pathfinder	White	MMA				559	488	397	445	422	327	425	394	422	273	342	359	157	149	218	176	211	178	159	193	210	124	79	139	239	150	65	151	123	124	148	132	
									Average =			460	Average =			363	Average =			359	Average =			196	Average =			204	Average =			152	Average =			199	Average =			122	
60	B1	8	Dursel (#1 - #8, not specified)	White	MMA				279	355	376	337	384	379	355	366	302	341	340	338	170	174	232	194	180	159	203	204	213	63	208	161	314	91	220	208	143	67	173	128	
300	B2	8	Dursel (#1 - #8, not specified)	White	MMA				306	374	393	358	334	388	380	367	326	357	367	359	79	277	159	172	129	142	248	173	166	90	186	147	316	84	151	184	120	69	226	138	
									Average =			347	Average =			367	Average =			339	Average =			182	Average =			169	Average =			154	Average =			196	Average =			133	
108	D1	4	98091 Series, Colorado White, VOC Compliant	White	Solventborne, Acrylic	161	139	139	145	40	31	36	96	167	191	191	153	49	45	43	46	39	18	26	28	107	20	24	51	56	11	14	21	52	19	38	30	16	43	30	
348	D2	4	98091 Series, Colorado White, VOC Compliant	White	Solventborne, Acrylic	244	233	232	236	126	91	46	84	191	59	62	147	52	47	42	47	38	14	27	28	74	32	49	54	82	12	21	81	21	22	41	23	16	41	27	
									Average =			191	Average =			116	Average =			46	Average =			27	Average =			51	Average =			33	Average =			59	Average =			28	
382	D2	8	980681 Series, Colorado White, VOC Compliant	White	Solventborne, Acrylic	197	181	170	183	167	184	90	188	169	87	127	128	145	66	147	119	104	20	62	63	93	43	75	70	101	14	21	45	95	23	48	55	19	58	44	
112	D1	8	980681 Series, Colorado White, VOC Compliant	White	Solventborne, Acrylic	152	141	162	152	152	149	116	139	144	117	180	147	126	80	147	118	98	22	75	65	46	25	41	57	81	19	56	53	83	22	36	47	29	18	65	37
									Average =			167	Average =			137	Average =			119	Average =			64	Average =			54	Average =			48	Average =			51	Average =			41	
132	E1	8	980621 Series, Colorado White Waterborne	White	Waterborne	238	239	284	294	295	345	281	307	291	245	289	282	290	276	215	267	157	42	173	124	71	84	135	51	139	17	76	71	78	21	59	59	39	15	73	42
372	E2	8	980621 Series, Colorado White Waterborne	White	Waterborne	295	298	280	289	354	346	203	301	304	266	320	297	302	153	275	243	144	35	153	111	155	38	150	114	190	17	49	85	94	22	66	61	56	18	88	54
									Average =			304	Average =			279	Average =			292	Average =			117	Average =			106	Average =			81	Average =			57	Average =			48	
136	E1	12	980631 Series, Colorado White, Waterborne	White	Waterborne	289	301	234	295	315	345	263	308	288	276	316	290	230	442	227	304	173	75	228	159	202	171	189	161	207	75	129	121	223	57	132	137	103	49	124	92
376	E2	12	980631 Series, Colorado White, Waterborne	White	Waterborne	230	303	320	304	299	309	287	304	292	279	320	299	268	209	282	299	168	124	183	159	151	128	193	167	200	62	100	127	184	66	125	135	87	36	94	72
									Average =			306	Average =			296	Average =			276	Average =			159	Average =			172	Average =			129	Average =			121	Average =			101	
140	E1	16	980601 Series, Colorado White, Waterborne	White	Waterborne	409	361	347	373	350	460	382	394	190	381	296	391	240	329	106	263	81	92	94	88	111	93	81	59	133	26	41	67	87	30	46	54	41	37	61	46
382	E2	16	980601 Series, Colorado White, Waterborne	White	Waterborne	375	403	334	391	296	459	365	381	249	348	485	455	291	202	127	44	125	95	96	82	52	90	74	71	99	26	48	58	37	27	68	49	29	68	44	
									Average =			382	Average =			321	Average =			232	Average =			94	Average =			85	Average =			72	Average =			56	Average =			45	
160	F1	8	886001 Series, Thermoplastic	White	Thermoplastic, Hot-App.				427	527	315	428	405	122	295	274	390	250	322	331	179	100	252	129	104	145	137	129	96	101	79	93	147	137	110	131	52	112	90	85	
400	F2	8	886001 Series, Thermoplastic	White	Thermoplastic, Hot-App.				503	499	329	440	339	176	334	283	353	105	410	295	65	92	151	103	84	125	104	104	89	104	85	92	135	128	129	131	117	112	105	111	
									Average =			432	Average =			279	Average =			305	Average =			148	Average =			117	Average =			92	Average =			131	Average =			98	
164	F1	12	88490 Series, Thermoplastic	White	Thermoplastic, Hot-App.				594	495	393	464	376	197	516	360	255	180	409	291	111	103	193	138	95	153	119	102	133	108	132	104	97	137	114	116	126	82	99	102	
404	F2	12	88490 Series, Thermoplastic	White	Thermoplastic, Hot-App.				591	501	413	472	318	201	282	267	280	105	416	267	88	68	140	176	94	145	119	100	93	101	98	136	137	83	116	79	119	130	108		
									Average =			468	Average =			315	Average =			274	Average =			114	Average =			109	Average =			111	Average =			117	Average =			106	
176	G1	4	FlameTape	White	Thermoplastic, Preform.				245	252	178	187	216	136	187	188	178	118	195	164	73	66	104	81	164	95	154	138	151	54	57	67	93	79	98	59	67	158	95		
416	G2	4	FlameTape	White	Thermoplastic, Preform.				527	193	354	354	125	318	159	159	143	168	144	152	68	112	152	111	72	103	134	100	69	53	77	81	178	74	78	110	78	62	105	82	
									Average =			292	Average =			190	Average =			159	Average =			96	Average =			120	Average =			77	Average =			100	Average =			88	

Table 5

I-25 @ Happy Canyon (Concrete Retro-reflectivity Readings)

Epoplex

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	Shoulder Reading	Wheel Track Reading	Midline Reading	Readings 9/30/05			Readings 10-14-05			Readings 11/09/05			Readings 12/13/05			Readings 1/24/06			Readings 2/28/06			14-Apr-06			17-May-06									
									Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading				
72	C1	4	Epoplex L590 (Single Drop) Ground	White	Polyurea				498	456	449		494	421	468		496	365	430		217	194	317		286	180	359		306	79	188		343	139	231		261	137	241
312	C2	4	Epoplex L590 (Single Drop) Ground	White	Polyurea				503	530	513		467	445	536		433	376	473		285	179	290		256	173	318		248	94	237		342	120	195		228	117	198
									Average = 482				Average = 472				Average = 429				Average = 244				Average = 282				Average = 192				Average = 228				Average = 197		
76	C1	8	Epoplex L590 (Double Drop) Ground	White	Polyurea				671	810	664		669	465	519		661	385	484		157	185	230		453	201	286		464	100	112		424	119	178		250	110	261
316	C2	8	Epoplex L590 (Double Drop) Ground	White	Polyurea				829	847	732		437	534	670		356	429	505		186	169	267		137	171	188		201	116	155		296	135	170		159	114	145
									Average = 759				Average = 552				Average = 470				Average = 199				Average = 228				Average = 191				Average = 222				Average = 173		
492	I1	12	Epoplex L590 (Single Drop) Ground	Yellow	Polyurea				207	207	193		185	170	170		165	146	178		89	68	118		83	74	133		138	52	90		147	58	96		91	44	93
692	I2	12	Epoplex L590 (Single Drop) Ground	Yellow	Polyurea				186	259	233		210	177	229		200	155	266		109	72	155		79	66	133		117	41	80		143	50	94		85	45	116
									Average = 208				Average = 190				Average = 185				Average = 102				Average = 95				Average = 86				Average = 98				Average = 79		
496	I1	16	Epoplex L590 (Double Drop) Ground	Yellow	Polyurea				311	383	349		263	259	288		250	206	233		187	78	158		131	82	139		196	60	82		226	57	103		91	46	143
696	I2	16	Epoplex L590 (Double Drop) Ground	Yellow	Polyurea				417	383	380		338	257	256		318	224	239		289	70	141		205	71	101		125	61	90		234	57	80		77	58	135
									Average = 387				Average = 277				Average = 245				Average = 154				Average = 122				Average = 102				Average = 126				Average = 92		
892	O1	12	Epoplex L590 (Standard) Ground	White	Epoxy				318	244	238		259	229	229		242	175	199		170	89	139		168	85	70		151	50	65		157	60	72		66	44	153
936	O2	12	Epoplex L590 (Standard) Ground	White	Epoxy				286	298	284		266	251	271		259	160	252		192	102	128		155	66	98		225	44	87		221	62	77		60	42	196
									Average = 281				Average = 251				Average = 215				Average = 137				Average = 104				Average = 104				Average = 168				Average = 94		
896	O1	16	Epoplex L590 (Double Drop) Ground	White	Epoxy				461	357	417		264	267	333		209	198	285		221	76	129		208	79	108		187	61	72		188	96	115		104	53	189
940	O2	16	Epoplex L590 (Double Drop) Ground	White	Epoxy				585	446	440		388	277	393		369	192	319		181	94	158		144	69	109		151	52	76		157	77	86		83	52	177
									Average = 481				Average = 334				Average = 282				Average = 143				Average = 100				Average = 120				Average = 110						
980	P1	12	Epoplex L590 (Standard) Ground	Yellow	Epoxy				213	200	189		158	154	176		150	122	153		147	61	75		105	47	93		95	31	58		123	45	88		66	41	100
1024	P2	12	Epoplex L590 (Standard) Ground	Yellow	Epoxy				202	222	189		179	159	172		169	111	148		132	54	83		105	58	80		89	32	52		148	51	53		62	48	134
									Average = 202				Average = 168				Average = 142				Average = 92				Average = 61				Average = 60				Average = 61				Average = 75		
984	P1	16	Epoplex L590 (Double Drop) Ground	Yellow	Epoxy				273	221	217		235	170	186		242	135	127		95	98	72		140	51	94		117	34	77		91	38	65		68	38	107
1028	P2	16	Epoplex L590 (Double Drop) Ground	Yellow	Epoxy				210	176	187		214	162	158		202	143	123		130	64	58		82	59	63		95	42	60		120	57	59		58	53	124
									Average = 214				Average = 188				Average = 162				Average = 86				Average = 82				Average = 71				Average = 71				Average = 75		

Flint Trading Co.

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	30-Sep-05			14-Oct-05			9-Nov-05			13-Dec-05			24-Jan-06			28-Feb-06			14-Apr-06			17-May-06									
						Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading	Shoulder Reading	Wheel Track Reading	Midline Reading				
180	G1	8	PreMark Plus	White	Thermoplastic, Preform.	431	276	412		143	251	247		131	127	236		66	74	115		149	110	136		72	64	68		87	78	84		77	64	69
420	G2	8	PreMark Plus	White	Thermoplastic, Preform.	187	381	157		228	177	221		192	117	348		97	70	110		64	126	117		49	70	85		94	84	88		88	76	66
						Average = 307				Average = 211				Average = 192				Average = 89				Average = 117				Average = 68				Average = 88				Average = 73		
184	G1	12	Via/GRP	White	Thermoplastic, Preform.	191	196	254		197	167	220		210	141	179		45	84	75		66	97	116		24	53	28		43	76	17		16	65	50
424	G2	12	Via/GRP	White	Thermoplastic, Preform.	484	327	385		383	250	232		356	182	328		58	62	128		82	86	70		110	56	41		101	74	67		70	65	87
						Average = 305				Average = 243				Average = 233				Average = 75				Average = 86				Average = 52				Average = 63				Average = 59		
188	G1	16	PreMark Plus (2-component)	White	Thermoplastic, Preform.	413	444	402		302	259	332		223	282	201		147	70	112		113	122	172		83	43	50		79	63	79		47	53	73
428	G2	16	PreMark Plus (2-component)	White	Thermoplastic, Preform.	404	294	200		227	194	248		242	121	168		80	80	123		52	83	126		107	58	87		206	79	87		93	59	122
						Average = 380				Average = 286				Average = 208				Average = 102				Average = 111				Average = 71				Average = 98				Average = 75		
232	H1	28	PreMark Plus	W-on-B	Thermoplastic, Preform.	499	250	131		718	140	216		588	79	185		161	76	96		232	92	142		119	61	60		184	77	110		79	63	98
472	H2	28	PreMark Plus	W-on-B	Thermoplastic, Preform.	286	193	70		148	66	162		173	84	133		66	70	144		43	99	173		106	62	102		89	73	65		63	64	60
						Average = 238				Average = 242				Average = 207				Average = 102				Average = 138				Average = 85				Average = 100				Average = 71		
568	K1	24	PreMark Plus	Yellow	Thermoplastic, Preform.	74	55	74		114	115	106		107	67	123		61	38	44		27	53	65		53	41	40		50	44	44		58	39	55
768	K2	24	PreMark Plus	Yellow	Thermoplastic, Preform.	261	243	111		161	71	102		127	60	105		83	29	38		82	43	36		44	33	24		105	40	36		42	35	60
						Average = 138				Average = 112				Average = 98				Average = 49				Average = 51				Average = 39				Average = 53				Average = 48		
572	K1	28	PreMark Plus (2-component)	Yellow	Thermoplastic, Preform.	79	48	85		136	80	44		62	72	49		45	30	48		72	47	57		75	31	30		92	36	58		48	31	37
772	K2	28	PreMark Plus (2-component)	Yellow	Thermoplastic, Preform.	165	246	70		87	62	214		56	47	157		58																		

Table 5

I-25 @ Happy Canyon (Concrete Retro-reflectivity Readings)

Innovative Performance Systems

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	Shoulder Reading	Midlane Reading	Wheel Track Reading	Notes	Readings 9/30/05			Readings 10-14-05			Readings 11/09/05			Readings 12/13/05			Readings 1/24/06			Readings 2/28/06			14-Apr-06			17-May-06				
										Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading
80	C1	12	HPS-5 (Beads, Premium)	White	Polyurea					555	560	578	219	438	384	418	372	370	109	137	168	180	118	148	232	63	90	453	74	115	109	60	228		
320	C2	12	HPS-5 (Beads, Premium)	White	Polyurea					522	536	550	469	492	479	506	425	482	184	166	156	194	136	144	261	60	119	256	84	126	123	72	117		
										Average = 584			Average = 414			Average = 429			Average = 153			Average = 153			Average = 148			Average = 185			Average = 118				
96	C1	28	HPS-4 (Beads, Premium)	White	Urethane					428	444	306	379	200	250	326	203	363	114	109	184	152	114	193	215	75	117	273	73	127	147	88	126		
336	C2	28	HPS-4 (Beads, Premium)	White	Urethane					479	579	468	280	380	430	415	313	328	106	116	213	78	87	137	177	51	99	202	71	126	116	63	112		
										Average = 451			Average = 324			Average = 335			Average = 140			Average = 127			Average = 122			Average = 145			Average = 105				
900	O1	20	HPS-3 (NITPEP version)	White	Epoxy					395	319	328	322	246	274	253	175	228	165	90	157	183	88	114	142	60	96	146	88	122	102	89	134		
944	O2	20	HPS-3 (NITPEP version)	White	Epoxy					319	390	389	224	287	325	199	191	272	195	99	162	157	81	127	167	59	81	225	92	86	80	77	123		
										Average = 353			Average = 280			Average = 220			Average = 145			Average = 125			Average = 101			Average = 127			Average = 101				
904	O1	24	HPS-3 (CDOT version)	White	Epoxy					358	348	367	271	306	335	253	208	280	271	129	196	175	85	151	309	60	111	272	100	146	135	75	144		
948	O2	24	HPS-3 (CDOT version)	White	Epoxy					355	362	346	273	302	331	285	184	288	163	100	152	121	88	126	369	68	126	370	101	149	86	94	157		
										Average = 356			Average = 303			Average = 250			Average = 169			Average = 124			Average = 174			Average = 150			Average = 115				
920	O1	40	HPS-6	White						332	309	288				249	179	227	112	41	70			89	75	88	123	19	34	124	28	54	71	69	167
										Average = 290			Average = 270			Average = 213			Average = 105			Average = 94			Average = 59			Average = 69			Average = 106				
516	I1	36	HPS-4 (Beads, Premium)	Yellow	Urethane					420	353	323	222	248	266	387	196	247	159	78	106	128	65	95	158	45	61	139	52	84					
716	I2	36	HPS-4 (Beads, Premium)	Yellow	Urethane					356	380	320	183	269	264	267	206	252	127	99	120	66	89	132	80	57	75	84	74	66	71	68	67		
										Average = 359			Average = 242			Average = 259			Average = 115			Average = 96			Average = 79			Average = 83			Average = 69				
992	P1	24	HPS-3 (CDOT version)	Yellow	Epoxy					355	301	319	185	247	250	154	201	171	79	107	119	0	84	94	53	50	65	78	73	75	75	66	83		
1036	P2	24	HPS-3 (CDOT version)	Yellow	Epoxy					191	328	310	112	251	219	144	170	223	89	89	107	48	71	84	48	42	60	106	72	73	69	64	82		
										Average = 301			Average = 211			Average = 177			Average = 98			Average = 64			Average = 53			Average = 80			Average = 73				

Poly-Carb, Inc.

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	Shoulder Reading	Midlane Reading	Wheel Track Reading	Notes	30-Sep-05			14-Oct-05			9-Nov-05			13-Dec-05			24-Jan-06			18-Feb-06			Readings 4/14/06			Readings 5/17/06										
										Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Notes				
84	C1	16	Mark-75 CO Ground	White	Polyurea/Urethane Hybrid					531	553	386	450	582	357	491	477	554	318	446	438	198	126	243	188	281	134	284	228	307	71	181	188	352	82	168	201	199	72	333	201
324	C2	16	Mark-75 CO Ground	White	Polyurea/Urethane Hybrid					498	639	517	551	485	489	533	502	440	410	458	438	206	210	279	232	171	164	228	189	288	90	171	178	348	124	247	244	226	94	171	164
										Average = 521			Average = 490			Average = 439			Average = 210			Average = 210			Average = 181			Average = 220			Average = 180										
908	O1	28	Mark-55.2 CO Ground	White	Epoxy					441	367	376	401	405	344	377	375	383	278	338	333	320	122	164	202	260	120	214	188	306	69	115	164	326	96	187	203	194	86	273	184
962	O2	28	Mark-55.2 CO Ground	White	Epoxy					485	398	394	426	485	380	382	418	450	294	386	378	348	156	219	241	295	115	198	208	228	66	129	141	241	93	147	160	154	81	306	180
										Average = 414			Average = 397			Average = 353			Average = 222			Average = 200			Average = 153			Average = 182			Average = 182										
912	O1	32	Mark-55.3 CO Ground	White	Epoxy -Fast Set					482	357	372	397	386	380	445	397	372	254	290	306	248	125	218	197	133	111	125	128	218	93	111	141	217	110	205	177	167	85	250	167
956	O2	32	Mark-55.3 CO Ground	White	Epoxy -Fast Set					485	388	386	426	382	382	388	387	322	254	306	294	357	131	164	224	206	114	164	167	178	91	127	132	210	126	153	163	135	76	269	160
										Average = 408			Average = 392			Average = 300			Average = 211			Average = 142			Average = 136			Average = 170			Average = 154										
916	O1	36	Mark-544 CO Ground	W-on-B	Hybridized Polymer Contrast					440	483	396	440	483	396	445	440	483	396	445	440	483	396	445	168	124	46	53	74	100	72	70	81	115	104	231	151	143	143		
960	O2	36	Mark-544 CO Ground	W-on-B	Hybridized Polymer Contrast					515	448	381	447	381	337	409	376	376	256	337	328	230	142	309	200	201	123	172	168	159	44	70	91	202	71	95	123	130	109	191	143
										Average = 440			Average = 315			Average = 322			Average = 155			Average = 166			Average = 83			Average = 102			Average = 147										
504	I1	24	Mark-75 CO ground	Yellow	Polyurea/Urethane Hybrid					237	277	235	250	215	222	254	230	215	174	205	205	124	81	133	113	87	67	109	88	113	79	80	91	100	88	96	95	100	52	99	84
704	I2	24	Mark-75 CO Ground	Yellow	Polyurea/Urethane Hybrid					220	276	248	248	190	224	275	230	220	206	223	216	120	90	172	127	84	66	163	111	84	81	112	82	174	65	91	110	126	79	122	188
										Average = 249			Average = 230			Average = 211			Average = 120			Average = 99			Average = 92			Average = 102			Average = 96										
986	P1	28	Mark-55.2 CO Ground	Yellow	Epoxy					284	233	228	248	234	205	217	219	262	162	184	203	198	109	91	133	146	62	94	101	182	40	78	93	143	53	94	97	77	44	165	95
1040	P2	28	Mark-55.2 CO Ground	Yellow	Epoxy					301	238	260	269	240	225	226	230	256	172	184	204	192	78	123	131	120	69	105	98	117	45	88	83	189	52	85	109	61	40	168	91
										Average = 257			Average = 225			Average = 203			Average = 132			Average = 99			Average = 88			Average = 103			Average = 93										
1000	P1	32	Mark-55.3 CO Ground	Yellow	Epoxy -Fast Set					310	325	292	309	279	251	292	274	244	206	261	237	186	111	137	145	163	74	95	111	167	42	96	102	162	65	122	116	110	47	181	113
1044	P2	32	Mark-55.3 CO Ground	Yellow	Epoxy -Fast Set					341	300	290	310	285	246	284	271	297	203	248	249	230	106	158	165	205	81	109	132	220	56	108	131	264	58	101	141	98			

Table 5

I-25 @ Happy Canyon (Concrete Retro-reflectivity Readings)

Swarco

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	Shoulder Reading	Midlane Reading	Wheel Track Reading	Notes	Readings 9/30/05			Readings 10-14-05			Readings 11/09/05			Readings 12/13/05			Readings 1/24/06			Readings 2/28/06			14-Apr-06			17-May-06		
										Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading
272	A2	32	Director 35, Pavement Marking Tape	White	Plastic Tape, Preformed					446	436	217	330	165	255	280	110	205	130	45	134	97	74	150	14	49	80	18	68	83	72	57	25
288	A2	28	Director 35, Pavement Marking Tape	White	Plastic Tape, Preformed					437	485	145	167	114	194	149	65	150	90	39	61	80	69	83	88	47	41	71	77	62	63	65	67
										Average =	363		Average =	204		Average =	160		Average =	83		Average =	92		Average =	53		Average =	63		Average =	58	
32	A1	32	Director 60, Intersection Marking Tape	White	Plastic Tape, Preformed	553	573	551		604	312	278	431	223	289	348	133	316	139	69	182	125	76	171	16	41	83	20	58	84	76	53	19
28	A1	28	Director 60, Intersection Marking Tape	White	Plastic Tape, Preformed	560	622	556		492	362	250	397	163	324	273	93	159	258	40	163	146	61	101	61	49	67	47	75	86	74	64	80
										Average =	380		Average =	265		Average =	220		Average =	142		Average =	113		Average =	53		Average =	62		Average =	61	
156	F1	4	Swarcotherm Alkyd-Based Thermoplastic	White	Thermoplastic, Hot-App	173	185	141		413	440	362	369	325	409	442	320	415	221	121	267	209	173	172	108	122	109	160	112	116	113	121	96
396	F2	4	Swarcotherm Alkyd-Based Thermoplastic	White	Thermoplastic, Hot-App					385	500	402	471	385	440	524	242	399	40	102	130	119	168	93	249	155	83	194	159	150	126	137	202
										Average =	417		Average =	397		Average =	390		Average =	147		Average =	156		Average =	138		Average =	148		Average =	133	
548	K1	4	Swarcotherm Alkyd-Based Thermoplastic	Yellow	Thermoplastic, Hot-App	112	81	94		216	132	95	223	69	90	183	72	132	96	80	92	79	116	100	115	83	93	71	46	93	56	53	73
748	K2	4	Swarcotherm Alkyd-Based Thermoplastic	Yellow	Thermoplastic, Hot-App					301	240	79	278	97	212	296	59	139	132	78	98	48	102	92	52	74	45	54	67	24	30	82	55
										Average =	181		Average =	162		Average =	147		Average =	94		Average =	90		Average =	77		Average =	63		Average =	58	
632	M1	16	Director 35, Intersection Marking Tape	Yellow	Plastic Tape, Preformed	272	224	227		171	159	132	138	113	164	117	95	164	48	41	121	47	49	103	30	31	65	17	42	49	46	35	19
832	M2	16	Director 35, Intersection Marking Tape	Yellow	Plastic Tape, Preformed					197	149	143	135	117	129	125	89	117	40	44	69	87	42	74	50	24	43	39	37	35	31	28	40
										Average =	169		Average =	133		Average =	118		Average =	61		Average =	67		Average =	41		Average =	37		Average =	33	
636	M1	20	Director 60, Pavement Marking Tape	Yellow	Plastic Tape, Preformed	429	451	431		380	408	180	205	92	216	102	72	98	57	20	59	52	30	50	46	24	20	30	35	36	33	32	67
836	M2	20	Director 60, Pavement Marking Tape	Yellow	Plastic Tape, Preformed					462	242	249	198	127	207	188	45	202	32	39	27	111	31	59	50	24	36	40	36	33	33	33	39
										Average =	320		Average =	174		Average =	118		Average =	39		Average =	56		Average =	33		Average =	35		Average =	40	

Zumar Industries, Inc.

Total Distance	Reference Mark	Distance from Reference Mark	Product Name	Color	Categorization	Shoulder Reading	Midlane Reading	Wheel Track Reading	Notes	Readings 9/30/05			Readings 10-14-05			Readings 11/09/05			Readings 12/13/05			Readings 1/24/06			Readings 2/28/06			14-Apr-06			17-May-06		
										Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading	Shoulder Reading	Wheel Track Reading	Midlane Reading
192	G1	20	HotTape, High Optic, Highway Series, 90 ml	White	Thermoplastic, Preform.					291	418	440	228	314	321	179	159	243	93	58	86	86	105	107	83	40	28	98	42	64	82	56	47
432	G2	20	HotTape, High Optic, Highway Series, 90 ml	White	Thermoplastic, Preform.					304	301	273	267	170	286	281	157	241	25	62	175	54	83	181	180	50	87	226	67	43	64	58	158
										Average =	338		Average =	265		Average =	210		Average =	83		Average =	103		Average =	78		Average =	90		Average =	78	
196	G1	24	HotTape, High Optic, Highway Series, 125 ml	White	Thermoplastic, Preform.					395	735	382	148	238	344	284	163	304	137	78	47	79	126	12	88	47	27	65	44	17	13	63	25
436	G2	24	HotTape, High Optic, Highway Series, 125 ml	White	Thermoplastic, Preform.					448	421	256	326	281	289	316	154	216	237	65	8	56	91	10	180	66	11	187	80	15	14	50	26
										Average =	440		Average =	256		Average =	245		Average =	95		Average =	62		Average =	70		Average =	68		Average =	32	
576	K1	32	HotTape, High Optic, Highway Series, 90 ml	Yellow	Thermoplastic, Preform.					301	280	195	147	159	149	178	143	188	66	47	62	62	43	48	76	41	37	80	42	45	44	35	77
776	K2	32	HotTape, High Optic, Highway Series, 90 ml	Yellow	Thermoplastic, Preform.					378	207	188	109	148	161	101	101	129	137	48	101	103	55	89	107	32	60	119	44	55	45	38	61
										Average =	238		Average =	146		Average =	140		Average =	77		Average =	67		Average =	59		Average =	64		Average =	50	
580	K1	36	HotTape, High Optic, Highway Series, 125 ml	Yellow	Thermoplastic, Preform.					271	371	192	242	168	234	188	145	174	72	46	57	55	73	82	58	37	61	81	37	47	75	40	114
780	K2	36	HotTape, High Optic, Highway Series, 125 ml	Yellow	Thermoplastic, Preform.					296	356	193	159	155	222	169	100	117	83	51	28	107	50	44	30	29	22	38	37	15	27	32	52
										Average =	280		Average =	197		Average =	148		Average =	66		Average =	69		Average =	48		Average =	43		Average =	57	

Table 6***Recommended Minimum Values of Reflectivity***

TYPE OF MATERIAL	COLOR	mcd/m ² /lux Minimum (Initial)	mcd/m ² /lux Minimum (Acceptable) 6 Months	mcd/m ² /lux Minimum (Acceptable) 9 Months	mcd/m ² /lux Minimum (Acceptable) 1 Year
Preformed Plastic Tape (Type I)	White	500	330	245	160
Preformed Plastic Tape (Type II)	W-on-B	500	330	245	160
Preformed Plastic Tape (Type I)	Yellow	300	200	150	100
Preformed Plastic Tape (Type II)	Y-on-B	300	200	150	100
Preformed Plastic Tape (Type III)	White	250	165	120	80
Preformed Plastic Tape (Type III)	Yellow	175	120	90	65
MMA	White	375	315	280	255
MMA	Yellow	180	160	145	140
Polyurea	White	400	300	250	200
Polyurea	Yellow	200	150	125	100
Urethane	White	250	200	175	150
Urethane	Yellow	175	125	100	75
Solventborne, Acrylic	White	180	125	100	70
Solventborne, Acrylic	Yellow	130	90	75	50
Low VOC Solvent Base	White	90	55	35	20
Low VOC Solvent Base	Yellow	30	25	20	20
Waterborne	White	330	200	130	70
Waterborne	Yellow	210	130	85	50
Thermoplastic, Hot Applied	White	380	250	190	120
Thermoplastic, Hot Applied	Yellow	210	155	125	100
Preformed Thermoplastic	White	350	300	275	250
Preformed Thermoplastic	Yellow	225	175	150	125
Epoxy	White	300	255	235	210
Epoxy	Yellow	250	215	195	180
Epoxy	W-on-B	300	255	235	210

Note: The one year values were a linear interpolation of the data.