

MEMORANDUM

DEPARTMENT OF TRANSPORTATION
 Materials and Geotechnical Branch
 4670 Holly Street
 Denver, Colorado 80216



DEPARTMENT OF TRANSPORTATION

August 23, 2006
 9:00 am to Noon
 North Holly Turnpike Conference Room

Smoothness Task Force Meeting Minutes

Attending the meeting were:

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Smoothness Task Force
 Sign in Sheet

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Agenda Topic #1 – Review of 2007 Draft Specifications

The committee reviewed the proposed draft specifications. Eric Prieve presented a Power Point presentation that highlighted the changes of the specification. These changes were as follows:

1. Asphalt and Concrete will have separate specifications
2. Asphalt will be under HRI specification
3. Concrete will be under LPI specification
4. Corrective work will no longer be required on lifts below the final surface HMA.
5. HMA Localized Roughness greater than that shown in table 105.6 but less than 150 inches per mile will fall under the 10 foot straight edge specification.
6. Concrete QC testing can be done with a California style profilograph, a light weight profiler or high speed profiler in profilograph simulation mode.
7. Neither HMA nor PCCP will be able to grind to get out of disincentive.
8. Quality Assurance testing will be done before corrective work. The QA testing will determine the incentive, disincentive and corrective work areas. QC testing will verify that the areas identified by the QA testing as needing corrective work have been corrected.
9. On HMA Rural percent improvement projects the Contractor may request to have the category changed to HRI category I. The request will have to be before QA testing begins.
10. Industry Task Force requested that the distance at bridge expansion joints, cattle guards, etc... be changed from 5-feet to 25-feet due to amount of travel. This change will also be incorporated into the 2007 specification.
11. The distance of the distance calibration site shall be a set 1056 ft. instead of a minimum of 1056 ft.

In addition to the changes stated above the Task Force reviewed the proposal to change the current tiered system of assigning incentive and disincentive to an equation based system. The charts below illustrate the proposal and how it would have affected paving projects in 2005 and 2006. The task force felt that the equation system was a positive change and that it would help eliminate the differences that could accrue in the QC and QA numbers. It would also make it more equitable between Contractors. The HRI, PI, or Percent Improvement numbers may be very close but under the tiered system the amount of incentive or disincentives could be very different.

In addition to the review of the changes stated above the Task Force did a page by page, line by line review and comparison of both the HMA and PCCP specifications. The group expressed understanding that the two specifications were as close to equitable that could be achieved given that PCCP tinning currently precludes the use of the HRI specification. Tom Clayton requested some statement from CDOT as to when we would have the technology to use HRI on PCCP projects. Glenn Frieler replied that it was a matter of development and funding. As soon as industry develops a system to use the HSP on PCCP that is dependable we will request funding to adapt the QA profiler and make the spec changes. In other words, “as soon as we can, depending on technology and funding”.



2005 Projects

Current Levels

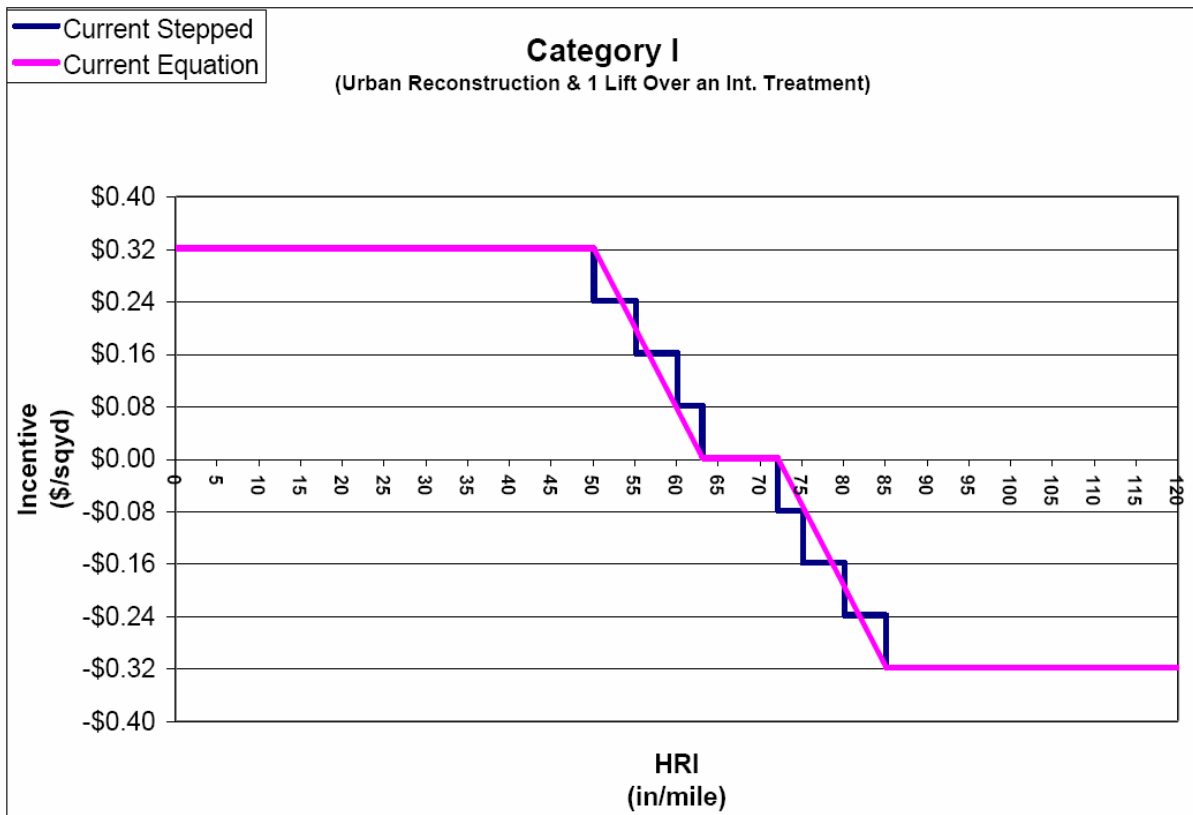
Project	Location	Project No.	HBP Thickness	Category	Lane #	Length (mile)	Ave HRI (in/mile)	Incentive	Equation Based Incentive (\$0.32 Max)	
14507	Fl. Gariand East	NH 1603-021	2.5	1	E1	10.7278	50.0	\$ 19,424.09	\$ 19,316.15	-
			2.5	1	W1	10.7240	53.9	\$ 16,107.52	\$ 15,743.69	-
			2.5	1	WCL	0.8595	55.1	\$ 1,137.10	\$ 1,060.78	-
15135	New Mexico State Line to Hesperus	HB 140A-003	2	1	N1	23.1595	44.6	\$ 46,804.96	\$ 45,747.40	-
			2	1	S1	23.0360	43.5	\$ 46,604.63	\$ 45,684.38	+
15162	US 50, McClave Jct. East & West	NH 0504-048	2	1	E1	10.7302	55.5	\$ 13,283.07	\$ 12,809.74	-
			2	1	E1a	1.1178	58.6	\$ 1,126.40	\$ 1,126.40	-
			2	1	E2a	1.1178	53.1	\$ 1,633.28	\$ 1,710.72	+
			2	1	W1	10.7302	59.7	\$ 9,218.68	\$ 8,762.94	-
			2	1	W1a	0.7593	64.5	\$ 294.05	\$ 399.40	+
			2	1	W2a	0.7600	60.2	\$ 585.73	\$ 692.74	+
			3	1	E1	6.6922	46.4	\$ 11,733.03	\$ 11,465.51	-
15032	West of Mack - I-70	IM 0701-171	3	1	E2	6.8902	38.9	\$ 14,178.00	\$ 14,060.40	-
			3	1	W1	6.9305	54.7	\$ 9,053.21	\$ 8,212.95	-
			3	1	W2	6.9364	36.2	\$ 15,136.11	\$ 15,112.00	-
14698	SH 14, Raymer - East	STA 0142-042	5	2	E1	15.2632	44.1	\$ 30,328.09	\$ 27,343.33	-
			5	2	W1	15.2974	50.6	\$ 20,104.78	\$ 15,792.26	-
14712	Woodrow - South	STA 0712-012	5.25	2	N1	16.4276	43.9	\$ 32,709.02	\$ 29,455.23	-
			5.25	2	S1	16.4541	49.0	\$ 31,211.98	\$ 24,273.65	-
14950	I-25 Resurfacing, El Paso County Line, North	IM 0252-374	4	2	N1	4.0874	49.4	\$ 8,032.47	\$ 6,033.48	-
			4	2	N2	4.0891	48.8	\$ 8,047.62	\$ 6,281.85	-
			4	2	S1	4.1075	44.8	\$ 8,549.38	\$ 7,713.10	-
			4	2	S2	4.1099	46.4	\$ 8,222.72	\$ 7,174.53	-
15039	Trinidad South	IM 0251-168	4	2	N1	5.4733	54.9	\$ 7,377.92	\$ 4,724.20	-
			4	2	N2	5.4276	54.4	\$ 7,347.34	\$ 4,851.34	-
			4	2	S1	5.4727	52.4	\$ 8,993.68	\$ 5,999.90	-
			4	2	S2	5.4769	56.7	\$ 7,642.23	\$ 4,493.69	-
14663R	Estes Park to Lyons	STA 0361-075	4	2	E1	1.5510	44.8	\$ 2,989.69	\$ 2,615.17	-
			4	2	E1a	18.6407	52.4	\$30,029.04	\$ 20,167.66	-
			4	2	E1b	0.1725	98.6	\$0.00	\$ (388.61)	-
			4	2	E2	1.5451	57.3	\$ 1,595.88	\$ 967.34	-
			4	2	W1	1.3317	43.6	\$ 2,442.37	\$ 2,269.92	-
			4	2	W1a	18.7211	50.0	\$32,553.30	\$ 24,959.11	-
			4	2	W1b	0.2230	62.3	\$158.01	\$ 50.43	-
			4	2	W2	1.3240	57.4	\$ 1,264.83	\$ 725.09	-
			4	2	WCL	2.2531	55.3	\$3,016.61	\$ 1,643.01	-
			Ave HRI							49.0
Incentive Paid								75.89%		

2006 Projects

Current Levels

Project	Location	Project No.	HBP Thickness	Category	Lane #	Length (mile)	Ave HRI (in/mile)	Incentive	Equation Based Incentive (\$0.32 Max)	
15406	I-70 Genoa East & West	IM 0705-076	1.75	1	E1	5.0629	41.4	\$ 11,293.06	\$ 11,314.18	+
			5.25	1	E2	5.0621	43.9	\$ 11,007.63	\$ 11,190.67	+
			2.5	1	W1	5.0695	56.3	\$ 6,273.48	\$ 5,913.25	-
			2.5	1	W2	5.0647	54.0	\$ 7,712.52	\$ 7,548.53	-
15562	I-25 Overlay North of Butte Creek Rd. North	IM 0251-172	2.5	1	S1	10.5411	42.8	\$ 22,733.23	\$ 22,817.71	-
			2.5	1	S2	10.5426	41.1	\$ 22,004.45	\$ 21,955.17	-
			2.5	1	N1	10.3236	43.0	\$ 21,929.21	\$ 21,867.76	-
			2.5	1	N2	10.3246	40.0	\$ 22,509.70	\$ 22,625.03	+
15150	Uravan Safety Improvements	STA 141A-029	4	2	N1	0.9228	56.7	\$ 511.84	\$ 569.66	+
			4	2	S1	0.9236	61.4	\$ 72.77	\$ 15.90	-
15141		NH 0341-064	4	2	N1	5.1122	43.8	\$ 8,880.31	\$ 8,887.38	+
			4	2	S1	4.6648	45.0	\$ 8,391.68	\$ 8,592.41	+
14633	I-7: SO. Of Bromley Lochbuie	IM 076A-006	4	2	E1	3.2811	54.8	\$ 2,601.36	\$ 2,385.14	-
			4	2	E2	3.2805	51.8	\$ 3,717.12	\$ 3,746.30	+
			4	2	W1	3.2852	51.5	\$ 3,996.72	\$ 3,967.76	-
			4	2	W2	3.2876	51.5	\$ 3,970.33	\$ 3,845.74	-
15272	SH 195 Resurf. M.P. 28.2 - 32.5	STA 105A-013	3	2	N1	3.8788	60.1	\$ 926.58	\$ 1,151.15	+
			3	2	S1	3.8739	59.8	\$ 1,121.11	\$ 951.26	-
15142		STA 3852-010	4	2	N1	19.471	33.7	\$ 42,360.30	\$ 42,450.47	+
			4	2	S1	19.4835	35.6	\$ 42,334.05	\$ 42,544.67	+
15428		STA 052A-024	6.25	2	E1	5.1089	45.5	\$ 6,964.76	\$ 8,167.90	+
			6.25	2	W1	5.1122	44.6	\$ 8,027.29	\$ 9,389.48	+
Ave HRI							43.4	\$ 260,918.90	\$ 263,457.71	
Incentive Paid								80.21%		





A late agenda topic was requested by CAPA. The request was for information as to how many other states have different specifications for HMA and PCCP. Below are two maps that show the number of states those use IRI for HMA and IRI for PCCP. A quick summary of the map shows that as many as 9 other states that use IRI specifications for HMA and use PI for PCCP. Understand that this information is a snap shot in time. Like Colorado other states are changing their specifications and adopting IRI specifications. The information presented below is from www.roadprofile.com.



Concrete Pavement Ride Specifications



5 States with IRI
29 States with PI

Asphalt Pavement Ride Specifications



19 States with IRI
18 States with PI
9 States with PI for PCCP & IRI for HMA



Glenn Frieler asked for a vote from the Task Force to approve the changes as stated above. These changes would be presented to the MAC for their approval during the September meeting. Eric Jensen and Tom Clayton requested that the vote be delayed until Friday to give them time to discuss the issues with their members.

Voting members are advised that an e-vote needs to be emailed to glenn.frieler@dot.state.co.us by noon, Friday September 1. Please include the other members of the Task Force in you response. There is no such thing as a secret ballot. Failure to vote will indicate a vote of approval for the proposed changes.

Other topics that were on the agenda were:

**Smoothness Training and Education
Level D / Level S – 2007
Profiler Class and Round Up 2007
Incentive / Disincentive levels**

These topics were sent to Sub-Committees for work. Sub- Committees will meet before the next AIF and Joint Co-op meetings. At the AIF and Joint Co-op meetings a committee representative will discuss their work.

Incentive / Disincentive Limits 2007 - This topic was brought up for discussion. The Task Force felt that with only eight projects out of the scheduled 34 completed that the amount of information was insufficient to make a determination. They also felt that with an increase in the smoothness requirements an increase in the possible level of incentive should accompany it. This also was sent to Sub-Committee for work.

The next meeting is tentatively scheduled for November 15, 2007

New Draft Specifications will be sent out by the end of the day. Thursday August 24, 2006

