

**STATE**

**OF**

**TENNESSEE**

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(Rev. 10-12-20)  
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January 1, 2021

**SPECIAL PROVISION**

**REGARDING**

**ASPHALTIC CONCRETE SURFACE (HOT MIX)**

This provision sets up pavement smoothness requirements and how testing procedures, acceptance, and payment practices will be handled by the Department.

Completed pavement surfaces of traffic lanes, including those on bridge deck surfaces on both the mainline and ramps with stop or yield conditions shall be tested for smoothness with the Road Profiler in accordance with Department procedures.

The Contractor shall be paid monies due for items in the surface mix based on the applicable payment table. Any lot (1 mile or fraction thereof) of pavement where the Road Profiler’s International Roughness Index (IRI) value exceeds the maximum limit or does not provide at least the minimum percent improvement, as shown in the applicable payment tables, will require corrective action. Any unacceptable lot(s) will be divided into 0.1-mile sub-lots for closer evaluation. Choose those sub-lots, within the unacceptable lot, to correct in order to bring the overall lot into the acceptable smoothness range. However, do not choose more than 3 sub-lots for repair, unless they are adjacent to each other and there are no more than 6 transverse joints. Otherwise, the entire lot will require corrective action. The minimum corrective action shall be the length of the entire sub-lot of 0.1 mile. The only acceptable corrective action is mill and inlay. Payment for the corrected 1 mile lot(s) will be based on the Road Profiler’s International Roughness Index after corrective action has been taken.

Each lot of pavement will be tested by one pass of the Road Profiler. If corrective action is required, a second pass will then be made to determine the pay adjustments for the corrected lot(s).

Roadway sections excluded from this provision will be identified in the project documents. Any excluded sections of roadway must comply with the straightedge requirements specified in **411.08** of the Standard Specifications.

Any deduction in monies due the Contractor for ride quality shall be made in accordance with this provision under the item for Rideability Deduction.

Payment tables for smoothness based on Road Profiler IRI values are as follows:

**Table 411C-1** will apply to lots of surface mixtures that are greater than or equal to 1 inch in thickness that either receive more than one lift of surface mixture and/or lots of single lifts with an initial IRI less than 90 in/mi. Table 411C-1 will also apply to all lots of any thickness that are milled prior to overlay with an initial IRI less than 110 in/mi.

**Table 411C-2** will apply to lots of surface mixtures that are greater than or equal to 1 inch in thickness that are single lift with an initial IRI greater than or equal to 90 in/mi. Table 2 will also apply to all lots of any thickness that are milled prior to overlay with an initial IRI greater than or equal to 110 in/mi.

**Table 411C-3** will apply to lots of surface mixtures that are less than 1 inch in thickness that are a single lift with an initial IRI less than 90 in/mi and have not been milled prior to placement.

**Table 411C-4** will apply to lots of surface mixtures that are less than 1 inch in thickness that are a single lift with an initial IRI greater than or equal to 90 in/mi and have not been milled prior to placement.

Cape Seal projects (i.e. chip seal/scrub seals, microsurface, that are covered by less than 1 inch of surface mixture) will follow Table 411C-3 or Table 411C-4 based on the initial IRI.

Thin lift surface mixtures placed on top of new construction, full depth recycled pavement, hot in-place or cold recycled pavement shall meet the requirements of Table 411C-1 and Table 411C-2.

For the purpose of this provision, placement of any mixture for spot leveling, cape seals, or microsurface will not be considered a lift of mixture to improve smoothness.

**Table 411C-1**

Road Profiler Value IRI (IN/MI)	Percentage paid on bid price of surface items
65 or less	100%
66	99%
67	98%
68	97%
69	96%
70	95%
71	94%
72	93%
73	92%
74	91%
75	90%
76	88%
77	86%
78	84%
79	82%
80	80%
81	77%
82	74%
83	71%
84	68%
85	65%
86	61%
87	57%
88	53%
89	49%
90	45%
Greater than 90	Mill & Inlay*

**Table 411C-2**

Percent Improvement % **	Percentage paid on bid price of surface items
30 or more	100%
29	99%
28	98%
27	97%
26	96%
25	95%
24	94%
23	93%
22	92%
21	91%
20	90%
19	88%
18	86%
17	84%
16	82%
15	80%
Less than 15	Mill and Inlay*

**Table 411C-3**

Road Profiler Value IRI (IN/MI)	Percentage paid on bid price of surface items
75 or less	100%
76	99%
77	98%
78	97%
79	96%
80	95%
81	94%
82	93%
83	92%
84	91%
85	90%
86	88%
87	86%
88	84%
89	82%
90	80%
Greater than 90	Mill & Inlay*

**Table 411C-4**

Percent Improvement % **	Percentage paid on bid price of surface items
15 or more	100%
14	99%
13	98%
12	97%
11	96%
10	95%
9	94%
8	93%
7	92%
6	91%
5	90%
4	88%
3	86%
2	84%
1	82%
0	80%
Less than 0	Mill & Inlay*

\*The mill and inlay shall be the thickness as specified on the plans for the surface layer

$$**\% \text{ Improvement} = \frac{(\text{Initial IRI} - \text{Final IRI})}{\text{Initial IRI}} \times 100$$