



*Florida Department of Transportation*

RICK SCOTT  
GOVERNOR

605 Suwannee Street  
Tallahassee, FL 32399-0450

MIKE DEW  
SECRETARY

February 22, 2018

Khoa Nguyen  
Director, Office of Technical Services  
Federal Highway Administration  
3500 Financial Plaza, Suite 400  
Tallahassee, Florida 32312

Re: State Specifications Office  
Section: **330**  
Proposed Specification: **SP3300802 Hot Mix Asphalt – General Construction Requirements. REVISED**

Dear Mr. Nguyen:

We are submitting, for your approval, two copies of the above referenced Special Provision. Revisions have been made in response to comments made on February 20, 2018, by Rafiq Darji. These changes are **highlighted**.

The changes are proposed by Rich Hewitt of the State Construction Office to add language needed to use the laser profiler to obtain smoothness data that will be evaluated by International Roughness Index (IRI) for acceptance and determination of incentive and disincentive pay adjustments.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to [dan.hurtado@dot.state.fl.us](mailto:dan.hurtado@dot.state.fl.us).

If you have any questions relating to this specification change, please call me at 414-4130.

Sincerely,

Signature on file

Dan Hurtado, P.E.  
State Specifications Engineer

DH/dt

Attachment

cc: Florida Transportation Builders' Assoc.



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State Construction Engineer

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## HOT MIX ASPHALT - GENERAL CONSTRUCTION REQUIREMENTS.

(REV ~~10-30-172-15-182-22-18~~)

SUBARTICLE 330-8.2 is deleted and the following substituted:

**330-8.2 Transverse Joints:** Place the mixture as continuously as possible to minimize transverse joints. When constructing permanent transverse joints, meet the surface requirements as defined in 330-9.4.3. Construct temporary transverse joints in such a manner to allow traffic to pass over it. When resuming the paving operation, construct a transverse joint by cutting back on the previously placed pavement at a location where the straightedge requirements are met. At the project limits, tie into the adjoining pavement layers as shown in the Plans.

SUBARTICLE 330-9.4 is deleted and the following substituted:

**330-9.4 Pavement Smoothness:** Construct a smooth pavement meeting the requirements of this Specification.

**330-9.4.1 General Process Control Testing:** ~~Furnish a 15 foot manual and a 15 foot rolling straightedge meeting the requirements of FM 5-509. Obtain a smooth surface on all pavement courses placed, and then straightedge all layers as required by this Specification. Assume full responsibility for controlling all paving operations and processes such that the requirements of these Specifications are met at all times.~~

**330-9.4.2 Test Method Laser Acceptance:** ~~Perform all straightedge testing in accordance with FM 5-509 in the outside wheel path of each lane. The Engineer may require additional testing at other locations within the lane. Acceptance testing for pavement smoothness of the friction course for mainline traffic lanes will be based on the laser profiler using the International Roughness Index (IRI) as defined in ASTM E1926. Areas not suitable for testing with the laser profiler will be QC tested and accepted with the straight edge in accordance with 330-9.4.3.~~

~~The pavement smoothness of each lane will be determined by a laser profiler furnished and operated by the Department in accordance with FM 5-549 and a report issued with the IRI reported to whole numbers.~~

~~For acceptance testing purposes, the pavement will be divided into LOTS. A LOT is defined as anything less than or equal to 0.1 mile and greater than or equal to 0.01 mile.~~

**330-9.4.2.1 Evaluation Process:** ~~As soon as the friction course to be placed is scheduled, notify the Engineer. A minimum of 10 calendar days from notification is needed for the Department to schedule the equipment. Prior to testing and for the full project limits, ensure all lanes are open, free from obstructions, and all debris is removed from roadway.~~

**330-9.4.2.2 Acceptable Pavement:** ~~If the initial ride acceptance test shows all project LOTS to be less than or equal to 95 IRI, LOT incentive/disincentive pay will be calculated as described in 330-9.4.2.4.~~

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**330-9.4.2.3 Unacceptable Pavement:** If any LOT in the project has an IRI greater than 95, the project data will be reprocessed using continuous analysis to define the limits of the unacceptable pavement.

For unacceptable LOTs, the limits of unacceptable pavement are defined as those areas of pavement 50 feet either side of where the continuous plot line exceeds 95 IRI. The limits of unacceptable pavement may extend into neighboring LOTs.

For unacceptable LOTs at either end of the project:

1. If the continuous analysis ends above 95 IRI 0.05 miles from the end of the project, then the corrective action limits will extend to the end of the project.

2. If the continuous analysis ends at or below 95 IRI 0.05 miles from the end of the project, then the corrective action limits are defined above.

For unacceptable LOTs at ~~hold-out areas due to~~ breaks in paving such as bridges:

1. If the continuous analysis ends above 95 IRI 0.05 miles from the break in paving, then the corrective action limits will extend from the break in paving to a point as defined above.

2. If the continuous analysis ends at or below 95 IRI 0.05 miles from the break in paving then the pavement will be left in place with the appropriate disincentive applied.

3. If any LOTs with an IRI greater than 95 are left in place as a result of the continuous analysis, they will be paid at maximum disincentive

Address all areas of unacceptable pavement in accordance with 330-9.5.

As soon as all corrections are scheduled, notify the Engineer. A minimum of 10 calendar days from notification is needed for the Department to schedule the equipment. Prior to testing and for the full project limits, ensure all lanes are open, free from obstructions, and all debris is removed from roadway.

Repeat this process as necessary until all LOTs have an IRI less than or equal to 95 at which time, incentive/disincentive will be calculated for the project as described in 330-9.4.2.4.

**330-9.4.2.4 Calculating Incentive/Disincentive:** For all LOTs, pay adjustment incentive/disincentive will be based on the dollar value corresponding to each LOT's IRI shown in Table 330-5

Incentive/disincentive will be determined from the initial test for all LOTs less than or equal to 95 IRI and that were not affected by remove and replace corrections.

Incentive/disincentive for any LOTs affected by remove and replace corrections will be determined from the final acceptance run (once at or below 95 IRI).

LOT incentive / disincentive for a project will be calculated once all project LOTs are less than or equal to 95 IRI as follows:

$$\text{LOT incentive/disincentive} = \text{LOT Pay Adjustment} * \text{LOT length (miles)}$$

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Project incentive/disincentive is the sum of the incentives / disincentives of all LOTs in the project.

Total project incentive shall not exceed 5% of the FC-5 price.

Total project disincentive shall not result in payment less than 80% of the FC-5 price.

The FC-5 price is the bid unit price times the pay quantity of FC-5 (as determined in accordance with 337-11). For lump sum projects, the FC-5 price is the unit price determined using the six month statewide pay item average for the six months prior to the letting date for this Contract times the pay quantity of FC-5 (as determined in accordance with 9-2).

**330-9.4.2.5 Project Level Consistency Incentive:** If all project LOTs are less than or equal 55 IRI, the project will earn an additional 3% incentive based on the FC-5 price. The FC-5 price is described in 330-9.4.2.4. The project level consistency incentive is in addition to the project incentive outlined in 330-9.4.2.4.

<u>LOT IRI</u>	<u>LOT Pay Adjustment</u>	<u>LOT IRI</u>	<u>LOT Pay Adjustment</u>	<u>LOT IRI</u>	<u>LOT Pay Adjustment</u>
<u>&lt; 30</u>	<u>\$260</u>	<u>56</u>	<u>-\$20</u>	<u>76</u>	<u>-\$420</u>
<u>31</u>	<u>\$240</u>	<u>57</u>	<u>-\$40</u>	<u>77</u>	<u>-\$440</u>
<u>32</u>	<u>\$220</u>	<u>58</u>	<u>-\$60</u>	<u>78</u>	<u>-\$460</u>
<u>33</u>	<u>\$200</u>	<u>59</u>	<u>-\$80</u>	<u>79</u>	<u>-\$480</u>
<u>34</u>	<u>\$180</u>	<u>60</u>	<u>-\$100</u>	<u>80</u>	<u>-\$500</u>
<u>35</u>	<u>\$160</u>	<u>61</u>	<u>-\$120</u>	<u>81</u>	<u>-\$520</u>
<u>36</u>	<u>\$140</u>	<u>62</u>	<u>-\$140</u>	<u>82</u>	<u>-\$540</u>
<u>37</u>	<u>\$120</u>	<u>63</u>	<u>-\$160</u>	<u>83</u>	<u>-\$560</u>
<u>38</u>	<u>\$100</u>	<u>64</u>	<u>-\$180</u>	<u>84</u>	<u>-\$580</u>
<u>39</u>	<u>\$80</u>	<u>65</u>	<u>-\$200</u>	<u>85</u>	<u>-\$600</u>
<u>40</u>	<u>\$60</u>	<u>66</u>	<u>-\$220</u>	<u>86</u>	<u>-\$620</u>
<u>41</u>	<u>\$40</u>	<u>67</u>	<u>-\$240</u>	<u>87</u>	<u>-\$640</u>
<u>42</u>	<u>\$20</u>	<u>68</u>	<u>-\$260</u>	<u>88</u>	<u>-\$660</u>
		<u>69</u>	<u>-\$280</u>	<u>89</u>	<u>-\$680</u>
<u>43 – 55</u>	<u>Full Pay</u>	<u>70</u>	<u>-\$300</u>	<u>90</u>	<u>-\$700</u>
		<u>71</u>	<u>-\$320</u>	<u>91</u>	<u>-\$720</u>
		<u>72</u>	<u>-\$340</u>	<u>92</u>	<u>-\$740</u>
		<u>73</u>	<u>-\$360</u>	<u>93</u>	<u>-\$760</u>
		<u>74</u>	<u>-\$380</u>	<u>94</u>	<u>-\$780</u>
		<u>75</u>	<u>-\$400</u>	<u>95*</u>	<u>-\$800</u>

\*LOTs > 95 IRI left in place following continuous analysis method receive -\$800 LOT pay adjustment.

**330-9.4.3 Traffic Control Straightedge Acceptance:** Provide traffic control in accordance with Section 102 and the Design Standards, Index Nos. 607 or 619 during all testing. When traffic control cannot be provided in accordance with Index Nos. 607 or 619, submit an

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~~alternative Traffic Control Plan as specified in 102-4. Include the cost of this traffic control in the Contract bid prices for the asphalt items. Furnish a 15 foot manual and 15 foot rolling straightedge meeting the requirements of FM 5-509 for transverse joints at the beginning and end of the project, at the beginning and end of bridge structures, ramps, acceleration/deceleration lanes, and other areas not suitable for testing with the laser profiler. Perform all straightedge testing in accordance with FM 5-509 in the outside wheel path of each lane. Notify the Engineer of the location and time of straightedge testing a minimum of 48 hours before beginning testing. The Engineer will verify the straightedge testing by observing the QC straightedging operations. Address all deficiencies in excess of 3/16 inch in accordance with 330-9.5.~~

~~330-9.4.4 Process Control Testing: Assume full responsibility for controlling all paving operations and processes such that the requirements of these Specifications are met at all times.~~

#### ~~330-9.4.5 QC Testing:~~

~~330-9.4.5.1 General: Straightedge the final Type SP structural layer and friction course layer in accordance with 330-9.4.2, with the exception that if the method of acceptance is by laser profiler, then straightedging of the friction course layer is not required unless otherwise stated in the Specifications. If the project's method of acceptance is by laser profiler, areas not suitable for testing with the laser profiler will be tested and accepted by straightedging. Test all pavement lanes and ramps where the width is constant and document all deficiencies in excess of 3/16 inch on a form approved by the Engineer.~~

~~330-9.4.5.2 Straightedge Exceptions: Straightedge testing will not be required in the following areas: shoulders, intersections, tapers, crossovers, sidewalks, shared use paths, parking lots and similar areas, or in the following areas when they are less than 250 feet in length: turn lanes, acceleration/deceleration lanes and side streets. The limits of the intersection will be from stop bar to stop bar for both the mainline and side streets.~~

~~As an exception, in the event the Engineer identifies an objectionable surface irregularity in the above areas, straightedge and address all deficiencies in excess of 3/8 inch in accordance with 330-9.5.~~

The Engineer may waive straightedge requirements for transverse joints at the beginning and end of the project, at the beginning and end of bridge structures, at manholes, and at utility structures if the deficiencies are caused by factors beyond the control of the Contractor, as determined by the Engineer. In addition, the Engineer may also waive the straightedging requirements on ramps and superelevated sections where the geometrical orientation of the pavement results in an inaccurate measurement with the rolling straightedge.

~~330-9.4.5.3 Intermediate Layers and Temporary Pavement: When the design speed is 55 mph or greater and the intermediate Type SP layer or temporary pavement is to be opened to traffic, if the Engineer identifies an objectionable surface irregularity, straightedge and address all deficiencies in excess of 3/8 inch within 72 hours of placement in accordance with 330-9.5.~~

~~330-9.4.5.4 Final Type SP Structural Layer: Straightedge the final Type SP structural layer in accordance with 330-9.4.2, either behind the final roller of the paving train or as a separate operation. Notify the Engineer of the location and time of straightedge testing a minimum of 48 hours before beginning testing. The Engineer will verify the straightedge testing by observing the QC straight edging operations. Address all deficiencies in excess of 3/16 inch in accordance with 330-9.5.~~

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~~When the final structural course is to be opened to traffic and the design speed is 55 mph or greater, if any defect is 3/8 inch or greater, the Engineer may require deficiencies to be corrected within 72 hours after opening to traffic.~~

~~**330-9.4.5.5 Friction Course Layer:** Where required per 330-9.4.5.1, and in areas noted in 330-9.4.6.2 as not suitable for testing with the Laser Profiler, straightedge the friction course layer in accordance with 330-9.4.2, either behind the final roller of the paving train or as a separate operation upon completion of all paving operations. Notify the Engineer of the location and time of straightedge testing a minimum of 48 hours before beginning testing. The Engineer will verify the straightedge testing by observing the QC straightedging operations. Address all deficiencies in excess of 3/16 inch in accordance with 330-9.5.~~

~~**330-9.4.6 Acceptance:**~~

~~**330-9.4.6.1 Straightedge Acceptance:** For areas of roadways where the design speed is less than 55 miles per hour, and for areas of roadways where the design speed is greater than or equal to 55 miles per hour which are noted in 330-9.4.6.2 as not suitable for testing with the Laser Profiler, acceptance for pavement smoothness of the friction course will be based on verified QC measurements using the straightedge as required by 330-9.4.5. The Engineer will verify the straightedge testing by observing the QC straightedging operations.~~

~~**330-9.4.6.2 Laser Acceptance:** For areas of high speed roadways where the design speed is equal to or greater than 55 miles per hour, acceptance testing for pavement smoothness of the friction course (for mainline traffic lanes only) will be based on the Laser Profiler. Ramps, acceleration and deceleration lanes, and other areas not suitable for testing with the Laser Profiler will be tested and accepted with the straightedge in accordance with 330-9.4.5.5 and 330-9.4.6.1.~~

~~The pavement smoothness of each lane will be determined by a Laser Profiler furnished and operated by the Department in accordance with FM 5-549 and a report issued with the Ride Number (RN) reported to one decimal place. If corrections are made, as required following Laser Acceptance, the pavement will not be retested for smoothness using the Laser Profiler.~~

~~For this testing, the pavement will be divided into 0.1 mile segments. Partial segments equal to or greater than 0.01 mile will be considered as a 0.1 mile segment. The pavement will be accepted as follows:~~

~~1. For segments with a RN greater than or equal to 4.0, the pavement will be accepted at full pay.~~

~~2. For segments with a RN less than 4.0, the Engineer will further evaluate the data in 0.01 mile intervals for both wheel paths.~~

~~If the RN is 3.5 or above for all 0.01 mile intervals in both wheel paths, the segment will be accepted at full payment.~~

~~If the RN is less than 3.5 for one or more 0.01 mile intervals, the segment will be tested with the rolling straightedge in both wheel paths in accordance with FM 5-509. If approved by the Engineer, this straightedging may be completed (in both wheel paths) as part of the QC straightedging operations described in 330-9.4.5.5, before testing with the laser profiler. Notify the Engineer of the location and time of straightedge testing a minimum of 48 hours before beginning testing. The Engineer will verify the straightedge testing by observing the QC straightedging operations. Address all deficiencies in excess of 3/16 inch in accordance with 330-9.5.~~

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~~Test and accept areas at the beginning and ending of the project, bridge approaches and departures, and areas where the segment is less than 0.01 mile, with the straightedge in accordance with 330-9.4.5.5 and 330-9.4.6.1.~~

SUBARTICLE 330-9.5.1 is deleted and the following substituted:

**330-9.5.1 Corrections:** ~~Address all areas of unacceptable pavement at no cost to the Department. Retest all corrected areas and assure the requirements of these Specifications are met.~~ Correct all areas of unacceptable pavement at no cost to the Department. Retest all corrected areas and **ensure** the requirements of these Specifications are met. For those areas corrected as a result of 330-9.4, the Department will retest all corrected areas to **ensure** the requirements of these Specifications are met.

~~Correct~~ **all areas of unacceptable pavement, as well as straightedge** deficiencies in the friction course or final surface layer by removing and replacing the full depth of the layer, extending a minimum of 50 feet on both sides (where possible) of the defective **or unacceptable** area for the full width of the paving lane.

~~As an exception, the Engineer may allow the Contractor to leave these areas in place if it is determined by the Engineer that the deficiency~~ **or unacceptable area** is not a significant detriment to the pavement quality. ~~For straightedge deficiencies, A~~ **a** reduction to the pay item quantity will be made in accordance with 330-9.5.4.2.4. ~~For unacceptable IRI areas, a~~ **a** pay reduction will be made using the formula in 330-9.4.2.4 where ~~lane~~ **LOT length (L)** will be calculated as the sum of the lengths of all LOTs with an IRI greater than 95 and ~~LOT P~~ **pay** ~~A~~ **adjustment will be the maximum disincentive shown in Table 330-5.**

~~**330-9.5.1.1 Structural Layers:** Correct all deficiencies, as defined in the Specifications, in the Type SP structural layers by removing and replacing the full depth of the layer, extending a minimum of 50 feet on both sides (where possible) of the defective area for the full width of the paving lane.~~

~~As an option, for high straightedge deficiencies only, mill the pavement surface the full lane width to a depth and length adequate to remove the deficiency. This option only applies if the structural layer is not the final surface layer.~~

~~**330-9.5.1.2 Friction Course:** Correct deficiencies in the friction course or final surface layer by removing and replacing the full depth of the layer, extending a minimum of 50 feet on both sides (where possible) of the defective area for the full width of the paving lane. As an exception, the Engineer may allow the Contractor to leave these areas in place if it is determined by the Engineer that the deficiency is not a significant detriment to the pavement quality. A reduction to the pay item quantity will be made in accordance with 330-9.5.2.~~

**HOT MIX ASPHALT - GENERAL CONSTRUCTION REQUIREMENTS.****(REV 2-22-18)**

SUBARTICLE 330-8.2 is deleted and the following substituted:

**330-8.2 Transverse Joints:** Place the mixture as continuously as possible to minimize transverse joints. When constructing permanent transverse joints, meet the surface requirements as defined in 330-9.4.3. Construct temporary transverse joints in such a manner to allow traffic to pass over it. When resuming the paving operation, construct a transverse joint by cutting back on the previously placed pavement at a location where the straightedge requirements are met. At the project limits, tie into the adjoining pavement layers as shown in the Plans.

SUBARTICLE 330-9.4 is deleted and the following substituted:

**330-9.4 Pavement Smoothness:** Construct a smooth pavement meeting the requirements of this Specification.

**330-9.4.1 Process Control Testing:** Assume full responsibility for controlling all paving operations and processes such that the requirements of these Specifications are met at all times.

**330-9.4.2 Laser Acceptance:** Acceptance testing for pavement smoothness of the friction course for mainline traffic lanes will be based on the laser profiler using the International Roughness Index (IRI) as defined in ASTM E1926. Areas not suitable for testing with the laser profiler will be QC tested and accepted with the straight edge in accordance with 330-9.4.3.

The pavement smoothness of each lane will be determined by a laser profiler furnished and operated by the Department in accordance with FM 5-549 and a report issued with the IRI reported to whole numbers.

For acceptance testing purposes, the pavement will be divided into LOTS. A LOT is defined as anything less than or equal to 0.1 mile and greater than or equal to 0.01 mile.

**330-9.4.2.1 Evaluation Process:** As soon as the friction course to be placed is scheduled, notify the Engineer. A minimum of 10 calendar days from notification is needed for the Department to schedule the equipment. Prior to testing and for the full project limits, ensure all lanes are open, free from obstructions, and all debris is removed from roadway.

**330-9.4.2.2 Acceptable Pavement:** If the initial ride acceptance test shows all project LOTS to be less than or equal to 95 IRI, LOT incentive/disincentive pay will be calculated as described in 330-9.4.2.4.

**330-9.4.2.3 Unacceptable Pavement:** If any LOT in the project has an IRI greater than 95, the project data will be reprocessed using continuous analysis to define the limits of the unacceptable pavement.

For unacceptable LOTS, the limits of unacceptable pavement are defined as those areas of pavement 50 feet either side of where the continuous plot line exceeds 95 IRI. The limits of unacceptable pavement may extend into neighboring LOTS.

For unacceptable LOTS at either end of the project:

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1. If the continuous analysis ends above 95 IRI 0.05 miles from the end of the project, then the corrective action limits will extend to the end of the project.

2. If the continuous analysis ends at or below 95 IRI 0.05 miles from the end of the project, then the corrective action limits are defined above.

For unacceptable LOTs at breaks in paving such as bridges:

1. If the continuous analysis ends above 95 IRI 0.05 miles from the break in paving, then the corrective action limits will extend from the break in paving to a point as defined above.

2. If the continuous analysis ends at or below 95 IRI 0.05 miles from the break in paving then the pavement will be left in place with the appropriate disincentive applied.

3. If any LOTs with an IRI greater than 95 are left in place, they will be paid at maximum disincentive

Address all areas of unacceptable pavement in accordance with 330-9.5.

As soon as all corrections are scheduled, notify the Engineer. A minimum of 10 calendar days from notification is needed for the Department to schedule the equipment. Prior to testing and for the full project limits, ensure all lanes are open, free from obstructions, and all debris is removed from roadway.

Repeat this process as necessary until all LOTs have an IRI less than or equal to 95 at which time, incentive/disincentive will be calculated for the project as described in 330-9.4.2.4.

**330-9.4.2.4 Calculating Incentive/Disincentive:** For all LOTs, pay adjustment incentive/disincentive will be based on the dollar value corresponding to each LOT's IRI shown in Table 330-5

Incentive/disincentive will be determined from the initial test for all LOTs less than or equal to 95 IRI and that were not affected by remove and replace corrections.

Incentive/disincentive for any LOTs affected by remove and replace corrections will be determined from the final acceptance run (once at or below 95 IRI).

LOT incentive / disincentive for a project will be calculated once all project LOTs are less than or equal to 95 IRI as follows:

$$\text{LOT incentive/disincentive} = \frac{\text{LOT Pay Adjustment} * \text{LOT length (miles)}}{0.1}$$

Project incentive/disincentive is the sum of the incentives / disincentives of all LOTs in the project.

Total project incentive shall not exceed 5% of the FC-5 price.

Total project disincentive shall not result in payment less than 80% of the FC-5 price.

The FC-5 price is the bid unit price times the pay quantity of FC-5 (as determined in accordance with 337-11). For lump sum projects, the FC-5 price is the unit price determined using the six month statewide pay item average for the six months prior to the

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letting date for this Contract times the pay quantity of FC-5 (as determined in accordance with 9-2).

**330-9.4.2.5 Project Level Consistency Incentive:** If all project LOTs are less than or equal 55 IRI, the project will earn an additional 3% incentive based on the FC-5 price. The FC-5 price is described in 330-9.4.2.4. The project level consistency incentive is in addition to the project incentive outlined in 330-9.4.2.4.

Table 330-5 Laser Acceptance Tolerance					
LOT IRI	LOT Pay Adjustment	LOT IRI	LOT Pay Adjustment	LOT IRI	LOT Pay Adjustment
≤ 30	\$260	56	-\$20	76	-\$420
31	\$240	57	-\$40	77	-\$440
32	\$220	58	-\$60	78	-\$460
33	\$200	59	-\$80	79	-\$480
34	\$180	60	-\$100	80	-\$500
35	\$160	61	-\$120	81	-\$520
36	\$140	62	-\$140	82	-\$540
37	\$120	63	-\$160	83	-\$560
38	\$100	64	-\$180	84	-\$580
39	\$80	65	-\$200	85	-\$600
40	\$60	66	-\$220	86	-\$620
41	\$40	67	-\$240	87	-\$640
42	\$20	68	-\$260	88	-\$660
		69	-\$280	89	-\$680
43 – 55	Full Pay	70	-\$300	90	-\$700
		71	-\$320	91	-\$720
		72	-\$340	92	-\$740
		73	-\$360	93	-\$760
		74	-\$380	94	-\$780
		75	-\$400	95*	-\$800

\*LOTs > 95 IRI left in place receive -\$800 LOT pay adjustment.

**330-9.4.3 Straightedge Acceptance:** Furnish a 15 foot manual and 15 foot rolling straightedge meeting the requirements of FM 5-509 for transverse joints at the beginning and end of the project, at the beginning and end of bridge structures, ramps, acceleration/deceleration lanes, and other areas not suitable for testing with the laser profiler. Perform all straightedge testing in accordance with FM 5-509 in the outside wheel path of each lane. Notify the Engineer of the location and time of straightedge testing a minimum of 48 hours before beginning testing. The Engineer will verify the straightedge testing by observing the QC straightedging operations. Address all deficiencies in excess of 3/16 inch in accordance with 330-9.5.

**330-9.4.3.1 Straightedge Exceptions:** Straightedge testing will not be required in the following areas: shoulders, intersections, tapers, crossovers, sidewalks, shared use

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paths, parking lots and similar areas, or in the following areas when they are less than 250 feet in length: turn lanes, acceleration/deceleration lanes and side streets. The limits of the intersection will be from stop bar to stop bar for both the mainline and side streets.

The Engineer may waive straightedge requirements for transverse joints at the beginning and end of the project, at the beginning and end of bridge structures, at manholes, and at utility structures if the deficiencies are caused by factors beyond the control of the Contractor, as determined by the Engineer. In addition, the Engineer may also waive the straightedging requirements on ramps and superelevated sections where the geometrical orientation of the pavement results in an inaccurate measurement with the rolling straightedge.

SUBARTICLE 330-9.5.1 is deleted and the following substituted:

**330-9.5.1 Corrections:** Correct all areas of unacceptable pavement at no cost to the Department. Retest all corrected areas and ensure the requirements of these Specifications are met. For those areas corrected as a result of 330-9.4, the Department will retest all corrected areas to ensure the requirements of these Specifications are met.

Correct all areas of unacceptable pavement, as well as straightedge deficiencies in the friction course or final surface layer by removing and replacing the full depth of the layer, extending a minimum of 50 feet on both sides (where possible) of the defective or unacceptable area for the full width of the paving lane.

As an exception, the Engineer may allow the Contractor to leave these areas in place if it is determined by the Engineer that the deficiency or unacceptable area is not a significant detriment to the pavement quality. For straightedge deficiencies, a reduction to the pay item quantity will be made in accordance with 330-9.5.2. For unacceptable IRI areas, a pay reduction will be made using the formula in 330-9.4.2.4 where LOT length will be calculated as the sum of the lengths of all LOTs with an IRI greater than 95 and LOT pay adjustment will be the maximum disincentive shown in Table 330-5.