

SECTION 338
VALUE ADDED ASPHALT PAVEMENT

338-1 Description.

Construct Value Added Asphalt Pavement consisting of Asphalt Concrete Structural Course and Asphalt Concrete Friction Course, subject to a three year warranty period after final acceptance of the Contract in accordance with 5-11.

For purposes of this Specification, the Responsible Party, as designated herein, is responsible for performance of the Value Added Asphalt Pavement including continued responsibility for performing all remedial work associated with pavement distresses exceeding threshold values determined in accordance with this Section, and as to which notice was provided to the Responsible Party.

The work specified in this Section will not be paid for directly, but will be considered as incidental to other Contract items.

338-2 Materials and Construction Requirements.

Meet the following requirements:

Hot Bituminous Mixtures - Plant, Methods and Equipment	Section 320
Hot Bituminous Mixtures - General Construction Requirements	Section 330
Superpave Asphalt Concrete	Section 334
Asphalt Concrete Friction Courses	Section 337

338-3 Responsible Party.

Prior to any Value Added Asphalt Pavement being placed on the project, the Contractor shall designate a Responsible Party to accept responsibility for maintaining the Value Added Asphalt Pavement, when remedial work is required. When the scope of the asphalt work is only milling and resurfacing, and there is no construction of the embankment, subgrade or base below the pavement included in the Contract, the Responsible Party may be either the Contractor or the Department approved subcontractor performing the Value Added Asphalt Pavement work. When the construction of the embankment, subgrade or base below the pavement is included in the Contract, in addition to the construction of the Asphalt Concrete Structural Course and Asphalt Concrete Friction Course, the Contractor shall be considered as the Responsible Party.

When the Responsible Party is a subcontractor, the subcontractor must be pre-qualified with the Department in the category of asphalt, and such designation must be made to the Department by the Contractor. The proposed subcontractor must execute and submit to the Department a form, provided by the Department, prior to or concurrent with the Contractor's request to sublet any Value Added Asphalt Pavement work, stipulating that the subcontractor assumes all responsibility as the Responsible Party for the Value Added Asphalt Pavement within the three-year warranty period. Failure to timely designate the Responsible Party will result in the Contractor being the Responsible Party unless otherwise agreed to in writing by the Department.

Upon final acceptance of the Contract in accordance with 5-11, the Contractor's responsibility for maintenance of all the work or facilities within the project limits of the Contract will terminate in accordance with 5-11; with the sole exception that the obligations set

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forth in this Section for Value Added Asphalt Pavement will continue thereafter to be the responsibility of the Responsible Party as otherwise provided in this Section.

338-4 Statewide Disputes Review Board.

The Statewide Disputes Review Board in effect for this Contract will resolve any and all disputes that may arise involving administration and enforcement of this Specification. The Responsible Party and the Department acknowledge that use of the Statewide Disputes Review Board is required, and the determinations of the Statewide Disputes Review Board for disputes arising out of this Specification will be binding on both the Responsible Party and the Department, with no right of appeal by either party.

Meet the requirements of 8-3.

338-5 Pavement Evaluation and Remedial Work.

338-5.1 General: The Department's Pavement Condition Survey Program, along with observations by the Engineer, will be used as the basis for determining the extent and the magnitude of the pavement distresses occurring on the project. In the event the level of distress exceeds any of the threshold values defined below, remedial work as described in 338-5.5 by the Responsible Party will be required.

The Department will monitor the pavement for distresses and may require remedial action at any time. For evaluation purposes, the project will be subdivided into LOTs of 0.1 mile per lane. When the segment is less than 0.1 mile, the segment will be called a partial LOT. For purposes of threshold values and remedial work, partial lots and lots will be treated as lots. The Department may conduct a Pavement Condition Survey of the value added pavement following the final acceptance of the project, and at intermediate times throughout the warranty period with findings provided when considered by the Department to be the obligation of the Responsible Party.

The final survey, if determined by the Engineer to be necessary, will be conducted before the end of the warranty period with results provided to the Responsible Party for those conditions exceeding contract threshold values requiring remedial action that the Department believes to be an obligation of the Responsible Party. The Department will be responsible for all costs associated with the surveys.

If the survey findings, intermediate or final, are to be disputed by the Responsible Party, written notification must be submitted to the Engineer within 30 calendar days of the date of receipt of the information from the Department.

During the warranty period, the Responsible Party may monitor the project using nondestructive methods and may participate with the Department in the Pavement Condition Surveys upon request. The Responsible Party shall not conduct any coring, milling or other destructive methods without prior approval by the Engineer.

338-5.2 Category 1 Pavement: For purposes of this Specification, "Category 1 Pavement" is defined as mainline roadways, access roads and frontage roads with a design speed of 55 mph and greater.

Threshold values and associated remedial work for Category 1 Value Added Asphalt Pavement are specified in Table 338-1.

TABLE 338-1 Category 1 Pavements		
Type of Distress	Threshold Values	Remedial Work
Rutting ⁽¹⁾	Depth > 0.25 inch	Remove and replace the distressed LOT(s) to the full depth of all layers and to the full lane width ⁽²⁾
Ride ⁽³⁾	RN < 3.5	Remove and replace the friction course layer for the full length and the full lane width of the distressed LOT(s) ⁽⁴⁾
Settlement/Depression ⁽⁵⁾	Depth ≥ 1/2 inch	Propose the method of correction to the Engineer for approval prior to beginning remedial work
Cracking ⁽⁶⁾	Cumulative length of cracking > 30 feet for Cracks > 1/8 inch	Remove and replace the distressed LOT(s) to the full depth of all layers, and to the full lane width ⁽⁷⁾
Raveling and/or Delamination affecting the Friction Course ⁽⁸⁾	Any length	Remove and replace the distressed area(s) to the full distressed depth and the full lane width for the full distressed length plus 50' on each end
Pot holes and Slippage Area(s) ⁽⁸⁾	Observation by Engineer	Remove and replace the distressed area(s) to the full distressed depth and the full lane width for the full distressed length plus 50' on each end
Bleeding ⁽⁹⁾	Loss of surface texture due to excess asphalt, individual area ≥ 10 sf.	Remove and replace the distressed area(s) to the full distressed depth and the full lane width for the full distressed length plus 50' on each end

(1) Rutting: Rut depth to be determined by Laser Profiler in accordance with the Flexible Pavement Condition Survey Handbook. For any LOT that cannot be surveyed by Laser Profiler, the rut depth will be determined manually in accordance with the Flexible Pavement Condition Survey Handbook, with the exception that the number of readings per LOT will be one every 20 feet. For a partial LOT, a minimum of three measurements not exceeding 20 feet apart will be made. When the average of the measurements obtained manually exceeds 0.30 inch or if any individual measurement exceeds 0.6 inch, remedial work will be required.

(2) Remedial Work for Rutting: The Contractor may propose removal and replacement of less than the full depth of all layers by preparation and submittal of a signed and sealed engineering analysis report, demonstrating the actual extent of the distressed area(s). Remedial work must be performed in accordance with Table 338-1 unless approved otherwise by the Engineer.

(3) Ride: Ride Number (RN) to be established by Laser Profiler in accordance with FM 5-549.

(4) If the deficient ride is due to underlying asphalt layers; base, subgrade, or embankment which were constructed by the Responsible Party, propose the method of correction to the Engineer for approval prior to beginning the remedial work.

(5) Settlement/Depression: Depth of the settlement/depression to be determined by a 6 foot manual straightedge.

(6) Cracking: Beginning and ending of 1/8 inch cracking will be determined as the average of three measurements taken at one foot intervals. The longitudinal construction joint at the lane line will not be considered as a crack.

(7) Remedial Work for Cracking: The Contractor may propose removal and replacement of less than the full depth of all layers by preparation and submittal of a signed and sealed engineering analysis report, demonstrating the actual extent of the distressed area(s). Remedial work must be performed in accordance with Table 338-1 unless approved otherwise by the Engineer.

(8) Raveling, Delamination, Pot holes, Slippage: As defined and determined by the Engineer in accordance with the examples displayed at the following URL: <http://www.fdot.gov/programmanagement/Implemented/URLinSpecs/Pavement.shtm>

(9) Bleeding: Bleeding to be defined and determined by the Engineer in accordance with the examples displayed at the following URL: <http://www.fdot.gov/programmanagement/Implemented/URLinSpecs/Pavement.shtm>

338-5.3 Category 2 Pavement: For purposes of this Specification, "Category 2 Pavement" is defined as mainline roadways, access roads and frontage roads with a design speed less than 55 mph; approach transition and merge areas at toll booths; ramps; acceleration and deceleration lanes (including tapers); turn lanes; parking areas; rest areas; weigh stations; and agricultural inspection stations.

Threshold values and associated remedial work for Category 2 Value Added Asphalt Pavement are specified in Table 338-2.

Type of Distress	Threshold Values	Remedial Work
Rutting ⁽¹⁾	Measured by Laser Profiler: See Table 338-1	See Table 338-1
	Manual Measurement: Avg. Depth > 0.4 inch	Remove and replace 1.5 inch ^(1a) the full lane width for the area plus 50 feet
Cracking	Cumulative length of cracking > 300 feet for Cracks > 1/8 inch	See Table 338-1
Surface Deterioration ⁽²⁾	See Table 338-1	See Table 338-1
Settlement/Depression ⁽³⁾	Depth ≥ 1/2 inch	See Table 338-1

(1) Rutting: Rut depth to be determined by Laser Profiler in accordance with the Flexible Pavement Condition Survey Handbook. For any LOT that cannot be surveyed by the Laser Profiler, the rut depth will be determined manually in accordance with the Flexible Pavement Condition Survey Handbook, with the exception that the number of readings per LOT will be one every 20 feet. For partial LOT, minimum of three measurements not exceeding 20 feet apart will be checked. When the average of the measurements obtained manually exceeds 0.40 inch, or if any individual measurement exceeds 0.6 inch, remedial work will be required..

(1a) If pavement has an open graded friction course, remove and replace 2.0 inches.

(2) Surface Deterioration: As used in Table 338-2, Surface Deterioration includes Raveling and/or Delamination affecting the Friction Course; Pot holes; Slippage Area(s); and Bleeding; all as defined and footnoted in Table 338-1.

(3)Settlement/Depression: Depth of the settlement/depression to be determined by a 6 foot manual straightedge.

338-5.4 Category 3 Pavement: For purposes of this Specification, "Category 3 Pavement" is defined as bicycle paths, walking paths, median crossovers, shoulders and other areas as determined by the Engineer.

Threshold values and associated remedial work for Category 3 Value Added Asphalt Pavement are specified in Table 338-3.

Type of Distress	Threshold Values	Remedial Work
Rutting	N/A	N/A
Cracking	Cumulative length of cracking > 500 feet for Cracks > 1/8 inch	See Table 338-1

TABLE 338-3 Category 3 Pavements		
Type of Distress	Threshold Values	Remedial Work
Surface Deterioration ⁽¹⁾	See Table 338-1	See Table 338-1
Settlement/Depression ⁽²⁾	Depth \geq 1/2 inch	See Table 338-1

(1) Surface Deterioration: As used in Table 338-3, Surface Deterioration includes Raveling and/or Delamination affecting the Friction Course; Pot holes; Slippage Area(s); and Bleeding; all as defined and footnoted in Table 338-1. Raveling of FC-5 for Category 3 Pavements is excluded from this requirement.

(2) Settlement/Depression: Depth of the settlement/depression to be determined by a 6 foot manual straightedge.

338-5.5 Remedial Work: The Responsible Party will perform all necessary remedial work described within this Section at no cost to the Department. If the pavement distresses exceed threshold values and it is determined that the cause of the distress is due to the embankment, subgrade, base or other activities performed by the Contractor, the Responsible Party will be responsible for performing all remedial work associated with the pavement distress. Should an impasse develop in any regard as to the need for remedial work or the extent required, the Statewide Disputes Review Board will render a final decision by majority vote.

Remedial work will not be required if any one of the following conditions is found to apply:

a. Determination that the pavement thickness design as provided by the Department is deficient. The Department will make available a copy of the original pavement thickness design package and design traffic report to the Responsible Party upon request. The Responsible Party is responsible for performing all remedial work associated with the pavement distress if the pavement design is provided by the Contractor.

b. Determination that the Accumulated ESALs (Number of 18 Kip Equivalent Single Axle Loads in the design lane) has increased by 25% or more than the Accumulated ESALs used by the Department for design purposes for the warranty period for the pavement design life. In calculating ESALs, the Average Annual Daily Traffic (AADT) will be obtained from the Department's traffic count data and the T24 (Percent Heavy Trucks during a 24 hour period) will be obtained from the Department's traffic classification survey data.

c. Determination that the deficiency was due to the failure of the existing underlying layers that were not part of the Contract work.

d. Determination that the deficiency was the responsibility of a third party or its actions, unless the third party was performing work included in the Contract.

If a measured distress value indicates remedial action is required per Table 338-1, Table 338-2 and/or Table 338-3, the Responsible Party must begin remedial work within 45 calendar days of notification by the Department or a ruling of the Statewide Disputes Review Board. The Disputes Review Board will determine the allowable duration for the completion of the remedial work, but not to exceed 6 months.

In the event remedial action is necessary and forensic information is required to determine the source of the distress, the Department may core and/or trench the pavement. The Responsible Party will not be responsible for damages to the pavement as a result of any forensic activities conducted by the Department.

As applicable to distress criteria for rutting, ride and cracking for Category 1 and Category 2 pavements, when two LOTs requiring remedial action are not separated by three or

more LOTs not requiring remedial action, the remedial work shall be required for the total length of all such contiguous LOTs, including the intermediate LOTs not requiring remedial action.

Additionally, for Category 1 and Category 2 pavements, where such areas of remedial action are required due to raveling, slippage or bleeding are separated by less than 1,000 feet, the remedial work will be required for the entire area contiguous to the distressed areas, including intermediate areas otherwise requiring no remedial action.

The Responsible Party has the first option to perform all remedial work that is determined by the Department to be their responsibility. If, in the opinion of the Engineer, the problem poses an immediate danger to the traveling public and the Responsible Party cannot provide temporary mitigation for the defect within 4 hours of written notification and restore the pavement to its original design condition within 72 hours of written notification, the Engineer has the authority to have the remedial work performed by other forces. Temporary mitigation includes the use of traffic control systems such as barricades, drums, or other approved devices to secure the area including lane closures if necessary, and constructing temporary repairs making it safe for the roadway user until the defect can be restored to its original design condition. The Responsible Party is responsible for all incurred costs of the work performed by other forces should the problem (remedial work) be determined to be the responsibility of the Responsible Party. Remedial work performed by other forces does not alter any of the requirements, responsibilities or obligations of the Responsible Party.

The Responsible Party must complete all remedial work to the satisfaction of the Engineer. Any disputes regarding the adequacy of the remedial work will be resolved by the Statewide Disputes Review Board. Approval of remedial work does not relieve the Responsible Party from continuing responsibility under the provisions of this Specification.

Notify the Engineer in writing prior to beginning any remedial work. Meet the requirements of the ~~Department's Standard Specifications for Road and Bridge Construction and implemented modifications thereto~~ when performing any remedial work. Perform all signing and traffic control in accordance with the current edition of the Department's ~~Design Standard Plans for Design, Construction, Maintenance and Utility Operations on the State Highway System~~. Provide ~~M~~aintenance of ~~T~~raffic during remedial work at no additional cost to the Department. Lane closure restrictions listed in the original Contract will apply to remedial work. Written request(s) to obtain permission for lane closure(s) for either forensic investigation or remedial work must be made to the Engineer 48 hours in advance of any lane closures. Do not perform any lane closures until written permission is given by the Engineer.

If remedial work necessitates a corrective action to overlying asphalt layers, pavement markings, signal loops, adjacent lane(s), roadway shoulders, or other affected Contract work, perform these corrective actions using similar products at no additional cost to the Department.

338-6 Responsible Party's Failure to Perform.

Should the Responsible Party fail to timely submit any dispute to the Statewide Disputes Review Board, fail to satisfactorily perform any remedial work, or fail to compensate the Department for any remedial work performed by the Department and determined to be the Responsible Party's responsibility in accordance with this Specification, the Department will suspend, revoke or deny the Responsible Party's certificate of qualification under the terms of Section 337.16(d)(2), Florida Statutes, for a minimum of 6 months or until the remedial work has been satisfactorily performed (or full and complete payment for remedial work performed by others made to the Department), whichever is longer. Should the Responsible Party choose to

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challenge the Department's notification of intent for suspension, revocation or denial of qualification and the Department's action is upheld, the Responsible Party will have its qualification suspended for an additional minimum of 6 months.

The remedial work is not an obligation of the Contractor's bond required by Section 337.18, Florida Statutes.