Sample Project Special: 310fdrhma

02-03-11

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REVISION OF SECTION 310

FULL DEPTH RECLAMATION OF HOT MIX ASPHALT PAVEMENT

Section 310 is hereby added to the Standard Specifications as follows:

**DESCRIPTION**

**310.01** This work will be specified as a total processed depth up to 8 inches, depths between 8 -12 inches and depths 12 -16 inches as appropriate. This work consists of cutting of the existing asphalt mat, pulverizing the existing asphalt mat shoulders, mixing the pulverized asphalt mat with the existing subgrade, existing base course, or combination thereof, to the specified depth, grading and compacting the mixed material, in accordance with and at locations as shown in the Contract.

**CONSTRUCTION REQUIREMENTS**

**310.02** The contractor shall develop a written method to maintain the centerline geometry, profile elevations, and cross slope of the existing roadway. The plan shall be submitted to the Engineer for approval a minimum of two weeks prior to starting work..

The existing asphalt mat shall be cut at neat lines as shown in the plans by the use of a cutting wheel attached to a blade or by another approved method. The existing asphalt mat shall be pulverized, and mixed with the existing subgrade, base course, or combination thereof to a specified depth or as directed by the Engineer, with a self propelled rotary type mixing machine. Existing asphalt mat thicknesses and core information will be available upon request. The mixing machine shall make as many passes as required to uniformly mix the asphalt, subgrade, existing base course, or combination thereof to the required thickness. Mixing of the different materials shall create a homogenous mixture. The particle size of the pulverized asphalt mat shall be a minimum of 99 percent passing the 37.5 mm (1-1/2 inch) sieve. When the addition of water is necessary for initial compaction purposes, unless otherwise approved by the Engineer, it shall be added through the mixing machine with the capability to uniformly distribute water through the mixed materials to within 2 percent of the optimum moisture as determined in accordance with AASHTO T-180 Method D.

When proper mixing has been accomplished, the mixture shall then be bladed, shaped, wetted or dried, and rolled to meet a minimum of 95 percent of the maximum dry density determined in accordance with AASHTO T-180 Method D. Grading equipment used to establish the final surface elevations shall have automatic controls for transverse slope. The transverse slope controls shall be capable of maintaining the final surface within 0.1 percent of the specified slope. Variations from the subgrade plane shall not be more than ¼ inch. The work shall be maintained and tested for conformance to these requirements immediately prior to placing additional pavement layers. An application of diluted emulsified asphalt may be required before placement of the bottom layer of hot bituminous pavement.

Compaction will be measured for the top 8-inch lift of reclaimed materials, and if appropriate for any lift below the top 8-inch lift. Density testing and materials acceptance will apply to each lift of 8 inches or less that is reclaimed and placed on the project. Acceptance Testing will be based on a random schedule of 1/4000 square yards of reclaimed material up to 8 inches and 1/4000 square yards of reclaimed material 8 inches and greater in depth.

The maximum length of exposed processed asphalt mat shall be no greater than four miles unless approved by the Engineer. The maximum time a portion of the roadway will be unpaved is three working days unless approved by the Engineer. The exposed longitudinal joint between the existing asphalt mat and the processed mat shall not remain in place for more than one day unless approved by the Engineer or when additional aggregate base course is imported. When additional aggregate base course is imported and placed before processing begins, the full width of the roadway shall be completed daily. Joint construction and maintenance shall conform to subsection 401.16.

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REVISION OF SECTION 310

FULL DEPTH RECLAMATION OF HOT MIX ASPHALT PAVEMENT

**METHOD OF MEASUREMENT**

**310.03** Full Depth Reclamation of Hot Mix Asphalt Pavement will be measured by the square yard of roadway treated, completed and accepted.

 **BASIS OF PAYMENT**

**310.04** The accepted quantities of Full Depth Reclamation of Hot Mix Asphalt Pavement will be paid for at the contract unit price per square yard for Full Depth Reclamation of Hot Mix Asphalt Pavement.

**Pay Item Pay Unit**

Full Depth Reclamation of Hot Mix Asphalt Pavement (0-8 Inches) Square Yard

Full Depth Reclamation of Hot Mix Asphalt Pavement (8-12 Inches) Square Yard

Full Depth Reclamation of Hot Mix Asphalt Pavement (12-16 Inches) Square Yard

Payment for Full Depth Reclamation of Hot Mix Asphalt Pavement will be full compensation for all work necessary to complete the item including cutting of the existing asphalt mat, pulverizing the existing asphalt mat, mixing the pulverized asphalt mat into existing subgrade or base course, wetting and compacting the mixed pulverized asphalt mat and subgrade and/or base course, blading, shaping, haul, and water. All additional equipment or labor to process and compact any lift below 8 inches will be included in the bid item Full Depth Reclamation of Hot Mix Asphalt Pavement 8-12 inches or Full Depth Reclamation of Hot Mix Asphalt Pavement 12-16 inches as appropriate.

**INSTRUCTIONS TO DESIGNERS** (delete instructions from final draft):

Consult the Region Materials Engineer for guidance on use of this specification. It should be considered still in development and long-term field performance is currently being monitored.

**Use the Project Special Provision** to reclaim existing HBP in place and utilize the material as base or sub-base in the finished pavement template. Project Selection guidelines should include the following:

* Recommended Use on Roadways with less than 10,000 AADT
* Selected Roadways need a completed preliminary soils investigation to determine HBP and Base thickness intended for reclamation
* Plans should include a tabulation of pavement thickness identified “for information purposes only used in estimating plan quantities”.
* The designer should consider estimating for some irregularities in existing pavement thickness and include bid items for Full Depth Reclamation of 8-12 inches and Full Depth Reclamation of 12-16 inches.
* Consideration should be given that there is a reduced drainage coefficient when the reclaimed base material is critical for roadway drainage