Sample project special: 420gcrhd

02-03-11

1

REVISION OF SECTIONS 420 AND 712

GEOTEXTILE (CRACK REDUCTION) (HIGH DENSITY)

Section 420 of the Standard Specifications is hereby revised for this project as follows:

Subsection 420.01 shall include the following:

This work includes furnishing and installing reinforced high density crack reduction geotextile between pavement layers in accordance with these specifications and the details shown on the plans.

Subsection 420.02 shall include the following:

Geotextile (Crack Reduction) (High Density) shall meet the requirements of subsection 712.08(f), including Table 712-4.

**1**The asphaltic tack to be applied to the pavement surface shall be AC-10 or AC-20 conforming to AASHTO M 226, or PG 58-22 or PG 64-22 conforming to AASHTO MP1.

Subsection 420.04 shall include the following:

Geotextile (Crack Reduction) (High Density) shall be installed as follows:

Application of Tack: The tack coat shall be applied in a fog coat at the approximate rate of 0.10 gal/sq yd if sprayed. In cold temperature conditions, a heavier spray may be used to ensure a good bond. However, the rate of application shall not exceed 0.25 gal/sq yd. The edges of the geotextile shall be bonded well to the old pavement. Minimum application temperature for the asphalt tack shall be 300 °F.

The width of the asphalt tack application shall be the geotextile width plus 2 – 3 inches. The tack shall be applied no further in advance of geotextile placement than can be accomplished before the tack loses adhesion. For example in cold weather this distance might be no more than 5 feet.

Sand: The Contractor shall have small amounts of washed sand immediately available to blot excess asphalt, if necessary to facilitate movement of traffic or construction equipment over the material prior to the overlay. When approved, sand may be placed ahead of paver to prevent material from sticking to tires, trucks, or paver.

Surface Preparation: The surface upon which the geotextile is to be placed shall be free of dirt, water, and vegetation.

Geotextile Placement: The geotextile shall be placed into the tack prior to the time the asphalt has cooled and lost its tackiness. The woven polyester side of the geotextile shall be placed up.

At transverse and longitudinal joints, the geotextile may be butted or overlapped. However, the geotextile shall be overlapped on bridge decks or where waterproofing is required. Additional tack shall be used to bond the two geotextile areas together where they overlap.

Cornering may be accomplished without sectioning geotextile by walking gathered geotextile to one spot and slicing bubble out with razor knife and tacking the overlap.

Geotextile that is damaged after placement shall be removed and replaced at the Contractor’s expense.

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REVISION OF SECTION 420 AND 712

GEOTEXTILE (CRACK REDUCTION) (HIGH DENSITY)

Geotextile Overlay: Hot bituminous pavement overlay shall be placed immediately after placement of the geotextile or, if approved, overlay placement may be delayed and the roadway opened to traffic as required.

General: Air and pavement temperatures during geotextile installation shall be sufficient to allow adequate tacking. Geotextile installed in cold weather shall be overlaid as soon as possible.

Subsection 420.09 shall include the following:

Geotextile (Crack Reduction) (High Density) will be measured in place by the square yard of surface area, completed and accepted.

Subsection 420.10 shall include the following:

Payment will be made under:

Pay Item Pay Unit

Geotextile (Crack Reduction) (High Density) Square Yard

Payment will be full compensation for all work and materials required to complete the item.

Add subsection 712.08(f) as follows:

The material for Geotextile (Crack Reduction) (High Density) shall be a high density asphalt mastic sandwiched between two layers of polyester fabric meeting the properties in Table 712-10.

**TABLE 712-4**

|  |  |  |
| --- | --- | --- |
| **PROPERTY** | **REQUIREMENT** | **TEST METHOD** |
| Density (minimum) | 80 lbs/ cu ft | ASTM E 12 |
| Weight (minimum) | 0.9 lbs/sq ft |  |
| Caliper (Retains 95% caliper after loading) | 0.135 inch | ASTM D 1777 |
| Absorption (maximum) | 1% | ASTM D 517 |
| Brittleness | Pass | ASTM D 517 |
| Softening Point (mastic) (minimum) | 200 °F | ASTM D 2398 |
| Cold Flex (2"x 5" specimen bent 180° on a 2" mandrel at 0°F) | No cracking |  |
| Heat Stability (2"x 5" specimen hung vertically in a mechanical convection oven for 2 hours at 190°F) | No Dripping or delamination |  |
| Polyester Reinforcement: Cycles to break single fiber | >2,100,000 |  |
| Flammability | Self extinguishing, no burn rate | USDOT Specification 302 |
| Elongation, percent | 100% | Instron |
| Tensile Strength | 1000 psi | Instron |
| Width x Length | 20” x 102’ |  |

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REVISION OF SECTION 420 AND 712

GEOTEXTILE (CRACK REDUCTION) (HIGH DENSITY)

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**INSTRUCTIONS TO DESIGNERS** (Delete instructions and symbols from final draft):

**1**Higher penetration asphalts or heavier coverage may be specified for cold weather applications or in severely cold climates. Higher penetration asphalts or heavier coverage may also be specified for application on milled surfaces.