Make the following Section a part of the Standard Specifications:

"SECTION 416 - PAVING GRID

416.01 Description. This work includes furnishing and placing paving grid between pavement layers over existing asphalt pavements.

416.02 Material. The grid material shall meet the following:

The reinforcement mesh shall be a knitted glass fiber strand grid with the following characteristics based on the minimum average roll values (MARV):

- Tensile Strength (in accordance with ASTM D6637)
  560 lb/in x 560 lb/in component strand strengths

- Area Weight (in accordance with ASTM D5261)
  12 ounces per square yard

- Modified Elastomeric Polymer Coating

- Elongation at break less than 5 percent (in accordance with ASTM D6637)

- Melt Point above 425 degrees Fahrenheit (in accordance with ASTM D276)

- Pressure-sensitive self-adhesive, with sufficient bond to allow normal construction traffic and paving machinery operations.

- Mesh opening of 1" by 1"

- 100% polymer coating (solid tack coat) to perform as a tack coat for the overlying AC layer and activated with AC at temperatures of over 280 degrees Fahrenheit

The material shall be stored in dry and covered conditions free from dust and stocked vertically to avoid misshaped rolls.

416.03 Construction Requirements.

(A) Weather Limitations. Application of paving grid will not be allowed under the following conditions:

(1) On wet surfaces, as determined by the Engineer.

(2) When surface temperature is below 40 degrees or above 140 degrees Fahrenheit.

(3) When weather conditions prevent proper method of construction.

(B) Surface Preparation. An AC layer shall be placed and properly compacted prior to placement of the grid. The cleaning of the existing pavement shall be in accordance with Section 310 – Brooming Off.

(C) Paving Grid Placement. Place grid onto the cleaned asphalt pavement, with the self-adhesive side down, and with minimal wrinkling or folding. The grid shall only be placed when the leveling course is below 125 degrees Fahrenheit, which is roughly ½ hour after the leveling course is compacted, as the heat can affect the grid adhesive. If the grid has a stronger strength direction, the grid shall be placed with its wider tendon being transverse to the travel direction.

The grid material shall be laid out either by hand or by mechanical means under sufficient tension to eliminate ripples, wrinkling, or folding. Should ripples, wrinkling, or folding occur, these must be removed by pulling the grid tight or in extreme cases (on tight radii) by cutting and laying flat.

The surface of the grid shall be rolled with a rubber-coated drum roller, or pneumatic-tired roller, with enough passes to activate the adhesive. The tires shall be cleaned regularly as needed with an asphalt cleaning agent.

Transverse joints must be lapped in the direction of the paver by 3 to 6 inches. Overlap longitudinal joints by 1 to 2 inches where roll widths of less than 5 feet are utilized. Where 5-foot wide roll widths are used, longitudinal joints are not required, and the rolls shall be placed along the left and right edges of each lane. Do not lap joints with more than two layers of grid. Shingle transverse joints in the direction of paving such that the grid is not pushed up from the construction traffic.

Slow construction equipment and emergency traffic may run on the grid after being rolled, provided the equipment does not make turns or braking movements. However, the grid must be kept clean of mud, soil, dust, debris, and other deleterious materials. In addition, should the grid become damaged, it shall be removed and replaced with a new grid patch that shall be overlapped by the adjacent grid layers, at no additional cost to the State.

The grid shall not be directly exposed to vehicular traffic. Therefore, the travel lane shall not be opened to the general public without an AC overlay.

Tests for proper adhesion shall be performed by the Contractor in the presence of the Engineer, when requested by the Engineer, especially when road conditions are wet or when the road does not appear to be properly cleaned prior to the placement of the grid. The procedure for the adhesion test is as follows.

1. Cut a square yard of grid
2. Place it on the area to be paved.
3. Activate the self-adhesive glue by rolling with a rubber-tired roller or by walking on the sample.
4. Insert the hook of a fish weight scale on to the center of the grid.

5. Pull upwards until the grid starts to pull from the surface.
6. Record the force result.
7. The result shall be at least 20 pounds or more prior to paving.

(D) Paving Operation. To activate the polymer coating on the top side of the grid, hot mix asphalt within a minimum temperature of 285 degrees Fahrenheit should be utilized. This requirement supercedes the 401.03(E) Spreading and Finishing minimum temperature of 250 degrees. Warm mix AC is not acceptable over the grid.

416.04 Method of Measurement. The Engineer will measure paving grid per square yard of grid finished surface, not including overlaps.

The Engineer will measure hot mix asphalt overlay under Section 401 – Dense Graded HMA Pavement

416.05 Basis of Payment. The Engineer will pay for the accepted paving grid at the contract unit price per square yard. Payment will be full compensation for the work prescribed in this section and the contract documents

The Engineer will pay for the following pay item when included in the proposal schedule::

Pay Item	**Pay Unit**
Paving Grid, GlasGrid 8511TF or Equivalent	Square Yard”

The Engineer will pay for:

(1) 20% of the contract bid price upon completion of preparing the surface;

(2) 70% of the contract bid price upon completion of furnishing and placing of the paving grid;

(3) 10% of the contract bid price upon completion of cleaning up;

The Engineer will pay for the accepted hot mix asphalt overlay under Section 401 – Dense Graded HMA Pavement.

END OF SECTION 416