

## **ITEM 601.9402 02 - TEXTURED ASPHALT PAVING WITH THERMOPLASTIC INLAY**

### **DESCRIPTION:**

Furnish and install and inlaid thermoplastic pavement system on hot mix asphalt (HMA) at the areas noted on the project plans and in the color specified.

### **MATERIALS:**

The system must be approved by the Landscape Architecture and Materials Bureau according to department directives.

**Thermoplastic:** Must meet the following requirements:

- 2 year shelf life from date of manufacture.
- Be a mixture of high quality polymeric materials, pigments, and glass beads, with a reflective layer of glass beads bonded to the top surface.
- Resist deterioration when exposed to sunlight, gasoline, oil, salt, water or adverse weather conditions.
- Provide an initial minimum skid resistance value of 52 to 62 British Pendulum Number (BPN) when tested according to ASTM E-303.
- Softening point range between 100° and 120 ° C when measured by the Ring and Ball method as described in ASTM D-36-95(2000).
- Be Stored in a cool (21°C +/- 3°C) dry area indoors
- Provided as pre-cut panels in sizes to conform to the specified pattern, widths and shapes.
- Packaged in accordance with accepted commercial standards.

### **EQUIPMENT:**

A. Infra-Red Heating Equipment: Designed to apply heat to the asphalt surface to make the upper portion of the asphalt surface pliable enough to accept the imprint of the template and allow continuous monitoring of the surface temperature to ensure the asphalt does not over heat and burn.

B. Vibratory Plate Compactor: For pressing the templates into the heated asphalt to create the specified pattern.

C. Templates: Providing the imprint design as detailed on the drawings and specifications.

### **QUALITY OF ASPHALT PAVEMENT**

The asphalt pavement in the area to receive the inlaid thermoplastic shall meet or exceed the mix design standards recommended. The asphalt pavement shall be stable and well compacted. Deficiencies in pre-existing asphalt pavement such as ruts, raveling, cracks, or the like shall be corrected to the satisfaction of the Engineer, prior to installing the in-laid thermoplastic. Surface to be stamped and inlaid must be clean and free of contaminants prior to installation

### **CONSTRUCTION DETAILS:**

Install according to manufacturer's recommendations and this specification.

A. Layout and imprint the pattern into the surface of the HMA as per the drawings and/or specifications.

**ITEM 601.9402 02 - TEXTURED ASPHALT PAVING WITH THERMOPLASTIC INLAY**

Coordinate the installation with the contractor and applicator.

B. Apply heat to pre-existing asphalt surface using equipment meeting the requirements of this specification. Direct flame heaters are not allowed to be used for this purpose, except in transition areas and for spot treatment. Do not allow reheating operations to cause the pavement temperature to exceed 163 °C.

C. Clean equipment used for the inlaid operation in accordance with subsection 402-3.12 Paver and Equipment Cleaning.

D. Once the asphalt has reached imprinting temperature, place the templates in position and press into the surface using vibratory plate compactors. Imprint to a depth equal to or greater than the thickness of the thermoplastic being inlaid.

E. Place the pre-cut thermoplastic panels in position on completely dry asphalt, within the imprinted area. Re-apply heat to the surface using infrared heaters, slowly raising the surface temperature until the thermoplastic material in the panels start to liquefy and flow, but no higher than 163° C. Once the thermoplastic material has liquefied, remove the heat source and allow the surface to cool.

**METHOD OF MEASUREMENT:**

The installation of the inlaid thermoplastic pavement system will be measured by the number of square meters of HMA satisfactorily inlaid in accordance with this specification and as approved by the Engineer.

**BASIS OF PAYMENT:**

The unit price bid per square meter shall include the cost of furnishing all labor, materials, equipment and tools necessary to complete the inlaid work. The HMA and any related repair work will be paid separately.

DISAPPROVED - E112005