

COUNTY OF SONOMA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC WORKS  
2300 COUNTY CENTER DRIVE, SUITE B 100  
SANTA ROSA, CALIFORNIA 95403

Phillip M. Demery, Director



AREA CODE (707)  
ROADS..... 565-2231  
TRANSIT ..... 585-7516  
REFUSE ..... 565-7940  
AIRPORT..... 565-7243  
AIR POLLUTION..... 433-5911  
FAX..... 565-2620  
[www.sonoma-county.org/tpw](http://www.sonoma-county.org/tpw)

**NOTICE TO PLANHOLDERS**  
**FOR CONSTRUCTION OF**

**SIGNALIZATION OF SEBASTOPOL ROAD AT BURBANK AVENUE**  
**COUNTY PROJECT NO. C07009**

**ADDENDUM NO. 1**

**I. Changes to the Engineer's Estimate in the Special Provisions and Bidders Book:  
Add the following item:**

Item #24: 840667 TEXTURED AND COLORED CROSSWALK SF 1219

Please replace the following "Copy of Bid Item List", in the Special Provisions and the two "Engineer's Estimate" in the Bidder's Book, per the attached revised pages (Attachment A).

Page SP-3 of the Special Provisions is replaced with "Copy of Bid Item List" SP-3 (Add 1).

Pages BB-4 and BB-14 of the Bidder's Book is replaced with the "Engineer's Estimate" BB-4 (Add 1) and BB-14 (Add1).

**II. Special Provisions:  
Changes to the Special Provisions**

Section 10-1.29(1), "TEXTURED AND COLORED CROSSWALK": is added with the following text:

**10-1.29.1 TEXTURED AND COLORED CROSSWALK**

**PART 1 – GENERAL**

**1.1 DESCRIPTION**

**A.** This work shall consist of elevating the surface temperature of the asphalt pavement and then pressing a metal template into the asphalt pavement to replicate, in relief, the grout depressions common to hand-laid brick or cobblestone, or any other design as shown on the drawings or described in the

specifications. The imprinted asphalt pavement surface is then coated with a coating or system of coatings specifically formulated for asphalt pavement per the following specification.

**B.** Asphalt pavement texturing shall employ specialized process that requires the skill of a qualified applicator working with the proper equipment and applying highly specialized coating(s) designed specifically for application to asphalt pavement.

**C.** This specification includes guidance with respect to the minimum requirements/qualifications of the applicator, equipment and coating in the execution of this Work.

## **1.2 REFERENCES**

**A.** ASTM D-4541 Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Tester.

**B.** ASTM D-4060 Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser.

**C.** ASTM D-2697 Standard Test Method for Volume of Nonvolatile Matter in Clear or Pigmented Coatings.

**D.** ASTM D522-93A Standard Test Method for Mandrel Bend Test of Attached Organic Coatings.

**E.** ASTM D1653 Standard test method for water vapor transmission or organic film coatings.

**F.** ASTM G-155 Accelerated Weathering Environment. Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials.

**G.** ASTM D 2369 Weight Solids Standard test method for Volatile Content of Coatings.

**H.** ASTM D 1475 Standard Test method for Density of Paint, Varnish, Lacquer, Other related products.

**I.** ASTM D-2240 (2000) Standard Test Method for Rubber property – Durometer hardness.

**J.** ASTM D-5895 Standard Test Method of drying or curing during film formation of organic coatings using mechanical recorders.

**K.** ASTM D-570 Standard Test Method for water absorption of plastics.

## **1.3 DEFINITIONS**

**A.** **“Qualified Applicator”** is a contractor or applicator who has completed asphalt pavement texturing work and can provide certification and references upon request.

**B.** **“Owner”** means the Owner and refers to the representative person who has decision making authority for the Work.

**C.** **“Textured asphalt Pavement”** is asphalt pavement that has been subjected to imprinting or stamping in a specific pattern.

**D.** **“Non-textured asphalt pavement”** is asphalt pavement that is unstamped and is sometimes referred to as “flatwork”.

**E.** **The “Work”** is the asphalt pavement texturing work contemplated in this bid submission and specification.

**F.** **“Scuffing”** is a “tear” of the asphalt pavement caused by an external force. Stationary vehicle tires turning on the pavement surface is a typical cause.

## **1.4 SUBMITTALS**

The documents required as part of this bid submission are as follows:

**A.** Proof of applicator’s ability. A copy of the current year license as provided to the proposed applicator issued by a recognized authority in the execution of asphalt pavement texturing work. Failing that, at least 3 reference sites and written references from 3 previous customers for work performed by this applicator.

**B.** A list of the major equipment to be used in the execution of the Work. This list will include the asphalt pavement reheat machinery, spray equipment, compactor(s) and templates.

**C.** The name of the coating(s) and the coating supplier’s name.

**D.** Certified performance test results of the coating material(s).

**E.** Confirmation of coating color(s).

## PART 2 – PRODUCTS

### 2.1 MATERIALS – COATINGS

Properly designed asphalt pavement coatings have been scientifically formulated to provide the optimal balance of performance properties for a durable, long lasting color and texture to asphalt pavement surfaces. Some of these key properties include wet wear durability, crack resistance, adhesion, color fastness, and friction properties. These properties must be backed up by a Certificate of Analysis from an independent laboratory or an equal document that certifies these performance properties.

The asphalt pavement coating must be environmentally safe and meet EPA requirements for Volatile Organic Compounds (VOC).

Only use asphalt pavement coatings from qualified pavement coating suppliers who can provide proof of these required performance properties.

### 2.2 MINIMUM PERFORMANCE PROPERTIES OF ASPHALT COATING

The following table outlines the minimum required performance properties of the asphalt pavement coating. These performance properties must be ascertained by a Certificate of Analysis issued by an approved testing facility.

### 2.3 MATERIALS – COATING PERFORMANCE PROPERTIES

The following table outlines minimum performance properties required of the asphalt pavement surface coating. These properties are to be backed up by Certificates of Analysis produced by an independent qualified testing facility.

**TABLE 1: TYPICAL MINIMUM PERFORMANCE PROPERTIES OF COATING**

Characteristic	Test Specification		
Dry time (To re-coat)	ASTM D-5895 23°C; 37% RH	< 40 min	
Taber Wear Abrasion Dry H-10 wheel	ASTM D-4060 7 days cure	< 1.0 g/1000 cycles	
Taber Wear Abrasion Wet H-10 wheel	ASTM D-4060 7 days cure	< 5.0 g/1000 cycles	
QUV E Accel. Weathering environment.	ASTM G-155 2,000 hours (CIE units)	$\Delta E < 1.0$ (brick color)	
Hydrophobicity Water absorption	ASTM D-570	< 10.0 % (9 days immersion)	
Shore hardness	ASTM D-2240	63 Type D	
Mandrel Bend	ASTM D522-93A	1/4" @ 21° C	
Permeance	ASTM D1653	3.45 g/m <sup>2</sup> /hr (52 mils)	
VOC	EPA-24 ASTM D3960-05	< 25 g/l	
Adhesion to Asphalt	ASTM D-4541	Substrate Failure	
Friction Wet	ASTM E-303 British Pendulum Tester	WP* coated	64
		WP* uncoated	57
		AC** coated	73
		AC** uncoated	60

\*WP – test conducted on asphalt in wheel path

\*\*AC – test conducted on asphalt adjacent to curb.

## 2.4 EQUIPMENT

The following specialized equipment shall be used in the execution of the Work.

**A.** Metal wire rope templates are used to create the desired imprint pattern. Only use templates that have been supplied by a manufacturer who has the proven expertise in manufacturing these templates for this type of application.

**B.** Asphalt pavement reheat equipment specifically designed for asphalt pavement texturing is to be used in the execution of this work. The primary asphalt pavement re-heat equipment must cycle the heat application and must allow the equipment operator to check the pavement surface temperature during the heating process. These controls are necessary to enable the pavement temperature to be elevated gradually, giving the operator the ability to ensure that the pavement is not overheated or adversely affected. Heaters without these controls are strictly prohibited as the primary re-heat equipment.

**C.** Hand-held portable heating devices may be used only for areas where it is difficult to operate the re-heat machine. These may not be used as the primary pavement re-heating device.

**D.** Finishing tools that are designed to enable the applicator to complete the imprinting of the asphalt pavement in areas which may be inaccessible to the template such as curbs and manhole covers are permitted.

**E.** Vibratory Plate Compactors shall be used for pressing the templates into the heated asphalt pavement to create the specified pattern.

**F.** Specialized coating spray equipment must be used in the application of the coating and must be capable of applying the coating to the asphalt pavement surface in a thin, controlled film which will optimize the drying and curing time of the coating. More specifically, the spray equipment pump must be capable of providing a continuous recirculation of the coating in order to keep the solids within the coating in suspension.

## PART 3 – EXECUTION

### 3.1 GENERAL

The pavement texturing system shall be supplied and installed by a Qualified Applicator in accordance with the plans and specifications or as directed by the Owner. Do not begin the Work until confirmation of the Applicator's qualifications is provided.

### 3.2 PRE-CONDITIONS – ASPHALT PAVEMENT

A highly stable asphalt pavement free of defects is a pre-requisite for the installation of a pavement texturing system. Do not install the pavement texturing system over poor quality asphalt pavement.

#### 3.2.1 Pre-requisites for new asphalt pavement

A durable and stable asphalt pavement mix design installed according to best practices over a properly prepared and stable substrate is a pre-requisite for all long-lasting asphalt pavement surfaces. The application of a pavement texturing system does not change this requirement.

#### 3.2.2 Pre-requisites for existing asphalt pavement

Depending upon the condition and age, existing asphalt pavement may or may not be suitable for the successful application of a **pavement texturing system**. Minimally, the asphalt pavement must be in excellent condition and not have any defects including cracks, ruts or potholes nor demonstrate any flushing, raveling or like deficiencies.

#### 3.2.3 Pavement Marking Removal: recommended guidelines

Pavement markings may be removed by sandblasting, water-blasting, grinding, or other approved

mechanical methods. The removal methods should, to the fullest extent possible, cause no significant damage to the pavement surface.

The Owner shall determine if the removal of the markings is satisfactory for the application of the **pavement texturing system**. Work shall not proceed until this approval is granted.

### **3.2.4 Surface Preparation**

The asphalt pavement surface shall be dry and free from all foreign matter, including but not limited to dirt, dust, de-icing materials, and chemical residue.

### **3.3 LAYOUT**

Layout of the pattern for imprinting into the surface of the asphalt pavement shall be as per the drawings and specifications.

### **3.4 HEATING THE ASPHALT PAVEMENT**

The Applicator shall use asphalt pavement reheat equipment as described in Section 2.2 Equipment.

**A.** The optimal pavement temperature for imprinting the template is dependent upon mix design, modifiers used in the mix, the age of the pavement and weather. The surface temperature of the pavement should not exceed 325°F as determined by an infra-red thermometer reading taken after the heat is applied to the asphalt pavement.

**B.** In order to achieve the proper depth of imprint it is important to elevate the asphalt pavement temperature to a minimum depth of 1/2 inch (12.5mm) without burning the pavement surface. This can only be accomplished using asphalt pavement reheat equipment that is specifically designed for this Work.

### **3.5 SURFACE IMPRINTING**

**A.** The pavement surface shall be dry and free from all foreign matter, including but not limited to dirt, dust, de-icing materials, and chemical residue.

**B.** Once the asphalt pavement has reached imprinting temperature, the templates shall be placed in position and pressed into the surface using vibratory plate compactors. The top of the template is to be flush with the surrounding asphalt pavement and can then be removed. Areas that have an imprint depth less than the full depth of the template shall be re-heated and re-stamped prior to applying the coatings. Hand tooling is a permitted method to achieve proper imprint depth in areas difficult to get at with the template.

### **3.6 APPLICATION OF ASPHALT PAVEMENT COATING**

#### **3.6.1 Application Guidelines**

**A.** The qualified applicator shall refer to the asphalt pavement coating supplier's recommendations for methods of application. Special care and attention must be paid to ensure asphalt pavement coatings are applied in environmental conditions that permit proper cure.

**B.** The coating application shall proceed as soon as possible upon completion of the imprinting of the asphalt pavement.

**C.** The pavement surface shall be completely dry and thoroughly cleaned prior to application of the asphalt pavement coating(s).

**D.** The qualified applicator shall use spray equipment specifically designed for the application of the coating(s) as outlined in Section 2.2 above.

**E.** Refer to the asphalt pavement coating supplier's recommendations for coating coverage rate, number of recommended passes and recommended film thickness.

### **3.7 OPENING TO TRAFFIC**

Minimally, the surface coating must be 100% dry before traffic is permitted. Refer to the asphalt pavement coating supplier's guide.

## **PART 4 – MEASUREMENT AND PAYMENT**

### **4.1 MEASUREMENT**

The measured area is the actual area that has received the asphalt pavement texturing. No deduction will be made for the area(s) occupied by manholes, inlets, drainage structures, bollards or by any public utility appurtenances within the area.

### **4.2 PAYMENT**

The contract unit price paid per square foot for textured and colored cross walks shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in applying textured and colored cross walks complete in place as shown on the plans, as specified in the standard specifications and these special provisions.

## **III. CLARIFICATION**

The Notice to Bidders that was advertised in the Press Democrat called for an Underutilized Disadvantaged Business Enterprise (UDBE) goal of 1%. There are no UDBE goals for this project.

## **IV. CHANGES TO THE PLANS:**

Sheet 3, "Plan," and Sheet 9, "Striping Plan," are amended to include the textured and colored cross walk information.

Please fill out the Addendum Acknowledgement sheet on page BB-5 of the Bidder's Book verifying your receipt of this Addendum and submit with your bid.

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Rex Cummins, P.E.

Attachments: Bid Item List, Page SP-3  
Engineer's Estimate Bid Book, Page BB-4  
Engineer's Estimate Bid Book, Page BB-14