



## **LEGAL NOTICE**

**REQUEST FOR BID  
SEALED BID 13-004**

**For**

**Paint, Road and Bridge and Thermoplastic Markings**

**For**

**ST. CHARLES COUNTY GOVERNMENT  
ST. CHARLES, MISSOURI**

St. Charles County is seeking bids for **Paint, Road and Bridge and Thermoplastic Markings**. The county reserves the right to terminate the contract for any violation, by the successful bidder, of any term or condition of the contract by giving thirty (30) days written notice stating the reasons therefore and giving the party time to remedy any deficiencies.

## BID INSTRUCTIONS

One original and one [1] signed copy of the bid must be received in a sealed envelope plainly marked “**13-004 Paint, Road and Bridge and Thermoplastic Markings**” with the date and time of the bid opening in the lower left corner of the envelope.

An authorized representative of the company/person submitting the bid must sign the bid, in **blue** ink.

Bids must be submitted to the St. Charles County Finance Department, 201 North Second Street Room 541 St. Charles MO 63301 prior to the bid opening.

**Bid opening will be on 12/27/2012 at 10:30 AM, in Room 523** of the St. Charles County Administration Building, 201 North Second Street, St. Charles, MO 63301.

St. Charles County reserves the right to accept and/or reject any and all bids.

Bid results may be obtained by emailing a request to the St. Charles County Purchasing Department at [purchasing@sccmo.org](mailto:purchasing@sccmo.org), **no phone calls please**. Include the name and number of the bid and date of the bid opening when requesting the results. The time it takes for final bid results to be made public depends on the complexity of the project and the cost of the project.

## BID INQUIRIES

Any questions or clarifications concerning this Request for Bid must be submitted in writing via E-mail (preferred), mail or fax to:

Kurt Mandernach, Purchasing Manager  
St. Charles County Government  
Finance Department  
201 North Second St  
St. Charles, Missouri 63301  
Fax: (636)949-7589

- The bid number and title shall be referenced on all correspondence.
- All questions must be received no later than **4:00 PM** on **12/18/2012**. Any question received after this deadline may not be answered.

**Responses to questions/clarifications will be placed on the County's website <http://finance.sccmo.org/finance>. Check this website frequently for updates and any addendum that are issued.**

## Prohibited Communication

**Contact with any representative, other than through the procedure outlined in the section titled “Bid [or Proposal] Inquiries”, concerning this request is prohibited PRIOR TO BID [OR PROPOSAL] OPENING. Representative shall include, but not be limited to, all elected and appointed officials, and employees of St. Charles County and the Agencies within St. Charles County.**

**Any Offeror engaging in such prohibited communications prior to Bid [or Proposal] Opening may be disqualified at the sole discretion of St. Charles County.**

## TERMS AND CONDITIONS

- St. Charles County reserves the right to reject any and all bids or parts of a bid and waive technicalities, and to adjust quantities.
- All bids will be considered final. No additions, deletions, corrections, or adjustments will be accepted after the time of bid opening.
- All delivery costs or charges must be included in the F.O.B. destination bid price.
- City, County and State of Missouri Sales Tax and Federal Taxes are not applicable to sales made to St. Charles County and must be excluded.
- The contract shall be effective for the approximate twelve (12) month period from the date of the notice of award.
- The electronic version of this bid/RFP is available upon request. The document was entered into WORD for Microsoft Windows. The Purchasing Office does not guarantee the completeness and accuracy of any information provided on the electronic version. Therefore, respondents are cautioned that the hard copy of this bid/RFP on file in the Purchasing Office governs in the event of a discrepancy between the information contained in or on the electronic version and that which is on the hard copy.
- Vendors are required to clearly identify any deviations from the specifications in this document.
- An authorized officer of the company submitting the bid must sign all bids, in blue ink.
- Vendors must submit two [2] signed copies of their bid; one is to be an original and so marked.
- All prices and notations must be in blue ink or typewritten on the attached form. Mistakes must be crossed out, corrections typed adjacent and must be initialed in blue ink by the person signing the bid.
- St. Charles County will not award any bid to an individual or business having any outstanding amounts due from a prior Contract or business relationship with the County or who owes any amount(s) for delinquent taxes, fees or licenses.
- Sealed proposals received after the designated time of the receipt of the sealed proposals will be considered as “No Bid” and “Void” and will not be opened.
- The successful bidder is specifically denied the right of using in any form or medium the names of St. Charles County or any other public entity within the St. Charles County for public advertising unless express written permission is granted.

- All bidders must possess the necessary and appropriate business and/or professional licenses in their field.
- Award will be made to the low responsive, responsible bidder, or to the offeror whose proposal is most advantageous to the County, price and other factors considered. When payments are to be made to the County, award will be made to the most advantageous offer.
- County reserves the right to accept any item or group of items offered, unless the bidder qualifies his bid by specific limitations. The bid can be on an "all or none" basis if wording in the bid so states and if all items solicited are included in the bid.
- When applicable, provide unit prices and extension prices. Where there is disagreement in the unit and extension prices, the unit price shall govern.

### **Open Records**

Any and all information contained in or submitted with the bid becomes a public record subject to the Missouri Sunshine Law when the bids are opened. If the bidder believes that any information contained in or submitted with the bid is protected from disclosure by the Missouri Sunshine Law, the bidder must clearly identify what information the bidder believes is so protected and must also clearly identify the legal basis therefor.

## BID SPECIFICATIONS

### ROAD AND BRIDGE PAINT AND THERMOPLASTIC MARKINGS

**SOLICITATION:** St. Charles County is soliciting bids from Respondents qualified, responsible and willing to provide the following Goods and/or Services in compliance with all solicitation specifications and requirements contained or referenced herein.

**GENERAL DESCRIPTION:** To provide St. Charles County with the materials as per specifications called for herein.

Unless otherwise specified, any manufacturers' names, trade names, brand names, information and/or catalog numbers listed in this specification are descriptive, **not restrictive**. The bidder may offer any product that meets or exceeds the applicable specifications. The bidder must demonstrate comparability, by including appropriate catalog materials, literature, specifications, test data, etc. **The County shall determine in its sole discretion whether a product is acceptable as an equivalent.**

#### A. STRIPING PAINT

##### I. Acrylic Waterborne

The following specifications shall apply to purchases of Water-Borne, Quick Dry Traffic Line Paints for St. Charles County. Hereafter, St. Charles County will be referred to as the County in these specifications. The County reserves the right to waive minor technicalities under the Specification.

#### GENERAL REQUIREMENTS:

These materials will be used to paint center lines, edge lines and no- passing lines on Portland cement concrete and bituminous concrete surfaces and shall be furnished in one grade and two classes as follows:

Class A - White  
Class B - Yellow

These paints shall consist of DOW DT 250 or Rohm and Haas 3427 acrylic resins. The paint is also required to have lead-free pigments, driers, water as solvent and sufficient pigment suspending agents to insure soft settlement during storage. The vendor shall certify to the County the resin to be utilized in the formulation of this paint.

The paints shall be:

Diamond Vogel  
UC - 1520 White  
VLX - 11912-02 Yellow  
Rohm and Haas 3427 acrylic resin  
Rich Paint Co.

RT-250 White  
RT-251 Yellow  
Dow DT 250 acrylic resin  
Ennis Paint  
981601 White  
981605 Yellow  
Acrylic Resin 3427

**Or Approved Equal**

The paints shall be well ground and mixed, shall not settle badly or cake in the container, shall not thicken in storage or change in consistency and shall be readily broken up with a stirrer to a smooth and uniform condition.

In addition to the general requirements, the paints must conform to the following detail requirements:

**DETAIL REQUIREMENTS:**

Formulation

White - The white paint must have a minimum of at least one (1) pound titanium dioxide per gallon.

Yellow - The pigment of the yellow paint shall consist of the following for each 100 gallons of paint.

30 lbs. of 11-2401 Hansa Yellow XT, from Hoechst Celanese Corp. or approved equivalent\*

17 lbs of Rutile Titanium Dioxide

And other such extender pigments as necessary to produce a close match to the yellow color requirement.

\*Approved equivalent must have been tested and approved by Missouri Department of Transportation or an independent laboratory selected by the County.

Drying Time In a field application, the dry to no-pick-up time shall not exceed 1 minute under the following conditions: The product must be applied at 12-13 wet mils with 6 lbs.of moisture resistant beads per gallon. Temperature is to be above 72° Fahr. and relative humidity must be below 57%. Air flow across the surface of field applied material must be at least 75 feet per minute to qualify material for this requirement.

For a laboratory test, the dry to no-pick-up time shall not exceed 5 minutes when tested according to the Kansas Department of Transportation test KT-MR 12 (ATTACHMENT A).

Dry Opacity: Contrast ratio shall be not less than 0.96 when the paint is applied with a 0.012 inch film applicator. Dry Opacity will be determined according to Method 4121, Federal Test Method Standard No. 141a. Apply the paint with the above applicator to the chart specified in Section 1.1 of Method 4121.

Daylight Reflectance: When tested according to Method 6121, Federal Test Standard No. 141a, the Daylight Reflectance of the white paint shall be not less than 80% relative to magnesium oxide.

Color: The color of the yellow paint shall match the Standard Shade within the red and green tolerance limits when compared with the Highway Yellow Color Tolerance chart obtained from the U.S. Department of Transportation, Washington, D.C.

Consistency (viscosity): The consistency shall be not less than 80 nor more than 90 K.U. as determined by ASTM D562.

Flexibility: Apply the paint to aluminum panels with a 0.005 inch Bird Film Applicator. Air dry 18 hours and bake for 5 hours at a temperature of 105° C to 110° C. Cool for 15 minutes at 77° F and bend over the conical mandrel. Examine without magnification. There shall be no cracking of the film at a mandrel diameter of one inch or larger. The Panel shall be aluminum alloy 2024-0, 0.032 inch thick plus or minus 0.003 inch. The conical mandrel shall be as specified in ASTM D522.

Abrasion Resistance: When subjected to the Falling Sand Abrasion Resistance Test the amount of sand required to completely abrade the paint film from an area 5/32" in diameter on the panel shall be not less than 70 liters.

The test shall be conducted according to Method 6191 of Federal Test Method Standard No. 141a with the following additions and exceptions:

Panel preparation shall be as indicated below.

Fresh, new unused sand shall be used for each test of three panels.

Sand shall be measured by weight, 17.5 lbs. of sand being counted as equivalent to 5 liters.

A test shall be the average liters of sand required to abrade the 5/32 inch spot on three separate panels.

Panels for the test will be prepared as follows: Apply the paint without reduction to a smooth glass panel with a 0.006 inch Bird Film Applicator. Air dry for 24 hours and bake for 3 hours at a temperature of 105 to 100° C. Condition the panel for 24 hours at a temperature of 70 to 80° F and a relative humidity of 50 to 70% before making the test. The glass panels shall not be less than 8 inches long and the abrasion test shall be made on the middle third *of the film on the* panel.

Water Resistance: Apply a film of the paint with a 0.005 inch Bird Film Applicator to a smooth glass panel approximately 10 inches long. Allow to dry for 48 to 72 hours and then immerse one end of the panel in a beaker of distilled water to a depth of approximately 5". After 24 hours of immersion, remove the panel and examine. After 24 hours of air drying the immersed portion of the film shall be equal in hardness, toughness, gloss, color adhesion to the portion of the film that was not immersed in water. Adhesion shall be checked using a knife blade or spatula on both ends of the film, comparing the ease with which the film can be removed from the glass.

Stability Test: Fill a one pint friction top paint can with the thoroughly mixed sample to within one inch of the top, Determine consistency in grams according to Method 4281, Federal Test Method Standard No. 141a. Close the can with the lid and shake for 5 minutes. Place the can in an air oven at 600 plus or minus **20** C for 18 hours. Remove and cool to room temperature. Open the can, remove any skins and examine the contents. There shall be no livering or other deterioration's. Thoroughly mix the paint and again determine the consistency in grams. The 17 grams is equivalent to slightly more than 3.0 K.U. increase in consistency.

Fineness of Grind: When tested according to ASTM D1210, the fineness of grind shall be not less than 3 Hegman units.

Freeze-Thaw Resistance Test: When tested according to ASTM D2243 the consistency shall not change by more than 5 K.U. and shall show no breaking of the emulsion or coagulation. Paint must be able to pass 5 freeze thaw cycles.

Bead Embedment: Paint shall be applied to a glass panel at a wet film thickness of 0.012 inch followed immediately by an application of glass beads dropped onto 'the surface of the paint, After drying for at least 24 hours, observe the amount of bead embedment with a 30 power microscope. At least 90% of the beads shall be embedded between 40% and 60%. The glass beads used for this test must be a Moisture Resistant Silicone treated bead suitable for use with a water base coating.

#### CERTIFICATION and TESTING:

The vendor shall furnish the County with a certification from an independent testing laboratory that the paint furnished to the County meets this specification.

The County reserves the right to also have the Missouri Department of Transportation or an independent testing laboratory test samples of the paint.

#### CONTAINERS:

Paint shall be furnished in Baked Phenolic Lined open head type returnable steel drums of 55 gallon capacity. The removable head shall be fitted with a gasket to prevent leakage. The head shall have a standard 2" threaded opening. The drums shall be stenciled "St Charles County Traffic Line Paint," with the manufacturer's name, paint color, date of manufacture, formula number and batch number.



Empty drums are to be picked up from the County within 10 days after notice.

**ATTACHMENT A**  
**DRY TO NO-PICK-UP TIME FOR WATER-BORNE TRAFFIC PAINT**

**1. Scope.**

This test method is a laboratory procedure to determine the dry to no-pick-up time for water-borne traffic paint by a rubber wheel.

**2. Summary of the Method.**

Three atmospheric conditions affect the drying time of water-borne traffic paint. These conditions which have direct effects on the evaporation of water from the paint are: air flow, temperature, and relative humidity. This method eliminates the influence of air flow and permits drying time evaluation as a function of temperature and relative humidity has a more significant effect on the drying time.

**3. Required Apparatus.**

- (a) Test chamber approved by the Kansas Department of Transportation.
- (b) Combination hygrometer and temperature indicator.
- (c) Equipment as described in ASTM D711.

**4. Procedure.**

(a) Beneath the grate, in the bottom of the test chamber, place a large piece of folded cheesecloth or other absorbent towel that has been saturated with water. Close the door and all ports. Allow to equilibrate for two hours at  $77^{\circ}\pm 2^{\circ}\text{F}$ .

(b) After equilibration, the relative humidity in the chamber should be near 100%. Open and close the ports to establish a relative humidity of  $65\%\pm 3\%$  in the chamber.

(c) Heat the paint and a clean 4 1/2" x 9" glass panel to 120°F.

(d) Draw down the paint at a 0.012" wet film thickness. Start the stop watch.

(e) Place the panel into the test chamber. Adjust the side ports of the test chamber to re-establish 65% relative humidity.

(f) After 3 minutes elapsed time, quickly remove the test panel and proceed to test for "Dry to no-pick-up" as described in ASTM D711. If the sample fails, quickly return the panel to the test chamber as in Step (a).

(g) Retest the sample at one minute intervals until no paint adheres to the rubber rings of the test wheel.

(h) Report the elapsed time in minutes between the application of the paint and the end point as the "Dry to no-pick-up" time.

## II. High Build

The following Specifications shall apply to the purchase of Water-Borne Traffic Line Paint for the Pavement Marking Division of St. Charles County, Missouri. The County reserves the right to waive minor technicalities under this specification.

### General Requirements

The material will be used to paint lane lines, center lines, edge lines and no-passing lines, in conjunction with glass beads, for applications on bituminous or Portland cement concrete pavements. The material shall be applied with department-owned spray equipment at application temperatures of 50 to 150 F. The paint shall be furnished in white and yellow as indicated on the proposal.

The paint shall consist of acrylic resin, lead-free pigments, dryers, water as solvent, and sufficient pigment suspending agents to insure soft settlement during storage.

The paint supplied shall be from freshly prepared stock and shall be formulated and manufactured from first grade materials. The paint shall be a fast-drying, waterbase, acrylic resin type paint capable of withstanding air and roadway temperatures without bleeding, staining, discoloring, or deforming. The dried film shall be capable of maintaining its original dimensions and placement without chipping, spalling, or cracking. In addition, it shall not deteriorate because of contact with sodium chloride, calcium chloride, mild alkalis and acids, or other ice control materials, oil, gasoline, or diesel fuel droppings from vehicles.

### Detailed Requirements

#### 2.1 Formulation

Yellow paint- The pigment of the Yellow paint shall consist of the following for each 100 gallons of paint:

- A. 30 lbs. of approved Hansa Yellow
- B. 17 lbs. of Rutile Titanium Dioxide
- C. Other such extender pigments as necessary to produce a close match to the yellow color requirement.

White and yellow paint shall be composed of 100% acrylic polymer, which shall be Rohm and Hass HD-21 acrylic resin.

#### 2.2 Color:

Yellow paint shall meet the following chromaticity requirements:

Color	1		2		3		4	
	X	Y	X	Y	X	Y	X	Y
Yellow	.475	.450	.490	.433	.495	.475	.520	.450

Yellow paint must display a nighttime presence of yellow when viewed from automobile headlights.

White paint shall be pure white (free of tint)

## 2.3 Properties

2.3.1 Dry to No Track Time: Maximum 5 minutes when tested according to Kansas Department of Transportation test method for water-borne traffic paint KT-MR 12.

2.3.2 Consistency (viscosity): The consistency shall not less than 75 nor greater than 90 K.U. as determined by ASTM D562.

2.3.3 Fineness of Grind: The fineness of grind shall be no less than 3 Hegman units when tested according to ASTM D121

2.3.4 Dry Opacity: Contrast ratio shall be not less than .96 when the paint is applied with 0.012 inch film applicator. Dry Opacity will be determined according to method 4121.1, Federal Test Method Standard No. 141c. Application of the paint be with the above applicator to the chart specified in Section 1.1 of Method 4121.1.

2.3.5 Daylight Reflectance: The Daylight Reflectance of the white paint shall not be less than 80% relative to magnesium oxide when tested according to ASTM E1347.

## 3. Acceptance:

Acceptance of material furnished under this specification will be based on receipt and approval of a certification stating that the paint complies with provisions of the specification.

## III. Cold Weather

1.0 SCOPE. This specification describes a fast drying cold weather waterborne traffic paint for application on bituminous or Portland cement concrete pavements with airless or air atomized spray equipment at air and pavement temperatures of 35° F. and above. The paint is intended for 15 wet mil applications and shall be capable of producing a reflectorized traffic marking when the proper bead system (coating, gradation, and rate of application) is used. This product shall not be applied when temperatures are below the dew point. Surfaces to be marked shall be dry and free of loose dirt, loose paint, and other contaminants.

2.0 PERFORMANCE OF FINISHED PRODUCT. The finished product shall comply fully with the following performance characteristics:

2.1 Viscosity at specific temperature. The paint shall maintain the following viscosity characteristics for a minimum of twelve (12) months after date of manufacture.

35 degrees F (1.7 degree C), Krebs Units	90 max.
77 degrees F (25 degree C), Krebs Units	80-85
90 degrees F (32 degree C), Krebs Units	75 min

2.2 Scrub Resistance. The paint shall pass a minimum of 800 cycles when tested in accordance with ASTM D 2486.

2.3 Low temperature Film Formation. The paint must coalesce to form a contiguous film free of cracks or film defect when applied at 25 wet mils over a glass panel and kept at 35° F. for 72 hours.

2.4 Shelf Life. After storage for periods of up to twelve (12) months (shelf life) from the date of packaging:

2.4.1 The pigment shall not settle badly or cake in the container, nor shall the paint skin or thicken in storage sufficiently to cause an undesirable change in condition, nor show spoilage.

2.4.2 The paint shall comply with all the provisions of these specifications and be capable of being re-dispersed with mixing to a smooth uniform condition of useable consistency.

3.0 GENERAL. In addition to the "PERFORMANCE CHARACTERISTICS" the paint shall:

3.1 Not contain more than 500 ppm lead, based on dry weight and/or more than 280 ppm chromium, based on dry weight.

3.2 Not exceed 150 grams per liter of Volatile Organic Compounds. (ASTM 3960)

3.3 Contain a minimum level of 1.0 pounds per gallon of Rutile Titanium Dioxide. (ASTM D476, Type II)

3.4 Contain a 100% acrylic emulsion. The non-volatile portion of the vehicle shall not be less than 43.0 percent by weight. No blending of latex emulsion polymers shall be allowed.

3.5 Meet the following Physical Properties:

Percent Total Solids by weight, min	70
Percent Volume Solids, min	58
Percent Pigment by Weight	48-52
Percent Non-volatile in Vehicle by weight, min	43.0
Weight per Gallon, lbs, min	12.5
Laboratory Dry Time, ASTM D 711 @ 15 wet mils, minutes	10 max
Grind (Hegman Gauge), min.	3
Dry Through @ 90% +/- 5% R.H.	Not greater than 15 minutes Difference from formula or a maximum of 130 minutes.

3.6 Pigment Yellow 65.

3.7 Yellow Iron Oxide. This material shall comply with the latest revision of ASTM D 768.

3.8 Extender Pigments. Extender pigments are left to the discretion of the manufacturer.

3.9 Color. The color after drying shall (for White) be a flat white, free from tint, furnishing good opacity and visibility under both daylight and artificial light. For yellow, the color shall closely match Color Chip 33538 of Federal Standard 595 and be +/- 6% from the PR-1 chart central color when read over the white portion of a 2A Leneta Chart.

3.10 Flexibility. The paint shall show no cracking or flaking when tested in accordance with Federal Specification TT-P-1952E

3.11 Water Resistance. The paint shall conform to Federal Specification TT-P-1952E water resistance test. There shall be no blistering or appreciable loss of adhesion, softening, or other deterioration after examination.

3.12 Freeze-Thaw Stability. The paint shall show no coagulation or change in consistency greater than 10 Krieb Units when tested in accordance with Federal Specification TT-P-1952E for three (3) cycles.

3.13 Heat Stability. The paint shall show no coagulation, discoloration or change in consistency greater than 10 Krieb Units when tested for one (1) week at 140 ° F. (60° C.)

3.14 Dilution Test. The paint shall be capable of dilution with water at all levels without curdling or precipitation such that the wet paint can be readily cleaned with water only.

3.15 Storage Stability. After 30 days storage in a three-quarters filled, closed container, the paint shall show no caking that cannot be readily remixed to a smooth, homogeneous state, no skinning, livering, curdling, or hard settling. The viscosity shall not change more than 10 Krieb Units from the viscosity of the original sample.

3.16 Contrast Ratio. The minimum contrast ratio shall be 0.99 for White and 0.98 for Yellow when drawn down with a 0.015 Bird film applicator on a 2A Leneta Chart and air dried for 24 hours. Contrast Ratio = Black / White

3.17 Reflectance. The daylight directional reflectance of the white paint shall not be less than 87 percent and not less than 50 percent for yellow paint of a 15 mil wet film applied to a 2A Leneta Chart. After drying 24 hours, measure the reflectance of the paint over the white portion of the chart using a Colorimeter. ASTM E 97

3.18 Bleeding. The paint shall have a minimum bleeding ratio of 0.97 when tested in accordance with Federal Specification TT-P-1952E. The asphalt saturated felt shall conform to ASTM D 226 for Type I.

3.19 Dry Through Time. The paint shall be applied to a non-absorbent substrate at a wet

film thickness of 15 +/-1mils and placed in a humidity chamber controlled at 90 +/-5 % Relative Humidity and 72.5° F. +/- 2.5° F. The dry through time shall be determined according to ASTM D 1640, except that the pressure exerted shall be the minimum needed to maintain contact with the thumb and film.

#### 4.0 PREQUALIFICATION OF BIDDER.

No bid shall be considered unless the firm submitting the bid can meet the following conditions:

That it has in operation a plant adequate for, and devoted to the manufacture of the pavement marking paint that it proposes to furnish, and is capable of producing batch sizes of at least 3000 gallons and consistent with the quantities to be delivered.

4.1 That it maintains a laboratory to scientifically control the product bid upon to assure accuracy and quality of formulation.

4.2 That it has produced fast drying waterborne traffic marking paint meeting this specification with a successful application record.

5.0 SERVICE. Since proper application is deemed essential to the success of this process, the manufacturer shall have at least one technician available to instruct in the application of this type of paint. The technician shall be familiar with the application equipment and the materials, and shall have successful experience in the placing of fast drying waterborne traffic paint at the film thickness called for in this specification and with standard glass beads.

6.0 ACCEPTANCE. St. Charles County reserves the right to make field tests of material prior to award to determine its suitability for application in its equipment and for purposes of determining compliance with the drying time requirements of this specification.

#### Delivery

Paint shall be ready for immediate use upon delivery without any additional mixing or agitating required. Each shipment of paint shall consist of at least 550 gallons. Each shipment shall be delivered only upon request from the Highway Department. The paint shall be delivered to the St. Charles County Highway Department, 3890 Greens Bottom Road, St. Charles, Missouri 63304 within ten (10) working days after receipt of order. The supplier shall schedule arrival of each shipment at this location between 7:00 a.m. and 3:30 p.m. The St. Charles County Highway Department shall be notified of the shipment delivery date at least two (2) days in advance of delivery by calling 636-498-0545, or 636-949-7305. The bidder shall be penalized \$100.00 a day for late shipments.

#### **B. BRIDGE PAINT**

Prime & finish coat paint must meet MoDOT specifications. The Primary bid should be Calcium Sulfonate. Alternate paint systems may be submitted. These systems may include but are not limited to: Waterborne Vinyl, Metallite Aluminum Epoxy, or two component polyurethane

topcoats.

Must have specifications and MSDS sheets included with bid. System must be tolerant to a wide range of surface conditions and film build.

Prices based per gallon in 5-gallon containers.

### **C. PREFORMED THERMOPLASTIC PAVEMENT MARKINGS**

1. Description: This specification is for a preformed polymer thermoplastic pavement marking material, which is adhered to asphalt and concrete pavements and Portland cement concrete pavements by means of heat fusion by the use of a propane torch.

1.1 These markings are suitable to use for roadway, intersection, commercial or private pavement delineation and markings.

1.2 The markings shall be designed for straight lines, arrows, symbols, legends, letters/numbers and specialty markings.

1.3 This material is designed for high urban traffic volumes and severe wear and will not deteriorate due to exposure to sunlight, oil and gasoline, water, salt or pavement oil content.

1.4 The preformed marking shall conform to the pavement contours. The marking shall have resealing characteristics and be capable of fusing to itself and previously applied worn hydrocarbon and alkyd thermoplastic.

1.5 Configurations shall conform to the current Manual of Uniform Traffic Control Devices for Street and highways as issued by the U.S.A. Federal Highway Administration.

1.6 The markings must be a resilient white or yellow thermoplastic product with uniformly distributed glass beads on surface and throughout the entire cross section of the material

2. Quality Control: The manufacturer must be ISO certified and provide proof of current Certification.

3. Material Composition: The material must be comprised of alkyd modified ester rosin that will not be deteriorated by gas or oil. In addition, the material contains aggregates, pigments, binders and glass beads which has been factory produced as a finished product. Some markings, such as arrows, are produced without beads for directional purposes and receive drop on beads during installation. The thermoplastic material shall conform to AASHTO designation M249, with the exception of the relevant differences due to the material being supplied in a preformed state.

3.1 Glass Beads: The preformed thermoplastic material shall have a minimum of 30% uniformly distributed glass beads throughout the entire cross section of the material. The exposed layer of glass beads shall provide immediate retro-reflectivity without additional glass beads being added on the material during application (reversible arrows are an exception).



3.1.1. The intermixed beads shall be clear and transparent and no more than twenty percent (20%) shall consist of irregular fused spheroids, or silica. The index of refraction shall not be less than 1.50.

3.1.2. The material must have factory applied coated surface beads in addition to the intermixed beads at a rate of 1 lb ( $\pm$  10%) per 11sq.ft. These factory applied coated surface beads, shall have the following specifications:

- 3.1.3. 1) Minimum 80% rounds
- 2) Minimum refractive index of 1.5
- 3) Minimum SiO<sub>2</sub> content of 70%;
- 4) Maximum iron content of 0.1%;

<b>Size Gradation</b>	<b>% Retained</b>
1400 $\mu$ m (14 U.S. mesh)	0-3%
1180 $\mu$ m (16 U.S. mesh)	2-10%
1000 $\mu$ m (18 U.S. mesh)	10-30%
850 $\mu$ m (20 U.S. mesh)	30-60%
600 $\mu$ m (30 U.S. mesh)	50-80%
500 $\mu$ m (35 U.S. mesh)	60-85%
355 $\mu$ m (45 U.S. mesh)	95-100%
250 $\mu$ m (60 U.S. mesh)	98-100%

### 3.2. Pigments:

3.2.1. White: The material shall be manufactured with 10% rutile titanium dioxide pigment meeting ASTM D-476 Type II.

3.2.2. Yellow, Blue and Red: The material shall be manufactured with sufficient and Ultra Violet stable pigments. The yellow pigments must be organic and must be heavy-metal free.

### 3.3. Melting Index:

3.3.1. The top surface of the material should be heated until the material has reached a molten state (fusible liquid).

3.3.1.1. Material will appear to be shiny.

3.3.1.2. The edges will relax and slant downward.

3.3.1.3. Small bubbles and/or steam can be visible.

3.3.1.4. Material is completely conformed to surface being applied to All the above, signify that a satisfactory adhesion and proper bead embedment has been achieved.

4. Skid Resistance: The surface of the preformed thermoplastic markings, with properly applied and embedded top dressing, must provide a minimum skid resistance value of 45 BPN when tested according to ASTM: E 303-74.
5. Thickness: The width of the supplied material shall have a minimum average thickness of 0.090 inch (2.286mm).
6. Versatility: The turn arrows and combination arrows shall be available without bead toppings. This will allow for the reduction of inventory and last minute job changes when required.
7. Environmental Wear And Tear: The material must be resistant to deterioration exposure to water, sunlight, adverse weather conditions and is impervious to oil and gasoline.
8. Retro-reflectivity: The preformed markings shall upon application exhibit uniform adequate nighttime reflectivity. Using a LTL 2000 or LTL-X Reflectometer with a 30-meter geometry the preformed thermoplastic shall be capable of exceeding a retro reflectivity value of 500 millicandelas for white and 300 millicandelas for yellow. Note: the retro reflection can vary greatly during installation depending on the amount of heat applied during installation.
9. Installation: Prior to application the material shall remain flexible at temperatures above 50°F and shall be fusible to asphalt concrete by means of the normal heat of a propane type torch.
- 9.1. The type of torch shall be recommended by the manufacturer and have a rating between 210.000 and 300.000 BTU's.
- 9.2. The markings shall be applied in accordance with the manufacturer's recommendations. All moisture must be completely removed from the substrate and the surface must be totally free of loose debris.
- 9.3. A primer is recommended for aged or difficult to bond surfaces.
10. New Surfaces: Markings shall be capable of being applied as the original permanent marking on the day the surface is paved without being adversely affected by the fresh pavement oil content.
11. Packaging: The material shall be packed in suitable cartons clearly labeled with items such as material thickness, batch and part #, etc., for ease of identifying the contents.
- 11.1. Cardboard stiffeners are to be placed in boxes where necessary.
- 11.2. Each pallet is stretch wrapped and banded in both directions to avoid shifting during transit.
- 11.3. The packaging shall be packed in 100% recycled materials.
- 11.4. Maximum of 3' long pieces for linear material.
- 11.5. The carton shall not weigh more than 70 lbs.

12. Technical Services: Technical services shall be provided when required.

13. Performance: The preformed thermoplastic markings shall meet all state specifications and be approved for use by the appropriate state agency.

## Exception Sheet

If the item(s) and/or services proposed in the response to this bid is in any way different from that contained in this proposal or bid, the bidder is responsible to clearly identify all such differences in the space provided below. Otherwise, it will be assumed that the bidder's offer is in total compliance with all aspects of the proposal or bid.

Below are the exceptions or differences to the stated specifications (attach additional sheets as needed):

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

# BID FORM

13-004

## Road and Bridge Paint, Thermoplastic Markings

BID OPENING DATE: 12/27/2012 at 10:30 AM

\_\_\_\_\_  
(Bidder name)

Submits the following bid for this project:

Striping Paint	Price per 55 Gal. Drum	
Acrylic Waterborne (White)		
Acrylic Waterborne (Yellow)		
High Build (White)		
High Build (Yellow)		
Cold Weather (White)		
Cold Weather (Yellow)		

Bridge Paint	Type	Per Gallon
Oil Base Primer		
Top Coat		
New Structure Paint		
Primer		
Top Coat		

Existing Structure Paint		
Primer		
Top Coat		

Others		
--------	--	--

Thermoplastic Symbols	UOM	Price
Left Or Right Turn Arrow, 4 Foot, 125 Mil	Ea	
Left Or Right Turn Arrow, 8 Foot, 125 Mil	Ea	
Lines, White, 1 Foot Wide, 3 Foot Long, 125 Mil	Ea	
Lines, White, 1 Foot Wide, 30 Foot Long, 125 Mil	Roll	
Lines, White, 2 Foot Wide, 3 Foot Long, 125 Mil	Ea	
Lines, White, 2 Foot Wide, 30 Foot Long, 125 Mil	Roll	

All bids shall be in effect until new bids are let in 2014.

\_\_\_\_\_  
**Authorized signature**

**Date** \_\_\_\_\_

**THIS FORM MUST BE COMPLETED AND ENCLOSED WITH THE BID**

**Audit Clause for Contracts**

Examination of Records

The Contractor's records must include, but not be limited to, accounting records (hard copy, as well as computer readable data), written policies and procedures, subcontractor files, indirect cost records, overhead allocation records, correspondence, instructions, drawings, receipts, vouchers, memoranda, and any other data relating to this contract shall be open to inspection and subject to audit and/or reproduction by the County Auditor, or a duly authorized representative from the County, at the County's expense. The contractor must preserve all such records for a period of three years, unless permission to destroy them is granted by the County, or for such longer period as may be required by law, after the final payment. Since the Contractor is not subject to the Missouri Sunshine Law (Chapter 610, RSMo), information regarding the Contractor's operations, obtained during audits, will be kept confidential.

The Contractor will require all subcontractors under this contract to comply with the provisions of this article by including the requirements listed above in written contracts with the subcontractors.

Vendor Information

Company Name: \_\_\_\_\_

Business Address: \_\_\_\_\_

\_\_\_\_\_

Business Hours: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email address: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_

(Indicates acceptance of all bid terms and conditions)

Date: \_\_\_\_\_