



**CITY OF SPRINGFIELD, MISSOURI  
DIVISION OF PURCHASES  
INVITATION FOR BID #157-2016**

**THIS IS NOT AN ORDER**

**RETURN**

**TO:** Kara Daniel, Buyer  
City of Springfield  
Division of Purchases  
218 E. Central  
Springfield, MO 65802

Date Issued: March 22, 2016  
Buyer's Email: [kdaniel@springfieldmo.gov](mailto:kdaniel@springfieldmo.gov)  
Telephone Number: 417-864-1621  
Fax Number: 417-864-1927  
**DUE DATE: APRIL 5, 2016**

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SEALED BIDS MUST BE PHYSICALLY RECEIVED IN THE DIVISION OF PURCHASES PRIOR TO **3:00 P.M. ON TUESDAY, APRIL 5<sup>th</sup>, 2016**. Bids will be opened by the buyer at the location listed above.

- Bids shall be submitted on the forms provided and must be manually signed by the individual authorized to legally bind the company.
- Bids shall be submitted with the IFB number clearly indicated on the outside of the mailing envelope.
- Bids received after the opening date and time will be rejected.
- The attached Terms and Conditions shall become part of any purchase order resulting from this bid.
- **FAXED/EMAILED BIDS WILL NOT BE ACCEPTED.**

You are invited to submit your bid to furnish the materials and/or services described herein. Please submit your prices/fees net of all discounts.

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**DESCRIPTION**

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**THERMOPLASTIC PAVEMENT MARKING MATERIAL DECALS**

*See attached General Conditions, Specifications, and Bid Form for detailed information.*

DELIVERY: F.O.B. DESTINATION

*The articles to be furnished hereunder shall be delivered all transportation charges paid by the bidder to destination.*

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**CITY OF SPRINGFIELD  
INSTRUCTION TO BIDDERS**

**01. Opening Location**

The Bids will be opened at the City of Springfield, Division of Purchases, 218 E. Central, Springfield, MO 65802 in the presence of Purchasing officials at the due date and time indicated on the IFB. All bidders or their representatives are invited to attend the opening of the IFB.

**02. IFB Delivery Requirements**

Any Bids received after the above stated time and date will not be considered. It shall be the sole responsibility of the bidder to have their Bid delivered to the Division of Purchases for receipt on or before the due date and time indicated. If a Bid is sent by U.S. Mail, the bidder shall be responsible for its timely delivery to the Division of Purchases office. Bids delayed by mail shall not be considered, shall not be opened, and shall be rejected. Arrangements may be made for their return at the bidder's request and expense. Bids may be mailed to the Division of Purchases and accepted if the signed bid form and required information was mailed and received prior to the due date and time. Bids sent by email will not be accepted.

**03. Sealed and Marked**

If sent by mail, one original signed Bid shall be submitted in one sealed package, clearly marked on the outside of the package with the Invitation for Bid number and addressed to:

City of Springfield  
Division of Purchases  
218 E. Central  
Springfield, MO 65802

**04. Legal Name and Signature**

Bids shall clearly indicate the legal name, address, and telephone number of the bidder (company, firm, corporation, partnership, or individual). Bids shall be manually signed above the printed name and title of signer on the Affidavit of Compliance page. The signer shall have the authority to bind the company to the submitted Bid. Failure to properly sign the Bid form shall invalidate same, and it shall not be considered for award.

**05. Corrections**

No erasures are permitted. If a correction is necessary, draw a single line through the entered figure and enter the corrected figure above it. Corrections must be initialed by the person signing the Bid.

**06. Clarification and Addenda**

Each bidder shall examine all Invitation for Bid documents and shall judge all matters relating to the adequacy and accuracy of such documents. Any inquiries or suggestions, concerning interpretation, clarification, or additional information pertaining to the Invitation for Bid shall be made through the Division of Purchases in writing or through email. The Division of Purchases shall not be responsible for oral interpretations given by any City employee, representative, or others. The issuance of written addenda is the official method whereby interpretation, clarification, or additional information can be given.

It shall be the responsibility of each bidder, prior to submitting their Bid, to contact the Division of Purchases at phone number 417-864-1620, or to check the Purchasing website to determine if addenda were issued and to make such addenda a part of their Bid at: [www.springfieldmo.gov/bids](http://www.springfieldmo.gov/bids)

**07. IFB Expenses**

All expenses for making Bids to the City are to be borne by the bidder.

**08. Irrevocable Offer**

Any Bid may be withdrawn up until the due date and time set for opening of the IFB. Any Bid not so withdrawn shall, upon opening, constitute an irrevocable offer for a minimum period of 90 days to sell to the City the goods or services set forth in the IFB, until one or more of the Bids have been duly accepted by the City.

**09. Responsive and Responsible Bidder**

To be responsive, a bidder shall submit a Bid which conforms in all material respects to the requirements set forth in the Invitation for Bid. To be a responsible bidder, the bidder shall have the capability in all respects to perform fully the contract requirements, and the tenacity, perseverance, experience, integrity, reliability, capacity, facilities, equipment and credit which will ensure good faith performance. The lowest responsible bidder shall mean the bidder who makes the lowest Bid to sell goods or services of a quality which conforms closest to the quality of goods or services set forth in the specifications or otherwise required by the City and who is known to be fit and capable to perform the Bid as made.

**10. Reserved Rights**

The City reserves the right to make such investigations as it deems necessary to make the determination of the bidder's responsiveness and responsibility. Such information may include, but shall not be limited to: current financial statement, verification of availability of equipment and personnel, and past performance records.

**11. The Right to Audit**

The bidder agrees to furnish supporting detail as may be required by the City to support charges or invoices, to make available for audit purposes all records covering charges pertinent to the purchase, and to make appropriate adjustments in the event discrepancies are found. The cost of any audit

will be paid by the City. The City shall have the right to audit the bidder's records pertaining to the work/product for a period of three (3) years after final payment.

## **12. Applicable Law**

All applicable laws and regulations of the State of Missouri and the City including the City Procurement Regulations and Procedures will apply to any resulting agreement, contract, or purchase order. Any involvement with the City Procurement shall be in accordance with the Procurement Regulations and Procedures.

## **13. Right to Protest**

Appeals and remedies are provided for in the City Procurement Regulations. Protestors shall seek resolution of their complaints initially with the City Purchasing Agent.

Any protest shall state the basis upon which the solicitation or award is contested and shall be submitted within ten (10) calendar days after such aggrieved person knew or could have reasonably been expected to know of the facts giving rise thereto.

## **14. Ethical Standards**

With respect to this IFB, if any bidder violates or is a party to a violation of the general ethical standards of the City Procurement Code or the State of Missouri Statutes, such bidder may be disqualified from furnishing the goods or services for which the Bid is submitted and shall be further disqualified from submitting any future Bids. A copy of the City's General Ethical Standards is available at the Division of Purchases.

## **15. Collusion**

By offering a submission to this Invitation for Bid, the bidder certifies the bidder has not divulged, discussed, or compared the Bid with other bidders and has not colluded with any other bidder or parties to this IFB whatsoever. Also, the bidder certifies, and in the case of a joint Bid, each party thereto certifies as to their own organization, that in connection with this IFB:

- a. Any prices and/or cost data submitted have been arrived at independently, without consultation, communication, or agreement for the purpose of restricting competition, as to any matter relating to such prices and/or cost data, with any other bidder or with any competitor.
- b. Any prices and/or cost data for this Bid have not knowingly been disclosed by the bidder and will not knowingly be disclosed by the bidder prior to the scheduled opening directly or indirectly to any other bidder or to any competitor.
- c. No attempt has been made or will be made by the bidder to induce any other person or firm to submit or not to submit a Bid for the purpose of restricting competition.
- d. The only person or persons interested in this Bid, principal or principals are named therein and that no person other than therein mentioned has any interest in this Bid or in the contract to be entered into.
- e. No person or agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee exempting bona fide employees or established commercial agencies maintained by the Purchaser for the purpose of doing business.

## **16. Contract Forms**

Any agreement, contract, or purchase order resulting from the acceptance of a Bid shall be on forms either supplied by or approved by the City.

## **17. Liability and Indemnity**

- a. In no event shall the City be liable to the Contractor for special, indirect, or consequential damages, except those caused by the City's gross negligence or willful or wanton misconduct arising out of or in any way connected with a breach of this contract. The maximum liability of the City shall be limited to the amount of money to be paid or received by the City under this contract.
- b. The Contractor shall defend, indemnify and save harmless the City, its elected or appointed officials, agents and employees from and against any and all liability, suits, damages, costs (including attorney fees), losses, outlays and expenses from claims in any manner caused by, or allegedly caused by, or arising out of, or connected with, this contract, or the work or any subcontract thereunder (the Contractor hereby assuming full responsibility for relations with subcontractors), including, but not limited to, claims for personal injuries, death, property damage, or for damages from the award of this contract to Contractor.
- c. The Contractor shall indemnify and hold the City harmless from all wages or overtime compensation due any employees in rendering services pursuant to this agreement or any subcontract, including payment of reasonable attorneys' fees and costs in the defense of any claim made under the Fair Labor Standards Act, the Missouri Prevailing Wage Law or any other federal or state law.

## **18. IFB Forms, Variances, Alternates**

Bids must be submitted on attached City IFB forms, although additional information may be attached. Bidders must indicate any variances from the City requested specifications and/or terms and conditions, on the IFB Affidavit of Compliance. Otherwise, bidders must fully comply with the City requested specifications and terms and conditions. Alternate Bids may or may not be considered at the sole discretion of the City Purchasing Agent.

**19. Bid Form**

All blank spaces must be completed with the appropriate response. The bidder must state the price, written in ink, for what is proposed to complete each item of the project. Bidders shall insert the words "no bid" in the space provided for an item for which no Bid is made. The bidder shall submit an executed Bid form, affidavit of compliance with other requested documents.

**20. Modifications or Withdrawal of Bid**

A modification for a Bid already received will be considered only if the modification is received prior to the time announced for opening of Bids. All modifications shall be made in writing, executed, and submitted on the same form and manner as the original Bid. Modifications submitted by telephone, fax, or email will not be considered.

**21. No Bid**

If not submitting a Bid, respond by returning the "Statement of No Bid" no later than the stated Bid opening time and date, and explain the reason in the space provided.

**22. Errors in Bids**

Bidders or their authorized representatives are expected to fully inform themselves as to the conditions, requirements, and specifications before submitting Bids; failure to do so will be at the bidder's own risk. Neither law nor regulations make allowance for errors either of omission or commission on the part of bidders. In case of error of extension of prices in the Bid, the unit price shall govern.

**23. Prices Bid**

Give both unit price and extended total. Price must be stated in units of quantity specified in the bidding specifications. In case of discrepancy in computing the amount of the Bid, the unit price of the Bid will govern. All prices shall be F.O.B. destination, freight prepaid (unless otherwise stated in special conditions). Each item must be bid separately and no attempt is to be made to tie any item or items in with any other item or items. If a bidder offers a discount on payment terms, the discount time will be computed from the date of satisfactory delivery at place of acceptance and receipt of correct invoice at the office specified. Payment terms shall be Net 30 if not otherwise specified. Pre-payment terms are not acceptable.

**24. Discounts**

Any and all discounts except cash discounts for prompt payments must be incorporated as a reduction in the Bid price and not shown separately. The price as shown on the Bid shall be the price used in determining award(s).

**25. Descriptive Information**

All equipment, materials, and articles incorporated in the product/work covered by this IFB are to be new and of suitable grade for the purpose intended. Brand or trade names referenced in specifications are for comparison purposes only. Bidders may submit Bids on items manufactured by other than the manufacturer specified when an "or equal" is stated.

**26. Deviations to Specifications and Requirements**

When bidding on an "or equal," Bids must be accompanied with all descriptive information necessary for an evaluation of the proposed material or equipment such as the detailed drawings and specifications, certified operation and test data, and experience records. Failure of any bidder to furnish the data necessary to determine whether the product is equivalent, may be cause for rejection of the specific item(s) to which it pertains. All deviations from the specifications must be noted in detail by the bidder on the Affidavit of Compliance form, at the time of submittal of Bid. The absence of listed deviations at the time of submittal of the Bid will hold the bidder strictly accountable to the specifications as written. Any deviation from the specifications as written and accepted by the City may be grounds for rejection of the material and/or equipment when delivered.

**27. Samples (if required)**

For certain types of procurements, samples may be required. If samples are required, it will be stated in the IFB. The following conditions and requirements apply to all samples submitted.

- a. The samples submitted by bidders on items for which they have received an award may be retained by the City until the delivery of contracted items is completed and accepted. Bidders whose samples are retained may remove them after delivery is accepted.
- b. Samples not retained must be removed as soon as possible after award has been made on the item or items for which the samples have been submitted. The City will not be responsible for such samples not removed by the bidder within 30 days after the award has been made. The City reserves the right to consume any or all samples for testing purposes.
- c. Bidders shall make all arrangements for delivery of samples to place designated as well as the removal of samples. Cost of delivery and removal of samples shall be borne by the bidder.
- d. All samples packages shall be marked "Sample for Division of Purchases" and each sample shall bear the name of the bidder, item number, Bid number, and shall be carefully tagged or marked in a substantial manner. Failure of the bidder to clearly identify samples as indicated may be considered sufficient reason for rejection of Bid.

**28. Quality Guaranty**

If any product delivered does not meet applicable specifications or if the product will not produce the effect that the bidder represents to the City, the bidder shall pick up the product from the City at no expense. Also, the bidder shall refund to the City any money which has been paid for same. The bidder will be responsible for attorney fees in the event the bidder defaults and court action is required.

**29. Quality Terms**

The City reserves the right to reject any or all materials if, in its judgment, the item reflects unsatisfactory workmanship, manufacturing, or shipping damages.

### **30. Tax-Exempt**

The City is exempt from sales taxes and Federal Excise Taxes: Missouri Tax ID Number 12493651.

### **31. Awards**

- a. Unless otherwise stated in the Invitation for Bid, cash discounts for prompt payment of invoices will not be considered in the evaluation of prices. However, such discounts are encouraged to motivate prompt payment.
- b. As the best interest of the City may require, the right is reserved to make awards by item, group of items, all or none, or a combination thereof; to reject any and all Bids or waive any minor irregularity or technicality in Bids received.
- c. Awards will be made to the Bidder whose Bid (1) meets the specifications and all other requirements of the Invitation for Bid and (2) is the lowest and best Bid, considering price, delivery, responsibility of the bidder, and all other relevant factors.

### **32. Authorized Product Representation**

The successful bidder(s) by virtue of submitting the name and specifications of a manufacturer's product will be required to furnish the named manufacturer's product. By virtue of submission of the stated documents, it will be presumed by the City that the bidder(s) is legally authorized to submit and the successful bidder(s) will be legally bound to perform according to the documents.

### **33. Regulations**

It shall be the responsibility of each bidder to assure compliance with OSHA, EPA, Federal, State of Missouri, and City rules, regulations, or other requirements, as each may apply.

### **34. Termination of Award**

Any failure of the bidder to satisfy the requirements of the City shall be reason for termination of the award. Any Bid may be rejected in whole or in part for good cause when in the best interest of the City.

### **35. Royalties and Patents**

The successful bidder(s) shall pay all royalties and license fees for equipment or processes in conjunction with the equipment being furnished. Bidder shall defend all suits or claims for infringement of any patent right and shall hold the City harmless from loss on account or cost and attorney's fees incurred.

### **36. Equal Employment Opportunity Clause**

The City of Springfield, in accordance with the provision of Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Department of Commerce (15 CFR, Part 8) issued pursuant to such Act, hereby notifies all bidders that affirmatively ensure that in any contract entered into pursuant to this advertisement that minority businesses will be afforded full opportunity to submit Bids in response to this advertisement and will not be discriminated against on the grounds of race, color, or national origin in consideration for award.

### **37. Bid Tabulation**

Bidders may request a copy of the bid tabulation of the Invitation for Bid.

### **38. Budgetary Constraints**

The City reserves the right to reduce or increase the quantity, retract any item from the Bid, or upon notification, terminate entire agreement without any obligations or penalty based upon availability of funds.

### **39. Additional Purchases by Other Public Agencies**

The bidder by submitting a Bid authorizes other public agencies to "Piggy-Back" or purchase equipment and services being proposed in this Invitation for Bid unless otherwise noted on the Affidavit of Compliance Form.

### **40. Order of Precedence**

Any and all Special/General Conditions and Specifications attached hereto, which varies from the instruction to bidders, shall take precedence.

### **41. Affidavit for Service Contracts**

The Bidder represents, in accordance with RSMO 285.530.2 that they have not employed, or subcontracted with, unauthorized aliens in connection with the scope of work to be done under the IFB and agrees to provide an affidavit to the City of Springfield affirming that they have not, and will not in connection with the IFB, knowingly employ, or subcontract with, any person who is an unauthorized alien.

### **42. Inspection and Acceptance**

No item(s) received by the City pursuant to this contract shall be deemed accepted until the City has had reasonable opportunity to inspect the item(s). Any item(s) which are discovered to be defective or which do not conform to any warranty of the Seller upon inspection may be returned at the seller's expense for full credit or replacement. If at a later time, the defects were not ascertainable upon the initial inspection may also be returned at the Seller's expense for full credit or replacement. The City's return of defective items shall not exclude any other legal, equitable or contractual remedies the City may have.

**CITY OF SPRINGFIELD  
INVITATION FOR BID #157-2016  
GENERAL TERMS AND CONDITIONS**

1. **SCOPE OF PROJECT:** Contractor shall provide all labor, materials, equipment, supplies, taxes, fuels, and any and all other items necessary to complete the work, as specified herein. Contractor shall complete all work.
2. **TERM:** One year beginning on date of award on an as required basis. The City may, at its option, extend the contract for up to two (2) additional one-year terms.
3. **ESCALATION/DE-ESCALATION:** Bid prices shall remain firm for a period of six months from the date of award. The contract prices may be changed after that time for the following reasons:

An increase or decrease in the supplier's cost of materials may be justification for price change; however, this shall not be construed in any way to increase vendor's margin of profit.

All written requests for price increase must include backup documentation as to the nature of the increase and shall be submitted to the City Purchasing Agent at least 60 days prior to the scheduled price increase/decrease or renewal of contract. Approval of each request shall be by written confirmation from the City Purchasing Agent. If the City should consider said increase unwarranted or unreasonable, the City reserves the right to terminate the contract with the vendor. Any price decline at the manufacturer's level shall be reflected in an immediate reduction of the contract prices and the vendor shall notify the buyer of said decline.

4. **QUANTITY:** Quantities listed are estimates for bid purposes only; actual usage may be more or less.
5. **PURCHASING CARD PROGRAM:** The City has implemented a purchasing card program through Commerce Bank, using the Visa network. Bidders may receive payment from the purchasing card in the same manner as other Visa purchases. Bidders should have the ability to accept Visa.

City departments will be encouraged to use purchasing cards to order from this annual contract. In the event the department does not use a purchasing card, a written purchase order will be issued.

6. **SPECIFICATIONS:** If bidding an equal, Bidders must include with their bid specification sheets or information sufficient for thorough evaluation. Failure may be cause for rejection as non-compliant.
7. **SAMPLES:** If samples are requested, Bidder shall provide samples within five (5) days or less to the Division of Purchasing, 218 E. Central Springfield, MO 65802. The City will notify Bidders after award for disposition of samples provided. All costs for return of samples shall be the responsibility of the Bidder. Samples not picked up within thirty (30) days from date of notice shall become the property of the City at no cost to the City.  
**DO NOT SEND SAMPLES UNTIL REQUESTED TO DO SO BY THE DIVISION OF PURCHASES.**

8. **ACCEPTANCE:** Acceptance is subject to inspection by the City.
9. **ADDITIONS, DELETIONS, OR CHANGES:** No one can authorize any additions, deletions, or changes to the work, before or during the contract, unless an approved change orders has been issued by the Division of Purchases. The City will not be responsible for any additional charges unless an authorized change order has been issued.

10. **TERMINATION OF CONTRACT:**

**A. For Breach:** If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner Contractor's obligations under this contract, or if the Contractor shall violate any of the covenants, agreements, or stipulations of this contract, the City shall thereupon have the right to terminate this contract by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least five (5) days before the effective day of such termination.

**B. For Convenience:** The City shall have the right at any time by written notice to Contractor to terminate and cancel this contract, without cause, for the convenience of the City, and Contractor shall immediately stop work.

**In either such event, all finished or unfinished documents, data, studies, reports, or other materials prepared by the Contractor shall, at the option of the City become its property.** The Contractor shall be entitled to receive just and equitable compensation for any satisfactory work completed prior to termination of the contract. Notwithstanding the above, the Contractor shall not be relieved of liability to the City for damages sustained by the City by virtue of any such breach of the contract by the Contractor.

11. **QUESTIONS AND ADDENDA:** All questions regarding this bid should be directed to the Buyer, Kara Daniel at [kdaniel@springfieldmo.gov](mailto:kdaniel@springfieldmo.gov). No addendum will be issued less than three working days before the bid due date.

**CITY OF SPRINGFIELD  
SPECIFICATIONS  
IFB #157-2016**

**DESCRIPTION:** Pavement marking material shall be a minimum thickness of 90 mils.

**PREFORMED THERMOPLASTIC PAVEMENT MARKINGS**

- 1. USE:** A durable, retro-reflective pavement marking material suitable for use as roadway, intersection, commercial or private pavement delineation and markings.
  - 1.1** The markings must be a resilient white, yellow, or specified color thermoplastic product with uniformly distributed glass beads throughout the entire cross sectional area. The markings must be resistant to the detrimental effects of motor fuels, lubricants, hydraulic fluids, antifreeze, etc. Lines, legends and symbols are capable of being affixed to bituminous and/or portland cement concrete pavements by the use of the normal heat of a propane torch. Other colors shall be available as required.
  - 1.2** The markings must be capable of conforming to pavement contours, breaks and faults through the action of traffic at normal pavement temperatures. The markings shall have resealing characteristics, such that it is capable of fusing with itself and previously applied thermoplastic when heated with the torch.
  - 1.3** The markings shall not have minimum ambient and road temperature requirements for application, storage, or handling.
- 2. MANUFACTURING CONTROL AND ISO CERTIFICATION:** The manufacturer must be ISO 9001:2000 certified and provide proof of current certification. The scope of the certification shall include manufacture of preformed thermoplastic marking materials.
- 3. MATERIAL:** Must be composed of an ester modified rosin resistant to degradation by motor fuels, lubricants etc. in conjunction with aggregates, pigments, binders and glass beads which have been factory produced as a finished product, and meets the requirements of the current edition of the Manual on Uniform Traffic Control Devices for Streets and Highways. The thermoplastic material conforms to AASHTO designation M249, with the exception of the relevant differences due to the material being supplied in a preformed state.
  - 3.1 Graded Glass Beads:**
    - 3.1.1** The material must contain a minimum of thirty percent (30%) intermixed graded glass beads by weight. The intermixed beads shall be conforming to AASHTO designation M247, with minimum 80% true spheres and minimum refractive index of 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 10 sq. ft. These factory applied coated surface beads shall have a minimum of 90% true spheres, minimum refractive index of 1.50, and meet the following gradation.



Size Gradation		Retained, %	Passing, %
US Mesh	µm		
12	1700	0-2%	98-100%
14	1400	0-3.5%	96.5-100%
16	1180	2-25%	75-98%
18	1000	28-63%	37-72%
20	850	63-72%	28-37%
30	600	67-77%	23-33%
50	300	89-95%	5-11%
80	200	97-100%	0-3%

### 3.2 Pigments:

**3.2.1** White: The material shall be manufactured with sufficient titanium dioxide pigment to meet FHWA Docket No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected.

**3.2.2** Red, Blue, and Yellow: The material shall be manufactured with sufficient pigment to meet FHWA Docket No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected. The yellow pigments must be organic and must be heavy-metal free.

**3.2.3** Other Colors: The pigments must be heavy-metal free.

**3.3** Heating indicators: The top surface of the material (same side as the factory applied surface beads) shall have regularly spaced indents. These indents shall act as a visual cue during application that the material has reached a molten state so satisfactory adhesion and proper bead embedment has been achieved and a post-application visual cue that the installation procedures have been followed.

**3.4** Skid Resistance: The surface, with properly applied and embedded surface beads, must provide a minimum resistance value of 45 BPN when tested according to ASTM E 303.

**3.5** Thickness: The material must be supplied at a minimum thickness of 125 mils (3.15 mm).

**3.6** Environmental Resistance: The material must be resistant to deterioration due to exposure to sunlight, water, salt or adverse weather conditions and impervious to oil and gasoline.

**3.7** Retro-reflectivity: The material, when applied in accordance with manufacturer's guidelines, must demonstrate a uniform level of sufficient nighttime retro-reflection when tested in accordance to ASTM E 1710. The applied material must have an initial minimum intensity reading of 500 mcd·m<sup>-2</sup>·lx<sup>-1</sup> for white and 300 mcd·m<sup>-2</sup>·lx<sup>-1</sup> for yellow as measured with an LTL-2000 or LTL-X Retro-reflectometer.

**4. APPLICATION:**

**4.1** Asphalt: The materials shall be applied using the propane torch method recommended by the manufacturer. The material must be able to be applied without minimum requirements for ambient and road temperatures and without any preheating of the pavement to a specific temperature. The material must be able to be applied without the use of a thermometer. The pavement shall be clean, dry and free of debris. Supplier must enclose application instructions in English and Spanish with each box/package.

**4.2** Portland Cement Concrete: The same application procedure shall be used as described under Section 4.1. However, a compatible primer sealer shall be applied before application to assure proper adhesion.

**5. PACKAGING:** The preformed thermoplastic markings shall be placed in protective plastic film with cardboard stiffeners where necessary to prevent damage in transit. Linear material must be cut to a maximum of 3' long pieces. Legends and symbols must also be supplied in flat pieces. The cartons in which packed shall be non-returnable and shall not exceed 40" in length and 25" in width, and be labeled for ease of identification. The weight of the individual carton must not exceed seventy (70) pounds. A protective film around the box must be applied in order to protect the material from rain or premature aging.

**6. TECHNICAL SERVICES:** The successful bidder shall provide technical services as required.

# PREFORMED RETROREFLECTIVE MARKING MATERIAL

## 1. DESCRIPTION

This specification is for furnishing a system designed for providing pavement markings directed at pedestrian and bike path delineation. The applied markings will have significant skid resistant features not typically associated with thermoplastic systems, will be durable, oil and grease impervious, and provide immediate and continuing retro-reflectivity. This unique marking system can be adhered to asphalt and portland cement concrete pavements by means of heat fusion, and without the need and requirement for sealers and primers.

## 2. GENERAL

**2.1** The preformed retro-reflective marking material shall consist of a resilient polymer thermoplastic (alkyd, no hydrocarbon) with uniformly distributed glass beads and abrasives throughout its entire cross section. Preformed retro-reflective markings shall be available conforming to the current edition of the Manual on Uniform Traffic Control Devices for Streets and Highways as issued by the U.S. Department of Transportation Federal Highway Administration.

**2.2** The preformed marking materials shall not be brittle and will be sufficiently cohesive and flexible at temperatures exceeding 50°F.

**2.3** The preformed marking materials shall be fusible to asphalt and portland cement concrete pavements by means of the normal heat of a propane type torch. Adhesives, primers, or sealers are not necessary prior to the preformed markings application on asphalt and portland cement concrete pavements.

**2.4** The preformed marking materials shall conform to pavement contours, breaks, and faults through the action of traffic at normal pavement temperatures. The markings shall have resealing characteristics and be capable of fusing to itself and previously applied hydrocarbon and / or alkyd thermoplastic pavement markings.

**2.5** The preformed marking materials shall be capable of application on new, dense, and open graded asphalt wearing courses during the paving operation in accordance with the manufacturer's instructions.

**2.6** The preformed marking materials shall be capable and ready to open to traffic 15 minutes after application.

**2.7** The preformed marking materials shall be suitable for use for one year after the date of receipt when stored in accordance with the manufacturer's recommendations.

**3. MANUFACTURING CONTROL AND ISO CERTIFICATION:** The manufacturer must be ISO 9001:2000 certified and provide proof of current certification. The scope of the certification shall include manufacture of preformed thermoplastic pavement marking material.

**4. CLASSIFICATION:** The preformed marking materials shall be highly durable retro-reflective pliant polymer thermoplastic materials designed for transverse, legend, and symbol markings. This system is designed for and subjected to high urban traffic volumes and particularly severe wear conditions including winterized maintenance practices employed by various regions of the US DOT market.

## 5. REQUIREMENTS

**5.1 Composition:** The preformed marking materials shall consist of a homogeneous mixture of high quality polymeric thermoplastic binders, lead-free pigments, fillers, and intermix glass HT HO 125 SA 03.04.08 throughout the entire composition. The thermoplastic material must conform to AASHTO designation M249 with the exception of the relevant differences due to the material being preformed, and identified herein.

- 5.1.1 Intermix Glass:** The preformed retro-reflective material shall contain a minimum of 30% glass spheres which shall conform to AASHTO M247 Type 1. Glass spheres shall have a minimum of 80% true spheres overall.
- 5.1.2 Top Glass:** To provide uniform retro-reflectivity and skid resistance, a proprietary glass bead and abrasive combination shall be factory pre-applied at a uniform rate. The glass beads shall have a minimum of 80% true spheres overall.
- 5.2 Retro-reflectivity:** The preformed marking materials shall upon application exhibit uniform adequate nighttime visibility (retro-reflectivity). The applied markings shall have an average minimum retro-reflectivity of 400 mcd/lx/m<sup>2</sup> for white markings and 250 mcd/lx/m<sup>2</sup> for yellow markings. Note: The initial retro-reflectivity values assume proper application. For optimum retro-reflectivity, beads must be embedded, upon application, 50% - 60% into the preformed thermoplastic.
- 5.3 Color Characteristics:** Preformed marking materials without pre-applied top glass beads shall meet the following: White: Daytime luminance factor (cap Y) of 80% minimum. Yellow: Daytime luminance factor (cap Y) of 45% minimum. The daytime luminance factor shall not change significantly when the preformed retro-reflective thermoplastic is properly applied to the roadway surface. For highway use, the white markings shall contain a minimum of 10% by weight of titanium dioxide pigment. Yellow color shall reasonably match color chip Number 13538 of Federal Standard number 595 and be lead free.
- 5.4 Skid Resistance:** The surface of the preformed marking materials shall provide a post-applied minimum skid resistance value of at least 45 BPN when tested according to ASTM E 303.
- 5.5 Thickness:** The thickness of the supplied material shall have a minimum average thickness of 0.125 in. (3.18 mm) (expressed as 125 mils).
- 5.6 Flexibility:** The preformed marking materials shall have flexibility at 50°F such that when a 1 in. by 6 in. sample is bent through an arc of 90° at a uniform rate in 10 seconds (9° per second) over a 1 in. mandrel, no cracking occurs in the test sample. The sample must be conditioned prior to testing at 50°F ±2 for a minimum of four hours. At least two specimens tested must meet the flexibility requirements at 50°F for a passing result.
- 5.7 Bond Strength:** The preformed marking materials must have superior bonding strength of at least 300 psi on portland cement concrete when tested according to ASTM D 4796, except that a 2 in. by 2 in. specimen shall be placed on a preheated brick (15 minutes at 425°F) and then placed in a 425°F oven for 15 minutes.
- 5.8 Tensile Strength and Elongation:** The preformed marking materials shall have a minimum tensile strength of 150 lb. per square inch of cross section when tested according to ASTM D 638, except that a sample 1 in. wide by 6 in. long shall be tested at a temperature HT HO 125 SA 03.04.08 between 70°F and 80°F using a jaw speed of 10 in./min. The sample shall have a maximum elongation of 20% at break when tested by this method.
- 5.9 Low Temperature Cracking (Stress) Resistance for Extended Period:** The Pre-formed marking materials shall be tested according to AASHTO T250 section 7 with section 7.2.3 modified for extended cold temperature (-9.4°C ±2 (15°F ±3)) exposure period of 72 hours. Any cracking shall constitute failure of the material for portland cement concrete road surfaces.
- 5.10 Environmental Resistance:** The applied preformed marking materials shall be resistant to deterioration due to exposure to sunlight, water, oil, diesel fuels, gasoline, pavement oil content, salt, and adverse weather conditions.

- 5.11 Effective Performance Life:** When properly applied, in accordance with manufacturer's instructions, the preformed marking materials shall be neat and durable. The markings shall remain skid resistant and show no fading, lifting, shrinkage, tearing, roll back, or other signs of poor adhesion.
- 6. PACKAGING:** The flexible preformed marking materials, for use as transverse or bike symbols as well as legends, shall be available in flat form material up to a maximum of 2 ft. width by 4 ft. length. The material shall be packed in suitable shrink-wrapped cartons clearly labeled for ease of identifying the contents. Packaging shall not use plastic liners within to separate material from itself. Product packaging shall identify part number and mil thickness.
- 7. MATERIAL REPLACEMENT PROVISIONS:** Any properly applied preformed marking materials that shall smear or soften independent of pavement movement or condition within a period of one year from date of application shall be replaced by the supplier.
- 8. INSTALLATION:** The preformed marking materials shall be applied in accordance with the manufacturer's recommendations on clean and dry surfaces. New portland cement concrete surfaces must be sandblasted to entirely remove curing compound. Marking configuration shall be in accordance with the "Manual on Uniform Traffic Control Devices" where applicable.
- 8.1 New Surfaces:** Markings specified for newly paved asphalt road surfaces shall be capable of being applied as the original permanent marking on the day the surface is paved.
- 8.2 Fusion:** The preformed marking materials shall be fusible to the pavement by means of a propane torch recommended by the manufacturer.
- 9. TECHNICAL SERVICES:** The supplier shall provide technical services as may be required.
- 10. IMAGES FOR DECALS:** The following are specifications for the decals required by the City. All decals must be produced in accordance with these specifications.
- Bike Route:** 24-inch diameter circle with green background (PMS368C, or equal) and white 18-inch by 12-inch bicycle symbol and 2.0-inch high letters "BIKE ROUTE"



**Path:** 24-inch diameter circle with green background (PMS368C, or equal) and white 22-inch by 9.6-inch symbol of bicyclist and pedestrian on path (no white within one-half inch of edge and heads one inch from edge) and white 2.0-inch high letters with legend "WALK & BIKE PATH"



**CITY OF SPRINGFIELD  
 BID FORM – PROPOSAL  
 IFB #157-2016**

SUBMITTED BY \_\_\_\_\_  
 Company Name

Pursuant to and in accordance with the above stated Invitation for Bid, the undersigned hereby declares that they have examined the IFB documents and specifications for the item(s) listed below. The undersigned proposes and agrees, if their Bid is accepted to furnish the item(s) submitted below, including delivery to Springfield, Missouri in accordance with the delivery schedule indicated below and according to the prices products/services information submitted.

ITEM	QTY	DESCRIPTION	UNIT PRICE	EXTENDED AMOUNT
1.	200 Each	<b>Bike Route (24" Diameter)</b>  Mfg. _____ Type _____  Delivery: _____ days after receipt of order.  SHALL WARRANTY THE ABOVE EQUIPMENT FOR PARTS, LABOR, AND TRAVEL FOR _____	\$ _____	\$ _____
2.	20 Each	<b>Walk and Bike Path (24" Diameter)</b>  Mfg. _____ Type _____  Delivery: _____ days after receipt of order.  SHALL WARRANTY THE ABOVE EQUIPMENT FOR PARTS, LABOR, AND TRAVEL FOR _____	\$ _____	\$ _____
<b>OPTIONAL SERVICES: Note: These will not be calculated in the bid tabulation</b>				
3.		<b>THERMOPLASTIC PAVEMENT MARKING DECALS DESIGN NOT SPECIFIED HEREIN</b> Decals shall be produced in accordance to the specifications herein. Price shall include White and One Pantone Color.  Mfg. _____ Type _____  Delivery: _____ days after receipt of order.  SHALL WARRANTY THE ABOVE EQUIPMENT FOR PARTS, LABOR, AND TRAVEL FOR _____	\$ _____ per square foot	
4.		<b>ADDITIONAL PANTONE COLOR FOR THE OPTIONAL DECAL(S) SPECIFIED ABOVE.</b>	\$ _____ per square foot	

**DELIVERY: F.O.B. DESTINATION**

ACCEPT VISA P-CARD: YES \_\_\_\_\_ NO \_\_\_\_\_

Prompt Payment Discount \_\_\_\_\_ % \_\_\_\_\_ Days, Net \_\_\_\_\_ Days





**CITY OF SPRINGFIELD  
STATEMENT OF "NO BID"  
IFB #157-2016**

**RETURN THIS PAGE ONLY IF YOUR COMPANY PROVIDES THE PRODUCTS/SERVICES BEING BID AND DECLINES TO DO SO.**

WE, THE UNDERSIGNED, HAVE DECLINED TO BID ON YOUR **IFB #157-2016** FOR **THERMOPLASTIC PAVEMENT MARKING MATERIAL DECALS** FOR THE FOLLOWING REASON(S):

\_\_\_\_\_ SPECIFICATIONS ARE TOO "TIGHT," I.E. GEARED TOWARD ONE BRAND OR MANUFACTURER ONLY  
(PLEASE EXPLAIN BELOW).

\_\_\_\_\_ INSUFFICIENT TIME TO RESPOND TO INVITATION FOR BID.

\_\_\_\_\_ OUR PRODUCT SCHEDULE WOULD NOT PERMIT US TO PERFORM.

\_\_\_\_\_ UNABLE TO MEET SPECIFICATIONS.

\_\_\_\_\_ UNABLE TO MEET INSURANCE REQUIREMENTS.

\_\_\_\_\_ SPECIFICATIONS UNCLEAR (PLEASE EXPLAIN BELOW).

\_\_\_\_\_ OTHER (PLEASE SPECIFY BELOW).

REMARKS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

SIGNATURE AND TITLE: \_\_\_\_\_

TELEPHONE NUMBER: \_\_\_\_\_

DATE: \_\_\_\_\_