



CITY OF HOUSTON INVITATION TO BID

Issued: August 3, 2012

Bid Opening

Sealed bids, in duplicate, will be received by the City Secretary of the City of Houston, in the City Hall Annex, Public Level, 900 Bagby, Houston, Texas 77002 until **10:30 a.m. Thursday, August 23, 2012**, and all bids will be opened and publicly read in the City Council Chamber at 11:00 A.M. on that date for the purchase of:

**REFLECTIVE AND NON-REFLECTIVE MATERIALS
FOR
VARIOUS DEPARTMENTS
BID INVITATION NO. S06-S24081
NIGP CODE: 550-45**

Buyer

Tywana L. Rhone is the Buyer for this solicitation and she may be reached at 832.393.8754. Any questions regarding this solicitation should be submitted in writing to 832-393-8760 (fax) or via e-mail at tywana.rhone@houstontx.gov

Electronic Bidding

In order to submit a bid for the items associated with this procurement, you must fill in the pricing information on the "PLACE BID" page.

Pre-Bid

A Pre-Bid Conference will be held for all Prospective Bidders in the Strategic Purchasing Division, Basement, City Hall, 901 Bagby, Houston, Texas 77002 at 1:30 PM, Wednesday August 15, 2012 in Conference Room No. 2.

All Prospective Bidders are urged to be present. It is the bidder's responsibility to ensure that they have secured and thoroughly reviewed all aspects of the bidding documents prior to the Pre-Bid Conference. **Any revisions to be incorporated into this solicitation arising from discussions before, during and subsequent to the pre-bid conference will be confirmed in writing by Letter(s) of Clarification prior to the bid due date. No verbal responses will otherwise alter the specifications, terms and conditions as stated herein.**

Bidding forms, specifications and all necessary information should be downloaded from the Internet at <https://purchasing.houstontx.gov>. By registering and downloading this bid document, all updates to this bid document will be automatically forwarded via e-mail to any registered bidder. This information may also be obtained from the office of the City Purchasing Agent, 901 Bagby, Basement, Houston, Texas 77002.

The place of the bid opening may be transferred in accordance with Paragraph B (5) of Section 15-3 of The Code of Ordinances, Houston, Texas. The bid opening meeting may be rescheduled in accordance with Paragraph B (6) of said Section 15-3.

The City reserves the right to reject any or all bids or to accept any bid or combination of bids deemed advantageous to it.

CITY EMPLOYEES ARE PROHIBITED FROM BIDDING ON THIS SOLICITATION IN ACCORDANCE WITH THE CODE OF ORDINANCES SECTION 15 - 1.

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**SECTION A.
OFFICIAL BID FORM**



**REFLECTIVE AND NON-REFLECTIVE MATERIALS
FOR
VARIOUS DEPARTMENTS
BID INVITATION NO. S06-24081**

Honorable Mayor and City Council Members:

The undersigned hereby proposes to furnish and deliver, **reflective and non-reflective materials FOB destination point as listed on individual Purchase Orders**, the items listed below in accordance with the Net Prices and other conditions shown herein, and in accordance with the City's Specifications and General Terms and Condition Specifications. When issued, Letters of Clarification shall automatically become part of this bid document and shall supersede any previous specifications or provisions in conflict with the Letters of Clarification. It is the responsibility of the Bidder to ensure that it has obtained such letters. By submitting a bid on this project, Bidder shall be deemed to have received all Letters of Clarification and to have incorporated them into its bid. THE MANUFACTURER'S NAME, PRODUCT NAME AND PRODUCT NUMBER MUST BE DESIGNATED IN THE SPACE PROVIDED, IF BIDDERS ARE BIDDING AN "OR EQUAL" ITEM.

The undersigned hereby proposes to furnish and deliver **reflective and non-reflective materials FOB destination point as listed on individual Purchase Orders**, parts and components in accordance with the percentage (plus or minus) applied to the stated Manufacturer's List Price Schedules identified herein, or from the Price List's most current published revision, in accordance with the City's Specifications and General Terms and Conditions. Most current published revision means latest price list in effect between the "first advertised date" as shown on the "Notice to Bidder" and the Bid Opening Date. When issued Letters of Clarification shall automatically become part of this bid document and shall supersede any previous specifications or provisions in conflict with the Letters of Clarification. It is the **responsibility of the Bidder** to ensure that it has obtained such letters. By submitting a bid on this project, Bidder shall be deemed to have received all Letters of Clarification and to have incorporated them into its bid.

The City may accept this bid offer by issuance of a Notice of Award Letter and/or a Purchase Order covering award of said bid to this Bidder at any time on or before the 120th day following the day this Official Bid Form is opened by the City. This offer shall be irrevocable for 120 days after bid opening or for 90 days after City Council awards the bid, whichever comes last, but this period may be extended by written agreement of the parties.

The City of Houston reserves the option, after bids are opened, to increase or decrease the quantities listed, subject to the availability of funds, and/or make award by line item.

BIDDING AND AWARD:

It is the intent of the City to award, on the basis of overall low net bid meeting specifications for the entire award; however, the right is reserved to accept or reject in whole or in part any or all bids received and to make an award on the basis of individual item, combination of items or overall best bid, as it is deemed in the best interest of the City.

THIS IS A THIRTY-SIX (36) MONTH AWARD WITH TWO (2) ONE (1) YEAR OPTIONS TO EXTEND

FIRM PRICES ARE TO BE QUOTED FOR THE FIRST TWELVE (12) MONTH PERIOD

SECTION A. OFFICIAL BID FORM FOR REFLECTIVE AND NON-REFLECTIVE MATERIALS: CONTINUED:

SPECIAL BIDDERS NOTE:

These bid documents are to be bid exactly as published or amended by any letter(s) of clarification that may be issued pertaining thereto.

LINE ITEM BIDS:

Only one item may be bid for each referenced line item. To bid the referenced line item and an alternate, bidder must submit a separate bid form for each alternate item(s) with its own original signature page. Multiple bids for the same line item on one bid form will be just cause to reject a bid from further consideration.

LOBBYING AND OTHER FORMS OF INFLUENCE PROHIBITED:

Neither Bidder(s) nor any person acting on Bidder(s)'s behalf shall attempt to influence the outcome of the award by the offer, presentation or promise of gratuities, favors, or anything of value to any appointed or elected official or employee of the City of Houston, their families or staff members. All inquiries regarding the solicitation are to be directed to the designated City Buyer identified on the first page of the solicitation. Upon issuance of the solicitation through the pre-award phase and up to the award, aside from Bidder's formal response to the solicitation, communications publically made during the official pre-bid conference, written requests for clarification during the period officially designated for such purpose by the City Buyer, neither Bidder(s) nor persons acting on their behalf shall communicate with any appointed or elected official or employee of the City of Houston, their families or staff through written or oral means in an attempt to persuade or influence the outcome of the award or to obtain or deliver information intended to or which could reasonably result in an advantage to any Bidder. However, nothing in this paragraph shall prevent Bidder from making public statements to the City Council body convened for a regularly scheduled session after the official selection has been made and placed on the City Council agenda for action.

HIRE HOUSTON FIRST:

THIS PROCUREMENT IS SUBJECT TO THE HIRE HOUSTON FIRST PROGRAM, WHICH GIVES A PREFERENCE TO CERTAIN LOCAL BIDDERS IN AWARD OF THE PROCUREMENT. FOR MORE INFORMATION, GO TO:

<http://www.houstontx.gov/onestop/hirehoustonfirstaffidavit.pdf>

Designation as a City Business or Local Business

To be designated as a City or Local Business for the purposes of the Hire Houston First Program, as set out in Article XI of Chapter 15 of the Houston City Code, a bidder or proposer must submit the **Hire Houston First Application and Affidavit ("HHF Affidavit")** to the Director of the Mayor's Office of Business Opportunities and receive notice that the submission has been approved prior to award of a contract. Bidders are encouraged to secure a designation prior to submission of a bid or proposal if at all possible.

Download the HHF Affidavit from the Office of Business Opportunities Webpage at the City of Houston e-Government Website at the following location:

www.houstontx.gov/obo/moreforms/hirehoustonfirstaffidavit.pdf

Submit the completed application forms to: Mayor's Office of Business Opportunity, One Stop Business Center, 900 Bagby St., Public Level, Houston, TX 77002 or Applications may be submitted via e-mail to HHF-MOBO@houstontx.gov or faxed to 832.393.0952.

Award of a Procurement of \$100,000 or More for Purchase of Goods:

THE CITY WILL AWARD THIS PROCUREMENT TO A "CITY BUSINESS," AS THAT TERM IS DEFINED IN SECTION 15-176 OF THE CITY OF HOUSTON CODE OF ORDINANCES ("THE CODE")

- IF THE BID OF THE CITY BUSINESS IS THE LOWEST RESPONSIBLE BID OR IS WITHIN 3% OF THE LOWEST BID RECEIVED, AND
- UNLESS THE USER DEPARTMENT DETERMINES THAT SUCH AN AWARD WOULD UNDULY INTERFERE WITH CONTRACT NEEDS, AS PROVIDED IN SECTION 15-181 OF THE CODE.

IF THERE IS NO BID OF A CITY BUSINESS THAT MEETS THESE CRITERIA, THE CITY WILL AWARD THE PROCUREMENT TO THE LOWEST RESPONSIBLE BIDDER.

SECTION A. OFFICIAL BID FORM FOR REFLECTIVE AND NON-REFLECTIVE MATERIALS: CONTINUED:

Award of Procurement under \$100,000 for Purchase of Goods:

THE CITY WILL AWARD THIS PROCUREMENT TO A "CITY BUSINESS," AS THAT TERM IS DEFINED IN SECTION 15-176 OF THE CITY OF HOUSTON CODE OF ORDINANCES ("THE CODE")

- IF THE BID OF THE CITY BUSINESS IS THE LOWEST RESPONSIBLE BID OR IS WITHIN 5% OF THE LOWEST BID RECEIVED, AND
- UNLESS THE USER DEPARTMENT DETERMINES THAT SUCH AN AWARD WOULD UNDULY INTERFERE WITH CONTRACT NEEDS, AS PROVIDED IN SECTION 15-181 OF THE CODE.

IF THERE IS NO BID OF A CITY BUSINESS THAT MEETS THESE CRITERIA, THE CITY WILL AWARD THE PROCUREMENT TO THE LOWEST RESPONSIBLE BIDDER

Award of Procurement that may be More or Less than \$100,000 for Purchase of Goods:

THE CITY WILL AWARD THIS PROCUREMENT TO A "CITY BUSINESS," AS THAT TERM IS DEFINED IN SECTION 15-176 OF THE CITY OF HOUSTON CODE OF ORDINANCES ("THE CODE")

- IF THE BID OF THE CITY BUSINESS IS LESS THAN \$100,000 AND IS THE LOWEST RESPONSIBLE BID OR IS WITHIN 5% OF THE LOWEST BID RECEIVED, OR
- IF THE BID OF THE CITY BUSINESS IS MORE THAN \$100,000 AND IS THE LOWEST RESPONSIBLE BID OR IS WITHIN 3% OF THE LOWEST BID RECEIVED, AND
- UNLESS THE USER DEPARTMENT DETERMINES THAT SUCH AN AWARD WOULD UNDULY INTERFERE WITH CONTRACT NEEDS, AS PROVIDED IN SECTION 15-181 OF THE CODE.

IF THERE IS NO BID OF A CITY BUSINESS THAT MEETS THESE CRITERIA, THE CITY WILL AWARD THE PROCUREMENT TO THE LOWEST RESPONSIBLE BIDDER.

Documents/forms must be downloaded from the City's Website <https://houstontx.gov/purchasing/index.html>

Additional Required Forms to be Included with this Bid:

In addition to the electronic Bid Form and the Official Signature Page, the Forms listed in Table 1 **must be completed and submitted to the Office of the City Secretary on or before the date and time the bid is due:**

Table 1
Affidavit of Ownership
Fair Campaign Ordinance
Statement of Residency
Conflict of Interest Questionnaire
Bidders Attachments Supply
Location of Bidders Inventory

Table 2 lists other documents and forms that should be viewed/downloaded from the City's website, but are not required to be submitted with the bid. The City will request these forms, as applicable, to be completed and submitted to the City by the recommended/successful bidder:

Table 2
MWBE
Sample Insurance Over \$50000
Formal Instructions for Price List Bidders
Formal Instructions for Bid Terms
EEOC

SECTION B.
CITY OF HOUSTON
TECHNICAL SPECIFICATIONS
FOR
REFLECTIVE AND NON-REFLECTIVE MATERIALS
FOR
VARIOUS DEPARTMENTS

1.0 SUPPLEMENTAL ITEMS TO BE FURNISHED:

Successful bidder shall furnish supplemental items as part of this Award, at no additional cost, as follows:

- 1.1 Process Inks: Manufacturer of sheeting being offered shall furnish at no additional cost the process inks, State approved 2 Part Graffiti Resistant Ink (for ASTM D4956-09 Type II), clear coat, thinners, special screen wash solvent, etc. recommended for its sheeting to meet performance requirements.
- 1.2 Washers: If recommended by sheeting manufacturer to protect sign surface from damage by bolts shall be furnished by manufacturer at no additional charge.

2.0 INSTRUCTIONS AND TRAINING:

- 2.1 The manufacturer supplying the sheeting requirements shall provide the services of a qualified technician for instruction and train at the primary sign manufacturing facility designed by the City. This instruction shall be available on a quarterly basis at no additional cost, and shall include but shall not be limited to, training films, material application, equipment operation, silk screening techniques, packaging, storage and other proven sign shop practices as they apply to the reflective sheeting supplied by the manufacturer and to assure that the resulting signs can comply with the applicable specifications.
- 2.2 Additional on-site technical assistance by the manufacturer supplying the retro-reflective sheeting shall be provided at the Traffic and Transportation facility, 2200 Patterson, Houston Texas. This assistance will be provided at least once during each quarter of sign production, if required.
- 2.3 EQUIPMENT: The manufacturer supplying the retro-reflective sheeting requirement shall provide service for sheeting application equipment for their manufacturer, certify that trained personnel will be available on 72 hours notice to render such service, and shall stock authorized parts for their sheeting application equipments. "Service" is understood to mean the capability of calibration and trouble shooting, as well as, the training and retaining of personnel as required.
- 2.4 COMPLIANCE: Failure to comply with specification requirements may be just cause of cancellation of award.

3.0 SPECIAL NOTICES:

- 3.1 Each bidder of the reflective materials shall furnish manufacturer certified test reports from its in-house testing facilities, or from an independent testing laboratory, which certifies that the material being bid has/have been successfully tested in exact accordance with specification requirements. The test report may be furnished with the bid.

3.0 SPECIAL NOTICES (CONTINUED):

- 3.2 Upon receipt of written request from the City, bidders shall submit two (2) - 12 inch by 12 inch samples of reflective or non-reflective sheeting of each color and adhesive class material upon which bids are submitted, and one quart sample of each color or type of process inks bid. The samples shall be properly labeled by the manufacturer to permit product identification and sample submittal information. Bidders shall furnish sample materials within fourteen (14) calendar days. Sample shall be used for testing, evaluation and to suggest changes in fabrication to better accommodate the City's requirements. Failure to comply with this requirement may be just cause for rejection of the bid from further bid consideration. Destination of samples shall be provided upon the City's request.
- 3.3 Sheeting materials: Sheeting, applied according to manufacturer's recommendation to clean etched 0.020-inch by 2- inch by 8- inch aluminum panel of alloy 6061-T6 conditioned a minimum of 48 hours and tested at 72 F and 50 percent relative humidity shall be sufficiently flexible to show no cracking when bent around a ¾ inch mandrel.
- 3.4 Types III, IV, IX and IV Sheeting Materials: Sheeting with liner removed and conditioned for 24 hours at 72F and 50 percent relative humidity shall be sufficiently flexible to show no cracking when slowly bent, in one second's time around mandrel with adhesive contacting mandrel. Note: For ease of testing, spread talcum powder on adhesive to prevent sticking to mandrel.
- 3.5 In testing, non -adhesive sheeting shall show no signs of cracking or curling when flexed repeatedly over an 1/16 inch mandrel to 180 degrees at 72 degrees F.

4.0 ITEM SPECIFICATIONS:

- 4.1 The detailed specifications governing items included in the solicitation (4.1.1 through 4.1.13) shall meet or exceed the standards set forth by the American Society for Testing Materials (ASTM) standard specification D4956-09.
- 4.1.1 TYPE II Reflective Super Enclosed Lens (Super EG)
 - 4.1.2 TYPE II-P Reflective Super Enclosed Lens (Super EG), Punched
 - 4.1.3 TYPE II-C Reflective Super Enclosed Lens (Super EG), Construction Barricade
 - 4.1.4 ASTM IV, 3M (High Intensity) Prismatic Series 3930
 - 4.1.5 TYPE III-P Reflective Encapsulated Lens (High Intensity), Punched
 - 4.1.6 TYPE III-C Reflective Encapsulated Lens (High Intensity), Construction Barricade Sheeting
 - 4.1.7 Prismatic Lens Grade
 - 4.1.8 Prismatic Lens Grade, Fluorescent Yellow
 - 4.1.9 Prismatic Diamond Grade, Yellow Green
 - 4.1.10 Non-Reflective Vinyl, Black or White
 - 4.1.11 Non-Reflective Electronic Cuttable Film, Acrylic
 - 4.1.12 Non-Reflective Electronic Cuttable Film, Acrylic, Punched
 - 4.1.13 Protective Overlay, Premium, Clear

5.0 REFLECTIVE SHEETING:

5.1 GENERAL:

It is the intent of the specification to describe reflective sheeting requirements for the various kinds, classes, and types of material utilized for reflective traffic control devices for streets and highways. The fabrication of such devices shall be performed in the City's shops by City personnel utilizing City equipment.

5.0 REFLECTIVE SHEETING (CONTINUED):

5.2 MANUFACTURING CHANGES:

When in the opinion of the Assistant Director, Traffic Maintenance Branch, or Director of the Houston Airport System, changes are made in the composition, manufacturing process, or quality of materials bid in the award that may affect its durability or appearance, such change shall be immediately reported to the Assistant Director or Director. The City reserves the right to conduct whatever evaluation or test that is deemed necessary to identify if a change made will affect the material's durability. Such changes that are detected and not reported by the manufacturer shall be cause for removal of that material from the tentative approved list of materials.

5.3 PERIOD EVALUATION:

The City reserves the right to periodically evaluate the performance of materials. Samples for periodic evaluation of performance will be selected at random from materials delivered to the City. Failure of materials to comply with specification requirements, as a result of periodic evaluation, may result in cancellation of the Award.

5.4 ADHESIVE:

5.4.1 Reflective sheeting shall include a pre-coated adhesive as follows:

5.4.1.1 Class 1 – Pressure Sensitive Adhesive Backing Adhesive shall be applied without necessity of additional adhesive coats on sheeting or supplication surface. Class 1 adhesive shall be of aggressive tack type requiring no heat, solvents, or other preparation for adhesion to smooth clean surfaces.

5.4.1.2 Protective liner attached to adhesive shall be clear plastic removed by peeling (without soaking in water or other solvents) without breaking, tearing or removing any adhesive from backing. Protective liner shall be easily removed following accelerated storage for four (4) hours at 160 degrees F under weight of 2.5 pounds per square inch.

5.4.1.3 Adhesive backing of reflective sheeting shall produce a bond to support a 1-3/4 pound weight for five (5) minutes, without bond peeling for a distance of more that two (2) inches when applied to smooth aluminum surface and tested as specified in Section 5.4.1.1.

5.5 IMPACT RESISTANT:

Type II reflective sheeting material, applied according to manufacturer's recommendations to a clean, etched aluminum panel of 6061-T6 alloy, 0.040 inch by 3 inch by 5 inch and conditioned for 24 hours at 72 degrees F and 50% relative humidity shall show no cracking when the face of the panel is subjected to an impact to a two (2) pound weight with a 5/8 inch rounded tip dropped from a 10 inch-pound setting on a Gardner Variable Impact Tester, 1G-1120.

5.0 REFLECTIVE SHEETING (CONTINUED):

5.6 ACCELERATED WEATHERING:

Retro-reflective surface of sign shall be weather resistant and show no cracking, blistering, crazing or dimensional change after two (2) years of unprotected outdoor exposure facing the equator and being inclined 45 degrees from vertical. After cleaning, coefficient of reflection shall not be less than values cited in Table I and colors shall conform to Section 5.7. Following exposure, panels shall be washed with five (5) percent HC solution for 45 seconds rinsed thoroughly with clean water, blotted with soft clean cloth, brought to equilibrium at standard conditions and tested. It shall have no less than the percent of a minimum SIA specified in Table below when subjects to accelerated weathering in accordance with ASTM G23, Type E or EH Weather-o-meter with humidifier off. Sign shall show: 1)"Good" colorfastness or better when tested 2) no appreciable evidence of cracking, scaling, pitting, blistering, edge lifting, curling or more than 1/32 inch shrinkage or expansion and retain not less than the retro-reflection level specified in the Table below, 3) and shall not be removable from aluminum panels without damage. Determine coefficient of retro-reflection at 0.2 degrees observation and minus 4.0 degrees entrance only. When more than one (1) panel of a color is measured, coefficient of retro-reflection shall be average of all the determinations.

<u>Material Type</u>	<u>Hours Tested</u>	<u>Per Unit Area</u>
II	1000	50% of Table 2
III A, B & C	2200	80% of Table 3
III E	500	80% of Table 3

5.7 COLORFASTNESS:

5.7.1 One specimen exposed and prepared as specified in Section 5.6 shall be wet with mild detergent and water solution and compared with a similarly treated unexposed specimen under natural (North sky) daylight or artificial daylight having a color temperature of 7600 degrees Kelvin. Colorfastness shall be evaluated as follows:

- 5.7.1.1 Excellent - No perceptible change in color
- 5.7.1.2 Good - Perceptible but no appreciable change in color
- 5.7.1.3 Fair - Appreciable change in color

5.7.2 Appreciable change in color means a change that is immediately noticeable in comparing the exposed specimen with the original comparison specimen. If closer inspection or change of angle of light is required to make apparent a slight change in color, the change is not appreciable.

5.8 COEFFICIENT OF RETOREFLECTION DURING RAINFALL:

Coefficient of retro-reflection of reflective sheeting, when totally wet, shall not be less than 90 percent of dry values. Test procedure shall conform to ASTM E810, modified by adding water nozzle 6 inches above and 4 inches in front of specimen and determine coefficient of retro-reflection at 0.2 degree observation and minus 4.0 degrees entrance only. When more than panel of color is measured, coefficient of retro-reflection during rainfall shall be average of all the determinations.

TECHNICAL SPECIFICATIONS FOR REFLECTIVE AND NON-REFLECTIVE MATERIALS: CONTINUED:

5.0 REFLECTIVE SHEETING (CONTINUED):

5.9 INTENDED USE:

5.9.1 Reflective sheeting specified herein is intended for use on surfaces of highway signs and other traffic control devices to assure their optimum visibility by day and at night when exposed to a light source and whether dry or tully wet by rain.

5.9.2 City shall specify in the bid form the colors and preferred options permitted herein, 1) the desired level of SIA (Type II or III) as appropriate for anticipated use and durability and 2) the type of adhesive backing (Class 1) or other type of non-adhesive backing as required.

5.10 REQUIREMENTS:

Reflective sheeting shall be of the quantity, type, color and adhesive class as designated in the bid form or purchase order and shall conform to applicable specifications. When specified in purchase order, reflective sheeting materials shall be furnished by supplier with applicator splices. Individual reflective sheeting rolls goods shall not contain more than three splices per roll.

6.0 MATERIAL SPECIFICATION FOR BARRICADE SHEETING: TYPE II-C AND TYPE III-C:

6.1 SHEETING:

6.1.1 The reflective sheeting shall consist of spherical lens elements adhered to a synthetic resin and encapsulated by a flexible, transparent, weatherproof plastic have a smooth outer surface. The sheeting shall be weather resistant and have a protected pre-coated adhesive backing. The pre-coated adhesive backing shall be pressure sensitive type which may be applied without necessity of additional adhesive coast on the reflective sheeting or application surface. The protected liner attached to the adhesive shall be removal by peeling without soaking in water or other solvents.

6.1.2. Adhesive coated sheeting shall form a durable bond to smooth, corrosion and weather resistant surface and adhere securely at all normal application temperatures up to 150 degrees F. The pre-coated adhesive, 48 hours after application shall be: 1) Tough enough to resist scuffing and marring during handling, elastic enough to low temperature to resist shocking off when jabbed at 10 degrees F, 2) and vandal resistant and strong enough to resist peeling the reflective sheeting from the application surface in accordance with ASTM D903-49 or Federal Specification LS-300. The pre-coated adhesive shall have no staining effect on the reflective sheeting and must be mildew resistant.

7.0 ITEM NO. 8: SPECIFICATION FOR TYPE IV (ASTM D4956) REFLECTIVE SHEETING WHITE, YELLOW AND GREEN:

7.1 SCOPE:

7.1.1 This specification covers flexible white or colored, fluorescent wide angle prismatic retro-reflective sheeting (hereinafter called sheeting), and related processing materials designed to enhance nighttime visibility of traffic control signs and objects under all driving conditions, day and night. The sheeting shall consist of prismatic optics encapsulated by a flexible transparent plastic film that has a smooth outer surface. The sheeting shall have a pre-coated adhesive protected by an easily removable liner.

7.1.2 The sheeting shall be part of a family of products required for the manufacture and imaging of traffic control signs as described in Section 7.4. Only Section 7.3, Section 7.6.11, Table 1 and Section 7.7.2, Table 2 cover imaged (printed or overlain) areas of signs.

7.0 ITEM NO. 8: SPECIFICATION FOR TYPE IV (ASTM D4956) REFLECTIVE SHEETING WHITE, YELLOW AND GREEN (CONTINUED):

7.2 PRE-QUALIFICATION AND PERFORMANCE HISTORY:

Materials shall be considered for use only when, in the opinion of the agency, sufficient evidence exists to ensure that the materials and services offered can reliably conform to this specification. The sheeting manufacturer shall provide evidence of performance and suitability for use in accordance with the Agency's Qualified Products Procedures

7.3 CLASSIFICATION AND CONFORMANCE:

7.3.1 The sheeting shall meet the performance requirements contained in all of the standards and specifications listed below. The sheeting need not conform to any construction or composition limitations included in the reference specifications, and the retro-reflectance measurements shall be limited to observation angles less than 2.0°.

AASHTO M 268 Type III and Type IV	AS/NZ 1906.1 Class 1
ASTM D 4956 Type III and Type IV	BS 873 Class 1
CGSB 62-GP-11 Type 1	DIN67520 Type 2
EN 12899-1 Class 2	FP-03 Type III and Type IV
GB/T 18833 Class 3	JT/T 279 Class 3
NBR 14644 Type	NTC 4739 Type III and IV
SABS 1519.1 Class III	

7.3.2 The adhesive shall be a pressure-sensitive adhesive of the aggressive tack type requiring no heat, solvent or other preparation for adhesion to smooth clean surfaces when properly applied at temperatures above 50 ° F. For application to rough surfaces, a surface primer may be required.

7.4 IMAGING SYSTEMS:

7.4.1 Process Inks

7.4.1.1 The manufacturer of the sheeting being offered shall furnish at no additional cost the process inks in standard traffic colors and thinners recommended for the sheeting to meet the performance requirements of this specification.

7.4.1.2 The process colors shall be a single line of traffic colors which may be applied before and after the sheeting is applied to a substrate require no component premixing and will air dry for packing in four (4) hours or less, and requires no clear coating.

7.4.2 Overlay Films: The sheeting manufacturer shall also manufacture colored imaging films and clear protective overlays, which are compatible with the sheetings and when used in accordance with the sheeting manufacturer's instructions shall not lessen the warranty term as described in Section 7.7.2.

7.5 TEST PANELS AND TEST CONDITIONS:

Unless otherwise specified herein, when tests are to be performed using test panels, the specimens shall be applied to smooth aluminum 0.020 in. (0.508 mm), 0.040 in. (1.016 mm) or 0.063 in. (1.600 mm) in thickness cut from Alloy 6061-T6 or 5052-H38. The aluminum shall be degreased and lightly acid etched before the specimens are applied. Unless otherwise specified, all test samples shall be conditioned for 24 hours prior to testing and all tests shall be conducted at a temperature of 73 ± 3°F (23 ± 2°C) and 50 ± 5 % relative humidity.

7.0 ITEM NO. 8: SPECIFICATION FOR TYPE IV (ASTM D4956) REFLECTIVE SHEETING WHITE, YELLOW AND GREEN (CONTINUED):

7.6 MATERIAL REQUIREMENTS:

- 7.6.1 Color requirements: Color shall be as specified and shall conform to the requirements of ASTM D 4956-04, Table 17. Luminance factors shall conform to proposed ASTM Type XI
- 7.6.2 Coefficient of Retro-reflection: The coefficients of retro-reflection shall be determined in accordance with ASTM E-810, for the minimum requirements of Table 1, as specified (reference page 12).
- 7.6.3 Units: Coefficients of retro-reflection shall be specified in units of candelas per lux per square meter. The observation angles shall range from 0.2° to 1.0°. The entrance angles shall range from -4° to 40°.
- 7.6.4 For screen printed transparent colored areas on white sheeting, the coefficients of retro-reflection shall not be less than 70% of the values for corresponding color in Table 1. Standard traffic colors not available in integrally colored sheeting may be produced using acrylic overlay films.
- 7.6.5 Color Processing: The retro-reflective sheeting shall be designed to work in concert with recommended imaging systems. Color processing with compatible transparent and opaque process colors shall be possible in accordance with the sheeting manufacturer's recommendation at temperatures of 66 to 100°F (16 to 38°C) and relative humidity of 20 to 80%. The sheeting shall be heat resistant and permit force curing without staining of applied or unapplied sheeting at temperatures recommended by the sheeting manufacturer.
- 7.6.6 Flexibility: The reflective sheeting shall be sufficiently flexible to show no cracking during application to substrates in accordance with the manufacturer's instructions.
- 7.6.7 Adhesion: The retro-reflective sheeting shall comply with the liner removal and adhesion requirements contained in the standards and specifications listed in Section 7.3.
- 7.6.8 Impact Resistance: The retro-reflective sheeting shall comply with the impact resistance requirements contained in the standards and specifications listed in Section 7.3.
- 7.6.9 Resistance to Accelerated Weathering: The retro-reflective sheeting shall comply with the weathering resistance requirements contained in the standards and specifications listed in Section 7.3.
- 7.6.10 Resistance to Heat, Cold and Humidity: Three samples of retro-reflective sheeting, 3 x 6 inch, applied to test panels in accordance with Section 7.3 shall be exposed as follows:
 - 7.6.10.1 Heat: One specimen shall be placed in an oven at 160°F + 5°F (71° C + 3° C) for 24 hours and then conditioned as in Section 5.0 for 2 hours.
 - 7.6.10.2 Cold: The second specimen shall be exposed to an air temperature of -70°F + 5°F (57°C + 3°C) for 72 hours and then conditioned as in Section 5.0 for 2 hours.
 - 7.6.10.3 Humidity: The final specimen shall be subjected to 100% relative humidity at a temperature of 75° - 78°F (23°- 27°C) in accordance with US Federal Test Method Standard 141, method 6201, for 24 hours and then conditioned as in Section 5.0 for 24 hours.
- 7.6.11 Examination of each of the three samples following the exposures shall show no evidence of cracking, peeling, chipping or delaminating from the test panel. After heat exposure the sheeting shall retain a minimum of 85% and a maximum of 115% of the original coefficient of retro-reflection when measured at room temperature.

Table 1
 Minimum Coefficient of Retro-reflection
 (Candelas per Lux per Square Meter)

White

	-4/5	30	40
0.2	360	175	120
0.5	150	70	55
1.0	20	10	9.0

Green

	-4/5	30	40
0.2	50	30	12
0.5	21	12	8.0
1.0	2.0	2.0	0.8

Yellow

	-4/5	30	40
0.2	270	135	80
0.5	110	60	40
1.0	14	8.5	8.0

Blue

	-4/5	30	40
0.2	30	14	9.0
0.5	13	6.0	4.0
1.0	1.0	0.8	0.5

Red

	-4/5	30	40
0.2	65	35	16
0.5	27	14	10
1.0	3.0	2.0	1.0

Brown

	-4/5	30	40
0.2	18	8.5	5.0
0.5	7.5	3.5	1.5
1.0	1.0	0.2	0.1

Orange

	-4/5	30	40
0.2	145	70	29
0.5	60	28	14
1.0	5.0	3.0	1.0

7.0 ITEM NO. 8: SPECIFICATION FOR TYPE IV (ASTM D4956) REFLECTIVE SHEETING WHITE, YELLOW AND GREEN (CONTINUED):

7.7 PERFORMANCE REQUIREMENTS AND OBLIGATIONS:

7.7.1 Certification:

The sheeting manufacturer shall submit with each lot or shipment certification that states the material supplied will meet all the requirements listed herein.

7.7.2 Field Performance Requirements

7.7.2.1 Sheeting processed and applied to sign blank materials in accordance with sheeting manufacturer's recommendations, shall perform effectively for the number of years stated in Table 2 of this specification. The retro-reflective sheeting will be considered unsatisfactory if it has deteriorated due to natural causes to the extent that: (1) the sign is ineffective for its intended purpose when viewed from a moving vehicle under normal day and night driving conditions; or (2) the coefficient of retro-reflection is less than the minimum specified for that sheeting during that period listed in Table 2. All measurements shall be made after sign cleaning according to sheeting manufacturer's recommendations.

Table 2
Minimum Coefficient of Retro-reflection
Candelas per Lux per Sq-Meter
(.2° obs, and -4° entrance)

Sheeting Color	Minimum Coefficient of Retro. (7 years) ¹	Minimum Coefficient of Retro. (10 years)
White	288	250
Yellow	216	170
Green	40	35
Red	52	45
Blue	24	20
Brown	14	12
Orange	100	

7.7.2.2 For screen printed transparent colored areas on white sheeting, the coefficients of retro-reflection shall not be less than 70% of the values for the corresponding color in the above table.

7.7.3 Sheeting Manufacturer's Replacement Obligation

7.7.3.1 Where it can be shown that retro-reflective traffic signs manufactured with sheeting supplied and used according to the sheeting manufacturer's recommendations have not met the performance requirements of Subsection 7.7.2 due to internal defects, the sheeting manufacturer shall cover restoration costs as follows for sheetings shown to be unsatisfactory during:

7.7.3.1.1 The entire ten (10) years (three (3) years for work zone materials): the sheeting manufacturer will replace the sheeting required to restore the sign surface to its original effectiveness.

7.7.3.1.2 In addition, during the first seven (7) years (excluding work zone materials): the sheeting manufacturer will cover the cost of restoring the sign surface to its original effectiveness at no cost to the City of Houston for materials and labor.

¹ When sheeting is used in temporary work zone applications the warranty period shall be limited to 3 years

TECHNICAL SPECIFICATIONS FOR REFLECTIVE AND NON-REFLECTIVE MATERIALS: CONTINUED:

7.0 ITEM NO. 8: SPECIFICATION FOR TYPE IV (ASTM D4956) REFLECTIVE SHEETING WHITE, YELLOW AND GREEN (CONTINUED):

7.7 PERFORMANCE REQUIREMENTS AND OBLIGATIONS (CONTINUED):

7.7.4 Government Using Agency Obligation

The using Agency shall be responsible for requiring the dating of all signs at the time of application. That date constitutes the start of the field performance obligation period.

8.0 ITEM NO. 9: SPECIFICATION FOR TYPE XI (ASTM D4956-09) REFLECTIVE SHEETING WHITE, YELLOW AND ALL FLUORESCENT COLORS:

8.1 SCOPE:

8.1.1 This provisional specification covers flexible white or colored Super-High Efficiency Full Cube Retro-reflective Sheeting (hereinafter called sheeting), tape and related processing materials designed to enhance nighttime visibility of traffic control signs and objects. The sheeting shall consist of full cube prismatic len elements with a distinctive interlocking diamond seal pattern visible from the face of a smooth surface. The sheeting shall have a pre-coated adhesive protected by an easily removable liner.

8.1.2 The sheeting shall be part of a family of matched component products required for the manufacture and imaging of traffic control signs as described in Section 8.4. Only Section 8.4, Section 8.8, Section 8.9 and Section 8.16 cover printed colored areas of signs.

8.2 PREQUALIFICATION:

Materials (sheeting, process colors, and overlay films) shall be considered for use only when, in the opinion of the City of Houston, sufficient evidence exists to ensure that the materials and services offered can reliably conform to this provisional specification.

8.3 CLASSIFICATION AND CONFORMANCE:

The sheeting shall conform to ASTM D 4956-09 as modified by this special provision and proposed amendments to include Type XI.

8.4 ITEMS TO BE INCLUDED IN BIDS:

8.4.1 Process Colors

8.4.1.1 The manufacturer of the sheeting shall manufacture and offer process colors in standard traffic colors, clears and thinners recommended for the sheeting to meet the performance requirements of this specification.

8.4.1.2 The process colors shall be a single line of traffic colors which may be applied before and after sheeting is applied to a substrate, require no component premixing, will air dry for packing in three (3) hours or less, and require no clear coating.

8.5 OVERLAY FILMS:

The sheeting manufacturer shall also manufacture colored acrylic imaging films and clear protective overlays, which are compatible with the sheetings, and when used in accordance with the sheeting manufacturer's instructions, shall not lessen the warranty term as described in Section 8.16.

8.6 TEST PANELS AND TEST CONDITIONS:

Unless otherwise specified herein, sheeting shall be applied to test panels in accordance with ASTM D 4956-09, Section 8.16 and test conditions shall conform to ASTM D 4956-09 Section 8.15.1.

8.0 ITEM NO. 9: SPECIFICATION FOR TYPE XI (ASTM D4956-09) REFLECTIVE SHEETING WHITE, YELLOW AND ALL FLUORESCENT COLORS (CONTINUED):

8.7 COLOR REQUIREMENTS:

Color shall be as specified and shall conform to the requirements of ASTM D 4956-09, Table 3 (reference Page 16). Luminance factors shall conform to proposed ASTM Type XI.

8.8 COEFFICIENT OF RETRO-REFLECTION:

8.8.1 Conformance to minimum requirements for Retro reflectance is determined as follows:

8.8.1.2 Three (3) 8 in. x 8 in. samples spaced evenly across and down a representative piece of sheeting shall be taken.

8.8.1.3 The Coefficient of Retro reflection (Ra) shall be determined for each of the three samples per ASTM E810. The average of the three values shall comply with the stated minimum table value and no single sample shall be less than 80% of the table value.

8.8.1.4 The observation angles shall be 0.2°, 0.5°, 1.0°. The entrance angles shall be -4° and 30°.

8.8.1.5 For screen printed transparent colored areas or transparent colored overlay films on white sheeting, the coefficients of retro-reflection shall not be less than 70% of the values for corresponding color in Table I (reference Page 12).

8.0 ITEM NO. 9: SPECIFICATION FOR TYPE XI (ASTM D4956-09) REFLECTIVE SHEETING WHITE, YELLOW AND ALL FLUORESCENT COLORS (CONTINUED):

Table 3 – Extracted from ASTM D 4956
Proposed Type XI

Minimum Coefficient of Retro-reflection
(cd/lux/m2)

White	-4	30
0.2	570	215
0.5	400	150
1.0	120	45

Blue	-4	30
0.2	45	28
0.5	32	16
1.0	9	6

Yellow	-4	30
0.2	425	160
0.5	300	112
1.0	90	34

FYG	-4	30
0.2	455	170
0.5	320	120
1.0	96	36

Red	-4	30
0.2	114	43
0.5	80	30
1.0	24	9

FY	-4	30
0.2	340	130
0.5	240	90
1.0	72	27

Green	-4	30
0.2	57	21
0.5	40	15
1.0	12	4.5

FO	-4	30
0.2	200	75
0.5	140	52
1.0	42	16

8.0 ITEM NO. 9: SPECIFICATION FOR TYPE XI (ASTM D4956-09) REFLECTIVE SHEETING WHITE, YELLOW AND ALL FLUORESCENT COLORS (CONTINUED):

8.9 COLOR PROCESSING:

The retro-reflective sheeting shall be designed to work in concert with recommended imaging systems. Color processing with compatible transparent and opaque process colors shall be possible in accordance with the sheeting manufacturer's recommendation at temperatures of 60° to 100°F (16° to 38°C) and relative humidity of 20% to 80%. The sheeting shall be heat resistant and permit force curing without staining of applied or unapplied sheeting at temperatures recommended by the sheeting manufacturer.

8.10 SHRINKAGE:

The retro-reflective sheeting shall comply with the shrinkage requirements contained in ASTM D 4956-09 Section 9.12.

8.11 ADHESIVE:

The retro-reflective sheeting shall comply with the liner removal and adhesion requirements contained in ASTM D 4956-09 Sections 8.14 and 8.15, respectively.

8.12 OPTICAL STABILITY:

8.12.1 Three samples of retro-reflective sheeting applied to test panels and conditioned as in Section 4.0 shall each first have their photometric properties characterized by measuring the coefficients of retro-reflection in accordance with ASTM E 810 at all test geometries shown in Table I. These panels shall then be exposed in an air circulating oven at $160 \pm 5^\circ\text{F}$ ($71 \pm 3^\circ\text{C}$) for a period of 24 hours. After exposure the panels shall be allowed to condition according to the provisions of Section 4.0. These panels will again be characterized for photometric properties by measuring the coefficients of retro-reflection at all test geometries measured before exposure.

8.12.2 The coefficients of retro-reflection measured after exposure shall be between 85% and 115% of the values measured before exposure for each of the three samples.

8.13 FUNGUS RESISTANCE:

The retro-reflective sheeting shall comply with the supplementary requirements contained in Section S1 of ASTM D 4956-09, 8.14 General Characteristics and Packaging.

8.14 GENERAL CHARACTERISTICS AND PACKAGING:

8.14.1 The retro-reflective sheeting as supplied shall be of good appearance, free from ragged edges, cracks and extraneous materials and shall be furnished in either rolls or sheets.

8.14.2 When furnished in continuous rolls, the number of splices shall not be more than two per 50 yards (45.7 m) of material, with a maximum of three pieces in any 50-yard (45.7 m) length. Splices shall be butted or overlapped and shall be suitable for continuous application as furnished.

8.14.3 The sheeting shall be packaged in accordance with commercially accepted standards. Each carton shall clearly stipulate the brand, quantity, size, lot or run number, color and type adhesive. Stored under normal conditions the retro-reflective sheeting as furnished shall be suitable for use for a minimum period of one year.

8.15 PERFORMANCE REQUIREMENT AND OBLIGATIONS:

8.15.1 Certification:

The sheeting manufacturer shall submit with each lot or shipment, a certification that states the material supplied will meet all the requirements listed herein.

8.0 ITEM NO. 9: SPECIFICATION FOR TYPE XI (ASTM D4956-09) REFLECTIVE SHEETING WHITE, YELLOW AND ALL FLUORESCENT COLORS (CONTINUED):

8.15 PERFORMANCE REQUIREMENT AND OBLIGATIONS(CONTINUED):

8.15.2 Field Performance Requirements:

8.15.2.1 For Permanent Signing-Ordinary Colors:

Sheeting manufactured of standard colors and processed and applied to sign blank materials in accordance with sheeting manufacturer's recommendations, shall perform effectively for at least 12 years. The retro-reflective sheeting will be considered unsatisfactory if it has deteriorated due to natural causes to the extent that: (1) the sign is ineffective for its intended purpose when viewed from a moving vehicle under normal day and night driving conditions or (2) the coefficient of retro-reflection is less than the minimum specified for that sheeting during that period listed.

8.15.2.1.1 80% of values listed in Table 1 Page 12 up to 7 years and

8.15.2.1.2 70% of values listed in Table 1 up to 12 years

8.15.2.1.3 Failure of process colors or overlay films provided and/or sold for use on recommended sheeting shall constitute a failure of entire sign and shall be replaced under manufacturer's replacement obligations.

8.15.2.1.4 For screen printed transparent colored areas or transparent colored overlay films on white sheeting, the coefficients of retro-reflection shall not be less than 70% of the values for the corresponding integral color.

8.15.2.1.5 All measurements shall be made after sign cleaning according to sheeting manufacturer's recommendations.

8.15.3.1 For Permanent Signing – Fluorescent Colors:

Sheeting manufactured of fluorescent colors and processed and applied to sign blank materials in accordance with sheeting manufacturer's recommendations shall perform effectively for the number of years stated in this specification. The retro-reflective sheeting will be considered unsatisfactory if it has deteriorated due to natural causes to the extent that (1) the sign is ineffective for its intended purpose when viewed from a moving vehicle under normal day and night driving conditions or (2) the coefficient of retro-reflection is less than the minimum specified for that sheeting during that period listed.

8.15.3.1.1 80% of values listed in Table I up to 7 years and

8.15.3.1.2 70% of values listed in Table I up to 10 years

8.15.3.1.3 Failure of process colors or overlay films provided and/or sold for use on recommended sheeting shall constitute a failure of entire sign and shall be replaced under manufacturer's replacement obligations.

8.15.3.1.4 All measurements shall be made after sign cleaning according to sheeting manufacturer's recommendations.

8.15.3.1.5 Seven (7) years in states listed in Table 3A

TECHNICAL SPECIFICATIONS FOR REFLECTIVE AND NON-REFLECTIVE MATERIALS: CONTINUED:

8.0 ITEM NO. 9: SPECIFICATION FOR TYPE XI (ASTM D4956-09) REFLECTIVE SHEETING WHITE, YELLOW AND ALL FLUORESCENT COLORS (CONTINUED):

8.15 PERFORMANCE REQUIREMENT AND OBLIGATIONS (CONTINUED):

8.15.3.1 For Permanent Signing – Fluorescent Colors (Continued):

<u>Table 3A</u> Minimum Fluorescence Luminance Factor (All measurements shall be made after cleaning according to manufacturer's recommendations)			
Color	Warranty Period	Minimum Fluorescence Luminance Factor Y_F %	Minimum Total Luminance Factor Y_T %
Fluorescent Yellow	10 Years*	20%	45%
Fluorescent Yellow Green	10 Years*	20%	60%

*Due to climatic conditions, the warranty in the following states will be a seven (7) year warranty: Alabama, Arizona, Florida, Georgia, Hawaii, Louisiana, Mississippi, New Mexico, South Carolina, and Texas

8.15.4.1 For Temporary Signing – Fluorescent Orange Colors:

Sheeting manufactured of fluorescent orange and applied to sign blank material in accordance with the sheeting manufacturer's recommendations, is expected to perform effectively for a minimum of three (3) years. The retro-reflective sheeting will be considered unsatisfactory if it has deteriorated due to natural causes to the extent that (1) the sign is ineffective for its intended purpose or (2) retains less than 50% of the coefficient of retro-reflection values listed in Table 1 (page 12) at 0.2 degrees observation, -4 degrees entrance (measured in accordance with ASTM E810).

8.15.4.1.1 All measurements shall be made after sign cleaning according to the sheeting manufacturer's recommendations.

8.15.4.1.2 Natural causes include effects of exposure to weather. Natural causes exclude (without limitation) damage from exposure to chemicals, abrasion and other mechanical damage (such as from fasteners used to mount the sign, collisions or mishandling), vandalism, or malicious mischief.

8.16 SHEETING MANUFACTURER'S REPLACEMENT OBLIGATION:

8.16.1 For standard colors where it can be shown that retro-reflective signs, supplied and used according to the sheeting manufacturer's recommendations, have not met the performance requirements of Section 8.15, the sheeting manufacturer shall cover restoration costs as follows for sheeting's shown to be unsatisfactory during:

8.16.2 For the entire 12 years, the sheeting manufacturer will replace the sheeting required to restore the sign surface to its original effectiveness.

8.16.3 In addition, during the first seven years the sheeting manufacturer will cover the cost of restoration of the sign surface to its original effectiveness at no cost to (Agency) for materials and labor.

8.16.4 For fluorescent colors where it can be shown that retro-reflective signs, supplied and used according to the sheeting manufacturer's recommendations, have not met the performance requirements of Section 8.15, the sheeting manufacturer shall cover restoration costs as follows for sheeting's shown to be unsatisfactory during:

TECHINICAL SPECIFICATIONS FOR REFLECTIVE AND NON-REFLECTIVE MATERIALS: CONTINUED:

8.0 ITEM NO. 9: SPECIFICATION FOR TYPE XI (ASTM D4956-09) REFLECTIVE SHEETING WHITE, YELLOW AND ALL FLUORESCENT COLORS (CONTINUED):

8.16 SHEETING MANUFACTURER'S REPLACEMENT OBLIGATION (CONTINUED):

- 8.16.4.1 For those states with a 10 year warranty, if the failure occurs within the first 7 years from the date of fabrication, the sheeting manufacturer shall, at its expense, restore the sign surface to its original effectiveness.
- 8.16.4.2 If the failure occurs in the 8th through the 10th year from the date of fabrication, the sheeting manufacturer will furnish the necessary amount of sheeting to restore the sign surface to its original effectiveness.
- 8.16.4.3 Replacement sheeting shall carry the unexpired warranty of the sheeting it replaces.
- 8.16.4.4 For those states with a seven (7) year warranty, if the failure occurs within the first five (5) years from the date of fabrication, the manufacturer will, at its expense, restore the sign surface to its original effectiveness.
- 8.16.4.5 If the failure occurs within the 6th or 7th year from the date of fabrication, the manufacturer will furnish the necessary amount of sheeting necessary to restore the sign surface to its original effectiveness.

8.16.5 For temporary signing, fluorescent orange, where it can be shown that the retro-reflective sheeting fails to conform to the performance requirements of Section 8.15, the sheeting manufacturer's sole responsibility and purchaser's and user's exclusive remedy shall be to provide replacements sheeting. This sheeting shall carry the unexpired warranty of the sheeting it replaces

8.17 APPLICABLE DOCUMENTS:

The following documents shall apply to the reflective material on the date of invitation for bid request.

8.17.1 ASTM Standards

8.17.1.1 D 4956 Standard Specifications for Retro-reflective Sheeting for Traffic Control

8.17.1.2 E 810 Standard Test Method for Coefficient of Retro-reflection of Retro-reflective Sheeting

9.0 ITEM 11, SPECIFICATION FOR CLEAR PROTECTIVE OVERLAY FILM, PREMIUM FOR USE ON REFLECTIVE SHEETING:

9.1 SCOPE:

The specification covers protective, highly transparent overlay film, which has excellent chemical resistance, weather ability, dimensional stability and flexibility characteristics.

9.2 DESCRIPTION:

The protective overlay film shall be a clear, colorless film, which may be used in lieu of clear coating. It shall be durable, solvent resistant and shall be coated with a transparent, pressure-sensitive adhesive protected by a removable liner. When necessary, reflective sheeting and screening inks can be protected from graffiti removal solvents and compounds using premium protective overlay film. Sheeting furnished shall be of good appearance, free from ragged cracks, and extraneous materials and shall be furnished in either rolls or sheets.

9.0 ITEM 11, SPECIFICATION FOR CLEAR PROTECTIVE OVERLAY FILM, PREMIUM FOR USE ON REFLECTIVE SHEETING (CONTINUED):

9.3 REQUIREMENTS:

9.3.1 Responsibility For Inspection - The manufacturer is responsible for the performance of all inspection requirements as specified hereinafter.

9.3.2 Protective Liner - The protective liner shall be removable from the adhesive backing by peeling without soaking in water or other solvents and without breaking, tearing, or removing from adhesive backing. The protective liner shall be easily removed following accelerated storage for four (4) hours at 160 degrees F under a weight of 2.5 pounds per square inch.

9.4 ADHESIVE BACKING:

The adhesive shall be a pressure sensitive adhesive applied to the sign face according to the instructions of the sheeting manufacturer without the necessity of additional adhesive coats on either the film or application surface. After application, the overlay film shall tightly adhere to the application surface and show no discoloration, cracking, blistering, or dimensional change.

9.5 GRAFFITI RESISTANT:

The overlay film should be resistant to most enamels, strong acids and alkalis. The overlay film shall have a transparent, flexible, smooth-surfaced, moisture resisting material and shall have sufficient strength and flexibility to be easily handled, cut to shape, processed and applied without appreciable stretching, tearing or other damage.

9.6 SATISFACTORY PERFORMANCE LIFE:

The overlay film will perform effectively provided that application and maintenance is followed in accordance to the manufacturer's recommendations. It is considered unsatisfactory if it has deteriorated due to natural causes to the extent that:

9.6.1 The sign is ineffective for its intended purpose when viewed from a moving vehicle under normal day and night conditions.

9.6.2 The reflective intensity is less than the minimums specified by the retro-reflective sheeting grade type. All measurements shall be made after sign cleaning according to the manufacturer's recommendations.

9.7 GENERAL CHARACTERISTICS AND PACKAGING:

The overlay film shall be of good appearance, free from ragged edges and cracks, and shall be furnished in rolls. When furnished in continuous rolls, the average number of splices on a roll shall not be more than 2 splices per 50 yard roll, and 1 splice per 25 yard roll. Splices shall be suitable for continuous application as furnished. Each carton shall be clearly marked with the classification, size, length and lot number of the film.

9.8 PHOTO METRICS:

A composite produced by applying protective overlay film over reflective sheeting shall provide retro-reflective performance conforming to the requirements of screen processed sheeting of the same type throughout the effective life of the reflective sheeting.

9.0 ITEM 11, SPECIFICATION FOR CLEAR PROTECTIVE OVERLAY FILM, PREMIUM FOR USE ON REFLECTIVE SHEETING (CONTINUED):

9.9 CLEAN ABILITY:

The overlay film manufacturer shall identify acceptable cleaning systems sufficient to clean paint and other surface contaminants without damaging the sign face.

9.10 FIELD PERFORMANCE:

The expected performance life of a sign face constructed of overlay film and reflective sheeting shall be equivalent to the expected performance life of the retro-reflective material used.

9.11 STORAGE:

The overlay film, when stored according to manufacturer's recommendations, shall be suitable for use for a period of up to one (1) year.

10.0 PRICE ADJUSTMENT FOR LINE ITEMS (ITEM NOS. 1 THRU 18):

10.1 Direct Cost:

In this section means Supplier's cost from the manufacturer of any item or if Supplier is the manufacturer, the cost of raw materials required to manufacture the item, plus costs of transportation from manufacturer to Supplier and Supplier to the City.

10.2 Price Decreases:

10.2.1 If the Supplier's Direct Cost **decreases** at any time during the term of this award, Supplier shall **immediately** pass the decrease on to the City and lower its prices by the amount of the decrease in Direct Cost.

10.2.2 The Supplier shall notify the City Purchasing Agent of price decreases in the same way as for price increases set out below. The price decrease shall become effective upon City Purchasing Agent's receipt of Supplier's notice.

10.3 Price Increases:

10.3.1 Suppliers may request a price increase after **twelve (12) months** from the bid opening date of the bid received by the City Secretary of the City of Houston. Subsequent price increases may be requested **six (6) months** from the date of the previous approved price increase. The amount of the first increase shall not exceed actual documented increase in Supplier's Direct Cost and shall not ever be more than **10%** above the previous bid price. The amount of the subsequent price increase shall also not exceed this percentage.

10.3.2 To request a price increase, Supplier must submit a letter setting the amount of the increase, along with an itemized list of any increased prices, showing the Supplier's current price, revised price, the actual dollar difference and the percentage of the price increase by line item. Documentation from the Supplier's supplier(s) showing the actual dollar increase to the Supplier must accompany this request. Such documentation from the Supplier's supplier must clearly show the dollar increase incurred by the Supplier on the applicable award per item bid. The letter and documentation shall be sent to the following address:

**City Purchasing Agent
City of Houston
P.O. Box 1562
Houston, Texas 77251**

10.0 PRICE ADJUSTMENT FOR LINE ITEMS (ITEM NOS. 1 THRU 18) (CONTINUED):

10.3 Price Increases (Continued):

10.3.3 If the City Purchasing Agent approves the price increase, he or she shall notify Supplier in writing; no price increase will be effective until Supplier receives this notice. If the City Purchasing Agent does not approve Supplier's price increase, Supplier may terminate its performance upon **sixty (60) days** advance written notice to the City Purchasing Agent. Termination of performance is Supplier's only remedy if the City Purchasing Agent does not approve the price increase.

10.3.4 If, at any time after approving a price increase, the City Purchasing Agent determines that the City can obtain the same item at a lower price from a different source without violating the State bid laws, the City may then purchase the item from the lower price source without any obligation to the Supplier.

11.0 PRICE ADJUSTMENT FOR PRICE LIST (ITEM NO. 19):

11.1 The price percentage adjustment bid shall remain firm during the full term of the award. Price adjustments will be determined from the plus or minus percentage applied to the manufacturer's published price list lowest unit price column as originally bid.

11.2 The price list(s) submitted with this bid will be in effect from the date bids are received and opened by the City Secretary. A price list substitution may be made any time after award by City Council. This substitution will be the updated version of the price list submitted with the bid. A letter from the manufacturer stating the new price list submitted is the replacement for the one being replaced must accompany the request. This letter must also state when (date) the new price list was distributed to its distributors/suppliers. **The new price list will not be accepted as a price list substitute if it was distributed and/or in the possession of the Bidder(s) before the bid due date.** A request to substitute the price list(s) with revised price list(s) will be allowed subject to the City Purchasing Agent's approval. Substitute price list(s) may only be later revisions to the original price list(s) bid. Acceptance of any revised price list(s) will be considered after the Supplier submits the following to the City of Houston City Purchasing Agent; Strategic Purchasing Division; P.O. Box 1562; Houston, Texas 77251:

11.2.1 A letter clearly stating **PRICE ADJUSTMENT REQUEST AND NAME AND NUMBER OF THE INVITATION TO BID** in the contents and on the outside of the envelope;

11.2.2 Itemized revised price list indicating effective date; and

11.2.3 Multiple copies of the revised manufacturer's price list(s) for distribution to participating City departments.

11.3 **Price list substitution(s) shall become effective only upon the Supplier's receipt of express written consent from the City of Houston City Purchasing Agent or his designee. Price list substitution(s) shall not be effective until such written consent is received.** If the Supplier submits a request for price list(s) substitution in accordance with the above revisions and the City Purchasing Agent fails to approve such request, the Supplier may terminate its performance upon 60-day advance notification in writing. This will be the Supplier's only remedy in the event a price adjustment is not approved. The effective date of the price list(s) change shall be no earlier than 30-days following receipt of written request by the City unless otherwise stated in the approval letter from the City Purchasing Agent or his designee. **No retroactive price changes will be honored for delinquent requests.** The price in effect on the date of issue of the purchase order establishes the price to be paid.

11.4 The City of Houston's City Purchasing Agent reserves the right to obtain a different source(s) to meet the requirements for any item(s) which has increased in price if said item(s) may be obtained at a lower price and if it is deemed in the best interest of the City to do so.

BIDDER'S QUESTIONNAIRE

In order to receive bid award consideration, the bidder must be able to demonstrate that they are currently providing or have had at least one contract, as a prime supplier, for delivering **reflective and non-reflective materials** that is similar in size and scope to this solicitation. The reference(s) should be included in the space provided below. Please attach another piece of paper if necessary. If references are not included with the bid, the bidder shall be required to provide such references to the City of Houston within five working days from receipt of a written request from the City of Houston to do so. **Bidder's capability and experience shall be a factor in determining the Supplier's responsibility. Bidder must have references documenting that it has delivered reflective and non-reflective materials.**

1. Name: _____

Address: _____

City & State: _____

Name & Phone Number of Contact: _____ Years of Services: _____

2. Name: _____

Address: _____

City & State: _____

Name & Phone Number of Contact: _____ Years of Services: _____

3. Name: _____

Address: _____

City & State: _____

Name & Phone Number of Contact: _____ Years of Services: _____

SECTION C
CITY OF HOUSTON
GENERAL TERMS AND CONDITIONS
FOR
REFLECTIVE AND NON-REFLECTIVE MATERIALS
FOR
VARIOUS DEPARTMENTS

1.0 TERM OF AWARD:

- 1.1 The term of the award shall be for a thirty-six (36) month period beginning on the date specified in the Notice of Award letter. During this period, purchase orders will be issued for items as needed. Any conflict between the terms and conditions as specified herein and said purchase orders; the term and conditions of this award shall govern. The supplier will not perform against the award without first having received an official City of Houston purchase order. While it is the intent to procure goods/services by issuing an Official City of Houston Purchase Order, there will be instances when a Purchasing Card (P-Card) or Petty Cash may be used. **The City requires that the prices awarded be honored on all purchases.**
- 1.2 It is emphasized that the City of Houston does not guarantee to purchase any specific quantity of any item listed; rather, the quantities may vary depending upon the actual needs of the user departments. Supplier shall remain obligated to the City under all clauses of this award that expressly or by their nature extend beyond and survive the expiration or termination of the award, including but not limited to warranties and indemnity provisions hereof.
- 1.3 "Upon written notice to the Supplier from the City Purchasing Agent or his designee, the term of this award shall be extended on the same terms and conditions on a month-to-month basis until (1) approval of a new award or (2) spending authority has been reached, whichever occurs first."

2.0 OPTIONAL EXTENSION:

This award may be extended for two additional one (1) year periods upon acceptance of the Supplier and thirty (30) days prior written notice from the City Purchasing Agent. A price increase subject to the provisions of this award may be requested by the Supplier for approval by the City Purchasing Agent at this time. If the price increase is approved by the City Purchasing Agent or if no price increase is requested, a letter of extension will be issued by the City Purchasing Agent for the Supplier's acceptance under the same terms and conditions as the existing award.

3.0 SUPPLIER'S DUTY TO PAY:

Supplier shall make timely payments to all persons and entities supplying labor, materials or equipment for the performance of this award. Supplier agrees to protect, defend, and indemnify the City from any claims or liability arising out of Supplier's failure to make such payments. (Disputes relating to payment of MWBE subcontractors shall be submitted to arbitration in the same manner as any other disputes under the MWBE subcontract. Failure of the Supplier to comply with the decisions of the arbitrator may, at the sole discretion of the City, to be deemed a material breach leading to termination of this award).

4.0 INTER-LOCAL AGREEMENTS

Under the same terms and conditions hereunder, the award may be expanded to other government entities through inter-local agreements between the City of Houston and the respective government entity that encompass all or part of the products provided under this award. Separate agreements will be drawn to reflect the needs of each participating entity.

5.0 PRICE LISTS (ITEM NO. 19):

5.1 Internet-Based Catalog/Price List

5.1.1 It is the City's desire that all price lists be provided electronically; therefore, if the Supplier is submitting a bid on any price list item as an **INTERNET-BASED CATALOG**, it is mandatory that pricing is in a secure format, available to the City of Houston in an **INTRANET** fashion. No custom software should be required to access the electronic catalog. The Supplier shall provide the ability for unlimited amount of users to order via on-line communication with the supplier's computer system by the City of Houston's PC terminals, printers, fax, or telephone. The supplier shall also provide the capability to conduct orders using the City of Houston Charge Card.

5.1.2 Supplier shall provide initial and on-going training and the set-up of PCs for City of Houston end-users.

5.1.3 Supplier's electronic catalog should include the following features:

5.1.3.1 Support open technology and standards such as Open-Buying on the Internet (OBI)

5.1.3.2 Flexible and robust product search methods

5.1.3.3 Account and user profile control including dollar limit processing

5.1.3.4 On-line ordering using a shopping cart utility

5.1.3.5 On-line order/usage history reporting

5.1.3.6 Notification of price changes in accordance with City of Houston terms and conditions

5.1.3.7 Help functions

5.1.3.8 Order processing using the City's Procurement Card

5.2 The Supplier shall furnish Price Lists to the Pricing Section of the Strategic Purchasing Division for distribution to all ordering departments, divisions and sections of the City of Houston requiring these items. Within ten (10) working days from written notification by the City Purchasing Agent, the Supplier shall furnish to the Pricing Section of the Strategic Purchasing Division, the number of required copies of its price list(s) bid for use by City Departments. Failure to timely furnish such price lists may result in rescinding the award. Each time a Supplier submits a revised price list it shall furnish the number of revised price list(s) required to the Pricing Section within ten working (10) days of such revision. Failure to do so may result in rescinding the award. **THESE PRICE LIST(S) SHALL BE FURNISHED AT NO COST TO THE CITY OF HOUSTON.**

5.3 Original, unaltered, manufacturers' price lists and revisions are requested. If all originals cannot be obtained, at least one (1) original plus photocopies of the original price list may be furnished provided each photocopy is certified as a true and accurate unaltered reproduction of the original. Each reproduced price list must have a notarized signature of authority that is certifying on the face thereof the copy is a true and accurate unaltered reproduction of the original. Although copies may be accepted, **IT IS A MANDATORY REQUIREMENT TO SUBMIT AT LEAST ONE (1) ORIGINAL PRICE LIST OR ACCESS TO THE MANUFACTURER'S INTERNET BASED CATALOG IN ORDER FOR YOUR BID TO BE CONSIDERED FOR AWARD RECOMMENDATION.**

5.4 A MINIMUM OF TEN (10) PRICE LISTS WILL BE REQUIRED FOR EACH ITEM AWARDED FROM THE SUCCESSFUL SUPPLIER(S) PRIOR TO AWARD. **THIS IS ONLY A MINIMUM REQUIREMENT OF THE NUMBER OF PRICE LISTS AND IS SUBJECT TO INCREASE ACCORDING TO THE REQUIREMENTS OF THE DEPARTMENTS.** THE SAME OR LIKE QUANTITIES WILL BE REQUIRED FOR SUBMITTAL OF REVISED PRICE LISTS.

5.5 Price lists furnished for these items shall include but shall not be limited to OEM descriptive catalogs and/or supplemental publications that clearly define each part number cost. Electronic media versions are preferred.

5.6 **THE CITY OF HOUSTON RESERVES THE RIGHT TO DUPLICATE THE PRICE LISTS AWARDED FOR DISSEMINATING TO THE DEPARTMENTS.**

6.0 ADDENDA TO PRICE LIST(S) (ITEM NO. 19):

If addenda containing new parts not listed in the price list(s) submitted with the original bid are received by the Supplier from the manufacturer, the Supplier may submit the addendums having new items identified by part number reference and highlighted in addenda price lists for easy identification to the City Purchasing Agent for consideration. The City Purchasing Agent will allow addenda only upon written acceptance and only new items may be added. No item(s) presently listed in the Price List(s) will be considered from these addenda. All such addenda shall be subject to the requirements of Section 252.048 of the Texas Local Government Code.

7.0 INVOICING:

- 7.1 In order to expedite payment all invoices must be submitted in triplicate, itemized as to quantity, part number, description, and applicable discount (if any) in the same order and form as in the City of Houston Purchase Order. Variations will only delay payment. In addition, invoices must show the name of the Department, Division or Section to which the merchandise was delivered, and the City of Houston Purchase Order Number.
- 7.2 All delivery tickets must have a description of the commodity delivered.
- 7.3 Mail invoices to the Accounts Payable Section of the department and to the address, as noted on individual purchase orders.
- 7.4 Delivery tickets and packing slips shall contain the same information as the invoice.
- 7.5 All packing slips and delivery tickets must be signed by the receiving employee and must show his/her City employee number.

8.0 PAYMENT:

Payment is due thirty (30) days after the City has approved the invoice or after the City has accepted the goods, whichever occurs later.

9.0 CONTAMINATED MATERIALS:

Each Supplier shall be required to identify their source of supply. No material will be accepted from a hazardous or toxic waste site, regardless of whether the site has been identified by either a Local, State or Federal Agency. No contaminated, toxic, hazardous waste products or heavy metal product shall be contained in these deliveries. If any material, supplied to the City is found to be contaminated or contain heavy metal products, it will be the responsibility of the Supplier to remove and replace the contaminated product at their expense and at no cost to the City. The City has the option to solicit the removal of any contaminated material and charge back the Supplier any and all costs involved.

10.0 INSPECTIONS AND AUDITS:

- 10.1 The City reserves all rights to review all payments made to Suppliers by auditing at a later date. Subject to such audit, any overpayments may be recovered from the Supplier.
- 10.2 Representatives of the City have the right to examine the books of all subcontractors and/or suppliers supplying goods and/or services under the prime award insofar as those books and records relate to performance under the prime award.
- 10.3 City representatives may have the right to perform, or have performed, (1) audits of Supplier's books and records, and (2) inspections of all places where work is undertaken in connection with this award. Supplier shall keep its books and records available for this purpose for at least three years after this award terminates. This provision does not affect the applicable statute of limitations.

11.0 SILENCE OF SPECIFICATIONS:

The apparent silence of these specifications as to any detail, or the apparent omission from it of a detailed description concerning any point, shall be regarded as meaning that only the best commercial practice is to prevail and that only material and workmanship of the finest quality are to be used. All interpretations of these specifications shall be made on the basis of this statement. The Bidder shall be an established Supplier of the items bid.

12.0 SPECIFIED EQUIPMENT, OR EQUIVALENT:

- 12.1 Wherever in the specifications any materials or processes are indicated or specified by patent of proprietary name and/or by name of manufacturer, such specifications shall be deemed to be used for the purpose of facilitating descriptions of the performance, materials and/or processes desired and shall be deemed to be followed by the words, "or equivalent", if not so stated in the specifications herein.
- 12.2 The burden of proof shall rest with the Bidder, in the course of a technical evaluation, to prove that the proposed item(s) are equivalent to the performance, materials, processes, or articles specified. **DETERMINATION AS TO WHETHER THE ITEM(S) BID IS/ARE EQUIVALENT TO THOSE SPECIFIED SHALL REST SOLELY WITH THE CITY PURCHASING AGENT AND THE RECEIVING DEPARTMENT.**

13.0 DELIVERIES:

- 13.1 The Supplier agrees to make deliveries within ten (10) working days only upon receipt of duly signed and approved Purchase Orders issued by the City of Houston City Purchasing Agent or designee. Delivery made without such Purchase Order shall be at Supplier's risk and shall leave the City the option of canceling any award implied or expressed herein.
- 13.2 Unless otherwise stated in the Bid Form or Specifications, deliveries must consist only of new and unused merchandise.
- 13.3 Full tare must be allowed and no charges made for packages.
- 13.4 In the event that the deliveries of the supplies covered in the solicitation are not made within the number of days specified, or in the event that the supplies delivered are rejected, and are not removed and replaced within the number of days specified in the official notice of rejection, the City reserves the right to terminate. The defaulting Supplier will be deemed non-responsible and will be disqualified from bidding on the solicitation if it is re-let by the City within ninety (90) days of such termination.

14.0 SHIPPING TERMS:

Prices shall be F.O.B. Destination to the delivery location designated herein or on a purchase order. The Supplier shall retain title and control of all goods until they are delivered and the award of coverage has been completed. All risk of transportation and all related charges shall be the responsibility of the Supplier. The Supplier shall file all claims for visible or concealed damage. The City will notify the Supplier promptly of any damaged goods and shall assist the Supplier in arranging for inspection.

15.0 MATERIALS:

The items furnished shall be the latest product in production to commercial trade, and shall be of the highest quality as to materials used. The Supplier furnishing these items shall be experienced in the production of such items and shall furnish evidence of having supplied similar items, which have been in successful operation. The Bidder shall be an established Supplier of the items bid.

16.0 RESTOCKING (EXCHANGES AND RETURNS):

There will be no restocking charge to the City for return or exchange of any item purchased under the terms of this award. If the City wishes to return items purchased under this award, the Supplier agrees to exchange, these items for other items, with no additional charge incurred. Items must be returned to Supplier within thirty (30) days from date of delivery. If there is a difference in price in the items exchanged, the Supplier shall invoice the City for increase price or provide the City with a credit or cash refund for any decrease in price. On items returned, a credit or cash refund will be issued by the Supplier to the City. This return and exchange option shall extend for thirty (30) days following the expiration date of the award. All items returned by the City must be unused and in the same merchantable condition as when received. **Items that are special ordered and/or stocked by the Supplier at the specific request of the City may be returned only upon approval of the Supplier.**

17.0 ADDITIONS & DELETIONS:

The City, by written notice from the City Purchasing Agent to the Supplier, at any time during the term of this award, may add or delete like or similar equipment, supplies, locations and/or services to the list of equipment, supplies, locations, and/or services to be provided. Any such written notice shall take effect on the date stated in the notice from the City. Similar equipment, supplies, services, or locations added to the award shall be in accordance with the solicitation specification/scope of services, and the charges or rates for items added shall be the same as specified on the bid form. In the event additional equipment, supplies, locations and/or services are not identical to the item(s) already awarded, the charges therefore will then be the Supplier's normal and customary charges or rates for the equipment, supplies, locations and/or services classified on the bid form.

18.0 FORCE MAJEURE

18.1 Timely performance by both parties is essential to the award. However, neither party is liable for delays or other failures to perform its obligations to the extent the delay or failure is caused by Force Majeure. Force Majeure means fires, floods, explosions, and other acts of God, war, terrorist acts, riots, court orders, and the acts of superior governmental or military authority.

18.2 This relief is not applicable unless the affected party does the following:

18.2.1 uses due diligence to remove the Force Majeure as quickly as possible; and

18.2.2 provides the other party with prompt written notice of the cause and its anticipated effect.

18.3 The City may perform or solicit functions itself during periods of Force Majeure. Such performance does not constitute a default or breach of this award by the City.

18.4 If the Force Majeure continues for more than 30 days, the City Purchasing Agent or Director upon written authorization by the City Purchasing Agent may terminate this award by giving 30 days' written notice to Supplier. This termination is not a default or breach. SUPPLIER WAIVES ANY CLAIM IT MAY HAVE FOR FINANCIAL LOSSES OR OTHER DAMAGES RESULTING FROM THE TERMINATION EXCEPT FOR AMOUNTS DUE AT THE TIME OF THE TERMINATION.

19.0 MEASUREMENTS:

The measurement stated for these items are approximates. The City reserves the right to accept items that are similar in size, if in the City's judgment, the item bid fulfills the intended purpose.

20.0 SAMPLES:

20.1 If requested by the City, the two (2) apparent low Bidders will be required to submit samples of the items proposed within seven (7) days of such request. The samples will be used to determine if the proposed items meet the specifications stated herein.

20.2 **If the Bidder fails to provide samples within the seven (7) day period, as required, the City may reject your bid and not consider it for further evaluation.**

20.3 These samples, if not subject to destructive testing, will be returned to the supplying Supplier. A notice will be mailed to the Supplier when samples are ready to be released by the City. Supplier will have fourteen (14) days to redeem the samples. If samples are not redeemed within this time period the City cannot be responsible for condition or loss of the subject items.

21.0 WARRANTY:

A minimum warranty of twelve (12) months from Supplier and the manufacturer's warranty will be furnished on materials and workmanship shall be provided. The warranty period shall begin the day the City officially accepts the item. Any warranty work is to be completed within five (5) working days after receipt of item.

22.0 RELEASE:

PRIME SUPPLIER AGREES TO AND SHALL RELEASE THE CITY, ITS AGENTS, EMPLOYEES, OFFICERS, AND LEGAL REPRESENTATIVES (COLLECTIVELY THE "CITY") FROM ALL LIABILITY FOR INJURY, DEATH, DAMAGE, OR LOSS TO PERSONS OR PROPERTY SUSTAINED IN CONNECTION WITH OR INCIDENTAL TO PERFORMANCE UNDER THIS AGREEMENT, EVEN IF THE INJURY, DEATH, DAMAGE, OR LOSS IS CAUSED BY THE CITY'S SOLE OR CONCURRENT NEGLIGENCE AND/OR THE CITY'S STRICT PRODUCTS LIABILITY OR STRICT STATUTORY LIABILITY.

23.0 INDEMNIFICATION:

23.1 PRIME SUPPLIER AGREES TO AND SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY, ITS AGENTS, EMPLOYEES, OFFICERS, AND LEGAL REPRESENTATIVES (COLLECTIVELY THE "CITY") HARMLESS FOR ALL CLAIMS, CAUSES OF ACTION, LIABILITIES, FINES, AND EXPENSES (INCLUDING, WITHOUT LIMITATION, ATTORNEYS' FEES, COURT COSTS, AND ALL OTHER DEFENSE COSTS AND INTEREST) FOR INJURY, DEATH, DAMAGE, OR LOSS TO PERSONS OR PROPERTY SUSTAINED IN CONNECTION WITH OR INCIDENTAL TO PERFORMANCE UNDER THIS AGREEMENT INCLUDING, WITHOUT LIMITATION, THOSE CAUSED BY:

- (1) PRIME SUPPLIER'S AND/OR ITS AGENTS', EMPLOYEES', OFFICERS', DIRECTORS', CONTRACTORS', OR SUBCONTRACTORS' (COLLECTIVELY IN NUMBERED PARAGRAPHS 1-3, "PRIME SUPPLIER") ACTUAL OR ALLEGED NEGLIGENCE OR INTENTIONAL ACTS OR OMISSIONS;
- (2) THE CITY'S AND PRIME SUPPLIER'S ACTUAL OR ALLEGED CONCURRENT NEGLIGENCE, WHETHER PRIME SUPPLIER IS IMMUNE FROM LIABILITY OR NOT; AND
- (3) THE CITY'S AND PRIME SUPPLIER'S ACTUAL OR ALLEGED STRICT PRODUCTS LIABILITY OR STRICT STATUTORY LIABILITY, WHETHER PRIME SUPPLIER IS IMMUNE FROM LIABILITY OR NOT.

23.2 PRIME SUPPLIER SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY HARMLESS DURING THE TERM OF THIS AGREEMENT AND FOR FOUR YEARS AFTER THE AGREEMENT TERMINATES. PRIME SUPPLIER'S INDEMNIFICATION IS LIMITED TO \$500,000 PER OCCURRENCE. PRIME SUPPLIER SHALL NOT INDEMNIFY THE CITY FOR THE CITY'S SOLE NEGLIGENCE.

23.3 INDEMNIFICATION PROCEDURES:

- (1) Notice of Claims. If the City or Prime Supplier receives notice of any claim or circumstances which could give rise to an indemnified loss, the receiving party shall give written notice to the other party within 10 days. The notice must include the following:
 - (a) a description of the indemnification event in reasonable detail,
 - (b) the basis on which indemnification may be due, and
 - (c) the anticipated amount of the indemnified loss.

This notice does not estop or prevent the City from later asserting a different basis for indemnification or a different amount of indemnified loss than that indicated in the initial notice. If the City does not provide this notice within the 10 day period, it does not waive any right to indemnification except to the extent that Prime Supplier is prejudiced, suffers loss, or incurs expense because of the delay.

(2) Defense of Claims

- (a) Assumption of Defense. Prime Supplier may assume the defense of the claim at its own expense with counsel chosen by it that is reasonably satisfactory to the City. Prime Supplier shall then control the defense and any negotiations to settle the claim. Within 10 days after receiving written notice of the indemnification request, Prime Supplier must advise the City as to whether or not it will defend the claim. If Prime Supplier does not assume the defense, the City shall assume and control the defense, and all defense expenses constitute an indemnification loss.

23.0 INDEMNIFICATION (CONTINUED):

23.3 INDEMNIFICATION PROCEDURES (CONTINUED):

(2) Defense of Claims (continued):

- (b) Continued Participation. If Prime Supplier elects to defend the claim, the City may retain separate counsel to participate in (but not control) the defense and to participate in (but not control) any settlement negotiations. Prime Supplier may settle the claim without the consent or agreement of the City, unless it (i) would result in injunctive relief or other equitable remedies or otherwise require the City to comply with restrictions or limitations that adversely affect the City, (ii) would require the City to pay amounts that Supplier does not fund in full, (iii) would not result in the City's full and complete release from all liability to the plaintiffs or claimants who are parties to or otherwise bound by the settlement.

24.0 WORKER'S COMPENSATION INSURANCE:

On any City award with a labor component or any award where Supplier delivery people make deliveries for City sites, Worker's Compensation Insurance as shown in the Insurance Section is required.

25.0 INSURANCE:

- 25.1 If performance of this award requires Supplier to provide labor in addition to supplies, labor and materials, the Supplier shall have and maintain in effect insurance coverage and furnish certificates of insurance showing the City as an additional insured, in duplicate form, prior to the beginning of the award. The City shall be named as an additional insured on all such policies except Worker's Compensation. **The issuer of any policy shall have a Certificate of Authority to transact insurance business in the State of Texas or have a Best's rating of at least B+ and a Best's Financial Size Category of Class VI or better, according to the most current edition of Best's Key Rating Guide, Property-Casualty United States.** Comprehensive General Liability including Contractual Liability and Automobile Liability insurance shall be in at least the following amounts: Automobile Liability Insurance for autos furnished or used in the course of performance of this award including Owned, Non-owned, and Hired Auto coverage (Any Auto coverage may be substituted for Owned, Non-owned and Hired Auto coverage.) If no autos are owned by Supplier, coverage may be limited to Non-owned and Hired Autos. If Owned Auto coverage cannot be purchased by Supplier, Scheduled Auto coverage may be substituted for Owned Auto coverage. EACH AUTO USED IN PERFORMANCE OF THIS AWARD MUST BE COVERED IN THE LIMITS SPECIFIED - \$1,000,000.00 Combined Single Limit.
- 25.2 Worker's Compensation including Broad Form All States endorsement shall be in statutory amount.
- 25.3 All insurance policies required by this award shall require by endorsement, that the insurance carrier waive any rights of subrogation against the City, and that it shall give thirty (30) days written notice to the City before they may be cancelled. Within such thirty (30) day period Supplier, covenants that it will provide other suitable policies in lieu of those about to be cancelled so as to maintain in effect the coverage required under the provisions hereof. Failure or refusal of the Supplier to obtain and keep in force the above-required insurance coverage shall authorize the City, at its option, to terminate this award at once.
- 25.4 ONLY UNALTERED ORIGINAL INSURANCE CERTIFICATES, EXCLUDING ANY ALTERATION AND INITIALS REGARDING CANCELLATION WHICH IS MADE TO MEET CITY REQUIREMENTS, AS ENDORSED BY THE UNDERWRITER ARE ACCEPTABLE. PHOTOCOPIES ARE UNACCEPTABLE.
- 25.5 All certificates of insurance submitted by Contractor shall be accompanied by endorsements for additional insured coverage in favor of the City for Commercial General Liability and Automobile Liability policies; and waivers of subrogation in favor of the City for Commercial General Liability, Automobile Liability, and Worker's Compensation/Employers' Liability policies. For a list of pre-approved endorsement, forms see http://purchasing.houstontx.gov/forms/Sample_Insurance_Endorsements.pdf. The Director will consider all other forms on a case-by-case basis.

26.0 SUCCESSORS AND ASSIGNMENTS:

Supplier may not assign this award or dispose of substantially all of its assets without the written consent of the City Purchasing Agent. Supplier's failure to obtain such consent shall be an event of default, authorizing the Purchasing Agent to terminate this award according to its terms.

27.0 MINORITY AND WOMEN BUSINESS ENTERPRISES:

27.1 Contractor shall comply with the City's Minority and Women Business Enterprise ("MWBE") programs as set out in Chapter 15, Article V of the City of Houston Code of Ordinances. Contractor shall make good faith efforts to award subcontracts or supply agreements in at least **3%** of the value of this Agreement to MWBEs. Contractor acknowledges that it has reviewed the requirements for good faith efforts on file with the City's Office of Business Opportunities ("OBO") and will comply with them.

27.2 Contractor shall require written subcontracts with all MWBE subcontractors and shall submit all disputes with MWBEs to binding arbitration to be conducted in Houston, Texas if directed to do so by the OBO Director. MWBE subcontracts must contain the terms set out in "Section A, Table 2".

28.0 TAXES:

The City is exempt from the Federal Excise and Transportation Tax, and the limited Sales and Use Tax. Unless the Bid Form or Specifications specifically indicate otherwise, the price bid must be net exclusive of above-mentioned taxes, and will be so construed. A Supplier desiring refunds of, or exemptions from, taxes paid on merchandise accepted by the City, must submit the proper forms, and the City Purchasing Agent, if satisfied as to the facts, will approve or issue the necessary certificates.

29.0 AWARD:

29.1 The City reserves the right to consider and make awards of bids on articles of similar nature that will in all respects serve the purpose for which the purchase is being made. The City reserves the right to be the sole judge as to whether such articles will serve the purpose.

29.2 Unless otherwise specified, the City reserves the right to accept or reject in whole or in part any bid submitted or to waive any informality for the best interest of the City.

30.0 REJECTIONS:

30.1 Articles not in accordance with samples and specifications must be removed by the Supplier and at his expense. All disputes concerning quality of supplies delivered under this invitation to bid will be determined by the City Purchasing Agent or designated representative.

30.2 All articles enumerated in the invitation to bid shall be subject to inspection on delivery by an officer designated for the purpose and if found inferior to the quality called for, or not equal in value to the Department's samples, or deficient in weight, measurements, workmanship or otherwise, this fact shall be certified to the City Purchasing Agent who shall have the right to reject the whole or any part of the same.

31.0 BRAND NAME

Any manufacturer's names, trade names, brand names, or catalog numbers used in the specifications are for the purpose of describing and establishing the general quality level, design and performance desired. Such references are not intended to limit or restrict bidding by other Suppliers, but are intended to approximate the quality design or performance, which is desired. Any bid, which proposes like quality, design or performance, will be considered. Equivalent products will be considered, provided a complete description and product literature is provided. Unless a specific exception is made, assumption will be that the item is bid exactly as specified on the Invitation to Bid.

32.0 CHANGE ORDER

- 32.1 At any time during the term of the award, the City Purchasing Agent or Director upon written authorization by the City Purchasing Agent may issue a Change Order to increase or decrease the scope of services or change plans and specifications, as he or she may find necessary to accomplish the general purposes of this award. The Supplier shall furnish the services or deliverables in the Change Order in accordance with the requirements of this award plus any special provisions, specifications, or special instructions issued to execute the extra work.
- 32.2 The City Purchasing Agent or Director upon written authorization by the City Purchasing Agent will issue the Change Order in substantially the following form:

CHANGE ORDER

TO: [Name of Supplier]
FROM: City of Houston, Texas (the "City")
DATE: [Date of Notice]
SUBJECT: Change Order under the award between the City and [Name of Supplier]

Subject to all terms and conditions of the award, the City requests that Supplier provide the following:

[Here describe the additions to or changes to the equipment or services and the Change Order Charges applicable to each.]

Signed:

[Signature of City Purchasing Agent or Director upon written notice to the City Purchasing Agent]

- 32.3 The City Purchasing Agent or Director upon written authorization by the City Purchasing Agent may issue more than one Change Order, subject to the following limitations:
- 32.3.1 Council expressly authorizes the City Purchasing Agent or Director upon written authorization by the City Purchasing Agent, to approve a Change Order of up to \$50,000. A Change Order of more than \$50,000 over the approved awarded amount must be approved by the City Council.
- 32.3.2 If a Change Order describes items that Supplier is otherwise required to provide under this award, the City is not obligated to pay any additional money to Supplier.
- 32.3.3 The total of all Change Orders issued under this section may not increase the original award amount by more than 25%.
- 32.4 Whenever the Supplier receives a Change Order, Supplier shall furnish all material, equipment, and personnel necessary to perform the work described in the Change Order. Supplier shall complete the work within the time prescribed. If no time for completion is prescribed, Supplier shall complete the work within a reasonable time. If the work described in any Change Order causes an unavoidable delay in any other work Supplier is required to perform, Supplier may request a time extension for the completion of the work. The City Purchasing Agent's or Director's decision regarding a time extension is final.
- 32.5 A product or service provided under a Change Order is subject to inspection, acceptance, or rejection in the same manner as the work described in the original award and is subject to the terms and conditions of the original award as if it had originally been a part of the award.

33.0 TERMINATION OF AWARD

- 33.1 By the City for Convenience:

The City Purchasing Agent may terminate this award at any time upon 30-calendar days notice in writing to the Supplier. Upon receipt of such notice, Supplier shall, unless the notice directs otherwise, discontinue all services in connection with the performance of the award and shall proceed to cancel promptly all existing orders and awards insofar as such orders and awards are chargeable to this award. As soon as practicable after the receipt of notice of termination, the Supplier shall submit a statement to the appropriate department(s) showing in detail the services performed or items delivered under this award to date of termination. The City agrees to compensate the Supplier for that portion of the prescribed charges for which the services were actually performed or items delivered under this award and not previously paid.

33.0 TERMINATION OF AWARD (CONTINUED):

33.2 By the City for Default by Supplier:

33.2.1 In the event that the materials and/or services furnished by the Supplier do not conform to the standard set forth herein, or if the deliveries and servicing of this award do not conform to the requirements detailed herein, the City through a written notice from the Purchasing Agent to the Supplier describing such default may as its options:

- (a) Terminate the award for default and the City shall have no further obligation under the award.
- (b) Allow the Supplier to cure default within a reasonable time as specified in the notice. The City, at its sole option, may extend the proposed date of termination to a later date. If prior to the proposed date of termination, Supplier cures such default to the City's satisfaction, then the proposed termination shall be ineffective. If Supplier fails to cure such default prior to the proposed date of termination, then the City may terminate its performance under this award as of such date and have no further obligation under the award.

33.2.2 In the event of failure to deliver any or all of the items or to perform required services, the City may cover its loss by reasonably procuring from another source the items not delivered or the services not performed. Supplier shall be responsible for and shall pay to the City immediately upon demand the difference in price between that offered by the Supplier and that which the City was forced to pay for covering Supplier's failure to deliver or perform services.

33.3 By the Supplier for Default by City:

33.3.1 Default by the City shall occur if the City fails to perform or observe the terms and conditions of the award required to be performed or observed by the City, and the Supplier gives notice in writing to the City within 30 calendar days of the act or omission claimed by the Supplier to constitute default on the part of the City.

33.3.2 Upon receipt of such notice in writing from the Supplier, however, the City shall have 30 calendar days to cure such default. The Supplier, at its sole option, may extend the proposed date of termination to a later date.

33.3.3 If City cures such default prior to the proposed date of termination, the proposed termination shall be ineffective. If the City fails to cure such default prior to the proposed date of termination, then the Supplier may terminate its performance as of such date.

34.0 PATENTS

The Supplier agrees to indemnify and save harmless the City, the City Purchasing Agent and assistants from all suits and actions of every nature and description brought against them or any of them, for or on account of the use of patented appliances, products or processes, and he shall pay all royalties and charges which are legal and equitable. Evidence of such payment or satisfaction shall be submitted, upon request of the City Purchasing Agent, as a necessary requirement in connection with the final estimate for payment in which such patented appliance, products or processes are used

35.0 SUPPLIER DEBT

If Supplier, at any time during the term of this award, incurs a debt, as the word is defined in section 15-122 of the Houston City code of ordinances, it shall immediately notify the City Controller in writing. If the City Controller becomes aware that Supplier has incurred a debt, the City Controller shall immediately notify Supplier in writing. If Supplier does not pay the debt within 30 days of either such notification, the City Controller may deduct funds in an amount equal to the debt from any payments owed to Supplier under this award, and Supplier waives any recourse therefore.