

Request for Qualifications  
To Design, Construct and Integrate ITS Devices  
For Houston's Intelligent Transportation System (HITS)  
Through A Design-Build Agreement



City of Houston  
Issued October 2, 2015



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## **A. GENERAL INFORMATION**

### **1. PURPOSE**

The Traffic Operations Division (TOD) of the City of Houston, Public Works & Engineering Department invites the submittal of Statement of Qualifications (SOQs) from design-build teams interested in pursuing a Design-Build Agreement (DBA) to provide professional services for the design, construction and integration of Intelligent Transportation Systems (ITS). This includes all services necessary to provide a fully integrated and operable system of Dynamic Message Signs (DMS), digital Closed-Circuit Television (CCTV) cameras, mid-block traffic count stations, and enhanced traffic signal detection. This also includes all services necessary to assess and verify existing conditions, provide engineering design and plans, arrange and conduct meetings, develop and submit reports, provide construction administration, perform all construction activities, perform all integration activities, provide CADD as-built drawings, testing, training and interfacing with Houston TranStar partner agencies.

It is the City of Houston's intent to retain a highly qualified design-build team with extensive experience in the field of design, construction and integration of comparable ITS projects. The City of Houston considers a comparable project to be any ITS project of similar size, scope, value and complexity, whether or not such a project was delivered through a DBA or otherwise. Those teams who participate in this process will be referred to as "Respondents".

Respondents are requested to carefully review the contents of this document and submit a proposal in accordance with the instructions provided as the selected team will be required to comply with its requirements. It is understood that the contracting agency is the City of Houston.

### **2. PROJECT DESCRIPTION**

This project will deploy 91 arterial DMS, 113 CCTV cameras, 144 mid-block traffic count stations, 489 enhanced signal detection locations (combination of loops and wireless magnetometer detection) and all software and hardware necessary for an operational system. These devices must be compatible with existing City of Houston and Houston TranStar's infrastructure / architecture. The proposed system will utilize travel time data received from the City's existing Bluetooth Automatic Vehicle Identification (AVI) system and real-time data from the count stations and signal detectors, where applicable, to generate DMS messages and various reports and alarm messages. It is envisioned that a majority of devices will be compatible with the City of Houston's central software system (Trafficware ATMS.now) or with existing systems at Houston TranStar. Each device will utilize existing communications systems (fiber optic cable or WiMAX) to integrate with Houston TranStar and the City's infrastructure. At a few locations where communication is not available, the project may be required to install new WiMAX subscribers and associated hardware.

### **3. PROJECT GOAL**

The project's goal is to expand upon existing City of Houston ITS infrastructure for monitoring and managing



arterial traffic in real-time. ITS devices will be deployed along approximately 150 arterial corridors throughout the City of Houston. Data will be gathered through CCTV cameras, Bluetooth AVI probe-based detection, mid-block traffic count stations and traffic signal detection. Information regarding travel times and possibly alternative routes will be provided to the public via Houston TranStar's website and by DMS positioned along arterials at strategic locations.

#### **4. PROJECT BENEFITS**

Once complete, HITS will:

- Allow traffic management staff to detect and respond to congestion and incidents in real-time;
- Provide real-time traveler information to the public, partner agencies, and media outlets for analysis, planning, and announcements;
- Reduce travel delay and emissions;
- Improve traffic throughput efficiency and travel time reliability;
- Enable traffic management staff to optimize signal operations by customizing timing plans for daily variation of traffic demands and for special events;
- Allow maintenance staff to identify, assess, and respond quicker to equipment failures.

#### **5. GENERAL REQUIREMENTS**

The Respondents will be required to have knowledge and expertise in the following areas:

- Coordination with TxDOT, CoH, and FHWA;
- Design, construction, and integration of ITS;
- Design / build process.

#### **6. NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)**

The NEPA process is in progress and is not complete for this project.

#### **7. PROJECT WEBPAGE**

For all project related information and communications (TIGER 2014 application, RFQ, addendum, short listed Respondents, etc.) see the project webpage at:

<http://www.publicworks.houstontx.gov/tod/tiger-2014.html>

It is the responsibility of the Respondent to monitor the project webpage for ALL project related information and updates including any addenda. The Respondent is required to acknowledge, on the cover letter, that they have received and reviewed all materials posted on the webpage.



## **B. DESCRIPTION OF PROCUREMENT PROCESS**

### **1. PROCUREMENT PROCESS**

The City of Houston reserves the right, in its sole discretion, to modify the following procurement process to comply with applicable law and/or to address the best interests of the City of Houston, including canceling the procurement.

The City of Houston will evaluate the SOQ's it receives in response to this RFQ and intends to establish, according to criteria generally outlined herein, a short list of two or more (maximum of five) Respondents that are eligible to receive the Request For Proposal (RFP). A list of the short listed respondents will be announced on the project webpage at the date listed in section B.2.

Following the short listing of Respondents, the City of Houston anticipates releasing a draft RFP for review and comment by the short listed Respondents. Following receipt of written comments, the City of Houston may schedule one-on-one and/or group meetings to discuss issues and comments identified by the short listed Respondents. This process is referred to as the industry review process. Specific details concerning the industry review process will be made available to the short listed Respondents following the short listing announcement.

After consideration of input from the short listed Respondents, the City of Houston plans to issue a final RFP to the short listed Respondents. If the City of Houston moves forward with the procurement, the final RFP will include methodology for determining the overall best value Respondent.

### **2. PROCUREMNT SCHEDULE**

Issue RFQ	October 2, 2015
Pre-submittal meeting / workshop (location: Houston TranStar)	October 20, 2015 at 10:00 a.m. (CST)
Deadline for questions regarding the RFQ	October 23, 2015
Questions relating to any addendum	Three business days after the addendum is issued (but no later than SOQ due date)
SOQ due date & time	November 3, 2015, 1:00 PM (central time)
Short listing announcement - on project webpage	Week of November 30, 2015

This schedule is subject to modification at the sole discretion of the City of Houston. Respondents will be notified of any changes by an addendum to this RFQ. The City of Houston intends to issue the draft RFP shortly after selection of the short listed Respondents and to proceed with the final RFP and DBA award thereafter. The City of Houston anticipates awarding and executing a DBA for the project in early 2016.



**3. PRE-SUBMITTAL MEETING / WORKSHOP**

A pre-submittal meeting / workshop will be held on the date and time specified in section B.2 at Houston TranStar to discuss this project. Attendance is strongly encouraged, but is not mandatory.

**4. QUESTIONS AND CLARIFICATIONS**

All inquiries regarding the solicitation are to be directed to the City Representative at:

**Laverne.Hollins2@houstontx.gov**

Respondents are encouraged to submit questions prior to the pre-submittal meeting.

**5. ADDENDA**

All addenda will be posted to the project webpage. Respondents are responsible for monitoring the project webpage for information concerning this procurement. Respondents shall acknowledge on the cover letter that they have received and reviewed all materials posted including addenda, if any.

**6. COMMUNICATIONS**

The following rules of contact shall apply during the procurement period for the project, which began on the date of issuance of this RFQ and will be completed with the execution of the DBA. These rules are designed to promote a fair and unbiased procurement process. Contact includes face-to-face, telephone, facsimile, email or formal written communications.

Commencing with issuance of this RFQ and continuing until the execution of the DBA, aside from the City of Houston's formal response to written requests for clarification during the period officially designated for such purpose by the City Representative, neither Respondents nor persons acting on their behalf shall communicate or have contact with any appointed or elected official or employee of the City of Houston, their families, or staff 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 Respondent. However, nothing in this paragraph shall prevent a Respondent from making public statements to the City Council convened for a regularly scheduled session after the official selection has been made and the award placed on the City Council agenda for action.

The Respondents shall not contact stakeholders regarding the project. The stakeholders include elected or appointed officials, employees, representatives and members of the entities listed below:

- City of Houston (except as provided herein);
- FHWA;
- TxDOT;
- Houston TranStar.

Any communications determined to be improper, at the sole discretion of the City of Houston, may result in disqualification.

Any official information regarding the project only will be disseminated from the City of Houston via email from



the City Representative or on the project webpage. The City of Houston will not be responsible for any oral exchange or other information exchange that occurs outside of the official processes specified herein.

**7. DBE REQUIREMENT**

The City of Houston has determined that the DBE goal for this project is **seven (7%) percent**. The City of Houston has adopted the definition of DBEs set forth in 49 CFR § 26.5. In response to this RFQ, Respondents shall include and identify team members to satisfy this DBE goal.

**8. LIABILITY AND INSURANCE**

The design-build contractor will be required to assume liabilities, to provide bonds, and insurance coverage, and to indemnify and defend the City of Houston against third party claims as specified in the DBA. Special provisions concerning forms of security, bonding, guarantees, insurance and indemnity will be set forth in the RFP and DBA.

**9. FEDERAL REQUIREMENTS**

Respondents are advised that the RFP will be drafted based on the assumption that the project and the plan of finance for the project will remain eligible for federal funds. Therefore, the procurement documents and the DBA must conform to requirements of applicable federal law, regulations and policies. The City of Houston anticipates that certain federal procurement requirements will apply, including but not limited to, Equal Opportunity requirements (Title VI of the Civil Rights Act of 1964, as amended), requirements applicable to DBEs (Title 49 Code of Federal Regulations Part 26, as amended), Small Business requirements (United States Code Section 631 et seq.), Buy America requirements (49 Code of Federal Regulations part 661) and Davis-Bacon wage rates. The City of Houston reserves the right to modify the procurement process described herein to address any concerns, conditions or requirements of federal agencies, including the Federal Highway Administration (FHWA). Respondents shall be notified in writing via and addendum of any such modifications.

**10. PUBLIC INFORMATION ACT (DISCLOSURE WAIVER)**

Each Respondent, by submitting an SOQ to the City of Houston in response to this RFQ, consents to the disclosures described in this RFQ and all other disclosures required by law and expressly waives the right to contest, impede, prevent or delay such disclosure, or to initiate any proceeding that may have the effect of impeding, preventing or delaying such disclosure, under Texas Government Code Chapter 552 (the "Public Information Act" or the "Act"), the Code, the Rules or any other law relating to the confidentiality or disclosure of information. Under no circumstance will the City of Houston be responsible or liable to a Respondent or any other party as a result of disclosing any such materials. Respondent hereby further agrees to assist the City of Houston in complying with these disclosure requirements.

**11. PROTEST PROCEDURES**

A protest shall be handled according to the City of Houston Procurement Manual.



A protest shall be submitted in writing and include the following:

1. The name, address, e-mail, and telephone number of the protester;
2. The signature of the protester or its representative who has the delegated authority to legally bind the person protesting;
3. Identification of a solicitation description and the solicitation or contract number;
4. A detailed written statement of the legal and factual grounds of the protest, including copies of relevant documents, etc.; and
5. The desired relief or outcome.

**12. CONFLICT OF INTEREST**

Chapter 176 of the Texas Local Government Code requires vendors and consultants contracting or seeking to contract with the City of Houston to file a conflict of interest questionnaire if they have an employment or other business relationship with the City of Houston – see Section C.2 Appendix B.

Respondents are required to adhere to 23 CFR 636.116 for conflict of interest requirements for this design-build project.

**13. THE CITY OF HOUSTON RESERVED RIGHTS**

The City of Houston reserves all rights described herein and available at law, including, without limitation, all rights described in Subchapter I in Chapter 9 of Title 43 of the Texas Administrative Code.

This RFQ does not commit the City of Houston to enter into a contract or proceed with the procurement described herein. The City of Houston assumes no obligations or liabilities, fiscal or otherwise, to reimburse all or part of the costs incurred, or alleged to have been incurred, by parties considering a response to and/or responding to this RFQ, or any subsequent RFP. All such costs shall be borne solely by each Respondent.

In no event shall the City of Houston be bound by, or liable for, any obligations with respect to the project until such time (if at all) as a DBA, in form and substance satisfactory to the City of Houston, has been executed and authorized by the City of Houston, and then only to the extent set forth therein.



## **C. SUBMISSION REQUIREMENTS, EVALUATION AND SCOPE**

### **1. SUBMITTING PROPOSAL**

To be considered for evaluation, Respondents shall submit six (6) bound hard copies and one (1) electronic copy (pdf files on a CD or USB drive) of their SOQ in the manner described below and may not submit more than one response to this RFQ as prime. Any firm submitting an SOQ that does not conform to all the requirements of this RFQ will be subject to disqualification. This RFQ is designed to provide interested Respondents with sufficient basic information to submit a SOQ, but is not intended to limit a proposal's content or exclude any relevant or essential data.

All (6) hard copies and one electronic copy of the SOQ shall be packaged in one (1) sealed envelope or other sealed container marked:

**City of Houston  
Response to the Request for Qualifications  
for Design-Build Services for the Houston Intelligent Transportation System (HITS)**

SOQ's shall be delivered by hand or courier to the following address:

Ms. LaVerne Hollins-McGlothen  
Administrative Coordinator  
City of Houston Public Works and Engineering Department  
Traffic Operations Division  
611 Walker, 5<sup>th</sup> floor  
Houston TX, 77002  
(Call 832-395-3013 from 5<sup>th</sup> floor lobby)

SOQ's will be accepted only at this address. The City of Houston will not accept facsimile or other electronic submitted SOQ's. Acknowledgment of receipt of SOQ package will be evidenced by the issuance of a receipt by a member of the City of Houston Staff. SOQ's will be accepted and must be received by the City of Houston during normal business hours before 1:00 PM (Central Time) on the SOQ due date specified in section B.2. SOQs not received prior to such time on the SOQ due date at the above address shall be rejected and will not be considered by the City of Houston for short listing.

Respondents are solely responsible for assuring that the City of Houston receives their SOQ by the specified delivery date and time at the address listed above. The City of Houston shall not be responsible for delays in delivery caused by weather, difficulties experienced by couriers or delivery services, misrouting of packages by courier or delivery service, improper, incorrect or incomplete addressing of deliveries and other occurrences beyond the control of the City of Houston.



## 2. SOQ CONTENT

The SOQ package shall, at a minimum, include the information described in section A through F below, which must stay within the following parameters:

- Not exceed twelve (12) single-sided 8½x11 pages
- Font: 11pt Arial typed
- Line spacing: 1.5
- Minimum page margin (all sides): 0.5"

### a. Cover Letter

The cover letter should include:

- A brief summary of the key aspects of the Respondent's team qualifications and approach to achieving the project scope;
- Acknowledgement that the Respondent received and reviewed all materials posted on the project webpage.

### b. Project Understanding and Approach

The Respondents should describe:

- Their understanding of the City's existing signal and ITS infrastructure / architecture;
- Their understanding and familiarity with the City of Houston TIGER 2014 application – this project shall adhere to all aspects of this document and shall not deviate from its intent without written approval;
- Their understanding of the City's existing fiber optic and WiMAX coverage and capabilities;
- How the proposed hardware/software will be integrated into the existing systems;
- Their proposed implementation process (e.g., design requirements, phasing of device installation, test sequence, verification and acceptance, etc.).

### c. Project Organization and Management

A project organization and management discussion should be provided. This shall include an organizational chart with indication of the key personnel to be involved and their respective role. The Respondents should also describe functions and responsibilities of all firms/contractors and staff involved. All individuals should be clearly delineated (project manager, construction manager, integration manager, lead designer, etc.), by names and titles and their key subject areas and tasks for this effort. Identify which functions the prime consultant will perform, which functions will be shared with a partner and which functions a sub-consultant / sub-contractor will perform. Indicate the percentage share of the contract work to be performed by each member of the Respondent's team (i.e., approximate percentage of work proposed for the prime and for each sub consultant – totaling 100%). After selection, no substitutions of key personnel may be made without prior approval by the City of Houston.

### d. Qualifications

Respondents must understand they are expected to provide qualified personnel to accomplish each portion of the work. Project personnel should include qualified individuals with backgrounds in types of projects comparable to this project. The City of Houston considers a comparable project to be any ITS project of similar size, scope, value and complexity, whether or not such a project was delivered through a DBA or otherwise. The key personnel that should be identified are:

- Principal with authority to commit the resources of the Respondent's firm to the project;



- The individual proposed as the project manager must have experience in managing comparable ITS projects. The project manager must have demonstrated experience with oversight of sub consultant work;
- The individual proposed as the construction manager/lead must have experience in managing the construction of comparable ITS projects;
- The individual proposed as the integration manager/lead must have experience in the integration of comparable ITS projects;
- The lead design engineer must be a professional engineer licensed in Texas who can sign and seal all documents (can be the same as other key personnel assigned to project). The professional engineer must have experience in the design of comparable ITS projects.

At a minimum, a summary table listing prior comparable ITS projects should be provided. The table should include a brief description of each project, role of the Respondents (e.g., prime or sub), ITS components deployed (and quantity), role of key personnel, size/cost, and contact information of client references.

Submit detailed resumes in an Appendix A (maximum one (1) page each, not included in the overall 12 page limit) for key personnel proposed for this project that include project specific qualifications.

Similar qualifications description and resumes should be included for key staff of the proposed sub consultants/contractors.

**e. Other Benefits**

Describe benefits that the City of Houston will realize in selecting your team for this project. Benefits may include any unique or specialized processes or organization, staff qualifications, capabilities, best practices, or other factors that distinguish your team from other Respondents.

**f. Disadvantaged Business Goal**

Provide a summary of DBE achievements in past projects and a detailed description of how your team will meet this goal and with what firms/contractors.

The remainder of the SOQ shall include the following as an Appendix (not included in the 12 page limit):

Appendix A:

1. Resumes

Appendix B:

1. A transmittal letter of interest notifying the City of Houston of the Respondents intent to be considered for these professional services.
2. A one-page letter from each sub-consulting firm proposed in the SOQ indicating that firm's desire to be included and indicating the scope of services that the sub-consultant will perform if the submitting firm is selected. A firm cannot be a sub-consultant for more than 10 prime consultants submitting for any RFQ.
3. A copy of the submitting firm's response to questionnaire pertaining to "Conflict of Interest". Local Government Code Chapter 176 requires firms seeking to do business with the City of Houston ("City") to file a Conflict of Interest Questionnaire with the City Secretary, only if there is a business relationship noted. The current Conflict of Interest Questionnaire is available for downloading on the website of the Texas



Ethics Commission: <http://www.ethics.state.tx.us/forms/CIQ.pdf>. If no one in the company has a business relationship with the City (as defined in Section 176.001 (1-a) in the Local Government Code), write "N/A" in Section 1 and leave the remainder of the form blank.

4. A copy of the submitting firm's current on-file Department of Public Works and Engineering's Standard Form for Engineering and Related Services ("PWE100"). Firms are still responsible for the formal submission of updated PWE100s according to the instructions at the following location:  
<http://edocs.publicworks.houstontx.gov/engineering-and-construction/pwe-100-form/353-form-pwe-100-1.html>

### 3. PROPOSAL EVALUATION CRITERIA

#### a. Responsiveness

Each SOQ will be reviewed for:

- Conformance to the RFQ instructions regarding organization and page limitations;
- Format and responsiveness of the Respondent to the requirements set forth in the RFQ.

Those SOQs not responsive to this RFQ may be excluded from further consideration and the Respondent will be so advised. The City of Houston may also exclude from considering any Respondent who's SOQ contains a material misrepresentation.

#### b. Qualifications Evaluation Criteria and Weighting

In order to short list the design-build team(s) for this project, the City of Houston will evaluate the SOQ from each Respondent using the following criteria:

- Project Understanding and Approach **(25 points)**
  - Demonstrate familiarity with the City of Houston's TIGER 2014 grant application;
  - Describe an understanding of existing City of Houston systems;
  - Describe potential challenges and possible solutions;
  - Detail how tasks will be executed by the Respondent's team;
  - Delineate an effective project understanding to achieve the project scope.
- Project Management and Organizational Structure **(20 points)**:
  - A brief description of the design-build management approach that the Respondent commits to implementing. Design-Build experience is not a prerequisite for a proposal to be considered to be responsive.
  - Organizational chart identifying team structure, teaming arrangement and respective roles;
  - Clear and concise description of roles and responsibilities of the prime firm, sub consultants/contractors and key staff involved;
  - Availability of key personnel;
  - Procedure(s) to ensure quality of delivered products, effective communication, and schedule adherence.
- Qualifications of Respondent **(40 points)**
  - Specific capabilities of the prime firm and sub consultant(s)/contractor(s);



- Strength and depth of experience of the Project Manager and other key personnel (including resumes);
- Demonstrated experience completing comparable ITS projects or tasks as identified on this project;
- The Respondents likelihood of success based on the teams experience in completing comparable projects;
- Table of referenced experience of projects of comparable of size, value, complexity and scope;
- Project problems encountered and corrective actions taken;
- Demonstrated track record of timely performance, quality and integrity, as evidenced by a list of client references;
- Evidence of quality in completing comparable projects.
- Other benefits **(10 points)**
  - Innovative and/or unique approaches to find cost saving/effective solutions on comparable projects (proposed for this project or used on previous projects);
  - Value-added factors that distinguish the Respondent from other Respondents.
- Demonstrated ability and plan to fulfill DBE goal **(5 points)**

The City of Houston reserves the right to request that a Respondent clarifies its response, and the right to waive any formalities in considering responses. However, failure to furnish all information requested may disqualify a respondent. The City of Houston reserves the right to interview all or selected Respondents if the evaluation committee deems an interview process necessary or helpful to enhance the City's understanding of the SOQ. In the case of an interview, the Respondent will have a 30-minute interview window that will include a 10-minute introduction of the team and key points of the proposal and another 20-minute to answer questions from the City of Houston evaluation committee. No more than 4 members of the Respondent's team shall be present during any interview.

A committee appointed by the Director of Public Works and Engineering will evaluate/review each SOQ and will give a numerical score for each SOQ according to the evaluation categories. The scores for each SOQ will be averaged to determine the overall ranking order of the Respondents. Each area of the evaluation criteria must be addressed in detail in the SOQ.

#### **4. PROJECT SCOPE OF SERVICES**

The preliminary anticipated scope of services includes the following elements:

- Conduct and report on performance measures (before, during, and after);
  - Pre-project report
  - Interim reports (monthly)
  - After-project report
- Coordinate with the City of Houston to obtain a list of potential traffic signal candidates for enhanced detection. Visit each location to determine if the existing detection is operational and enhanced detection is needed. Pavement condition and any other relevant information shall be gathered to



- determine if inductive loops or wireless magnetometer detection shall be used;
- Utilize existing conceptual designs to locate the approximate location of each DMS, midblock count station, and CCTV camera. Review these locations to ensure the ITS devices are conceptually placed in the best location to achieve project goals;
  - Coordinate with utility companies to establish power connection for each ITS device not located at a traffic signal. Obtain necessary permits, approvals and signatures required;
  - Provide GIS support for updating ITS device locations;
  - Conduct interagency coordination to obtain all necessary permits and approvals;
  - Prepare construction documents necessary to price, permit, and construct. Construction documents shall include all disciplines necessary for pricing, permitting, and constructing the project. The drawings and specifications will be reviewed by the City of Houston and TxDOT (for locations along TxDOT owned roadways). Submitting percentages are to be determined;
  - Prepare an initial construction cost estimate for City of Houston approval. The estimate will be updated throughout the design and revisions to the scope of work recommended if the cost estimate indicates the construction cost will exceed the designated budget;
  - Provide technical specifications for all ITS devices deployed, if not existing, and modifications to existing specifications as needed. These specifications shall utilize existing City of Houston format;
  - Maintain an adequate quality control function for this project;
  - Project scheduling (including, but not limited to, baseline, milestones, deliverables, dependencies, etc.);
  - Schedule and conduct the pre-construction and all project/construction meetings;
  - Solicit, review, approve or take other appropriate action on shop drawings, samples, and other submissions required by construction documents. Review laboratory, shop and mill tests of materials and equipment for conformance with the construction documents;
  - Gain access to, utilize, and update as needed the City of Houston CIPMS system for project records;
  - Prepare supporting data and provide other services, including revisions to the documents, in connection with work change directives and change orders;
  - Provide design clarification and recommendations to resolve field problems, with City of Houston concurrence;
  - Provide reproducible record drawings following completion of the project;
  - The selected team will be responsible for all integration of all ITS devices with Houston TranStar's information systems, existing City of Houston's communication systems, existing City of Houston Bluetooth AVI system, and existing City of Houston central software system;
  - Provide system testing and results;
  - Provide system training;
  - The selected team shall become familiar with FHWA's TIGER VI reporting requirements for capital projects. The selected team must provide the following reports, at a minimum, to the City of Houston for submittal to FHWA:
    - Monthly Report
    - Quarterly Report
    - Annual Report