

CONTRACT
FOR
PROFESSIONAL ENGINEERING SERVICES
FOR
«PROJNAME»
WBS NO. «wbsnum»

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

THIS CONTRACT FOR PROFESSIONAL ENGINEERING SERVICES ("Contract") is made on the date countersigned by the City Controller, by and between the **CITY OF HOUSTON, TEXAS** (the "City"), a municipal corporation and home-rule city of the State of Texas principally situated in Harris County, and **«ENGINEER»** (the "Engineer"), acting by and through its duly authorized officer. The initial addresses of the parties, which one party may change by giving notice to the respective other party, are as follows:

City

Director
Houston Public Works
City of Houston
P.O. Box 1562
Houston, Texas 77251

Engineer

«engineer», «engtitle»
«ENGINEER»
«engaddr»
«engcity», «engstate» «engzip»

RECITALS:

WHEREAS, the City desires to obtain professional engineering services in connection with the planning and/or design of the Project hereinafter described; and

WHEREAS, the Engineer desires to provide such services in exchange for the fees hereinafter specified;

NOW, THEREFORE, for and in consideration of the premises and mutual covenants herein contained, it is agreed as follows:

ARTICLE 1

GENERAL

- 1.1 **Definitions:** The following Definitions are used throughout this Contract, including Exhibit "A". See Exhibit "A" for any additional Definitions applicable to this Contract.
- 1.1.1 **Additional Services:** Services completed by Engineer in support of the Project that are not part of Basic Services, but are included in Article 2 of this Contract and as further described in Exhibit "A", Exhibit "A-1", and the Notice(s) to Proceed.
- 1.1.2 **Basic Services:** Services completed by Engineer in support of the Project, included in Article 2 of this Contract and as further described in Exhibit "A", Exhibit "A-1", and the Notice(s) to Proceed.
- 1.1.3 **City:** As defined in the preamble of this Contract, including its successors and assigns.
- 1.1.4 **City Design Manual:** "City of Houston Infrastructure Design Manual" in effect at the time of execution of this Contract, a current version of which can be found on the internet at the following URL:
<https://edocs.publicworks.houstontx.gov/engineering-and-construction/design-manuals.html>
- 1.1.5 **City Personnel:** All City employees, but not elected officials.
- 1.1.6 **Construction Documents:** All of the graphic and written information prepared or assembled by Engineer for communicating the design and for administering the bidding and construction of the Project.
- 1.1.7 **Construction Package:** The services and deliverables that make up a whole or a part of the Project, as further described in this Contract.
- 1.1.8 **Consultant (also "Subcontractor"):** The professional Consultant or other professional entity subcontracted by Engineer to provide a portion of engineering services required under the City-Engineer Contract.
- 1.1.9 **Consultant Markup:** A markup factor of 10%, which Engineer may apply only to Consultant subcontract invoices for Additional Services performed by the Consultant. Such markup shall include the non-professional services related to the Consultant's subcontract including all administrative costs, accounting costs, all contract administration, processing of invoices, monitoring of Consultant's work for compliance including project schedules, quality control, general administrative communication and coordination. Engineer shall not apply any Consultant Markup to Basic Services performed by Consultant or any services by Engineer.

- 1.1.10 **Consultant Subcontract Cost:** The ordinary and reasonable cost of Consultant subcontracts made by Engineer and approved by the Director for the principal purpose of obtaining the professional services of others in connection with the performance of any service under this Contract.
- 1.1.11 **Cooperative Development Agreement:** A contract between the City and a Developer in which the City and Developer share the cost of construction and other eligible costs.
- 1.1.12 **Developer:** The owner or agent of the owner development lots or tracts of property for further sale, lease, development, or redevelopment for residential, commercial, or industrial use.
- 1.1.13 **Director:** The Director of the Houston Public Works, or such other person designated from time to time by the Director by notice to Engineer to administer this Contract on behalf of the City.
- 1.1.14 **Documents:** The reports, charts, analyses, maps, letters, tabulations, exhibits, notes, models, photographs, the original transparencies of all drawings, Construction Documents, computer programs including source and object codes, and other work products obtained by or prepared by Engineer as part of its services under this Contract. The Director shall specify the medium and format in which Engineer shall provide such documents.
- 1.1.15 **Engineer:** As defined in the preamble of this Contract, including its successors and assigns.
- 1.1.16 **Geographic Information System (GIS):** A system designed to capture, store, manipulate, analyze, manage, and present all types of geographical information.
- 1.1.17 **Negotiated Lump Sum:** An amount consistent with the terms of this Contract that City shall pay Engineer for the completed performance of services, not to exceed the estimated total of the following:
- 1.1.17.1 Raw Salary times Raw Salary Multiplier for services performed directly by Engineer and Engineer's employees, plus
 - 1.1.17.2 Reimbursable Expenses, plus
 - 1.1.17.3 Consultant Subcontract Costs plus Engineer's Consultant Markup, plus
 - 1.1.17.4 Reasonable fees paid to contract personnel and personnel employed through employment agencies plus Engineer's Consultant Markup.
- 1.1.18 **Notice to Proceed:** A written communication from the Director that authorizes Engineer to begin performance of work. Multiple Notices to Proceed should be anticipated for contracts that include multiple projects/subprojects. A Notice to Proceed will contain the following:
- 1.1.18.1 A declaration that the City has allocated adequate funds for that phase or service;
 - 1.1.18.2 The Negotiated Lump Sum for all work described in the Notice to Proceed;
 - 1.1.18.3 A work description for each service Engineer, Consultants, or suppliers will perform under the Notice to Proceed;

- 1.1.18.4 The maximum cost and portion of the Negotiated Lump Sum associated with each work description;
- 1.1.18.5 Whether the work description represents a Basic or Additional Service;
- 1.1.18.6 The phase of the Project to which the work is attributable; and
- 1.1.18.7 Acceptance of the preceding Phase, when applicable.

1.1.19 **Project:** As identified in the title of this Contract.

1.1.20 **Project Schedule:** The schedule of project activities and events, showing initiation point, duration, and ending points using the form attached as Exhibit "B". The schedule will indicate time to be allowed for reviews by the City staff. The Project Schedule shall be drafted by Engineer in consultation with the Director, approved by the Director, and updated monthly at the time of invoice submittal.

1.1.21 **Raw Salary:** The actual cost of salary (annual base salary (excluding bonuses) divided by 2080) of an employee of Engineer for each hour during which such employee is actively performing services of benefit to the City and directly related to the Project. Maximum Raw Salary rates by employee category for the duration of the Contract are shown on Exhibit "C" attached hereto and, by reference, incorporated. The Raw Salary rates of Consultant shall not exceed the Raw Salary rates of Engineer without reasonable justification and prior written approval from the Director.

1.1.22 **Raw Salary Multiplier:** The Raw Salary Multiplier (when applied to Raw Salary) is 3.0 and includes all payment due Engineer for Raw Salary, salary burdens, benefits, insurance, overtime premium, payroll taxes, bonuses, overhead profit and clerical and management support, vacations, holidays and non-productive time of all kinds. The categories of service for which Raw Salary are payable are set out in Exhibit "C". All other categories of service are treated as overhead and are a part of the Raw Salary Multiplier. Payments to contract personnel and personnel employed through employment agencies are not subject to enhancement by the Raw Salary Multiplier.

1.1.23 **Reimbursable Expenses:** Reimbursable Expenses are limited to the following: (1) the ordinary and reasonable cost of copying, printing, postage, delivery services, long distance telephone calls and any additional expenses listed in Exhibit "A" incurred by the Engineer in the course of his performance of services under this Contract, including any sales tax Engineer is legally required to pay for Reimbursable Expenses; and (2) the ordinary and reasonable costs of travel including meals and lodging to and from points outside of Houston by representatives of the Engineer, not-to-exceed the amounts established under the City's then current travel reimbursement policy for its employees, if such travel is reasonably necessary to accomplish a task and authorized by the Director.

1.1.24 **Subcontractor (also "Consultant"):** The professional Consultant or other professional entity subcontracted by Engineer to provide a portion of engineering services required under the City-Engineer Contract.

1.1.25 **Supplemental Notice to Proceed:** A Notice to Proceed amending a preceding Notice to Proceed, which must be issued before services commence, containing the elements required for the original Notice to Proceed and the following:

- 1.1.25.1 A description of the changes in the scope or quality of work between the Supplemental Notice to Proceed and the preceding Notice to Proceed;
- 1.1.25.2 Acceptance for work completed under the previous Notice to Proceed, when applicable;
- 1.1.25.3 The percentage difference between the original Notice to Proceed for that Phase and all subsequent Supplemental Notices to Proceed; and
- 1.1.25.4 The incremental cost of the services in the Supplemental Notice to Proceed.

1.1.26 **Work:** The entire construction required to be provided by the Construction Documents. The Work may constitute the whole or a part of the Project and may be one or more Construction Packages.

1.2 **Review of Existing Information**

- 1.2.1 Existing utility information, existing record drawings of previous projects, and existing survey information are readily available to the Engineer and the public. The Director shall provide access to such information. It is the responsibility of the Engineer to physically gather this information from available sources.
- 1.2.2 The Engineer shall review applicable existing information and develop independent recommendations based on the information.

ARTICLE 2

DUTIES OF ENGINEER

2.1 **Services in General.** Engineer agrees to provide prompt and efficient professional services in relation to the design and management of the Project for the fees hereinafter specified. Engineer shall perform its work in accordance with the professional skill and care ordinarily provided by competent engineers, practicing in the same or similar locality and under the same or similar circumstances and professional license; and as expeditiously as is prudent considering the ordinarily professional skill and care of a competent engineer.

2.1.1 Engineer also agrees to perform such specific tasks as are set forth in Exhibit "A-1", when directed to do so by a Notice to Proceed, which is attached hereto and made a part hereof for all purposes. In the event of an inconsistency between these terms and conditions and the terms of Exhibit "A-1", the terms of Exhibit "A-1" shall control.

2.1.2 The Basic Services in this Contract are divided into three distinct phases:

- 2.1.2.1 Phase I - Preliminary Design;
- 2.1.2.2 Phase II - Final Design; and
- 2.1.2.3 Phase III - Construction Phase Services.

- 2.1.3 Preliminary and Final Designs shall conform to the latest City Design Manual as well as other design criteria that may be provided for this Contract by the Director.
- 2.1.4 The City may use a construction project manager as well as City personnel to review portions of the design; however, Engineer acknowledges that while others may suggest design ideas and components of the Project, such suggestions do not relieve Engineer of its professional responsibility to the City for complete design of the Project.
- 2.1.5 Engineer shall make periodic verbal or written reports and recommendations to the Director with respect to conditions, transactions, situations or circumstances encountered by Engineer relating to the services to be performed under this Contract and shall attend meetings determined to be necessary by the Director.
- 2.1.6 The Engineer shall reference the City's Project Title and City's Project WBS Numbers on all correspondence and submittals.
- 2.1.7 The Engineer shall manage the efforts of the Project team members and Consultants, assign manpower, delegate responsibilities, review work progress, monitor conformance to the scope regarding the budget and schedule, and otherwise direct the progress of the work.
- 2.1.8 Periodic meetings shall be held to review the progress of the engineering effort or to address other issues which may arise. The Director shall initiate meetings that include the Engineer and his Consultants, and if necessary, the Director and other applicable parties. The Engineer shall prepare and deliver meeting record memorandum of decisions and action items to the City within two business days after each meeting.
- 2.1.9 The Engineer shall notify the Director immediately of any deviation from the Scope of Services and/or Fee agreed to in this Contract. The Engineer shall not perform services outside of the Contract scope without a duly executed Amendment to this Contract.
- 2.1.10 The Engineer shall route all written communication with regulatory agencies, neighborhood associations, and City Council through the Director.
- 2.1.11 Engineer shall, upon written request, provide the Director with a written and/or electronic copy of materials prepared and/or referenced by Engineer or made available to it as a result of its performance under this Contract.
- 2.1.12 Engineer shall coordinate performance of the services hereunder with the Director and such other persons as the Director may specify.
- 2.1.13 Engineer shall perform the Basic Services or Additional Services required for any Phase of this Contract only upon receipt of a Notice to Proceed.
- 2.1.14 Engineer understands and acknowledges that the City may determine not to proceed with this Contract after completion of Engineer's services for any Notice to Proceed. Engineer understands and acknowledges that the City may determine not to proceed with this Contract after completion of Engineer's services for either Phase I - Preliminary Design or Phase II - Final Design.
- 2.1.15 Engineer shall review Notices to Proceed to ensure the work descriptions specified within the Notices to Proceed and change order forms are adequately detailed. Engineer shall report to the Director any work description that does not adequately detail the services Engineer intends to provide. Engineer may not receive payment for work if the work description in a Supplemental Notice to Proceed does not appear different in scope from the work description in a previous Notice to Proceed.

- 2.1.16 Engineer shall coordinate the performance of services hereunder with the Director and governmental agencies and other bodies having jurisdiction over this Project or City consultants performing services related to the Project.
- 2.1.17 Engineer agrees that the Director may reduce the scope of services for any of the services identified in the Notice to Proceed or may divide the Project into separate Construction Packages by issuing a written notice describing: (1) the scope of the reduced Project or the scope of each Construction Package; and (2) the revised Time of Performance.
- 2.1.18 Engineer understands and acknowledges that this Contract contains the entirety of potential services the City may request from Engineer through issuance of Notices to Proceed and that the inclusion of any particular service in this Contract does not guarantee that Engineer will be requested to perform that service during the performance of this Contract.
- 2.1.19 Time is of the essence to the performance by the Engineer under this Contract.
- 2.1.20 Engineer shall identify all government agencies having regulatory jurisdiction and obtain authorization from the City prior to communication with the agencies.

2.2 **Phase I – Preliminary Design**

- 2.2.1 Engineer shall submit to the Director, within ten days of the Notice to Proceed for Phase I, a Project Schedule reflecting actual dates for activities and reviews set forth therein. The Project Schedule shall commence on the date of the Notice to Proceed and be based upon the number of calendar days established in this Contract.
- 2.2.2 Once the Engineer has billed for the entire Limit on Phase I Compensation, Engineer shall complete the Phase I work for no further compensation.
- 2.2.3 Engineer shall submit «**ph1copy**» copies of the preliminary design and outline specification Documents to the Director in hard copy format and one electronic copy in the format requested by the Director.
- 2.2.4 Engineer shall attend preliminary conferences with officials from local, state, and federal agencies; utility companies; and other entities as necessary for the Project.
- 2.2.5 Engineer shall conduct a thorough utility plan review, and Engineer shall follow the City's Utility Coordination Ordinance and procedures.
- 2.2.6 The Notice to Proceed for Phase I shall specify Phase I milestones and the Engineer's Raw Salary with corresponding classifications times the Raw Salary Multiplier, Reimbursable Expenses, and Consultant Subcontract Cost necessary to reach each milestone. Engineer shall perform all services necessary to complete each milestone.
- 2.2.7 After receiving the Notice to Proceed for Phase I, Engineer shall perform the following Phase I services during the Project:
 - 2.2.7.1 Prepare a Preliminary Engineering Report (PER) which contains the findings and recommendations resulting from this Phase of work. Follow the guidelines in Exhibit A-1, at a minimum, and as further described in the Notice to Proceed;
 - 2.2.7.2 Prepare and participate in the Technical Review Committee (TRC) meeting, as further described in Article 2 of this Contract; and

- 2.2.8 For projects requiring drainage and pavement improvements, the Engineer shall perform the following work as part of Basic Services:
- 2.2.8.1 Hydrologic and hydraulic analysis (drainage analysis) of the existing and proposed condition for the design rainfall and the extreme rainfall. Include off-site contribution drainage areas and overland flow path analysis. Variance from current City design criteria requires City approval;
 - 2.2.8.2 Compare existing drainage system versus proposed drainage improvements in tabular and graphic profile including: hydraulic grade line; water surface elevation; ponded width; critical elevation (gutter); allowable maximum ponded elevation; allowable maximum ponded width; drainage area; 2-year peak outflow rate; and 100-year peak outflow rate;
 - 2.2.8.3 Determine the hydraulic impact and mitigation options of the proposed drainage improvements to the existing drainage system HGL of an interconnected City system including but not limited to in-line system storage and in-line system restriction as part of these services;
 - 2.2.8.4 Identify hydraulic impacts and mitigation options of the proposed drainage improvements to the receiving system of other governmental agencies including, but not limited to, detention basin, or low impact design (LID) method; and
 - 2.2.8.5 Engineer understands and acknowledges that standard engineering practice typically requires multiple modeling iterations for development of a sound proposed condition and determination of the best viable level of service.

2.3 Phase II - Final Design

- 2.3.1 The Engineer shall submit to the Director within ten days of any Notice to Proceed for Phase II, the Project Schedule updated to reflect firm dates for the beginning and end of each activity set forth therein and the review dates for such activities.
- 2.3.2 The Engineer shall submit a detailed construction cost estimate at the 60%, 90%, and Bid Ready Drawings stages:
 - 2.3.2.1 Engineer shall inform the Director of any adjustments to previous estimates of the Project construction cost which are indicated by market conditions or authorized changes in the scope and requirements of the Project within five business days of determining the adjustment; and
 - 2.3.2.2 Engineer does not guarantee that bids will not vary from the final construction cost estimate.
- 2.3.3 The Engineer shall submit **«ph2copy»** copies of the recommendations, analyses and other deliverables identified in this Contract in hard copy format and one electronic copy in the format requested by the Director.
- 2.3.4 Agency Approvals and Signatures
 - 2.3.4.1 The Engineer shall design the Project in compliance with the standard of care in the industry and the requirements of applicable laws, codes, and regulations, including

the City of Houston Building Code. The Construction Documents shall conform to applicable federal, state, and City regulations.

2.3.4.2 The Engineer shall prepare the Documents necessary to obtain approval of governmental authorities having jurisdiction over the design or operation of the Project and all public and private utilities including pipeline transmission and railroad companies affected by the Project; obtain the signatures of representatives of such governmental authorities and public and private utilities; and obtain the signatures of City officials indicated by the City's standard title block for drawings.

2.3.4.3 The Engineer shall obtain required signatures from other governmental agencies, public utilities, and private utilities, which may impact the Project prior to final approval by the Houston Public Works. Governmental agencies include, but are not limited to, Harris County and Harris County Flood Control District. Utility signatures include, but are not limited to, AT&T, Centerpoint Energy-Electric, Centerpoint Energy-Gas, and cable TV.

2.3.5 Additional Requirements

2.3.5.1 The Engineer is responsible for quality and completion of the Final Design as requested by the Director.

2.3.5.2 The Engineer shall specify the minimum acceptable performance and/or material standards associated with temporary facilities and structures that are determined necessary to implement the Project, that are potentially cause for significant disruption to local communities or businesses, and that are not solely for the convenience of the construction contractor.

2.3.5.3 The Engineer shall review results from Additional Services prior to submittal to the City and where applicable, incorporate this information into the Final Design documents. Such Additional Services may include, but not be limited to, survey, geotechnical, environmental, traffic control, storm water pollution prevention plans, street lighting plans, tree mitigation/planting plans, and special studies.

2.3.5.4 The Engineer shall incorporate the City Standard Details as applicable. The Engineer shall review each Standard Details and edit as necessary to suit Project-specific requirements and to meet the design intent of the Project. Revisions to the Standard Details shall not be incorporated based solely on Engineer's preference, but are subject to review and acceptance by the Director. The Engineer shall notify the Director of all proposed changes to Standard Details and provide reasons for such proposed changes. The Engineer shall prepare additional nonstandard details necessary for bidding and construction of the Project.

2.3.5.5 The Engineer shall verify findings from Utility Plan Review with the results of the Survey Services (see Additional Services) and identify potential conflicts during construction. Proposed designs shall strive to avoid conflicts where physically and financially feasible. Relocations of private utilities shall be coordinated with the City of Houston as early in design process as possible.

2.3.5.6 The Engineer shall obtain the written approval for the necessary Right of Entry to the properties affected by the Project, using the City's designated form that is currently in use. The Engineer shall turn in all acquired Rights of Entry to the City before proceeding to Phase III, Construction Phase Services. The Engineer shall perform its due diligence prior to coordinating with the City for additional assistance. Engineer shall identify and prepare encroachment letters.

2.3.5.7 The Engineer shall prepare a construction duration estimate for the proposed project. The construction duration estimate shall be based upon tasks, subtasks, critical dates, milestones, and deliverables and shall consider the interdependence of the various items, and adjacent construction projects. Scheduling software or other available industry methodologies may be used to assist in the construction duration estimate preparation. The Engineer must substantiate the construction duration estimate to the City and assist the City in interpreting the estimate. The construction duration estimate shall be submitted no later than the Final Drawing and Specification milestone submittal.

2.3.5.8 For Water Plant projects, the Engineer shall perform the following work:

2.3.5.8.1 Develop valve and water plant shut-down sequences for situations in which construction could necessitate a partial or entire shut-down;

2.3.5.8.2 Plan sequences in coordination with the assigned project manager of the City Drinking Water Operations Branch of the Houston Public Works Public Utilities Division ("Drinking Water Operations"), and include sequences in Bid Documents; and

2.3.5.8.3 Prepare a plan view showing locations of existing valves, and required working condition status to operate during construction.

2.3.5.9 For projects with paving and drainage improvements and other projects, as applicable:

2.3.5.9.1 Design of in-line system storage and or restriction shall be include in Basic Services; and

2.3.5.9.2 Floodplain Management Office approval is part of Basic Services.

2.3.6 Bidding Services

2.3.6.1 The Engineer shall prepare specifications in accordance with the Construction Specification Institute (CSI) standard format adopted by the City. The Engineer shall use the City Standard Specifications Table of Contents for Construction Documents as a guide for organization of the Contract Documents. The City Standard Specifications (Divisions 00-16) are prepared to include the requirements, features, construction materials, and related items desired by the City based on the City's experience and needs. The Engineer shall review each Standard Specification and supplement as necessary to suit Project-specific requirements and to meet the design intent of the Project. Supplements to the Standard Specifications shall not be incorporated based solely on the Engineer's preference. Supplements are subject to review and acceptance by the Director. The Engineer shall prepare additional

nonstandard specifications necessary for bidding and construction of the Project. Incorporate Guide Specifications necessary for bidding and construction of the Project.

- 2.3.6.2 The Engineer shall incorporate the CSI Division 00 front-end documents provided by the City into the Project specifications.
- 2.3.6.3 The Engineer shall prepare detailed Construction Documents and Conformed Drawings based on the guidelines provided by the Director. The Construction Documents shall set forth recommended alternate bid items for the Project in a manner that permits ready evaluation and comparison. The Engineer shall furnish copies of the Construction Documents and the Conformed Drawings to the City within ten business days after bid award, or as otherwise stated by the City, in the following numbers and formats: 10 full size sets; seven reduced size drawings (11 inches by 17 inches); eight sets of the project manual; and one compact disc of all associated reports. Conformed Drawings represent the Bid Documents revised to reflect all addenda changes made during the bid period.
 - 2.3.6.3.1 The Engineer shall furnish the City with an electronic copy of the final plans in a format usable by AutoCAD 2016.
- 2.3.6.4 The Engineer shall assist the City in conducting the pre-bid conference and submit meeting minutes within three business days.
- 2.3.6.5 The Engineer shall prepare necessary addenda to address issues or clarifications necessary for completion of the bidding process.
- 2.3.6.6 The Engineer shall furnish three copies of the tabulation of bids received with a written recommendation for the award of a construction contract, and submit within three business days after the bid opening.
- 2.3.6.7 The Engineer shall provide clarification, correct discrepancies, correct errors and omissions; assist the City in evaluating the bid proposals; and assist in the preparation of a construction contract between the City and the successful bidder.

2.4 Phase III – Construction Phase Services

- 2.4.1 Upon issuance of a Notice to Proceed for Phase III, Engineer shall provide professional services during construction to assist in obtaining a completed Project in accordance with the purpose and intent of the Construction Documents.
- 2.4.2 The Engineer shall participate in pre-construction conferences and monthly construction progress meetings. When requested by the construction project manager, the Engineer shall attend other meetings related to project design in lieu of attending the monthly construction progress meetings.
- 2.4.3 The Engineer shall make visits to the Project site at appropriate intervals as construction proceeds to observe and provide a written construction site observation report on the progress and the quality of the executed Work.
 - 2.4.3.1 The frequency of these visits should be monthly, after the construction contractor has mobilized and is constructing the proposed improvements. Site visits should occur during times when the construction contractor is actively performing major

construction activities. Site visits should be coordinated with the construction project manager. These monthly visits shall be combined with any site visits made to resolve field problems relating to the construction or monthly progress meetings.

2.4.3.2 The personnel provided by Engineer to perform site visits shall be experienced in the administration of construction contracts and shall be under the supervision of a professional engineer registered by the State of Texas. Supporting personnel shall be provided from the Project design team when specialized knowledge of the Project design is required.

2.4.3.3 Site Observation Reports

2.4.3.3.1 The report shall be included in the Engineer's monthly invoice, unless otherwise approved by the Director.

2.4.3.3.2 The report shall be in writing, shall include all referenced supporting documents, and shall advise the Director of deviations from the Construction Documents, the contractor's construction schedule, or other items as set forth below, observed by or brought to the attention of the Engineer at the time of the Site Observation.

2.4.3.3.3 Provide percentage of completion of the Work and an overall map, showing complete and incomplete areas.

2.4.3.3.4 The report shall be submitted to the construction project manager within three business days after the site visit.

2.4.3.3.5 The following guidelines are intended to provide consistency when preparing the required Construction Site Observation Reports. These guidelines are intended to be the minimum requirements and do not replace sound professional judgment.

2.4.3.3.5.1 A brief narrative of the type of construction activities occurring at the time of the site visit is to be prepared. The narrative should include a description of the progress to date and the general quality of the ongoing work (based upon the Contract Documents). The following items should be observed and reported for each project site:

2.4.3.3.5.1.1 The date and time period on the job site;

2.4.3.3.5.1.2 The station and street work in progress or facility location observed;

2.4.3.3.5.1.3 The description of work should include the type of activities the construction contractor was performing (e.g. excavating, backfilling, paving, etc.), approximate size of crew, number and type of

equipment in use (e.g. 1 back hoe, 3 dump trucks, etc.), and where these activities were occurring (e.g. Along Misty Valley, between Foggy Lane and Rainy Day);

- 2.4.3.3.5.1.4 Whether the work is in general conformance with the Contract Documents or report the observed deficiencies;
- 2.4.3.3.5.1.5 Identify whether the traffic control plan is being followed by the construction contractor or report the observed deficiencies and the impact the construction is having on traffic;
- 2.4.3.3.5.1.6 Whether NPDES storm water pollution prevention plan (SWPPP) is being followed by the construction contractor or report the observed deficiencies;
- 2.4.3.3.5.1.7 Whether trench safety system is in compliance with the construction contractor's submittal or report the observed deficiencies;
- 2.4.3.3.5.1.8 Note what discussions were held with the inspector, other City personnel, or construction contractor;
- 2.4.3.3.5.1.9 Note what type of progress construction contractor has made since the last site visit;
- 2.4.3.3.5.1.10 To assist in the description of the work activities, the use of color photographs is required. Two photographs are to be furnished. Include a "byline" with each photograph. The byline should describe the activity, time and place; and
- 2.4.3.3.5.1.11 Report any work that has been discovered that have not been approved by the Director or any work

that deviates from the approved submittal or Contract Documents.

2.4.3.3.5.2 Unsafe conditions and major work deficiencies observed should be immediately brought to the attention of the City Inspector and the construction project manager. Document such notifications on the report.

2.4.3.3.5.3 Report and color photographs are to be sent to the design project manager (one copy) and construction project manager (one copy).

- 2.4.4 The Engineer shall review and take appropriate action upon the shop drawings, samples, and other submissions furnished by the construction contractor and submitted to Engineer by the City. Engineer shall determine if the shop drawings, samples, and other submissions conform to the requirements of the Construction Documents. Engineer shall notify the Director if the shop drawings, samples or other submissions do not conform to the Construction Documents. Such action(s) shall be taken within 14 calendar days of receipt from the City unless approved in advance by the Director. Engineer shall maintain a log of all construction contractor submittals which shall include the submittal date, the action taken, and the date returned.
- 2.4.5 The Engineer shall prepare supporting data and provide other services (including revisions to Construction Documents) at no charge to the City in connection with change orders when such change orders are required either: (1) to make clarifications or to correct discrepancies, errors, or omissions in the Construction Documents; or (2) to conform the Construction Documents to the requirements of all applicable laws, codes, and regulations, including the City of Houston Building Code (which is expressly made applicable to this Project) as it was in effect at the time of execution of this Contract.
- 2.4.6 The Engineer shall review laboratory, shop, and mill tests of material and equipment for general conformance with Contract Document requirements and report to the Director in writing on such matters.
- 2.4.7 The Engineer shall provide design clarifications and recommendations to assist the City in resolving field problems relating to the construction. Requests for Information (RFIs) will normally be generated by the construction contractor when a situation or condition is anticipated or encountered in the field that may not be fully addressed in the construction Contract Documents. RFIs are to be reviewed, a complete and fully responsive written answer provided, and returned to the construction project manager with a copy to the design project manager within five business days depending upon the criticality and impacted cost of the condition as described in the RFI. Engineer's response to RFI's concerning proposed modifications or unforeseen conditions shall only address the technical and design aspect of the issue. Any cost or schedule impacts shall be addressed to the construction contractor by the construction project manager.
- 2.4.8 The Engineer shall evaluate construction contractor change and cost proposals and substitutions and recommend to the City to either approve or disapprove the construction contractor's proposal or substitution, unless instructed not to do so by the Director.

- 2.4.9 No less than 30 days and no more than 45 days before the expiration of the correction period established by the Construction Documents, Engineer, in company with the Director, shall observe the construction site. Within 14 days after such observation, Engineer shall furnish the Director with a written report enumerating items which require repair or replacement as provided under the correction period provisions of the Construction Documents.
- 2.4.10 To avoid misunderstandings or questions, Engineer understands and agrees that the Director shall have the responsibility for the general administration of the construction contract. Accordingly, Engineer shall not have the authority or responsibility to issue direct instructions to the construction contractor, to reject work done by the construction contractor, or to require special inspections or tests. Engineer, however, shall provide continuing counsel to the Director throughout the construction of the Project.
- 2.4.11 Within 30 calendar days of receipt of construction contractor's "as-built" drawings, the Engineer shall prepare and submit the Record Drawings to the design project manager. The Record Drawings shall become the property of the City and shall show significant changes made in the Work by the construction contractor during the construction of the Project. Record Drawings shall be prepared on the original as-bid drawings in the format specified by the Director at the time of execution. The Engineer shall prepare the record documents based solely upon the marked-up "as-built" drawings, addenda, revisions, change orders and other data furnished by the City and the construction contractor. The "as-built" drawings provided by the construction contractor shall clearly depict:
- 2.4.11.1 Any deviations from the proposed utilities alignments shown in the as-bid drawings;
 - 2.4.11.2 Actual alignments of utilities if different from alignment shown in the as-bid drawings; and
 - 2.4.11.3 The presence of existing utilities that are either not shown or shown incorrectly in the as-bid drawings should be accurately depicted.
 - 2.4.11.4 Other revisions to be shown include:
 - 2.4.11.4.1 PPCM (Potentially Petroleum Contaminated Material) encounters;
 - 2.4.11.4.2 Lengths for proposed utilities that differ from that shown in the as-bid drawings;
 - 2.4.11.4.3 Deviations from proposed tunneling lengths;
 - 2.4.11.4.4 Existing pavement composition, i.e. "unreinforced concrete with asphalt overlay";
 - 2.4.11.4.5 The name of the manufacturer for installed valves that are 20 inches and larger in diameter;
 - 2.4.11.4.6 Deviations from proposed restrained joint lengths for water line project only;
 - 2.4.11.4.7 Identify type of pipe material installed;
 - 2.4.11.4.8 Revisions due to construction contractor's Requests for Information; and
 - 2.4.11.4.9 Other changes made by the construction contractor.
 - 2.4.11.5 Project RFI's (construction contractor's Request for Information) should be reviewed to ensure the accuracy of the record drawings.

- 2.4.11.6 Changes shall be made electronically using the Conformed Drawings as a baseline. Actual alignments of utilities shall be shown. Incorrectly shown utilities shall be crossed out and drawn correctly. Inaccurate callouts shall have a line drawn through them. Revised callouts shall be noted in the Conformed Drawings.
- 2.4.11.7 All record drawing revisions shall be accompanied by a revision number contained within a triangle. The revision shall then be dated and initialed in the revision block. Any revisions made by, or under the supervision of, an Engineer other than the one whose seal appears on the subject drawing shall be signed and sealed by the Professional Engineer responsible for the revision.
- 2.4.12 Provide, in the event the Project construction exceeds the time stated in the Construction Documents by more than 30 days, the continuing services required to be done by Engineer during construction of the Project.
- 2.4.13 For contracts that require the construction contractor to service, calibrate, maintain or provide periodic site inspections for a period of one year after the date of substantial completion, the Engineer shall accompany the construction contractor and construction project manager during such visits. For projects involving startup, testing, calibration, training and operation of facilities or systems, the Engineer shall assist the construction project manager in accomplishing such tasks in accordance with the Contract Documents.
- 2.4.14 When requested by the Director, the Engineer shall visit manufacturers' facilities in order to prequalify major products and materials to be incorporated into a construction contract or verify manufacturers' compliance with the Contract Documents. The Engineer shall accompany City staff or may travel unaccompanied, as approved by the Director. A written report shall be generated to document the results of the trips. Cost for travel shall be considered a Reimbursable Expense.
- 2.4.15 Within 30 calendar days of receipt of the construction "as-built" drawings, the Engineer shall provide field verified GPS'ed information of all newly installed storm water assets (*i.e.*, manholes, inlets, junction boxes, and outfalls). All GIS information shall be delivered in the required format detailed in the Storm Water GIS Data Standards/Specifications and Procedural Document provided by the City.
- 2.5 **Additional Services:** Engineer shall perform the Additional Services specified below if and when the Director authorizes such services.
 - 2.5.1 Survey Services
 - 2.5.1.1 Perform in accordance with the City Design Manual and other City design requirements as designated in writing by the Director.
 - 2.5.1.2 Where new City of Houston monumentation is required in accordance with the City Design Manual, provide separate cost for task under surveying Additional Services.
 - 2.5.2 Drug Detection and Deterrence. Conduct random, reasonable suspicion, and post-accident drug testing necessary to comply with this Contract.
 - 2.5.3 Geotechnical Investigation. Perform in accordance with the City Design Manual and other City requirements as designated in writing by the Director.
 - 2.5.4 Environmental Site Assessment. Perform in accordance with the City Design Manual and other City requirements as designated in writing by the Director.

- 2.5.5 Special Licenses and Permits (Payment)
 - 2.5.5.1 The actual cost of special licenses and permits, including required inspection fees, shall be reimbursed by the City.
 - 2.5.5.2 This Additional Service does not include engineering work associated with Basic Services.
- 2.5.6 Traffic Control Plan (TCP)
 - 2.5.6.1 The specific traffic control work consists of the completed TCP, appropriate specifications and general notes, and traffic control construction cost estimates.
 - 2.5.6.2 The TCP shall show detailed construction sequences and the necessary traffic control phases, complete with all barricades, signing, striping, delineation, detours, temporary traffic signals and any other devices, to protect the traveling public and provide safety to the construction forces.
 - 2.5.6.3 The TCP should be accomplished with the least inconvenience to the traveling public consistent with expeditious completion of the Project in time and costs.
 - 2.5.6.4 Construction Sequencing and TCP shall be in accordance with general traffic engineering principles and practices governing traffic control during construction as prescribed by the guidelines of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD), and City of Houston requirements.
 - 2.5.6.5 Standards and Guidelines
 - 2.5.6.5.1 The construction of the Project should be scheduled or sequenced to minimize the down time for the construction contractor and to maximize the utilization of space for the travel ways. Sequencing is accomplished by partitioning the Project into construction phases, which may be further segmented into steps. A "phase" is a major portion of the construction, scheduled in a logical progression toward Project completion. A "step" is a minor portion of the construction, subordinate to a particular phase.
 - 2.5.6.5.2 The TCP should clearly distinguish areas of construction with areas of traffic for each phase. The work zone is also to be distinguished from the actual construction limits.
 - 2.5.6.5.3 Maintain minimum emergency travel lane width of ten feet at all times. If space is not available within the existing roadway, temporary widening of the pavement section may be necessary to provide a minimum 10-foot emergency travel lane.
 - 2.5.6.5.4 The TCP should contain the following basic elements:
 - 2.5.6.5.4.1 Project approach signing;
 - 2.5.6.5.4.2 Phasing overview (as applicable);
 - 2.5.6.5.4.3 Detailed plans for each phase of construction and any designated steps; and

2.5.6.5.4.4 Necessary TCP details, including appropriate City standards (Barricade & Construction, etc.), typical lane closures, and intersection details.

2.5.6.6 Drawings

2.5.6.6.1 Engineer shall verify and show existing field conditions of roadways and access to adjacent properties.

2.5.6.6.2 Engineer shall show traffic control devices and location of traffic flow, indicated by direction arrows, for each phase of the Project.

2.5.6.6.3 Engineer shall define construction areas by appropriate identifications, such as cross-hatching. Show all barricades, traffic signing, traffic signal changes, detour routing, and special intersection treatment details.

2.5.6.6.4 Engineer shall show only roadways that are existing or to be constructed under the Project. Do not show roadways that have been removed or that will be constructed in future contracts.

2.5.6.6.5 Engineer shall prepare cross sections for major thoroughfares and for each roadway variation showing the traffic lanes, construction pavement markings, delineators, barriers, buffer zone for barrels and concrete traffic barriers (CTBs), pavement drop-off, and construction details.

2.5.6.6.6 Engineer shall pictorially represent all construction signing and label with appropriate identification number as shown in TMUTCD. Show and identify all other traffic control devices in the plans and cross sections.

2.5.6.6.7 Engineer shall use a "typical" TCP detail for portions of the Project wherever possible.

2.5.6.6.8 Engineer shall prepare traffic control construction quantities and estimate of construction cost.

2.5.6.6.9 Engineer shall add general notes to the drawings or to the City's Standard General Note Drawing, as required for clarity.

2.5.6.6.10 Engineer shall include the City of Houston Standard Specifications for Traffic Control, and supplement as required.

2.5.6.7 For paving projects, include the following.

2.5.6.7.1 Engineer shall show temporary traffic control measures required during construction, such as temporary adjustments to traffic signal configurations, revisions to signal timing sequences, installations of contractor-supplied equipment and conduit to provide for proper signal operation, and parking restriction signs in areas where parking is not currently restricted but added roadway capacity is required.

2.5.6.7.2 Where substantial roadway capacity is being lost during construction, the Engineer shall show placement of contractor-supplied changeable

message signs with proposed messages to encourage use of alternative routes by the traveling public.

- 2.5.7 Storm Water Pollution Prevention Plan (SWPPP). Perform in accordance with the City Design Manual and other City requirements.
- 2.5.8 Existing Conditions Survey and Analysis
 - 2.5.7.1 The Engineer shall perform a survey and analyses of the existing conditions at designated locations. The Engineer shall submit the results of this work in a separate report.
 - 2.5.7.2 This special service is used where a separate deliverable is desired, and where the survey/analysis is not directly related to the scope of the new work, thus the engineering cost would not be included in the Basic Services.
- 2.5.9 Street Lighting Plans
 - 2.5.9.1 For new roadway construction or complete roadway reconstruction, it is the City of Houston's practice to upgrade street lighting along all roadways to current recommended levels as part of the Capital Improvement Projects.
 - 2.5.9.2 Proposed Street Lighting locations shall be provided at 1"=40' scale (minimum) consistent with project overall layouts.
 - 2.5.9.3 Design consultant will prepare the lighting layout, spacing the streetlights in accordance with the current published CenterPoint Energy Guidelines and Specifications. Distances shall avoid driveway/utility conflicts. The design should include any existing street lighting and generally begin layouts at intersections working away from them.
 - 2.5.9.4 Street Lighting plans shall show the proposed street lighting locations, electrical conduits, pull boxes and power feed locations provided by CenterPoint Energy in accordance with published CenterPoint Energy specifications.
 - 2.5.9.5 The approved layout will be submitted to CenterPoint Energy for review and cost estimate preparation for temporary or new fixtures. Conduit and pull box costs shall be included in the Engineer's Project construction cost estimate.
 - 2.5.9.6 Street Lighting Plans shall include a table showing the locations of the existing and proposed streetlights by station number.
- 2.5.10 Tree Protection, Mitigation and Planting Plan. Perform in accordance with the City Design Manual and other City requirements, as designated in writing by the Director.
- 2.5.11 Traffic Signals. Perform in accordance with the City Design Manual and other City requirements, as designated in writing by the Director.
- 2.5.12 Impact Analysis and Mitigation Report for projects requiring drainage and pavement improvements.
 - 2.5.12.1 Perform Impact Analysis and Mitigation Report when authorized by the City as designated in writing by the Director.
 - 2.5.12.2 A separate hydraulic analysis and report as required by government agencies having regulatory jurisdiction.
 - 2.5.12.3 Includes quantification of existing and proposed outflows and water surface elevation at outfall to the receiving system.

- 2.5.13 Design of detention pond or low impact development. For mitigation of adverse impacts; perform in accordance with the City Design Manual and other City requirements as designated in writing by the Director.
- 2.5.14 Technical Review Committee (TRC) Meeting
- 2.5.14.1 The Engineer shall attend a Pre-TRC meeting, as scheduled by the Director.
- 2.5.14.1.1 The purpose of the Pre-TRC is to allow the Director to review the preliminary design, presentation materials, and recommendations.
- 2.5.14.1.2 The Engineer shall have completed and submitted the Preliminary Engineering Report (PER) prior to the Pre-TRC meeting.
- 2.5.14.1.3 As part of the Pre-TRC, the Engineer shall prepare a Microsoft PowerPoint presentation, a TRC agenda and an executive summary showing the alternatives, recommendations, and estimated construction and project costs.
- 2.5.14.2 The Engineer will have two weeks to revise the report and presentation based on comments from the Pre-TRC. Once revisions have been made, the Engineer shall submit to the Director one copy of the report with all exhibits, maps, and computer model output listed in other parts of this Contract. The Executive Summary from the report will be included with the notice of TRC distribution.
- 2.5.14.3 Upon successful completion of the Pre-TRC meeting, the Engineer shall attend a TRC Meeting.
- 2.5.14.3.1 The purpose of the TRC meeting is to present the preliminary engineering recommendations to the City's Technical Review Committee for approval to proceed to Final Design.
- 2.5.14.3.2 The Engineer will provide equipment for preparation and presentation of the TRC meeting.
- 2.5.14.3.3 Members of the TRC are City staff and may include senior managers representing engineering, operations, maintenance, and construction divisions. Other stakeholders may attend at the City's direction.
- 2.5.14.3.4 The TRC will evaluate the Engineer's recommendations and approve or modify as appropriate.
- 2.5.14.3.5 Within three business days following the TRC Meeting, the Engineer shall submit a summary of the decisions and action items from the meeting, and a revised construction cost estimate.
- 2.5.14.3.6 At the conclusion of the TRC, Engineer shall:
- 2.5.14.3.6.1 Submit a revised estimate of probable construction cost, based on the outcome of the TRC;
- 2.5.14.3.6.2 Revise the PER in response to the Technical Review Committee's record of decisions and action items and furnish three final copies of the PER; and
- 2.5.14.3.6.3 Submit final PER in PDF Format on a CD in a single file with a Table of Contents.

2.5.14.3.6.4 Engineer shall make such revisions to the preliminary design as may be required by the Director as a result of Committee recommendations.

2.5.14.3.7 Upon acceptance by the TRC of the need to acquire additional right-of-way or easements for the project, the Director may issue to the Engineer a Notice to Proceed for the preparation of right-of-way and easement documents. These documents shall be delivered to the Director within the time specified in the Notice to Proceed.

2.5.15 Independent Quantity Take-Off

2.5.15.1 Engineer shall perform the following service(s).

2.5.15.1.1 Have an independent third party (Estimator) perform a quantity take-off from the Bid Ready Drawings and Specifications prior to Final Submittal. Engineer may provide other documents that will assist the Estimator to complete the task; however, these documents shall in no way compromise the independent judgment of the Estimator. Estimator shall identify each bid item and prepare the quantities for each bid item in accordance with the City of Houston's Standard Construction Specifications and/or Custom Specifications, as applicable, that is part of the detailed construction cost estimate.

2.5.15.1.2 Engineer is to review the quantity take-off with the Estimator and resolve all discrepancies in the bid items and quantities.

2.5.15.1.3 Engineer is to submit a signed letter confirming that an independent quantity take-off was performed, identifying the independent third party who performed the quantity take off, and certifying the accurateness of the bid items and quantities that are included in the detailed construction cost estimate.

2.5.15.1.4 The Engineer shall submit a check print of the third party review and mark-up of an independent quantity take-off to accompany the signed letter deliverable. Each unit price item shall be highlighted indicating that it has been checked. The check print shall be initialed by the author and the reviewer.

2.5.16 Other Additional Services

2.5.16.1 Provide the services of a Consultant to perform subsurface investigations, including performance of test borings, soil samples, and other foundation investigations, laboratory analyses of the samples, and engineering analyses. Engineer or the Consultant shall prepare a detailed report of all findings, and Engineer shall deliver to the Director two bound copies of the report and an electronic copy in the form requested by the Director.

2.5.16.2 Prepare special studies and reports, such as environmental Documents (including representation and testimony at hearings and community meetings), grant applications, etc.

- 2.5.16.3 Provide the services of an independent cost estimator as a consultant to make a comprehensive construction cost estimate for the Project, in a form satisfactory to the Director. The independent cost estimate shall be in addition to the cost estimates prepared by Engineer.
- 2.5.16.4 Provide value engineering services including the review of other engineers, either within the same organization or in other firms, to determine whether a proposed solution is optimum and, if not, to suggest a better approach for meeting the Project's functional and financial criteria.
- 2.5.16.5 Provide a scale model of the Project.
- 2.5.16.6 Reproduce Construction Documents, reports, and other materials, other than those reproductions included in the Basic Services, and excluding reproductions for the office use of Engineer and Engineer's Consultants.
- 2.5.16.7 Provide, in the event of termination of Engineers services pursuant to this Contract, such services as are reasonable and necessary for preserving partially finished work products or for the recording of work products in a particular manner (including the making of record prints of drawings, etc.).
- 2.5.16.8 Provide construction management services on the site during Project construction.
- 2.5.16.9 During the Final Design or Construction Phase, make revisions to Construction Documents, prepare addenda, or prepare change orders to reflect Project scope changes requested by the Director, required to address changed conditions or change in direction previously approved by the Director, mandated by changing governmental laws, or necessitated by City's acceptance of substitutions proposed by the construction contractor.
- 2.5.16.10 Prepare supporting data and other services in connection with change orders, other than those change orders and related services included in Section 2.4 of Article 2 of this Contract.
- 2.5.16.11 Consult with the City concerning replacement of any construction work damaged by fire or any other causes and furnish professional services as may be required in connection with the replacement of such work.
- 2.5.16.12 Prepare or obtain the services of a Consultant to prepare Operation and Maintenance (O & M) Manuals.
- 2.5.16.13 Prepare for, present to, and attend preliminary conferences with the City's Technical Review Committee, as requested by the Director. In addition to the foregoing, Engineer shall attend all other meetings as required by the Director.
- 2.5.16.14 Perform services in the event the Basic Services are suspended by the Director for a period exceeding 12 months, and the Engineer provides evidence satisfactory to the Director that additional effort is necessary to resume the Basic Services.
- 2.5.16.15 Unless instructed otherwise by the Director, cooperate fully with surety's representative in the event of construction contractor default; permit surety to copy all relevant documents at surety's expense.

- 2.5.16.16 Provide any Additional Services or other design services related to the Project and not otherwise included in the Basic Services or Additional Services as requested by the Director.
- 2.5.16.17 Travel to points outside Houston and its extraterritorial jurisdiction, if such travel is reasonably necessary to accomplish a task under this Contract and is authorized in writing by the Director. Travel costs shall include common carrier fares, ground transportation expenses and parking fees, and for overnight trips, the costs of lodging and meals and shall not exceed the appropriation limits of this Contract.

2.6 **Time of Performance:** Engineer shall perform the Basic Services in accordance with the following:

- 2.6.1 Phase I - Preliminary Design - «**ph1days**» calendar days for each Construction Package separately;
- 2.6.2 Phase II - Final Design - «**ph2days**» calendar days for each Construction Package separately;
- 2.6.3 Phase III - Construction Phase Services shall be completed at reasonable intervals in conjunction with the progress of the Project construction and for the period of construction time stated in the Construction Documents;
- 2.6.4 Time taken for review of Phase I and Phase II designs by City personnel shall be in addition to the calendar day periods specified above. In the preparation of the Project Schedule, Engineer shall allow at a minimum, 21 calendar days for City review of Phase I, and 21 calendar days for City review of Phase II; and
- 2.6.5 Upon written request of Engineer to the Director and the Director's approval, the City shall grant time extensions during each Phase for any delays caused by the City or other agencies with which the services must be coordinated and over which Engineer has no control.

2.7 **Engineer's Invoices**

- 2.7.1 Unless instructed otherwise in writing by the Director, Engineer must invoice the City for all Phase I amounts plus all Phase I-related Additional Services and Reimbursable Expenses before the Director issues a Notice to Proceed for Phase II.
- 2.7.2 Unless instructed otherwise in writing by the Director, Engineer must invoice the City for all Phase II lump sum payments plus all Phase II-related Additional Services and Reimbursable Expenses before the Director issues a Notice to Proceed for Phase III.
- 2.7.3 The amounts set out in the Phases I, II, and III Notices to Proceed shall constitute Engineer's total compensation under the Contract for a Construction Package unless the Director requests in writing an Additional Service or Reimbursable Expense not related to any of the above phases.
- 2.7.4 If Director and Engineer do not agree to the lump sum amount for such Construction Package, then the Director may send notice to the Engineer deleting such Construction Package from the Contract.
- 2.7.5 To receive fees for Phase I Services, Engineer shall submit copies of original invoices showing the corresponding Phase I Services and associated costs performed for each Construction Package and not previously invoiced. The invoice must include itemizations supporting the costs included. The itemization shall include, where applicable:
 - 2.7.5.1 A breakdown of the type and cost of each item included within the definition of Reimbursable Expenses;

- 2.7.5.2 A breakdown of the individual expenditures allowable as travel costs in the definition of Reimbursable Expenses;
 - 2.7.5.3 The actual invoice cost of Consultant Subcontract Cost plus Consultant Markup, including a copy of the Consultant's invoice;
 - 2.7.5.4 The number of hours expended by Engineer's employees times Raw Salary times Raw Salary Multiplier for each Construction Package and upon request by the Director a copy of employee time sheets;
 - 2.7.5.5 Reasonable costs of contract personnel and personnel employed through employment agencies plus the Consultant Markup; and
 - 2.7.5.6 A breakdown of the work performed in the Construction Package and a percent of the total that is completed.
- 2.7.6 To receive fees for Additional Services, Engineer shall submit copies of original invoices showing the corresponding Additional Services performed and not previously invoiced. The invoice must include itemizations supporting the costs included. The itemization shall include, where applicable:
- 2.7.6.1 A breakdown of the type and cost of each item included within the definition of Reimbursable Expenses;
 - 2.7.6.2 A breakdown of the individual expenditures allowable as travel costs in the definition of Reimbursable Expenses;
 - 2.7.6.3 The actual invoice cost of Consultant Subcontract Cost plus Consultant Markup, including a copy of that the Consultant's invoice;
 - 2.7.6.4 The number of hours expended by Engineer's employees times the Raw Salary times the Raw Salary Multiplier for each Additional Service and upon request by the Director a copy of employee time sheets;
 - 2.7.6.5 Reasonable contract personnel cost of personnel and personnel employed through employment agencies, plus Consultant Markup; and
 - 2.7.6.6 A reference to the work description in the applicable Notice to Proceed that authorized the item.
- 2.7.7 With each monthly invoice Engineer shall submit a copy of the updated Project Schedule, a brief narrative of the services performed in the preceding month, and a list of the planned activities for the following month. Any request for modification of the approved Project Schedule shall be submitted by Engineer in writing for the Director's consideration.
- 2.7.8 Claims for Additional Services shall be submitted for payment within a maximum of 60 days from the date of completion of the Additional Service.
- 2.7.9 Upon request of the Director, Engineer shall submit reports to the Director for informational purposes, showing all of the information set out in this Section, although such information shall not affect the method by which Engineer is paid.

2.8 **Insurance.** Engineer shall provide and maintain certain insurance and Endorsements in full force and effect at all times during the term of this Contract and any extensions thereto. Such insurance is described as follows.

2.8.1 **Risks and Limits of Liability**

2.8.1.1 Engineer shall maintain the following insurance coverages in the following amounts:

<u>COVERAGE</u>	<u>LIMIT OF LIABILITY</u>
Workers' Compensation	<ul style="list-style-type: none"> • Texas Statutory for Workers' Compensation
Employer's Liability	<ul style="list-style-type: none"> • Bodily Injury by accident \$1,000,000 (each accident) • Bodily Injury by Disease \$1,000,000 (policy limit) • Bodily Injury by Disease \$1,000,000 (each employee)
Commercial General Liability: Including Broad Form Coverage, Bodily Injury and Property Damage (Products and Completed Operations required when Physical Operations performed)	<ul style="list-style-type: none"> • \$1,000,000 Limit each Occurrence and \$2,000,000 aggregate per 12-month period
Automobile Liability	<ul style="list-style-type: none"> • \$1,000,000 combined single limit for (1) Any Auto or (2) All Owned, Hired, and Non-Owned Autos
Professional Liability	<ul style="list-style-type: none"> • \$2,000,000 Limit per claim/aggregate
Excess Liability applicable to Commercial General and Automobile Liability	<ul style="list-style-type: none"> • \$1,000,000 Limit each occurrence/aggregate
Aggregate Limits are per 12-month policy period unless otherwise indicated.	

2.8.2 **Insurance Coverage.** At all times during the term of this Contract and any extensions or renewals, Contractor shall provide and maintain insurance coverage that meets the Contract requirements. Prior to beginning performance under the Contract, at any time upon the Director's request, or each time coverage is renewed or updated, Contractor shall furnish to the Director current certificates of insurance, endorsements, all policies, or other policy documents evidencing adequate coverage, as necessary. Contractor shall be responsible for and pay (a) all premiums and (b) any claims or losses to the extent of any deductible amounts. Contractor waives any claim it may have for premiums or deductibles against the City, its officers, agents, or employees. Contractor shall also require all subcontractors or consultants whose subcontracts exceed \$100,000 to provide proof of insurance coverage meeting all requirements stated above except amount. The amount must be commensurate with the amount of the subcontract, but no less than \$500,000 per claim.

2.8.3 **Form of insurance.** The form of the insurance shall be approved by the Director and the City Attorney; such approval (or lack thereof) shall never (a) excuse non-compliance with the terms of this Section, or (b) waive or estop the City from asserting its rights to terminate this Contract. The policy issuer shall (1) have a Certificate of Authority to transact insurance business in Texas, or (2) be an eligible non-admitted insurer in the State of Texas and 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 Best's Key Rating Guide.

2.8.4 **Required Coverage.** The City shall be an Additional Insured under this Contract, and all policies except Professional Liability and Worker's Compensation must name the City as an Additional Insured. Contractor waives any claim or right of subrogation to recover against the City, its officers, agents, or employees, and each of Contractor's insurance policies except professional liability must contain coverage waiving such claim. Each policy, except Workers' Compensation and Professional

Liability, must also contain an endorsement that the policy is primary to any other insurance available to the Additional Insured with respect to claims arising under this Contract. If professional liability coverage is written on a "claims made" basis, Contractor shall also provide proof of renewal each year for two years after substantial completion of the Project, or in the alternative: evidence of extended reporting period coverage for a period of two years after substantial completion, or a project liability policy for the Project covered by this Contract with a duration of two years after substantial completion.

2.8.5 **Notice.** **CONTRACTOR SHALL GIVE 30 DAYS' ADVANCE WRITTEN NOTICE TO THE DIRECTOR IF ANY OF ITS INSURANCE POLICIES ARE CANCELED OR NON-RENEWED.** Within the 30-day period, Contractor shall provide other suitable policies in order to maintain the required coverage. If Contractor does not comply with this requirement, the Director, at his or her sole discretion, may immediately suspend Contractor from any further performance under this Agreement and begin procedures to terminate for default.

2.9 **INDEMNIFICATION. ENGINEER AGREES TO AND SHALL, TO THE EXTENT PERMITTED BY TEXAS LOCAL GOVERNMENT CODE §271.904, 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 ARISING AS A RESULT OF ENGINEER'S AND/OR ITS AGENTS', EMPLOYEES', OFFICERS', DIRECTORS', CONSULTANTS', OR SUBCONTRACTORS' ACTUAL OR ALLEGED NEGLIGENCE OR INTENTIONAL ACTS OR OMISSIONS IN CONNECTION WITH ITS PERFORMANCE UNDER THIS AGREEMENT, WHETHER ENGINEER IS IMMUNE FROM LIABILITY OR NOT. ENGINEER SHALL INDEMNIFY AND HOLD THE CITY HARMLESS DURING THE TERM OF THIS AGREEMENT AND FOR FOUR YEARS AFTER THE AGREEMENT TERMINATES. THE INDEMNITY SHALL APPLY WHETHER OR NOT THE EVENT IS CAUSED BY THE CONTRIBUTORY NEGLIGENCE OF THE CITY.**

2.10 **Ownership of Documents.** Engineer shall grant and assign and hereby does grant and assign to the City all right, title, interest and full ownership worldwide in and to any work, invention and all Documents, including Construction Documents, or any modifications or improvements to them, and the copyrights, patents, trademarks, trade secrets, source and object codes and any other possessory or proprietary rights therein, that are discovered, conceived, developed, written or produced by the Engineer, its agents, employees, contractors and subcontractors pursuant to this Contract (collectively, the "Works"), to have and to hold the same unto the City absolutely. This right of ownership shall include the City's ability to modify, sell, or license all computer programs, including all access to programming codes necessary to do so.

2.10.1 Engineer agrees that neither it nor any of its agents, employees, contractors or subcontractors shall have any right to assert or establish a claim or exercise any of the rights embodied in any copyrights, patents, trademarks, trade secrets and any other possessory or proprietary rights related to the Works. If requested by the Director, the Engineer shall place a conspicuous notation upon any such Works which indicates that the copyright, patent, trademark or trade secret thereto is owned by the City of Houston.

- 2.10.2 Engineer shall execute all documents required by the Director to further evidence such assignment and ownership. Engineer shall cooperate with the City in registering, creating or enforcing any copyrights, patents, trademarks, trade secrets or other possessory or proprietary rights arising hereunder. If any assistance by the Engineer is requested and rendered pursuant to this Section, the City shall reimburse Engineer for all out-of-pocket expenses incurred by Engineer in rendering such assistance. On termination of this Contract or upon request by the Director, Engineer shall deliver all Works to the City. Engineer shall obtain written agreements in the form specified in Exhibit "H" from its agents, contractors and subcontractors performing work hereunder which bind them to the terms contained in this Section.
- 2.10.3 The Engineer may, however, retain copies of such Documents. The Engineer shall have the right to use such copies internally, but the Engineer may not sell, license or otherwise market such Documents. Upon request by the Director, the Engineer shall deliver such Documents to the City.
- 2.10.4 Engineer does not represent that the Documents are or are intended to be, suitable for use on other Projects or extensions of this Project, to the extent that the Documents are site-specific. Any modification to the Engineer's work product or unintended use of same will be at the sole risk of the City.

2.11 **Consultants**

- 2.11.1 Engineer shall not subcontract any part of its Contract without approval by the Director.
- 2.11.2 Engineer shall be responsible for services performed by Consultants to the same extent as if the services were performed by Engineer.
- 2.11.3 Engineer shall replace any Consultant when requested to do so by the Director, who shall state the reasons for such request.
- 2.11.4 Engineer shall provide the Director with a copy of any of its Consultant subcontracts at Director's request.

2.12 **Payment of Consultants**

- 2.12.1 Engineer shall make timely payments to all persons and entities supplying labor, materials or equipment for the performance of this Contract in accordance with the State of Texas Prompt Payment Act.
- 2.12.2 Engineer agrees to protect, defend, and indemnify the City from any claims or liability arising out of Engineer's failure to make such payments.
- 2.12.3 Disputes relating to payment of MWBE subcontractors shall be submitted to mediation in the same manner as any other disputes under the MWBE subcontract. Failure of Engineer to comply with the decisions of the mediator may, at the sole discretion of the City, be deemed a material breach leading to termination of this Contract.

- 2.13 **Participation in Bidding and Construction.** Engineer agrees not to participate in the bidding process as a bidder and not to engage in construction of the Project as a contractor or subcontractor. By written agreement, Engineer shall require each Consultant for Project engineering services to be bound by the requirements of this Section.

2.14 **Equal Employment Opportunity.** Contractor shall comply with the City's Equal Employment Opportunity Ordinance as set out in Section 15-17 of the Code of Ordinances.

2.15 **Minority and Women Business Enterprises Participation**

2.15.1 It is the City's policy to ensure that Minority and Women Business Enterprises ("MWBEs") have the full opportunity to compete for and participate in City contracts. The objectives of Chapter 15, Article V of the City of Houston Code of Ordinances, relating to City-wide Percentage Goals for contracting with MWBEs, are incorporated into this Contract.

2.15.2 Engineer shall make good faith efforts to award subcontracts or supply agreements in at least **«mwbe_goals»%** of the value of this Contract to MWBEs. Engineer acknowledges that it has reviewed the requirements for good faith efforts on file with the City's Office of Business Opportunity ("OBO") and will comply with them. To this end, Engineer shall maintain records showing:

2.15.2.1 Subcontracts and supply agreements with Minority Business Enterprises;

2.15.2.2 Subcontracts and supply agreements with Women's Business Enterprises; and

2.15.2.3 Specific efforts to identify and award subcontracts and supply agreements to MWBEs.

2.15.3 Engineer shall submit periodic reports of its efforts under this Section to the Director of Office of Business Opportunity in the form and at the times he or she prescribes.

2.15.4 Engineer shall require written subcontracts with all MWBE subcontractors and suppliers and shall submit all disputes with MWBE subcontractors to binding mediation in Houston, Texas if directed to do so by the Director of Office of Business Opportunity. If Engineer is an individual person (as distinguished from a corporation, partnership, or other legal entity), and the amount of the subcontract is \$50,000 or less, then the subcontract must also be signed by the attorneys of the respective parties.

2.16 **Drug Abuse Detection and Deterrence**

2.16.1 It is the policy of the City to achieve a drug-free workforce and workplace. The manufacture, distribution, dispensation, possession, sale, or use of illegal drugs or alcohol by contractors while on City Premises is prohibited. Engineer shall comply with all the requirements and procedures set forth in the Mayor's Drug Abuse Detection and Deterrence Procedures for Engineers, Executive Order No. 1-31 ("Executive Order"), which is incorporated into this Contract and is on file in the City Secretary's Office.

2.16.2 Before the City signs this Contract, Engineer shall file with the Contract Compliance Officer for Drug Testing ("CCODT"):

2.16.2.1 A copy of its drug-free workplace policy;

2.16.2.2 The Drug Policy Compliance Agreement substantially in the form set forth in Exhibit "E"; and

2.16.2.3 A written designation of all safety impact positions or, if applicable, a Certification of No Safety Impact Positions, substantially in the form set forth in Exhibit "G".

2.16.3 If Engineer files a written designation of safety impact positions with its Drug Policy Compliance Agreement, it also shall file every six months during the performance of this Contract or on completion of this Contract if performance is less than six months, a Drug Policy Compliance Declaration in a form

substantially similar to Exhibit "F". Engineer shall submit the Drug Policy Compliance Declaration to the CCODT within 30 days of the expiration of each six-month period of performance and within 30 days of completion of this Contract. The first six-month period begins to run on the date the City issues its Notice to Proceed or if no Notice to Proceed is issued, on the first day Engineer begins work under this Contract.

2.16.4 Engineer also shall file updated designations of safety impact positions with the CCODT if additional safety impact positions are added to Engineer's employee work force.

2.16.5 Engineer shall require that its subcontractors comply with the Executive Order, and Engineer shall secure and maintain the required documents for City inspection.

2.17 **Confidentiality.** Engineer and each of its Consultants shall keep all Documents and City work products or data it receives in strict confidence. Engineer shall not divulge such records or the information contained therein except as approved in writing by the Director or as otherwise required by law.

2.18 **Licenses and Permits.** Engineer shall obtain, maintain, and pay for all licenses, permits, and certificates including all professional licenses required by any statute, ordinance, rule, or regulation. Engineer shall immediately notify the Director of any suspension, revocation, or other detrimental action against his or her license.

2.19 **Title VI Assurances.** The requirements and terms of the United States Department of Transportation Title VI program, as revised from time to time, are incorporated into this Contract for all purposes. Engineer has reviewed Exhibit "J", and shall comply with its terms and conditions.

2.20 **Pay or Play.** The requirements and terms of the City of Houston Pay or Play program, as set out in Executive Order 1-7, as revised from time to time, are incorporated into this Contract for all purposes. Engineer has reviewed Executive Order No. 1-7 and shall comply with its terms and conditions. Refer to Exhibit "I".

2.21 **Anti-Boycott of Israel.** Contractor certifies that Contractor is not currently engaged in, and agrees for the duration of this Agreement not to engage in, the boycott of Israel as defined by Section 808.001 of the Texas Government Code.

2.22 **Zero Tolerance Policy for Human Trafficking and Related Activities.** The requirements and terms of the City of Houston's Zero Tolerance Policy for Human Trafficking and Related Activities, as set forth in Executive Order 1-56, as revised from time to time, are incorporated into this Agreement for all purposes. Contractor has reviewed Executive Order 1-56, as revised, and shall comply with its terms and conditions as they are set out at the time of this Agreement's effective date. Contractor shall notify the City's Chief Procurement Officer, City Attorney, and the Director of any information regarding possible violation by the Contractor or its subcontractors providing services or goods under this Agreement.

2.23 **Preservation of Contracting Information.**

- 2.23.1 The requirements of Subchapter J, Chapter 552, Texas Government Code, may apply to this Contract and the Contractor agrees that this Contract can be terminated if the Contractor knowingly or intentionally fails to comply with a requirement of that subchapter. If the requirements of Subchapter J, Chapter 552, Texas Government Code, apply to this Contract, then for the duration of this Contract (including the initial term, any renewal terms, and any extensions), Contractor shall preserve all Contracting Information, as defined by Section 552.003 of the Texas Government Code, related to this Contract as provided by the records retention requirements applicable to the City pursuant to federal or state law or regulation, city ordinance or city policy, which record retention requirements include but are not limited to those set forth in Chapters 201 and 205 of the Texas Local Government Code and Texas Administrative Code Title 13, Chapter 7. Within five business days after receiving a request from the Director, Contractor shall provide any Contracting Information related to this Contract that is in the custody or possession of Contractor. Upon the expiration or termination of this Contract, Contractor shall, at the Director's election, either (a) provide, at no cost to the City, all Contracting Information related to this Contract that is in the custody or possession of Contractor, or (b) preserve the Contracting Information related to this Contract as provided by the records retention requirements applicable to the City pursuant to federal or state law or regulation, city ordinance or city policy.
- 2.23.2 If Contractor fails to comply with any one or more of the requirements of this Section, Preservation of Contracting Information, or Subchapter J, Chapter 552, Texas Government Code, then, in accordance with and pursuant to the processes and procedures set forth in Sections 552.373 and 552.374 of the Texas Government Code, the Director shall provide notice to the Contractor and may terminate this Contract. To effect final termination, the Director must notify Contractor in writing with a copy of the notice to the CPO. After receiving the notice, Contractor shall, unless the notice directs otherwise, immediately discontinue all services under this Contract, and promptly cancel all orders or subcontracts chargeable to this Contract.

ARTICLE 3

DUTIES OF THE CITY

- 3.1 **Fees, In General.** The City shall pay fees to the Engineer for all services rendered by Engineer in accordance with the terms and conditions of this Contract, subject to the appropriation limits of Article 3 hereof.
- 3.1.1 If services are suspended by the Director for a period exceeding 12 months, Engineer's fees will be subject to renegotiation, subject to the appropriation limits described this Contract.
- 3.1.2 If Engineer receives payment from the City for work performed by any Consultant or for materials provided by any supplier and Engineer withholds or has withheld payment to the Consultant or supplier on account of a deficiency in the quality or quantity of that Consultant's or supplier's work or materials, or if the Director reasonably believes that the work or a portion thereof cannot be completed for the remaining unpaid amount of any applicable limit or lump sum prices, the City may withhold the amount associated with such work or materials from any pending or future payments to the Engineer until the next regular payment to Engineer occurring after the City receives reasonable documentation that the deficiency has been remedied.
- 3.1.3 The City shall not authorize any work on the Project without issuing a Notice to Proceed.

3.1.4 All invoices are subject to approval by the Director and are due and payable 30 days after receipt. All payments shall be made by check. Such checks shall be made payable to Engineer and payments shall be addressed to Engineer at its address specified herein for notices. The City agrees that it will not unreasonably delay or withhold payment or approval of any invoice. Neither partial payments made hereunder nor approval of invoices or services by the Director shall be construed as final acceptance or approval of that part of Engineer's services to which such partial payment or approval relates nor shall such payments be construed as relieving Engineer of any of its obligations hereunder with respect thereto.

3.2 **Fees for Basic Services.** Subject to all the terms and conditions of this Contract, the City shall pay, and Engineer agrees to accept as full compensation for the Basic Services, the following fees.

3.2.1 Phase I - Preliminary Design. Subject to the Limit on Phase I Compensation, the City shall pay a fee for the complete performance of Phase I Basic Services work consisting of:

3.2.1.1 Raw Salary Times Raw Salary Multiplier, plus

3.2.1.2 Reimbursable Expenses, plus

3.2.1.3 Consultant Subcontract Cost for services that Engineer subcontracts to a Consultant, plus

3.2.1.4 Reasonable fees paid to contract personnel and personnel employed through employment agencies.

3.2.2 Phase II – Final Design Phase Service. For Phase II services performed for a Construction Package, the City shall pay a Negotiated Lump Sum which will be set out in the Notice to Proceed for such Construction Package. The Director and Engineer shall agree in writing to a Negotiated Lump Sum fee for each Construction Package prior to issuance of the Phase II Notice to Proceed. Engineer guarantees that it shall perform all Phase II services for the Negotiated Lump Sum fees set out in the respective Notices to Proceed.

3.2.3 Phase III - Construction Phase Services. For Phase III services performed for a Construction Package, the City shall pay a Negotiated Lump Sum which will be set out in the Notice to Proceed for such Construction Package. The Director and Engineer shall agree in writing to a Negotiated Lump Sum fee for each Construction Package prior to issuance of the Phase III Notice to Proceed. Engineer guarantees that it shall perform all Phase III services for the Negotiated Lump Sum fees set out in the respective Notices to Proceed.

3.2.4 At the discretion of the Director, Phase II and III services for a Construction Package may be included in the same Notice to Proceed for a Construction Package. For Phase II and III services performed for a Construction Package, the City shall pay a Negotiated Lump Sum which will be set out in the Notice to Proceed for such Construction Package. The Director and Engineer shall agree in writing to a Negotiated Lump Sum fee for each Phase II and III respectively for each Construction Package prior to issuance of the Notice to Proceed. Engineer guarantees that it shall perform Phase II and III services for the Negotiated Lump Sum fees set out in the respective Notices to Proceed.

3.2.5 After Engineer has completed the performance of all of the required services for Phase III, the City shall pay Engineer the total amount owed for that Phase less any amounts previously paid pursuant to the monthly invoices.

3.3 **Fees for Additional Services.** Subject to all the terms and conditions of this Contract, the City shall pay and Engineer agrees to accept, as full compensation for authorized Additional Services, the fees specified in this Section.

3.3.1 Survey Additional Services: For Route Topographical Survey only, the City shall pay Engineer a portion of the Negotiated Lump Sum fee according to the terms in the applicable Notice to Proceed or at the rate of **\$«M_1survey»** per linear foot for **«M_1surveydescript»**, and **\$«M_2survey»** per linear foot for **«M_2surveydescript»** of actual Survey performed. If these services are provided by the Engineer's Consultant, the City shall pay Engineer at the above rates plus Consultant markup.

3.3.2 For Drug Detection and Deterrence Additional Services, the City shall pay Engineer a portion of the Negotiated Lump Sum fee according to the terms in the applicable Notice to Proceed in advance or as follows:

3.3.2.1 The cost of invoiced laboratory analyses necessary for personnel producing services under this Contract; and

3.3.2.2 Raw Salary times Raw Salary Multiplier for employees' time not-to-exceed one hour total for each random test conducted.

3.3.3 For all other Additional Services, the City will pay Engineer a portion of the Negotiated Lump Sum fee according to the terms in the applicable Notice to Proceed.

3.4 **Limit of Appropriation.** Engineer recognizes that under certain provisions of the Charter of the City of Houston, the City may not obligate itself by contract to an extent in excess of an amount appropriated by the City Council and further recognizes that only **\$«basicappro»** has been appropriated and budgeted by City Council to pay the Cost of Basic Services hereunder and that only **\$«addappro»** has been appropriated and budgeted by the City Council to pay the cost of Additional Services hereunder for a total amount of **\$«totalappro»**.

3.4.1 In the event the appropriation for Basic Services is insufficient to compensate Engineer for Basic Services, Engineer shall suspend its Basic Services at such time as the total appropriation for Basic Services is expended, but shall resume such Basic Services, if and when authorized by the Director as provided elsewhere herein, upon transfer of funds by the Director or appropriation of additional funds by the City Council for Basic Services.

3.4.2 In the event the appropriation for Additional Services is insufficient to compensate Engineer for authorized Additional Services in accordance with the payment provisions of Article 3 hereof, Engineer shall suspend its Additional Services at such time as the total appropriation for Additional Services is expended, but shall resume such Additional Services, if and when authorized by the Director as provided elsewhere herein, upon transfer of funds by the Director or appropriation of additional funds by the City Council for Additional Services.

3.4.3 The Director may authorize the transfer of funds between Basic Services and Additional Services when necessary to continue services by issuing a Supplemental Notice to Proceed, provided that the transfer of funds does not exceed 25% of the Negotiated Lump Sum in the original Notice to Proceed and total funds authorized do not exceed the total amount appropriated by City Council.

3.5 **Method of Payment.** The City shall pay on the basis of monthly invoices submitted by Engineer and approved by the Director, showing the services performed and the fee. Invoices from Engineer shall show the hours worked in the preceding month and the corresponding hourly rates for Services. The City shall pay Engineer within 30 days of the receipt and approval of the invoices. The City shall make payments to the Engineer at the address for notices.

3.5.1 The City of Houston's standard payment term is to pay 30 days after receipt of invoice or receipt of goods or services, whichever is later, according to the requirements of the Texas Prompt Payment Act (Tx. Gov't Code, Ch. 2251). However, the City will pay in less than 30 days in return for an early payment discount from vendor as follows:

3.5.1.1 Payment Time - 10 Days: 2% Discount; or

3.5.1.2 Payment Time - 20 Days: 1% Discount.

If the City fails to make a payment according to the early payment schedule above, but does make the payment within the time specified by the Prompt Payment Act, the City shall not receive the discount, but shall pay no other penalty. When the payment date falls on a Saturday, Sunday, or official holiday when City offices are closed and City business is not expected to be conducted, payment may be made on the following business day.

3.6 **Certain Duties of the City**

3.6.1 In addition to its other duties under this Contract, the City shall perform the following services:

3.6.1.1 When requested to do so in writing by the Engineer, provide access to information such as existing drawings, maps, field notes, statistics, computations, and other data in the possession of the City which in the Director's opinion will assist the Engineer in the performance of its services hereunder; and

3.6.1.2 Examine the Construction Documents submitted by the Engineer and render decisions pertaining thereto within a reasonable time so as to avoid unnecessary delay in the progress of the Engineer's services.

3.7 **Partial Payments**

3.7.1 For Phase II and III Basic Services the City shall make partial payments of the fees on the basis of monthly invoices submitted by Engineer and approved by the Director. The invoices must show for each Construction Package the following on the standard format provided by the City:

3.7.1.1 The percentage of the total services completed in the applicable Phase in the preceding month;

3.7.1.2 A summary of the services performed during the period covered by the invoice; and

3.7.1.3 The amount due for such services, according to the below Milestones.

3.7.2 The amount of partial payments due for services performed during Phase II shall be a percentage of the total fee due for each Construction Package for Phase II services equal to the percentage of the total Phase II services performed during the period covered by the invoice. The percentage of the total fee due for partial payments for Phase II services shall not exceed the following:

<u>MILESTONE</u>	<u>MAXIMUM PHASE II PAYMENT</u>
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1. Research Utilities	«resutperc»%
2. Plot Topographic Survey and Utilities	«plotperc»%
3. Submit 60% Drawings	«submit60»%
4. Submit 90% Final Drawings and Specifications	«finalperc»%
5. Bid-Ready Drawings and Specifications	95%
6. Completion of Phase II Services	100%

3.7.3 The amount of partial payment due for services performed during Phase III shall be a percentage of the lump sum fee equal to the percentage of the total services for that Phase performed during the period covered by the invoice.

3.7.4 The amount of partial payment due for Additional Services shall be a percentage of the lump sum fee equal to the percentage of the total services (for the Phase for which the Additional Service was authorized) performed during the period covered by the invoice.

3.7.5 Definition of above Phase II Milestones for payment

3.7.5.1 Research Utilities

3.7.5.1.1 Engineer obtains and completes review of available record drawings.

3.7.5.1.2 Engineer completes the utility plan review, as defined in this Scope of Services.

3.7.5.1.3 Engineer completes coordination with other agencies, as defined in this Scope of Services.

3.7.5.1.4 Engineer verifies information obtained in this Section against findings from Survey.

3.7.5.1.5 Engineer obtains maps and correspondence from applicable private utilities, showing and verifying location of existing private utilities.

3.7.5.2 Plot of Topographical Surveys and Utilities. Engineer submits set of plan drawings showing results of topographic survey and location of existing public and private utilities.

3.7.5.3 Submit Drawings and Draft Specifications (60% Design Submittal)

3.7.5.3.1 Engineer submits sets of completed construction drawings, including as a minimum:

3.7.5.3.1.1 Cover Sheet;

3.7.5.3.1.2 Index Sheet (list of drawings);

3.7.5.3.1.3 Overall Layout Sheet;

3.7.5.3.1.4 Survey Control Map;

3.7.5.3.1.5 General Notes Sheets (as required);

3.7.5.3.1.6 Plan and profile drawings of existing conditions, existing utilities and proposed improvements;

3.7.5.3.1.7 Details of crossings (RR, HCFCD, TXDOT, etc.), potentially contaminated areas, and proposed real estate acquisitions;

3.7.5.3.1.8 Standard Details;

- 3.7.5.3.1.9 Traffic Control Plan, Detour Plans and temporary Traffic Signal plans (if required);
- 3.7.5.3.1.10 Storm Water Pollution Prevention Plan (if required);
- 3.7.5.3.1.11 Tree and plant protection plan (if required);
- 3.7.5.3.1.12 For Paving and Drainage Projects, also include:
 - 3.7.5.3.1.12.1 Typical roadway section/cross section;
 - 3.7.5.3.1.12.2 Proposed Traffic Signal Plans;
 - 3.7.5.3.1.12.3 Proposed Paving Marking and Signage Plans;
 - 3.7.5.3.1.12.4 Street Lighting Plans;
 - 3.7.5.3.1.12.5 Drainage Area Maps; and
 - 3.7.5.3.1.12.6 Houston Storm, and other Hydraulic and Hydrology Sewer Computations.
- 3.7.5.3.1.13 For Facilities Projects, also include process flow diagrams, piping diagrams, hydraulic profile diagrams, and instrumentation diagrams, as applicable;
- 3.7.5.3.1.14 For Water & Wastewater Projects, also include design calculations for the proposed improvements and system head curves for pumps; and
- 3.7.5.3.1.15 Engineer submits sheet-by-sheet quantity takeoff, flagman hour calculation, and documentation to support the construction duration specified.
- 3.7.5.3.1.16 Engineer shall submit documentation of Right-of-Entry, Encroachments, and Specialty features notices.
- 3.7.5.3.2 Engineer submits sets of draft construction specifications including as a minimum:
 - 3.7.5.3.2.1 Table of Contents;
 - 3.7.5.3.2.2 Document 00410 (Bid Form) with all bid items, including quantities, and other detailed construction cost estimates supporting Document 00410;
 - 3.7.5.3.2.3 Section 01110 (Summary of Work);
 - 3.7.5.3.2.4 Completed technical specifications (Division 01 through 16, as required); and
 - 3.7.5.3.2.5 All supplemental and non-standard technical specifications included in Divisions 02 through 16 identified.

- 3.7.5.3.3 Engineer submits documentation that drawings were submitted to private utilities for final review. Engineer makes initial coordination effort with private utilities regarding potential conflicts for the Project.
- 3.7.5.3.4 Engineer submits design review checklist (as available).
- 3.7.5.4 Submit Final Drawings and Specifications (90% Design Submittal)
 - 3.7.5.4.1 Engineer submits completed sets of construction drawings, with all review comments resolved, including all comment logs with responses.
 - 3.7.5.4.2 Engineer submits completed construction specifications, with all review comments resolved.
 - 3.7.5.4.3 Engineer submits a completed Document 00410 (Bid Form) with all bid items, including quantities, and other detailed construction cost estimates supporting Document 00410 Master List.
 - 3.7.5.4.3.1 Engineer shall perform quality assurance and quality control on Document 00410. Engineer shall provide evidence of their internal review and mark-up as preparation for the submittal of Document 00410. The Engineer shall submit a check print of the internal review, initialed by the author and the reviewer. Each unit price item shall be highlighted indicating that it has been checked. This submittal is not considered complete until the Engineer's submittal of associated quality assurance and quality control documents, along with any associated redlines, is provided.
 - 3.7.5.4.4 Engineer submits sheet-by-sheet quantity takeoff, flagman hour calculation, and documentation to support the construction duration specified.
 - 3.7.5.4.4.1 Engineer shall provide evidence of their internal review, a third-party review, and a third-party mark-up as preparation for the Engineer's submittal of the sheet by sheet takeoff. The Engineer shall submit a check print of the internal review, initialed by the author and the reviewer. Each unit price item shall be highlighted indicating that it has been checked. This submittal is not considered complete until the Engineer's submittal of associated quality assurance and quality control documents, along with any associated redlines, is provided.
 - 3.7.5.4.5 Engineer provides documentation of permit submittal or permit approvals, as applicable, from TXDOT, HCFCD, Railroads, U.S. Army

Corps of Engineers, and Harris County Public Infrastructure Department.

- 3.7.5.4.6 Engineer provides document submittals of plans to City for Building Permit Application (including Floodplain Management Office) and to Texas Department of Licensing and Regulations for ADA requirements, if applicable.
- 3.7.5.4.7 For Wastewater projects and other projects as applicable, Engineer submits Draft Engineering Design Report (DEDR) in conformance with TCEQ requirements.
- 3.7.5.4.8 The Engineer shall provide a PDF with quality assurance and quality control markups for all quantity calculations, and all design calculations.
- 3.7.5.4.9 The Engineer shall provide an internal quality assurance and quality control marked-up plan set with each submittal.
- 3.7.5.5 Submit Bid-Ready Drawings and Specifications
 - 3.7.5.5.1 Engineer submits bid-ready construction documents, signed and sealed construction drawings with all required signatures, and completed construction specifications, including signed letter of Quantity Take Off.
 - 3.7.5.5.2 Engineer provides documentation that application for City Building Permits (including Floodplain Administration) has been approved to Texas Department of Licensing and Regulations for ADA requirements, if applicable.
 - 3.7.5.5.3 For Wastewater projects or other projects as applicable, Engineer submits Final Engineering Design Report (FEDR) in conformance with TCEQ requirements.
 - 3.7.5.5.4 Engineer submits Final ESA I and II (as applicable), and Final Geotechnical reports, including Trench Safety Letter if required.

ARTICLE 4

TERMINATION

4.1 Termination by the City for Convenience

- 4.1.1 The Director may terminate Engineer's performance under this Contract at any time by giving seven days written notice to Engineer. As soon as possible, but not later than the effective date of such notice, Engineer shall, unless the notice directs otherwise, immediately discontinue all services in connection with this Contract and shall proceed to promptly cancel all existing orders and Consultant subcontracts insofar as such orders or subcontracts are chargeable to this Contract. Within seven days after the effective date of notice of termination, Engineer shall deliver copies of all Documents to the Director and submit an invoice showing in detail services performed under this Contract to the date of termination. The City shall then pay the prescribed fees to Engineer for services actually performed

under this Contract up to the date of termination less such payment on account of charges previously made, in the same manner as prescribed in Article 3 of this Contract. Any installments or lump sum fees shall be prorated in accordance with the progress of the Work at the effective date of termination. Engineer may, if necessary, submit invoices for vendor and Consultant charges reasonably necessary for the Project which are incurred prior to the effective date of termination and received by Engineer after its initial termination invoice.

4.1.2 Engineer understands and acknowledges that if the City determines not to proceed with this Contract, according to the terms of this article, the Director shall provide Engineer with a written notice of his intent to terminate this Contract and this Contract shall terminate upon Engineer's receipt of such written notice.

4.2 **Termination by the City for Cause.** City may terminate this Contract in the event of a material default by Engineer and a failure by Engineer to cure such default after receiving notice thereof, as provided in this Section. Default by Engineer shall occur if Engineer fails to observe or perform any of its duties under this Contract, if Engineer dies (if an individual), or for some other reason is unable to render services hereunder. Should such a default occur, the Director will deliver a written notice to Engineer describing such default and the proposed date of termination. Such date may not be sooner than the seventh day following receipt of the notice. The Director, at his or her sole option, may extend the proposed date of termination to a later date. If Engineer cures such default to the Director's reasonable satisfaction prior to the proposed date of termination, then the proposed termination shall be ineffective. If Engineer fails to cure such default prior to the proposed date of termination, then City may terminate its performance under this Contract as of such date, and Engineer shall deliver all Documents to the Director within seven days of the effective date of the termination. If the City's cost of obtaining completion of the work by other engineers, in combination with other direct costs sustained by the City as a result of the default, exceeds the remaining contract amounts unpaid to Engineer, the City shall not be obligated to make any further payment to Engineer. This provision does not relieve Engineer of any other obligation Engineer may have to the City.

4.3 **Termination by Engineer for Cause.** Engineer may terminate its performance only upon default of the City. Should such default occur, Engineer shall have the right to terminate all or part of its duties under this Contract as of the 14th day following the receipt by the City of a notice from Engineer describing such default and intended termination, provided: (1) such termination shall be ineffective if within the 14 day period the City cures the default; and (2) such termination may be stayed beyond such 14 day period, at the sole option of Engineer, pending cure of the default.

ARTICLE 5

MISCELLANEOUS PROVISIONS

5.1 **Independent Contractor.** The relationship of Engineer to the City shall be that of an independent contractor.

5.2 **Business Structure and Assignments.** Engineer shall not assign this Contract at law or otherwise or dispose of all or substantially all of its assets without the Director's prior written consent. Nothing in this

clause, however, prevents the assignment of accounts receivable or the creation of a security interest as described in Chapter 9 of the Texas Business & Commerce Code. In the case of such an assignment, Engineer shall immediately furnish the City with proof of the assignment and the name, telephone number, and address of the Assignee and a clear identification of the fees to be paid to the Assignee. Engineer shall not delegate any portion of its performance under this Contract without the Director's prior written consent.

- 5.3 **Parties in Interest.** This Contract shall not bestow any rights upon any third party, but rather, shall bind and benefit the City and Engineer only.
- 5.4 **Non-waiver.** Failure of either Party hereto to insist on the strict performance of any of the agreements herein or to exercise any rights or remedies accruing hereunder upon default or failure of performance shall not be considered a waiver of the right to insist on and to enforce by any appropriate remedy, strict compliance with any other obligation hereunder or to exercise any right or remedy occurring as a result of any future default or failure of performance.
- 5.5 **Governing Law and Venue.** This Agreement shall be construed and interpreted in accordance with the applicable laws of the State of Texas and City of Houston. Venue for any disputes relating in any way to this Agreement shall lie exclusively in Harris County, Texas.
- 5.6 **Notices.** All notices required or permitted hereunder shall be in writing and shall be deemed received when actually received or if earlier, on the third day following deposit in a United States Postal Service post office or receptacle with proper postage affixed (certified mail, return receipt requested) addressed to the other party at the address prescribed in the preamble hereof or at such other address as the receiving party may have theretofore prescribed by notice to the sending party.
- 5.7 **Captions.** The captions at the beginning of the articles and sections of this Contract are guides and labels to assist in locating and reading such articles and sections and, therefore, will be given no effect in construing this Contract and shall not be restrictive of or be used to interpret the subject matter of any article, section, or part of this Contract.
- 5.8 **Acceptances and Approvals.** Any acceptance or approval by the City, or its agents or employees shall not constitute nor be deemed to be a release of the responsibility and liability of Engineer, its employees, agents, Consultants, or suppliers for the accuracy, competency, and completeness for any Documents prepared or services performed pursuant to the terms and conditions of this Contract, nor shall acceptance or approval be deemed to be an assumption of such responsibility or liability by the City, or its agents and employees, for any defect, error or omission in any Documents prepared or services performed by Engineer, its employees, agents, Consultants or suppliers pursuant to this Contract.
- 5.9 **Inspections and Audits.** Representatives of the City shall have the right to examine and review all books, records, and billing documents which are directly related to performance or payment under this Contract. Engineer shall maintain such books, records, and billings for three years after the cessation of its other duties

under this Contract. This right of audit extends to the records of Engineer's Consultants, and Engineer's agreements with its Consultants shall provide this right to the City.

- 5.10 **Construction Budget.** If a construction budget for this Project is indicated in an exhibit to this Contract, Engineer will use its best efforts to design the Project so that it is likely that the Project may be constructed within that budget. At any point Engineer becomes reasonably aware that the construction budget will likely be exceeded, Engineer will notify City of its awareness of that likelihood.
- 5.11 **Site Conditions.** Engineer understands that it is in the interest of the City that the construction of the Project being designed by the Engineer under this Contract shall proceed in a prompt and efficient manner. Engineer will make a reasonable effort to identify and note on its construction documents interferences that will be encountered on the site of the construction by the construction contractor.
- 5.12 **Ambiguities.** In the event of any ambiguity in any of the terms of this Contract, it shall not be construed for or against any Party because of such Party's involvement in the preparation or drafting of this Contract.
- 5.13 **Entire Agreement.** This Contract merges the prior negotiations and understandings of the Parties hereto and embodies the entire agreement of the Parties, and there are no other agreements, assurances, conditions, covenants (expressed or implied) or other terms with respect to the subject matter hereof, whether written or verbal.
- 5.14 **Survival.** Engineer shall remain obligated to the City under all clauses of this Contract that expressly or by their nature extend beyond the expiration or termination of the term of this Contract, including but not limited to the Ownership of Documents provisions of Article 2 of this Contract.
- 5.15 **ENGINEER'S DEBT. IF ENGINEER, AT ANY TIME DURING THE TERM OF THIS CONTRACT, 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 ENGINEER HAS INCURRED A DEBT, THE CONTROLLER SHALL IMMEDIATELY NOTIFY ENGINEER IN WRITING. IF ENGINEER 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 ENGINEER UNDER THIS CONTRACT, AND ENGINEER WAIVES ANY RECOURSE THEREFOR. ENGINEER SHALL FILE A NEW AFFIDAVIT OF OWNERSHIP, USING THE FORM DESIGNATED BY CITY, BETWEEN FEBRUARY 1 AND MARCH 1 OF EVERY YEAR DURING THE TERM OF THIS CONTRACT.**

Signatures. The Parties have executed this Agreement in multiple copies, each of which is an original. Each person signing this Agreement represents and warrants that he or she is duly authorized and has legal capacity to execute and deliver this Agreement. Each Party represents and warrants to the other that the execution and delivery of this Agreement and the performance of such Party's obligations hereunder have been duly authorized and that the Agreement is a valid and legal agreement binding on such Party and enforceable in accordance with its terms. The Parties hereby agree that each Party may sign and deliver this Agreement electronically or by electronic means and that an electronic transmittal of a signature, including but not limited to, a scanned signature page, will be as good, binding, and effective as an original signature.

ATTEST/SEAL (if a corporation):
WITNESS (if not a corporation):

ENGINEER:
«ENGINEER»

By: _____
Name:
Title:

By: _____
Name: «engineer»
Title: «engtitle»

Federal Tax Identification No. «taxID»

ATTEST/SEAL:

CITY:
THE CITY OF HOUSTON, TEXAS
Signed by:

City Secretary

Mayor

APPROVED:

COUNTERSIGNED BY:

Director, Houston Public Works

City Controller

APPROVED AS TO FORM:

DATE COUNTERSIGNED:

Assistant City Attorney
L.D. File No. _____

EXHIBIT "A"

ADDITIONAL TERMS

«projname»

WBS No. «wbsnum»

GENERAL

1.1 Additional Definitions used in this Contract

1.1.1 **Limit on Phase I Compensation:** The limit on Phase I Compensation is «**ph1fee**» for all Construction Packages. Engineer's total billings for Phase I services, including Basic Services, Additional Services, Reimbursable Expenses, fees paid for contract personnel and personnel employed through employment agencies, and any and all other costs shall not exceed the Limit on Phase I Compensation.

1.1.2 **Negotiated Lump Sum:** An amount consistent with the terms of this Contract that City shall pay Engineer for the complete performance of services, not to exceed the estimated total of the following:

1.1.2.1 Raw Salary times Raw Salary Multiplier for services performed directly by Engineer and Engineer's employees, plus

1.1.2.2 Reimbursable Expenses, plus

1.1.2.3 Consultant Subcontract Costs plus Engineer's Consultant Markup, plus

1.1.2.4 Reasonable fees paid to contract personnel and personnel employed through employment agencies plus Engineer's Consultant Markup.

1.1.3 **Negotiated Work Order:** Individual Project assignments issued by the Director under this Contract. The Notice to Proceed for each Negotiated Work Order shall describe the specific requirements of the work to be performed, including Basic and Additional Services, for any Phase of this Contract.

1.2 General Description of Project

1.2.1 The Project generally is described as follows:

«projdesc»

1.3 **Contract Term.** This Contract is effective on the Countersignature Date and expires upon the completion of the last Negotiated Work Order issued within «term» years from the Countersignature Date. If the Director, at his or her sole discretion, makes a written request for renewal to Engineer at least 30 days before expiration of the then-current terms, and if sufficient funds are allocated, then, upon expiration of the then-current term, this Agreement is renewed for «renewyrs» year(s) upon the same terms and conditions. This Contract may only be renewed for «renewtimes» additional term(s) beyond the initial term.

EXHIBIT A-1

SCOPE OF WORK

«projname»

WBS No. «wbsnum»

The Engineer shall incorporate and utilize Capital Projects Standard drawings and details as applicable.

The Engineer shall utilize the following guidelines for the Preliminary Engineering Report (PER), as provided in Section 2.2.7.1 of the Contract.

The Preliminary Engineering Report shall have the content below, at a minimum.

EXECUTIVE SUMMARY

- a. Project Location - Describe project boundaries and locations within City of Houston limits with Key Map references. Include location and lay-out maps.
- b. Statement of Problem - Describe deficiencies of the system.
- c. Evaluation of Alternative Solutions - Provide summary of principal findings and conclusions from the evaluation of alternatives, based on specific cost and non-cost criteria.
- d. Findings from Phase I Design Activities - Summarize the findings that may impact the alternative solutions.
Also, summarize other issues associated with:
 1. Geotechnical Investigation;
 2. Environmental Site Assessment;
 3. Real Estate Acquisition;
 4. Traffic Control Analysis/Requirements;
 5. Permits;
 6. Survey;
 7. Other items constructed in Right of Way including sidewalks, driveways, encroachments, additions or replacements; and
 8. Other potential conflicts and special issues, such as inter-agency coordination and tree impacts.
- e. Recommended Project - Describe the recommended alternative, how it solves the described system deficiencies, and tabulate the design criteria.
- f. Estimated Construction Costs - Include Construction Costs for each alternative evaluated.

EVALUATIONS AND RECOMMENDATIONS

- A. Evaluation of Alternatives - Provide a summary of principal findings and conclusions from the evaluation of alternatives, based on specific cost and non-cost criteria.
- B. Recommended Project - Describe the recommended alternative, how it solves the described system deficiencies, and tabulate the design criteria. Also, provide the following:
1. Recommended Utility Improvements - Discuss the recommended improvements to public utilities and indicate locations of potential conflict with other utilities;
 2. Construction Traffic Control Plan - Provide traffic control concept, noting detours, phases, sequencing, construction zones, temporary pavement requirements and temporary signalization. Identify potential disruptions to local businesses and measures to address access during construction;
 3. Storm Water Pollution Prevention Plan - Describe the basic approach to storm water pollution prevention and what measures will be implemented;
 4. Tree Protection/Mitigation and Landscaping - Describe general approach to landscaping, tree protection, and tree mitigation, as required; and
 5. For projects with paving and drainage improvements, include the following:
 - a. Recommended Pavement - Describe recommended pavement widths, lane use, and structure;
 - b. Recommended Improvements to Roadway Geometrics - Describe recommended corner radii, esplanade widths and openings, intersection improvements, and measures taken to correct deficiencies. Indicate proposed speed limits;
 - c. Recommended Traffic Control - Describe the recommended improvements to existing traffic control measures. Discuss recommended improvements to traffic signals, and locations and configurations of proposed signals; and
 - d. Proposed condition analysis – Quantify the proposed drainage improvements by hydrologic and hydraulic analysis (drainage analysis) for the design rainfall, including hydraulic grade line, critical elevation (gutter), ponded width (spread), and 2-year peak outflow rate. Also quantify the extreme rainfall, including water surface elevation, allowable maximum ponded elevation and width, and 100-year peak outflow rate. Compare existing drainage system versus proposed drainage improvements in tabular and graphic profile.
 6. For Water and Wastewater Facilities include the following:
 - a. Recommended Project-Discuss the recommended base project including but not limited to the structural, equipment, piping and pumping components. Provide contrast and comparison for the recommendation to replace or rehabilitate the facility components; and
 - b. Operational Impact Analysis – Describe issues that may affect existing system operations. Provide definition of potential problems, recommendation for solution, additional services that may be required, and discuss needed resources/data/information internal as well as external.

EXHIBITS

- A. Project location maps - Prepare a color map of Project Area(s), in format acceptable to Director, identifying City Council Districts in which Project is located. Include a separate vicinity map of general Project Area(s).
- B. Typical cross-sections - Show horizontal dimensions, pavement structure makeup and thickness, typical locations of existing and proposed buried utilities, right-of-way and easements, sidewalks, shoulders, and drainage ditches.
- C. Plan Sheets - Show proposed water mains, sanitary sewers, storm sewers and pavement footprint with alternate(s), where applicable, in plan view.
- D. Right-of-way maps - Show dimensions and locations of existing and proposed right-of-way and easement locations.

EXHIBIT "B"
PROJECT SCHEDULE

EXHIBIT "C"

MAXIMUM RAW SALARIES

<u>Classification</u>	<u>Raw Salary Rates</u>
«class1»	\$«rate1»
«class2»	\$«rate2»
«class3»	\$«rate3»
«class4»	\$«rate4»
«class5»	\$«rate5»
«class6»	\$«rate6»
«class7»	\$«rate7»
«class8»	\$«rate8»
«class9»	\$«rate9»
«class10»	\$«rate10»
«class11»	\$«rate11»
«class12»	\$«rate12»
«class13»	\$«rate13»
«class14»	\$«rate14»
«class15»	\$«rate15»
«class16»	\$«rate16»
«class17»	\$«rate17»
«class18»	\$«rate18»
«class19»	\$«rate19»
«class20»	\$«rate20»
«class21»	\$«rate21»
«class22»	\$«rate22»
«class23»	\$«rate23»
«class24»	\$«rate24»
«class25»	\$«rate25»
«class26»	\$«rate26»
«class27»	\$«rate27»
«class28»	\$«rate28»
«class29»	\$«rate29»
«class30»	\$«rate30»

EXHIBIT "D"

CERTIFICATE OF INSURANCE

Please visit <http://purchasing.houstontx.gov/guide.shtml>, and find "Insurance & Indemnification" for the most current insurance certificates and requirements.

EXHIBIT "E"

DRUG POLICY COMPLIANCE AGREEMENT

I, _____ as an owner or officer of
(Name) (Print/Type) (Title)

(Name of Company) (Engineer)

have authority to bind Engineer with respect to its bid, offer or performance of any and all contracts it may enter into with the City of Houston; and that by making this Agreement, I affirm that the Engineer is aware of and by the time the contract is awarded will be bound by and agree to designate appropriate safety impact positions for company employee positions, and to comply with the following requirements before the City issues a Notice to Proceed:

1. Develop and implement a written Drug Free Workplace Policy and related drug testing procedures for the Engineer that meet the criteria and requirements established by the Mayor's Amended Policy on Drug Detection and Deterrence (Mayor's Drug Policy) and the Mayor's Drug Detection and Deterrence Procedures for Engineers (Executive Order No. 1-31).
2. Obtain a facility to collect urine samples consistent with Health and Human Services (HHS) guidelines and a HHS certified drug testing laboratory to perform the drug tests.
3. Monitor and keep records of drug tests given and the results; and upon request from the City of Houston, provide confirmation of such testing and results.
4. Submit semi-annual Drug Policy Compliance Declarations.

I affirm on behalf of the Engineer that full compliance with the Mayor's Drug Policy and Executive Order No. 1-31 is a material condition of the contract with the City of Houston.

I further acknowledge that falsification, failure to comply with or failure to timely submit declarations and/or documentation in compliance with the Mayor's Drug Policy and/or Executive Order No. 1-31 will be considered a breach of the contract with the City and may result in non-award or termination of the contract by the City of Houston.

Date

Engineer Name

Signature

Title

EXHIBIT "F"

DRUG POLICY COMPLIANCE DECLARATION

I, _____ as an owner or officer of _____
(Name) (Print/Type) (Title)

(Name of Company) (Engineer)

have personal knowledge and full authority to make the following declarations:

This reporting period covers the preceding six months from _____ to _____, 20_____.

_____ A written Drug Free Workplace Policy has been implemented and employees notified. The policy
Initials meets the criteria established by the Mayor's Amended Policy on Drug Detection and Deterrence
(Mayor's Policy).

_____ Written drug testing procedures have been implemented in conformity with the Mayor's Drug Detection
Initials and Deterrence Procedures for Engineers, Executive Order No. 1-31. Employees have been notified
of such procedures.

_____ Collection/testing has been conducted in compliance with federal Health and Human Services (HHS)
Initials guidelines.

_____ Appropriate safety impact positions have been designated for employee positions performing on the
Initials City of Houston contract. The number of employees in safety impact positions during this reporting
period is _____.

_____ From _____ to _____ the following test has occurred
Initials (Start date) (End date)

	<u>Random</u>	<u>Reasonable Suspicion</u>	<u>Post Accident</u>	<u>Total</u>
Number Employees Tested	_____	_____	_____	_____
Number Employees Positive	_____	_____	_____	_____
Percent Employees Positive	_____	_____	_____	_____

_____ Any employee who tested positive was immediately removed from the City worksite consistent with
Initials the Mayor's Policy and Executive Order No. 1-31.

_____ I affirm that falsification or failure to submit this declaration timely in accordance with established
Initials guidelines will be considered a breach of contract.

I declare under penalty of perjury that the affirmations made herein and all information contained in this declaration are within my personal knowledge and are true and correct.

(Date)

(Typed or Printed Name)

(Signature)

(Title)

EXHIBIT "G"

**ENGINEER'S CERTIFICATION
OF NO SAFETY IMPACT POSITIONS
IN PERFORMANCE OF A CITY CONTRACT**

I, _____, _____,
(Name) (Title)

as an owner or officer of _____ (Engineer)
(Name of Company)

have authority to bind the Engineer with respect to its bid, and hereby certify that Engineer has no employee safety impact positions, as defined in §5.18 of Executive Order No. 1-31, that will be involved

in performing _____.
(Project)

Engineer agrees and covenants that it shall immediately notify the City of Houston Director of Personnel if any safety impact positions are established to provide services in performing this City Contract.

(Date)

(Typed or Printed Name)

(Signature)

(Title)

EXHIBIT "H"

SUBCONTRACTOR'S ASSIGNMENT OF COPYRIGHT

1. Engineer has entered into a Contract with the **CITY OF HOUSTON, TEXAS** ("City") to provide professional engineering services as well as related support and consulting services ("Services").
2. Subcontractor is or will be providing services for Engineer related to its Contract with the City.
3. In the course of Subcontractor's work for Engineer related to the provision of Services to the City, Contract Documents and other work products will be produced by Subcontractor for the benefit of the City for which Subcontractor will be compensated by Engineer.
4. Contract Documents include but are not limited to reports, charts, analyses, maps, letters, tabulations, computer programs, exhibits, notes, models, photographs, the original transparencies of all drawings, all graphic and written information prepared or assembled by Subcontractor and all other work products obtained or prepared by Subcontractor as part of its services for Engineer.
5. For and in consideration of the foregoing, the Subcontractor shall grant and assign and hereby does grant and assign to the City all right, title, interest and full ownership worldwide in and to any work, invention and all Contract Documents, or any modifications or improvements to them, and the copyrights, patents, trademarks, trade secrets and any other possessory or proprietary rights therein, that are discovered, conceived, developed, written or produced by the Subcontractor, its agents and employees pursuant to its contract with Engineer (collectively "Works"), to have and to hold the same unto the City absolutely.
6. The Subcontractor agrees that neither it nor any of its agents and employees shall have any right to assert or establish a claim or exercise any of the rights embodied in any copyrights, patents, trademarks, trade secrets and any other possessory or proprietary rights related to the Works. If requested by the Engineer, the Subcontractor shall place a conspicuous notation upon any such Works which indicates that the copyright, patent, trademark or trade secret thereto is owned by the City of Houston.
7. The Subcontractor shall execute all documents required by the Engineer and the Director of the Houston Public Works of the City ("Director") to further evidence such assignment and ownership. The Subcontractor shall cooperate with the Engineer and the City in registering, creating or enforcing any copyrights, patents, trademarks, trade secrets or other possessory or proprietary rights arising hereunder. If any assistance by the Subcontractor is requested and rendered pursuant to this Section, the City shall reimburse the Subcontractor for all out-of-pocket expenses incurred by the Subcontractor in rendering such assistance, subject to the availability of funds. On termination of the Subcontractor's contract with Engineer or upon request by the Director, the Subcontractor shall deliver all Works to the City. The Subcontractor agrees that its agents and employees performing work hereunder are bound by the terms of this Exhibit.

IN WITNESS HEREOF, Subcontractor has executed this Assignment as of this _____ day of _____, 20____.

Subcontractor

By:
Title:

EXHIBIT "I"
FORM POP 2
CERTIFICATION OF COMPLIANCE WITH
PAY OR PLAY PROGRAM

Available at <http://www.houstontx.gov/obo/popforms.html>

EXHIBIT "J"

**CERTIFICATION OF AGREEMENT TO COMPLY WITH
STANDARD DOT TITLE VI ASSURANCES
APPENDIX A LANGUAGE**

During the performance of this Contract, the Engineer, for itself, its assignees and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

- (1) Compliance with Regulations: The Contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the "Regulations"), which are herein incorporated by reference and made a part of this contract.
- (2) Nondiscrimination: The Contractor, with regard to the work performed by it during the Contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- (3) Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- (4) Information and Reports: The Contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Texas Department of Transportation to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information the Contractor shall so certify to the Recipient, or the Texas Department of Transportation as appropriate, and shall set forth what efforts it has made to obtain the information.
- (5) Sanctions for Noncompliance: In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, the Recipient shall impose such contract sanctions as it or the Texas Department of Transportation may determine to be appropriate, including, but not limited to:
 - (a) withholding of payments to the Contractor under the Contract until the Contractor complies; and/or
 - (b) cancellation, termination or suspension of the contract, in whole or in part.
- (6) Incorporation of Provisions: The Contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The Contractor shall take such action with respect to any subcontract or procurement as the Recipient or the Texas Department of Transportation may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request the Recipient to enter into such litigation to protect the interests of the Recipient, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

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EXHIBITS

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 - "A-1" SCOPE OF WORK
 - "B" PROJECT SCHEDULE
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 - "D" CERTIFICATE OF INSURANCE
 - "E" DRUG POLICY COMPLIANCE AGREEMENT
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 - "G" ENGINEER'S CERTIFICATION OF NO SAFETY IMPACT POSITIONS IN PERFORMANCE OF A CITY CONTRACT
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- APPENDIX A LANGUAGE

CITY OF HOUSTON

AND

«ENAME»

PS FLOOD WARNING WORK ORDER

PROFESSIONAL ENGINEERING SERVICES

FOR DESIGN OF

«PROJNAME»

WBS NO. «wbsnum»