

STATE OF TEXAS §
 §
 COUNTY OF FORT BEND §

AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES

THIS AGREEMENT is made and entered into by and between Fort Bend County, (hereinafter "County"), a body corporate and politic under the laws of the State of Texas, and Isani Consultants, L.P. (hereinafter "Contractor"), a company authorized to conduct business in the State of Texas.

WITNESSETH

WHEREAS, County desires that Contractor provide certain preliminary engineering and design phase services to the Williams Way Boulevard Project (2013 Mobility Project No. 13114) for Williams Way Boulevard from FM 762 to US 59 NB Frontage Road (hereinafter "Services") pursuant to SOQ 14-025; and

WHEREAS, Contractor represents that it is qualified and desires to perform such services.

NOW, THEREFORE, in consideration of the mutual covenants and conditions set forth below, the parties agree as follows:

AGREEMENT

Section I. Scope of Services

Contractor shall render Services to County as defined in the Scope of Services (attached hereto as Exhibit A).

Section II. Personnel

2.1 Contractor represents that it presently has, or is able to obtain, adequate qualified personnel in its employment for the timely performance of the Scope of Services required under this Agreement and that Contractor shall furnish and maintain, at its own expense, adequate and sufficient personnel, in the opinion of County, to perform the Scope of Services when and as required and without delays.

2.2 All employees of Contractor shall have such knowledge and experience as will enable them to perform the duties assigned to them. Any employee of Contractor who, in the opinion of County, is incompetent or by his conduct becomes detrimental to the project shall, upon request of County, immediately be removed from association with the project.

Section III. Compensation and Payment

3.1 Contractor's fees shall be calculated at the rates set forth in the attached Exhibit B. The Maximum Compensation for the performance of Services within the Scope of Services described in Exhibit B is five hundred sixty-five thousand four hundred forty-one dollars and 00/100 (\$565,441.00). In no case shall the amount paid by County under this Agreement exceed the Maximum Compensation without an approved change order.

3.2 All performance of the Scope of Services by Contractor including any changes in the Scope of Services and revision of work satisfactorily performed will be performed only when approved in advance and authorized by County.

3.3 County will pay Contractor based on the following procedures: Upon completion of the tasks identified in the Scope of Services, Contractor shall submit to County staff person designated by the County Engineer, one (1) electronic (pdf) copy and two (2) original hard copies of invoices showing the amounts due for services performed in a form acceptable to County. County shall review such invoices and approve them within 30 calendar days with such modifications as are consistent with this Agreement and forward same to the Auditor for processing. County shall pay each such approved invoice within thirty (30) calendar days. County reserves the right to withhold payment pending verification of satisfactory work performed.

Section IV. Limit of Appropriation

4.1 Contractor clearly understands and agrees, such understanding and agreement being of the absolute essence of this Agreement, that County shall have available the total maximum sum of five hundred sixty-five thousand four hundred forty-one dollars and 00/100 (\$565,441.00), specifically allocated to fully discharge any and all liabilities County may incur.

4.2 Contractor does further understand and agree, said understanding and agreement also being of the absolute essence of this Agreement, that the total maximum compensation that Contractor may become entitled to and the total maximum sum that County may become liable to pay to Contractor shall not under any conditions, circumstances, or interpretations thereof exceed five hundred sixty-five thousand four hundred forty-one dollars and 00/100 (\$565,441.00).

Section V. Time of Performance

Time for performance of the Scope of Services under this Agreement shall begin with receipt of the Notice to Proceed and end no later than twenty-four (24) months thereafter. Contractor shall complete the tasks described in the Scope of Services, within this time or within such additional time as may be extended by the County.

Section VI. Modifications and Waivers

6.1 The parties may not amend or waive this Agreement, except by a written agreement executed by both parties.

6.2 No failure or delay in exercising any right or remedy or requiring the satisfaction of any condition under this Agreement, and no course of dealing between the parties, operates as a waiver or estoppel of any right, remedy, or condition.

6.3 The rights and remedies of the parties set forth in this Agreement are not exclusive of, but are cumulative to, any rights or remedies now or subsequently existing at law, in equity, or by statute.

Section VII. Termination

7.1 Termination for Convenience

7.1.1 County may terminate this Agreement at any time upon forty-eight (48) hours written notice.

7.2 Termination for Default

7.2.1 County may terminate the whole or any part of this Agreement for cause in the following circumstances:

7.2.1.1 If Contractor fails to perform services within the time specified in the Scope of Services or any extension thereof granted by the County in writing;

7.2.1.2 If Contractor materially breaches any of the covenants or terms and conditions set forth in this Agreement or fails to perform any of the other provisions of this Agreement or so fails to make progress as to endanger performance of this Agreement in accordance with its terms, and in any of these circumstances does not cure such breach or failure to County's reasonable satisfaction within a period of ten (10) calendar days after receipt of notice from County specifying such breach or failure.

7.2.2 If, after termination, it is determined for any reason whatsoever that Contractor was not in default, or that the default was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the County in accordance with Section 7.1 above.

7.3 Upon termination of this Agreement, County shall compensate Contractor in accordance with Section 3, above, for those services which were provided under this Agreement prior to its termination and which have not been previously invoiced to County.

Contractor's final invoice for said services will be presented to and paid by County in the same manner set forth in Section 3 above.

7.4 If County terminates this Agreement as provided in this Section, no fees of any type, other than fees due and payable at the Termination Date, shall thereafter be paid to Contractor.

Section VIII. Ownership and Reuse of Documents

All documents, data, reports, research, graphic presentation materials, etc., developed by Contractor as a part of its work under this Agreement, shall become the property of County upon completion of this Agreement, or in the event of termination or cancellation thereof, at the time of payment under Section 3 for work performed. Contractor shall promptly furnish all such data and material to County on request.

Section IX. Inspection of Books and Records

Contractor will permit County, or any duly authorized agent of County, to inspect and examine the books and records of Contractor for the purpose of verifying the amount of work performed under the Scope of Services. County's right to inspect survives the termination of this Agreement for a period of four years.

Section X. Insurance

10.1 Prior to commencement of the Services, Contractor shall furnish County with properly executed certificates of insurance which shall evidence all insurance required and provide that such insurance shall not be canceled, except on 30 days' prior written notice to County. Contractor shall provide certified copies of insurance endorsements and/or policies if requested by County. Contractor shall maintain such insurance coverage from the time Services commence until Services are completed and provide replacement certificates, policies and/or endorsements for any such insurance expiring prior to completion of Services. Contractor shall obtain such insurance written on an Occurrence form from such companies having Bests rating of A/VII or better, licensed or approved to transact business in the State of Texas, and shall obtain such insurance of the following types and minimum limits:

10.1.1 Workers' Compensation insurance. Substitutes to genuine Workers' Compensation Insurance will not be allowed. Employers' Liability insurance with limits of not less than \$1,000,000 per injury by accident, \$1,000,000 per injury by disease, and \$1,000,000 per bodily injury by disease.

10.1.2 Commercial general liability insurance with a limit of not less than \$1,000,000 each occurrence and \$2,000,000 in the annual aggregate. Policy shall cover liability for bodily injury, personal injury, and property damage and products/completed operations arising out of the business operations of the policyholder.

10.1.3 Business Automobile Liability insurance with a combined Bodily Injury/Property Damage limit of not less than \$1,000,000 each accident. The policy shall cover liability arising from the operation of licensed vehicles by policyholder.

10.1.4 Professional Liability insurance with limits not less than \$1,000,000.

10.2 County and the members of Commissioners Court shall be named as additional insured to all required coverage except for Workers' Compensation. All Liability policies including Workers' Compensation written on behalf of Contractor shall contain a waiver of subrogation in favor of County and members of Commissioners Court.

10.3 If required coverage is written on a claims-made basis, Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of the contract; and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of 2 years beginning from the time that work under the Agreement is completed.

Section XI. Indemnity

CONTRACTOR SHALL INDEMNIFY AND DEFEND COUNTY AGAINST ALL LOSSES, LIABILITIES, CLAIMS, CAUSES OF ACTION, AND OTHER EXPENSES, INCLUDING REASONABLE ATTORNEYS FEES, ARISING FROM ACTIVITIES OF CONTRACTOR, ITS AGENTS, SERVANTS OR EMPLOYEES, PERFORMED UNDER THIS AGREEMENT THAT RESULT FROM THE NEGLIGENT ACT, ERROR, OR OMISSION OF CONTRACTOR OR ANY OF CONTRACTOR'S AGENTS, SERVANTS OR EMPLOYEES.

Section XII. Confidential and Proprietary Information

12.1 Contractor acknowledges that it and its employees or agents may, in the course of performing their responsibilities under this Agreement, be exposed to or acquire information that is confidential to County. Any and all information of any form obtained by Contractor or its employees or agents from County in the performance of this Agreement shall be deemed to be confidential information of County ("Confidential Information"). Any reports or other documents or items (including software) that result from the use of the Confidential Information by Contractor shall be treated with respect to confidentiality in the same manner as the Confidential Information. Confidential Information shall be deemed not to include information that (a) is or becomes (other than by disclosure by Contractor) publicly known or is contained in a publicly available document; (b) is rightfully in Contractor's possession without the obligation of nondisclosure prior to the time of its disclosure under this Agreement; or (c) is independently developed by employees or agents of Contractor who can be shown to have had no access to the Confidential Information.

12.2 Contractor agrees to hold Confidential Information in strict confidence, using at least the same degree of care that Contractor uses in maintaining the confidentiality of its own confidential information, and not to copy, reproduce, sell, assign, license, market, transfer or otherwise dispose of, give, or disclose Confidential Information to third parties or use Confidential Information for any purposes whatsoever other than the provision of Services to County hereunder, and to advise each of its employees and agents of their obligations to keep Confidential Information confidential. Contractor shall use its best efforts to assist County in identifying and preventing any unauthorized use or disclosure of any Confidential Information. Without limitation of the foregoing, Contractor shall advise County immediately in the event Contractor learns or has reason to believe that any person who has had access to Confidential Information has violated or intends to violate the terms of this Agreement and Contractor will at its expense cooperate with County in seeking injunctive or other equitable relief in the name of County or Contractor against any such person. Contractor agrees that, except as directed by County, Contractor will not at any time during or after the term of this Agreement disclose, directly or indirectly, any Confidential Information to any person, and that upon termination of this Agreement or at County's request, Contractor will promptly turn over to County all documents, papers, and other matter in Contractor's possession which embody Confidential Information.

12.3 Contractor acknowledges that a breach of this Section, including disclosure of any Confidential Information, or disclosure of other information that, at law or in equity, ought to remain confidential, will give rise to irreparable injury to County that is inadequately compensable in damages. Accordingly, County may seek and obtain injunctive relief against the breach or threatened breach of the foregoing undertakings, in addition to any other legal remedies that may be available. Contractor acknowledges and agrees that the covenants contained herein are necessary for the protection of the legitimate business interest of County and are reasonable in scope and content.

12.4 Contractor in providing all services hereunder agrees to abide by the provisions of any applicable Federal or State Data Privacy Act.

12.5 Contractor expressly acknowledges that County is subject to the Texas Public Information Act, TEX. GOV'T CODE ANN. §§ 552.001 *et seq.*, as amended, and notwithstanding any provision in the Agreement to the contrary, County will make any information related to the Agreement, or otherwise, available to third parties in accordance with the Texas Public Information Act. Any proprietary or confidential information marked as such provided to County by Consultant shall not be disclosed to any third party, except as directed by the Texas Attorney General in response to a request for such under the Texas Public Information Act, which provides for notice to the owner of such marked information and the opportunity for the owner of such information to notify the Attorney General of the reasons why such information should not be disclosed.

Section XIII. Independent Contractor

13.1 In the performance of work or services hereunder, Contractor shall be deemed an independent contractor, and any of its agents, employees, officers, or volunteers performing work required hereunder shall be deemed solely as employees of contractor or, where permitted, of its subcontractors.

13.2 Contractor and its agents, employees, officers, or volunteers shall not, by performing work pursuant to this Agreement, be deemed to be employees, agents, or servants of County and shall not be entitled to any of the privileges or benefits of County employment.

Section XIV. Notices

14.1 Each party giving any notice or making any request, demand, or other communication (each, a "Notice") pursuant to this Agreement shall do so in writing and shall use one of the following methods of delivery, each of which, for purposes of this Agreement, is a writing: personal delivery, registered or certified mail (in each case, return receipt requested and postage prepaid), or nationally recognized overnight courier (with all fees prepaid).

14.2 Each party giving a Notice shall address the Notice to the receiving party at the address listed below or to another address designated by a party in a Notice pursuant to this Section:

County: Fort Bend County Engineering Department
Attn: County Engineer
301 Jackson Street
Richmond, Texas 77469

With a copy to: Fort Bend County
Attn: County Judge
401 Jackson Street, 1st Floor
Richmond, Texas 77469

Contractor: Isani Consultants, L.P.
Attn: Vincent N. Jacob, P.E.
3142 Yellowstone Boulevard
Houston, Texas 77054

14.3 A Notice is effective only if the party giving or making the Notice has complied with subsections 14.1 and 14.2 and if the addressee has received the Notice. A Notice is deemed received as follows:

14.3.1 If the Notice is delivered in person, or sent by registered or certified mail or a nationally recognized overnight courier, upon receipt as indicated by the date on the signed receipt.

14.3.2 If the addressee rejects or otherwise refuses to accept the Notice, or if the Notice cannot be delivered because of a change in address for which no Notice was given, then upon the rejection, refusal, or inability to deliver.

Section XV. Compliance with Laws

Contractor shall comply with all federal, state, and local laws, statutes, ordinances, rules and regulations, and the orders and decrees of any courts or administrative bodies or tribunals in any matter affecting the performance of this Agreement, including, without limitation, Worker's Compensation laws, minimum and maximum salary and wage statutes and regulations, licensing laws and regulations. When required by County, Contractor shall furnish County with certification of compliance with said laws, statutes, ordinances, rules, regulations, orders, and decrees above specified.

Section XVI. Performance Warranty

16.1 Contractor warrants to County that Contractor has the skill and knowledge ordinarily possessed by well-informed members of its trade or profession practicing in the greater Houston metropolitan area and Contractor will apply that skill and knowledge with care and diligence to ensure that the Services provided hereunder will be performed and delivered in accordance with the highest professional standards.

16.2 Contractor warrants to County that the Services will be free from material errors and will materially conform to all requirements and specifications contained in the attached Exhibit A.

Section XVII. Assignment

17.1 Neither party may assign any of its rights under this Agreement, except with the prior written consent of the other party. That party shall not unreasonably withhold its consent. All assignments of rights are prohibited under this subsection, whether they are voluntarily or involuntarily, by merger, consolidation, dissolution, operation of law, or any other manner.

17.2 Neither party may delegate any performance under this Agreement.

17.3 Any purported assignment of rights or delegation of performance in violation of this Section is void.

Section XVIII. Applicable Law

The laws of the State of Texas govern all disputes arising out of or relating to this Agreement. The parties hereto acknowledge that venue is proper in Fort Bend County, Texas, for all legal actions or proceedings arising out of or relating to this Agreement and waive the right to sue or be sued elsewhere. Nothing in the Agreement shall be construed to waive the County's sovereign immunity.

Section XIX. Successors and Assigns

County and Contractor bind themselves and their successors, executors, administrators and assigns to the other party of this Agreement and to the successors, executors, administrators and assigns of the other party, in respect to all covenants of this Agreement.

Section XX. Third Party Beneficiaries

This Agreement does not confer any enforceable rights or remedies upon any person other than the parties.

Section XXI. Severability

If any provision of this Agreement is determined to be invalid, illegal, or unenforceable, the remaining provisions remain in full force, if the essential terms and conditions of this Agreement for each party remain valid, binding, and enforceable.

Section XXII. Publicity

Contact with citizens of Fort Bend County, media outlets, or governmental agencies shall be the sole responsibility of County. Under no circumstances whatsoever, shall Contractor release any material or information developed or received in the performance of the Services hereunder without the express written permission of County, except where required to do so by law.

Section XXIII. Captions

The section captions used in this Agreement are for convenience of reference only and do not affect the interpretation or construction of this Agreement.

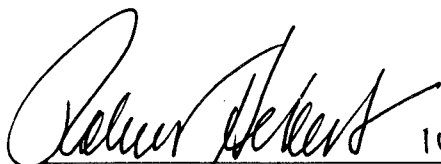
Section XXIV. Conflict

In the event there is a conflict between this Agreement and the attached exhibits, this Agreement controls.

IN WITNESS WHEREOF, the parties hereto have signed or have caused their respective names to be signed to multiple counterparts to be effective on the ____ day of _____, 2014.

FORT BEND COUNTY

ISANI CONSULTANTS, L.P.

 10-7-14
Robert E. Hebert, County Judge


Authorized Agent- Signature

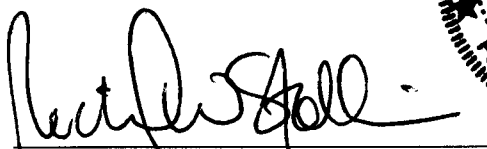
Bobby V.P. Singh
Authorized Agent- Printed Name

ATTEST:


County Clerk

Principal
Title
10/2/14
Date

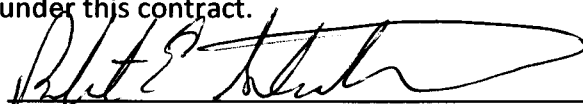
APPROVED:


Richard W. Stolleis, P.E.



AUDITOR'S CERTIFICATE

I hereby certify that funds are available in the amount of \$565,441.00 to accomplish and pay the obligation of Fort Bend County under this contract.


Robert Edward Sturdivant, County Auditor

"EXHIBIT A" – Scope of Services

Williams Way Boulevard

From FM 762 to US 59 NB Frontage Road

Fort Bend County has requested a proposal for **Preliminary Engineering Phase** and **Design Phase Services** to improve the existing 2-lane concrete undivided roadway (with roadside ditches) (south end of the project) and existing 2-lane asphalt roadway (with roadside ditches) (north end of the project) to a 4-lane concrete curb & gutter boulevard with storm sewers, Bridge on Rabbs Bayou, outfalls, modification to the existing traffic signal and all necessary appurtenances. The project includes the construction of a new Boulevard section (extension of Williams Way Boulevard) connecting FM 762 and US 59 NB Frontage Road.

PROJECT LIMITS

1. The **Williams Way Boulevard** project will begin at the intersection of Williams Way Boulevard and FM 762 and end at US 59 NB Frontage Road. The ROW for the project limits varies from 60-feet to 140-feet. The road will be widened to accommodate 4-lane concrete boulevard section, with left turn lanes as necessary and median. The existing ditches east and west of the existing roadway will be replaced with a storm sewer system.
2. The Existing Williams Way Boulevard at US-59 is being modified and reconstructed (currently in letting stage) as part of US 59 Reconstruction project by TxDOT connecting the West and East ends. The tie-in point for the proposed Williams Way Boulevard at US 59 NB Frontage Road (East end) will need to be coordinated with TxDOT.
3. The project has an existing signalized intersection at Williams Way Boulevard and FM 762 which will be modified per the new geometry of the intersection.
4. The project has an existing wooden bridge located on the Rabbs Bayou which will need to be removed and a new bridge will be constructed per the design standards. The total width of the Proposed Rabbs Bayou Bridge is 70 feet. The Cross section for the Proposed Rabbs Bayou Bridge will be two (2) 24 feet lanes with curbs, 6 feet sidewalk, 1 foot rail on either ends of the Bridge with a 6 feet median.

PROJECT SCOPE

PRELIMINARY ENGINEERING PHASE

A Preliminary Engineering Report (PER) shall serve as a summary document that incorporates the recommendations from the supporting investigative reports, results from working meetings with Fort Bend County, necessary approvals and final recommendations from the Consultant's efforts. The document will serve as the framework for the design phase, having addressed the major issues that affect the roadway design and supporting infrastructure.

The Preliminary Engineering Phase shall include the preparation and approval of reports necessary to support the recommendations and design of the roadway and all appurtenances included, but not limited to, Geotechnical Investigations, Hydrology and Hydraulic Analysis, Environmental Site Assessments, Wetlands Assessment, Delineation and Concurrence/Permitting. A schematic layout showing the proposed improvements for the Roadway and Bridge will be prepared for the preliminary meeting followed by the Preliminary Construction Plans.

Proposed Roadway geometry will be evaluated and the preliminary alternatives for the alignment and Proposed Right-of-Way (ROW) will be presented to Fort Bend County during the preliminary stages of the PER.

The Preliminary Engineering Phase shall include working meetings with Fort Bend County and other consultants/sub-consultants and a drainage meeting with Fort Bend County Drainage District prior to submitting the draft Drainage Report for the project. During this phase Topographic Survey will be performed and the existing conditions will be evaluated including roadway geometrics, soils, traffic and environmental conditions.

Utility companies within the project limits will be contacted and coordinated for obtaining the facility maps and record drawings present and a contact list for the utility companies will be prepared. Roadway Schematics and Aerial Exhibits will be prepared for review.

Proposed improvements including the Roadway Geometry, Pavement, Storm Systems and Traffic Signals. A Preliminary Construction Cost Estimate will be prepared and provided for final recommendation and will be updated as per the final design.

A Draft Preliminary Engineering Report will be submitted after initial review of the existing conditions will include, but not limited to, Exhibits, Preliminary Construction Drawings, Survey/Right-of-Way Maps, Roadway Alignment, Geotechnical, Environmental Site Assessment, Drainage Report, and Utility Conflicts. Consultant shall provide preliminary schematics and exhibits to support discussions to solicit input from Fort Bend County on decision items.

Exhibits/Attachments shall include:

- **Schematic Layout of Roadway and Bridge**

- Provide a Plan View Layout with sufficient detail to insure that the Final Design can be constructed without any major issues. Include the location of the proposed trunk storm sewer and detention facilities as necessary. The schematic layout shall be at a scale of 1" = 40' on 11"x17" sheets. Include a Cover Sheet with a Vicinity Map with the project limit. The schematic should show the pavement marking concept so that traffic movements can be considered and reviewed during the study phase. Provide the proposed typical sections on the schematic. Typical Sections shall be drawn at 1"=20' horizontal and 1"=2' vertical scale on 11"x17" sheets. Location of soil borings will be identified.

- **Cost Estimates**

- Provide a preliminary construction cost estimate for the final recommendation provided in the Abbreviated Preliminary Engineering Report.

- **Utility Tables**

- The consultant shall coordinate with utility companies that have existing facilities in or adjacent to project limits. The coordination shall include:
 - **Level B SUE:**
Identify all existing utilities within the existing and proposed rights-of-way. Provide list of existing utilities with owner and contact information. Meet with the utility companies and provide information and schematics as necessary.
 - Identify major utilities that will potentially require relocation. Major utilities are defined as: pipelines, concrete encased conduits, or other utilities of this nature. Overhead power lines at some locations need to

be relocated and will be coordinated with the concerned utility company during the design phase.

- Identify any utilities that are within dedicated easements that will be within the proposed right-of-way.
- Provide a table with each utility identified along with the contact information.
- Provide a table of the existing utilities. The table shall include given ID number for the potential conflicts, stations along the centerline for the utilities and for crossings, the owner of the utility, contact name, address, phone number, and email address, any notes such as it may be in possible conflict.
- **Sight Distance**
 - The consultant shall investigate sight distance restrictions and general operating conditions of all existing and proposed intersections along Williams Way Boulevard within the project limits.
 - Sight distance restrictions will be investigated and Approach and Departure Site Triangles will be developed for the intersections for determining the safe passing distance and stopping sight distance for the traffic.

SCOPE OF ADDITIONAL SERVICES FOR THE PROJECT:

SURVEYING:

1. Topographic Survey:

Topographic Survey will be performed and cross sections will be taken at 100-foot intervals each side of the centerline of Proposed Williams Way Boulevard. Locate any visible utilities, improvements, or above ground structures along the road. Provide project baseline and survey control maps.

2. Proposed ROW Maps with M&B Descriptions of Parcels to be Acquired:

Once the existing ROW Maps have been completed and the need for parcels identified (if any), prepare right-of-way maps with associated metes and bounds.

Right-of-way maps shall conform to Category 1A Condition II Land Title Survey. Individual parcel maps are not required. Right-of-way maps shall be at a scale of 1" = 40' on 11"x17". All structures shall be dimensioned to the new right-of-way. Final Mylars will be of 22"x34" size. It is assumed that a maximum of two (2) parcels will need to be acquired for this project.

3. Detention Pond (Optional Additional Service):

We are assuming that the detention pond includes additional abstracting, field surveys for boundary analysis, metes and bounds descriptions, parcel station and annotation on the final alignment map.

GEOTECHNICAL:

1. Proposed Roadway and Drainage Improvements:

Conduct geotechnical investigation involving eleven (11) 25-ft deep soil borings (B-1 through B-6, B-9 through B-12, B-17) along the proposed project alignment, four (4) 30-ft soil borings at the two culvert crossings (B-13 through B-16), and two (2) 100-ft soil borings (B-7 and B-8) at the Rabbs Bayou bridge crossing, regular laboratory tests, and associated engineering analyses (roadway pavement design (PCC pavement design, along with AC pavement design with black base and cement-treated crushed stone base for temporary roadways), bridge foundation recommendations (including feasible foundation type, allowable bearing capacity curves), geotechnical recommendations and parameters for the construction of the storm sewers, and construction recommendations for the proposed improvements. Boring B-1, B-5, B-11 and B-16 will be converted into Piezometer PZ-1, PZ-2, PZ-5 and PZ-6, respectively.

2. Proposed Slope Stability Analyses of the Earth Slopes at Rabbs Bayou Crossing:

Conduct geotechnical investigation involving eight (8) 45-ft deep soil borings (B-18 through B-25) along the north and south banks of Rabbs Bayou within 1000 feet of the bridge crossing, and conducting regular and specialty laboratory soils tests (crumb and pinhole tests, and triaxial consolidated-undrained (CU) tests) to investigate the subsurface soils properties and ground water conditions. Conduct slope stability analyses and provide recommendations to improve the existing earth slopes that may be impacted by the proposed bridge constructed and protection of

the slope soils against erosion (as necessary). FBCDD guidelines shall be followed in the investigation. Borings B-23 and B-24 will be converted into Piezometer PZ-4 and PZ-3, respectively.

3. Field Exploration:

Segments of the existing two-lane Williams Way Blvd. has busy traffic, and thus traffic control signs and cones, as well as one flagman and a peace officer, will be provided for coring/drilling operation for work personnel safety. We assume that the permission to access to the proposed boring locations along the proposed Williams Way Blvd. improvements alignment will be arranged by others at no cost to ATL, and that the boring locations are accessible to our drill rig.

Soils stratigraphy and conditions along the proposed Williams Way Blvd. improvements site will be evaluated by drilling thirty (30) borings to depths of 25, 30, 40 and 100 feet at approximate boring locations. Approximately six (6) of the borings may be located in the existing PCC pavements, and four (4) may be located within existing AC pavements with possible cement-stabilized base; these existing pavements will be cored through using a pavement coring machine to determine the existing pavement materials and thicknesses, and to facilitate the soil borings. Eight (8) of the soil borings will be converted into piezometers to monitor ground water conditions.

Soil stratigraphy within the yet to be located proposed detention pond (assumed to be about 5 acres and 15 feet deep) will be investigated by drilling five (5) 30-ft soil borings at locations to be decided once the pond site has been decided. Two piezometers are proposed within the detention pond area.

Soil samples will be obtained continuously to a depth of 20 feet, and at 5-ft intervals thereafter. Standard Penetration Tests (SPT) will be performed in sands, if encountered, and clays will be sampled by Shelby tube. Shear strengths of the clays will be measured in the field with a hand penetrometer and correlations between this data and laboratory shear strength data will be made during analysis.

Depth to ground water will be important for the design and construction of this project. For this reason, the borings will be drilled dry and the depth at which groundwater is encountered will be recorded. The borehole will be left open for 24 hours, and 24-hour water level will be recorded, and the boreholes will be grouted after the completion of drilling and sampling. For boreholes with piezometer, water

level after 24-hours and 7- and 30-day will be recorded; the piezoimeters will be pulled and plugged after the 30-day water level reading. All cored pavement will be patched using like pavement material.

4. Laboratory Testing:

Laboratory tests will vary with the soils encountered, but will be planned to classify soils and define design parameters for the design and construction of the proposed pavements, bridge structure, storm sewers and stability evaluation of slope soils of the existing Bayou/ditches and the proposed detention ponds. All tests will be performed in accordance with FBCED and FBCDD criteria, and the American Society of Testing Materials (ASTM) Procedures. Estimated test types and quantities are presented on attached sheet. All soil samples obtained will be retained for 3 months after the completion of final report. Crumb, pinhole and triaxial consolidated-undrained tests will be conducted for soil samples from detention basin borings to evaluate the dispersiveness and shear strength characteristics of the onsite soils.

5. Engineering Analysis and Reporting:

The field and laboratory data will be summarized in an engineering report. Analyses of these data will be presented and recommendations made in accordance with FBCED and FBCDD criteria. Recommendations will be made relative to the following:

- Generalized soils stratigraphy and groundwater levels.
- Existing pavement description at boring locations, as applicable.
- Conduct pavement design and analyses for the PCC pavements, as well as AC pavements with black base and cement-treated base for the temporary roadway based on available traffic volume data and projection, and provide recommendations for the pavement subgrade preparation and stabilization, as well as pavement construction.
- Recommendations for feasible foundation types for the proposed bridge structure, allowable foundation bearing capacities, and foundation construction.
- Slope stability analyses of the earth slopes at the existing Rabbs Bayou at the bridge site, and recommendations for the soil soils' improvements and erosion protection, as necessary.

- Slope stability analyses and recommended design earth slopes for the proposed detention pond, and recommendations for the basin construction and erosion protection measures of the slope soils.
- Discuss of onsite soil types and the suitability of these materials for use as fill in structure and non-structure areas.

A draft geotechnical report will be submitted. Once we have received review comments from Isani, FBCED and FBCDD, a final report addressing the review comments will be issued. An electronic copy (pdf) of the final report will also be issued.

DRAINAGE (HYDROLOGY & HYDRAULIC ANALYSIS):

We will perform the following Hydraulic and Hydrologic support services during the preliminary design phase.

The scope of services includes the following tasks:

1. Preparation of Drainage Impact and Mitigation Analysis Report for submission and approval of Fort Bend County Drainage District:

- Determine existing and proposed condition discharge rates from the proposed roadway alignment and limits. Confirm limits of the analysis with preliminary layout for the proposed roadway. Discharge rates for proposed conditions will reflect the change in Tc and change of the drainage system from open ditch to storm sewers. Additionally, all new areas of Proposed Right-of-Way (ROW) will be accounted for in the drainage calculations.
- Develop hydrographs for existing and proposed conditions for design storms and determine required detention volume requirements to offset the increase in peak runoff rates for storms up to the 100-year events. Storms to be evaluated for the analysis will include the 2-year, 10-year, and 100-year events.
- Perform drainage area delineations for the proposed conditions and develop onsite and offsite flow calculations for proposed conditions. Perform extreme event sheet flow analysis.
- Provide details on required hydraulic improvements to the channel as necessary to ensure no increase in water surface elevation for the proposed design condition.

- Identify all mitigation requirements, including measures needed to eliminate impacts on flow rates and floodplain storage. Such measures may include detention, floodplain excavation, channel modifications, etc.
- Update calculations and hydrologic modeling data to reflect required mitigation measures and features. Check all results to identify any residual impacts on flow rates.

2. Hydraulic Bridge Analysis for Rabbs Bayou Bridge:

- Review the existing HEC-RAS models for the Rabbs Bayou (to be furnished by Fort Bend County) for the analysis. An additional Level of Effort will be submitted to Fort Bend County if the existing models needs to be created by Isani.
- Maintain the low chord of the bridge will be 1.5 feet or more above the existing or fully developed 100-year water surface elevation, whichever is higher.
- Hydraulic Bridge Analysis will be required for the Proposed Bridge at Rabbs Bayou and for the Cross Culverts (Three Box Culvert and Seven Circular Culvert) located at two locations along the project area.
- Proposed HEC-RAS models will be created to represent proposed conditions for the Proposed Box Culverts, Circular culverts and Proposed Bridge at Rabbs Bayou.

3. Preparation of Drainage Report:

- Prepare a written report detailing the assumptions made in the drainage study and hydraulic analysis as well as the results obtained. The report will summarize background information, methodology, and results regarding the existing conditions and proposed improvements. Figures, tables, appendices, etc. will be provided to convey relevant information.

BRIDGE DESIGN AT RABBS BAYOU:

The Bridge at Rabbs Bayou will be designed to a minimum AASHTO LRFD Bridge Design Specifications, 6th edition with 2013 interim revisions. Designs are to be in accordance with the latest edition of the "Standard Specification for Highway Bridges", as adopted by AASHTO.

The total width of the Proposed Rabbs Bayou Bridge is 70 feet. The Cross section for the Proposed Rabbs Bayou Bridge will be two (2) 24 feet lanes with curbs, 6 feet sidewalk, 1 foot rail on either ends of the Bridge with a 6 feet median.

A Bridge Layout plan and profile will be prepared during the preliminary engineering phase and submitted to the county for approval before proceeding to structural detail design. Coordinate with the Geotechnical Consultants to determine the location of soil borings drilled.

Bridge will be designed to pass the 100-year design flow without causing adverse impacts or erosion problems in the channel. The low chord of the bridge will be 1.5 feet or more above the existing or fully developed 100-year water surface elevation, whichever is higher.

Bents and abutments will be aligned parallel to the longitudinal axis of the channel to minimize obstruction of the flow. Bridge and bents constructed on Rabbs Bayou shall be designed to accommodate the ultimate channel section with a minimum of structural modifications.

It is assumed that the Proposed Bridge will be a three (3) span concrete bridge with the middle span to clear the channel.

Preliminary Bridge Layout Plan and Profile includes the following during this phase:

Bridge Layout (Plan View)

- Horizontal Curve Information or Bearing of Centerline
- Skew angle(s)
- Slopes for header banks and approach fills
- Control stations at beginning and ending of bridge (with deck elevation)
- Approach pavement and crown width
- Bridge roadway width, curbs, median, face of rail, shoulders and sidewalks
- Approach slab and curb returns
- Proposed features under structure
- Typical Bridge section including preliminary proposed beam types and spacings
- Minimum horizontal and vertical clearance
- Railing and Joint types and seal size, if used
- Critical horizontal clearances (from near by structures and utilities)

Bridge Layout (Profile View)

- Types of Foundations
- Finished Grade Elevations at beginning and end of bridge
- Length, type of spans and units
- Type of Riprap
- Bent numbers encircled
- Fixed/expansion conditions of all bents
- Number, size and length of foundations

TRAFFIC SIGNALS:

We will develop the preliminary schematic for modifying the existing signalized intersection at FM 762 and Williams Way Boulevard as per the Proposed Geometry for the intersection.

Modifications may include proposed locations for traffic signal poles, pedestrian signals and push buttons, vehicular detection, etc.

"EXHIBIT A" – Scope of Services

Williams Way Boulevard

From FM 762 to US 59 NB Frontage Road

Fort Bend County has requested a proposal for **Preliminary Engineering Phase** and **Design Phase Services** to improve the existing 2-lane concrete undivided roadway (with roadside ditches) (south end of the project) and existing 2-lane asphalt roadway (with roadside ditches) (north end of the project) to a 4-lane concrete curb & gutter boulevard with storm sewers, Bridge on Rabbs Bayou, outfalls, modification to the existing traffic signal and all necessary appurtenances. The project includes the construction of a new Boulevard section (extension of Williams Way Boulevard) connecting FM 762 and US 59 NB Frontage Road.

PROJECT LIMITS

1. The **Williams Way Boulevard** project will begin at the intersection of Williams Way Boulevard and FM 762 and end at US 59 NB Frontage Road. The ROW for the project limits varies from 60-feet to 140-feet. The road will be widened to accommodate 4-lane concrete boulevard section, with left turn lanes as necessary and median. The existing ditches east and west of the existing roadway will be replaced with a storm sewer system.
2. The Existing Williams Way Boulevard at US-59 is being modified and reconstructed (currently in letting stage) as part of US 59 Reconstruction project by TxDOT connecting the West and East ends. The tie-in point for the proposed Williams Way Boulevard at US 59 NB Frontage Road (East end) will need to be coordinated with TxDOT.
3. The project has an existing signalized intersection at Williams Way Boulevard and FM 762 which will be modified per the new geometry of the intersection.
4. The project has an existing wooden bridge located on the Rabbs Bayou which will need to be removed and a new bridge will be constructed per the design standards. The total width of the Proposed Rabbs Bayou Bridge is 70 feet. The Cross section for the Proposed Rabbs Bayou Bridge will be two (2) 24 feet lanes with curbs, 6 feet sidewalk, 1 foot rail on either ends of the Bridge with a 6 feet median.

PROJECT SCOPE

FINAL DESIGN PHASE

The Design Phase of the project shall consist of the preparation of completely approved construction documents that reflect the Preliminary Engineering Report. The Design shall build upon the framework identified in the Preliminary Engineering Report and include roadway design, profiles, drainage system and appurtenances, details and bid documents necessary for a complete design review. The submittal milestones for Fort Bend County shall follow the project schedule as shown in the “**Exhibit C**”.

A Meeting will be held in order to discuss the traffic control and provide the following preliminary documents for communicating the significant construction traffic control concepts and to enable review and discussion at the meeting: phasing overview drawing (roll plots), typical cross-section(s) for each major phase and preliminary traffic control detail plans showing the temporary transitions at the ends of the project. Also provide preliminary traffic control detail plans for intersections with existing traffic signal control and, if off-site detours are anticipated, a detour concept sketch.

The Design Submittal shall address all comments from the Preliminary Engineering phase of the project, design phase milestone submittals, and the construction review meetings. The Design Submittal shall include the submittal of the 22”x34” construction ready Plans, Specifications and Cost Estimate (PS&E). The submittal milestones will be 70%, 100% and Mylars.

The design phase shall also include preparation of Exhibits and Utility Conflict list and provide assistance in coordination with utility companies.

DETAILED DESIGN PHASE

The Design Phase of the project shall consist of the preparation of completely approved Construction Plans documents reflecting the approved Preliminary Engineering Report.

The Design shall build upon the framework identified in the Preliminary Engineering Report and include Roadway Design, Profiles, Drainage Systems and Appurtenances, Details and the Bid Documents necessary for a complete design review. The submittal shall be considered final and ready for construction, barring minor comments from Fort Bend County.

The Design Submittal shall address all comments from the Preliminary Engineering Phase of the project. The Design Submittal shall include the submittal of the construction ready plans on 22"x34", the project manual, and a final cost estimate.

The design phase shall also include the coordination of utilities. The coordination shall include, but not limited to:

- Meet with the utility companies and provide information and plans as necessary.
- Provide any documentation as necessary and assist Fort Bend County into entering an agreement with the utility companies for the relocation of the facility.
- Obtain approval from the Utility Section for all request made by utility companies prior to implementing changes.

Additional Considerations for the Design Phase are:

Roadway and Drainage Design:

1. The Design Phase services will be performed in accordance with the DESIGN STANDARDS AND DETAILS, Fort Bend County Engineering Department, Latest Edition.
2. The Roadway design and construction of Williams Way Boulevard shall comply with requirement of Fort Bend County regulations and follow GEOMETRIC DESIGN AND STANDARDS, Harris County and City of Houston as modified by Fort Bend County Engineering Department, Latest Edition.
3. The Layout of medians including openings shall comply with the guidelines of GEOMETRIC DESIGN GUIDELINES FOR SUBDIVISION STREET, Harris County and City of Houston as modified by Fort Bend County Engineering Department, Latest Edition.
4. The design and construction of Williams Way Boulevard drainage systems shall comply with requirement of Fort Bend County regulations and Fort Bend County Drainage District (FBCDD) DRAINAGE CRITERIA MANUAL.
5. The pavement elevation shall be set in accordance with the Fort Bend County Guidelines.

6. The pavement section shall be designed in accordance with the recommendations from the Geotechnical Investigations and Report.
7. Provide coordination with Fort Bend County for any adjacent developments within the project area limits.
8. Plan and Profile sheets will be created for a scale of 1" = 40' with all the references attached and shown as per the Fort Bend County design requirements for all submittals and the Final Submittal will be a Full Size (Scale 1" = 20') set of 22"X34" Mylars. All the CAD work will follow Fort Bend County design standards.
9. Driveway width and location should match existing when feasible. Also, driveways should meet Fort Bend County Regulations of Subdivisions, Section 7 requirements. The centerline station and percent grade shall be indicated on the drawings for all driveways.
10. Median nose setbacks at intersections shall be 15 feet from the face of the curb of the intersecting street.
11. All the intersections or where the sidewalks exist shall include pedestrian ramps in accordance with the current ADA requirements

Bridge Design at Rabbs Bayou:

12. The Bridge at Rabbs Bayou will be designed to a minimum AASHTO LRFD Bridge Design Specifications, 6th edition with 2013 interim revisions. Designs are to be in accordance with the latest edition of the "Standard Specification for Highway Bridges", as adopted by AASHTO.
13. The total width of the Proposed Rabbs Bayou Bridge is 70 feet. The cross section for the Proposed Rabbs Bayou Bridge will be two (2) 24 feet lanes with curbs, 6 feet sidewalk, 1 foot rail on either ends of the Bridge with a 6 feet median.
14. Bridge Railings are to be Fort Bend County or Harris County Standard Railings on reinforced concrete parapets. The standard drawings for three types of guardrail (pedestrian rail, traffic rail and combination of pedestrian and traffic rail) will be used as applicable.

15. Bridge Plan and Profile with typical sections and structural details will be prepared as part of the final submitts. The Engineer shall submit all the structural design calculations and quantity calculations during the submittals to county.

Traffic Control Plans (TCP) and Signing and Pavement Marking Plans:

16. A construction traffic control meeting shall be held prior to the 70% submittal and will be scheduled by the Fort Bend County Project Manager with Traffic Engineer and the Construction Programs Division. Provide the following preliminary documents for communicating the significant construction traffic control concepts and to enable review and discussion at the meeting: phasing overview drawing (roll plots), a typical cross-section(s) for each major phase and preliminary traffic control detail plans showing the temporary transitions at the ends of the project.
17. Provide preliminary traffic control detail plans for intersections with existing traffic signal control and, if off-site detours are anticipated, a detour concept sketch.
18. Traffic Control Plans and Permanent Signing and Pavement Marking Plans will be provided as per the MUTCD and Fort Bend County Engineering Department Standards.

Traffic Signal Plans:

19. Proposed Traffic Signal Plans will be provided as per the Fort Bend County Engineering Department Standards at Williams Way Boulevard and FM 762 intersection.
20. Temporary Traffic Signal Design (Plans and Layouts, including Loop Detectors and Electrical Schedules) will be provided at FM 762 and Williams Way Boulevard during the construction of the project if required.

Storm Water Pollution Prevention Plans (SWPPP):

21. Prepare the drawings based on Fort Bend County Design Criteria.
22. As the roadway will disturb more than 1 acre of land, the following will be provided as part of SWPP Plans. Prepare the SWPPP written plan including two

Notices of Intent (NOI), two Notices on Termination (NOT), and two Construction Site Notices as/if required in accordance with the current Texas Commission on Environmental Quality, TPDES General Permit for storm water discharges associated with construction activities.

Storm Water Quality Management Plans (SWQMP):

23. Prepare a Storm Water Quality Management Plan (SWQMP) for implementation of Best Management Practices necessary for treatment of storm water runoff in accordance with the regulations of Fort Bend County, Texas for Storm Water Quality Management, and/or as required by the appropriate local jurisdictional agency regulations, ordinances, or guidelines. Review and sign off by Fort Bend County Engineering Department (FBCED) – Permit section will be required.
24. If it is determined that it will not be feasible to address SWQMP in accordance with the regulations noted above, alternate minimum acceptable options to address Best Management Practices (BMPs) are provided in the Harris County Public Infrastructure Department engineering Division–Permit Office’s “Storm Water Quality Guidance Document for New Development/Redevelopment Projects”. Use of these options will require approval of Fort Bend County Engineering Department (FBCED).
25. Prepare and submit final Survey Control Maps as part of the construction plans.
26. Finalize and submit Mylars for Issuing for Construction, Finalize Project Manual, Specifications and Construction Cost Estimate.

BID PHASE AND CONSTRUCTION PHASE

The following services will be performed during the Bid Phase and Construction Phase of the project:

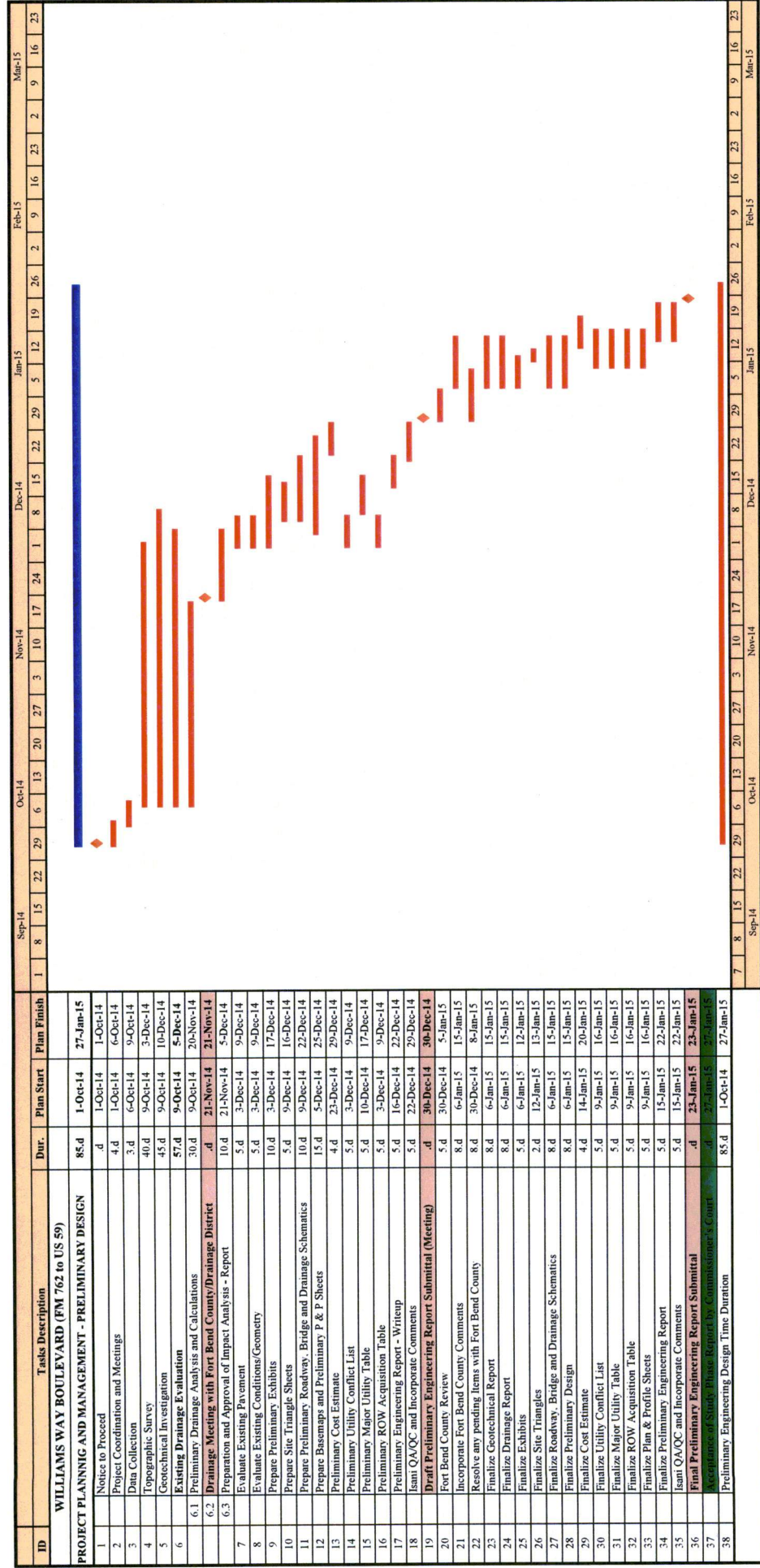
- **Bid Phase:**
 - The Bid Phase of the project shall consist of the preparation of the final bid documents, pre-bid meeting, preparation of addenda, bid-opening, preparation of bid tabs and recommendation of awards. This task will include submitting a CD with the Bid Documents after the project has been awarded.
 - Scanning of contract documents, printing of drawings (11"x17" and/or 22"x34") and providing Addendum(s) (if necessary).
- **Construction Phase:**
 - Attend Pre-Construction Meetings and Progress Meetings, Review and Respond to Submittals, RFI's, RFP's and Change orders as required, Substantial and Final Completion Walk-Thru and Punch List and Record Drawings as required by Fort Bend County.

"EXHIBIT B" - Compensation for Professional Services
Project Name: Williams Way Boulevard
Project Limits: From FM 762 to US 59 NB Frontage Road
FBC Project Number: 13114 | Isani Project Number: 14PV59

BASIC SERVICES			
1	Preliminary Engineering Design		\$ 132,474.00
2	Final Design		\$ 162,164.00
3	Bid Phase and Construction Phase		\$ 30,000.00
4	Drainage (H&H)		
4.1	Preparation and Approval of Drainage Report (Road and Bridge)	\$ 50,607.00	
			\$ 50,607.00
5	Bridge Design at Rabbs Bayou		
5.1	Preliminary Design for the Bridge	\$ 16,971.00	
5.2	Final Design for the Bridge	\$ 58,152.00	
			\$ 75,123.00
6	Geotechnical Investigations		
6.1	Geotechnical Report for Roadway, Drainage and Rabbs Bayou	\$ 43,474.00	
6.2	Coordination with Geotechnical	\$ 2,628.00	
			\$ 46,102.00
7	Survey		
7.1	Topographic Survey	\$ 35,075.00	
7.2	Proposed ROW Metes & Bounds	\$ 1,915.00	
7.3	Coordination with Survey	\$ 3,534.00	
			\$ 40,524.00
8	Traffic Signals		
8.1	Temporary Traffic Signal Design	\$ 2,478.00	
8.2	Permanent Traffic Signal Design	\$ 9,756.00	
			\$ 12,234.00
SUB-TOTAL FOR BASIC SERVICES (1-8)			\$ 549,228.00
OPTIONAL SERVICES (DETENTION POND)			
9	Drainage (H&H)		
9.1	Detention Pond Design	\$ 14,013.00	
			\$ 14,013.00
10	Survey		
10.1	Topographic Survey for Detention Pond	\$ 2,200.00	
			\$ 2,200.00
SUB-TOTAL FOR OPTIONAL SERVICES (9-10)			\$ 16,213.00
TOTAL SERVICES (BASIC & OPTIONAL)			\$ 565,441.00



"EXHIBIT C" - Preliminary Engineering Design and Report Schedule
WILLIAMS WAY BOULEVARD (From FM 762 to US 59 NB FRONTAGE ROAD)





"EXHIBIT C" - Final Design Schedule
WILLIAMS WAY BOULEVARD (From FM 762 to US 59 NB FRONTAGE ROAD)

