May 23, 2017

Mr. James Andrews, P.E.
City Engineer
City of Bellaire
7008 S. Rice Avenue
Bellaire, TX. 77401

Re: Engineering Services Proposal **(2nd Revision)**
Bonds for Better Bellaire Group C, Phase 2 Street & Drainage Improvements

Dear Mr. Andrews:

Costello, Inc., (CI) is pleased to provide this engineering services proposal for the referenced project. We understand that the City will reconstruct the following City Street Segments:

- Boliver Street (Dead End South – Jessamine Street)
- Maple Street (Ave B – Newcastle Street)
- Spruce Street (Ferris Street – South Rice Avenue)
- N Fifth Street (Bissonnet Street – Spruce Street)

as reinforced concrete, curb and gutter streets w/ closed conduit drainage systems. Besides pavement reconstruction, the project will include the replacement of some water distribution lines, and drainage utilities, sidewalks, curb ramps and drive way tie ins. It is anticipated that no sanitary sewer main facilities will be replaced unless determined to be in conflict with other improvements.

Assumptions:

1. Replace existing concrete/asphalt street pavement section through the limiting intersections.
2. Water Line replacement for N. Fifth street segment as required and transfer of water and sanitary sewer services (as needed).
3. 5 foot width sidewalk and ramp reconstruction on at least 1 side of the ROW throughout entire street segment to meet current ADA Standards, or obtain variances where required.
4. Recommendations from the City of Bellaire's Urban Village Downtown Streetscape package will be reviewed and incorporated into the designs for Spruce St. and N. Fifth St as much as possible, but landscaping to be designed and implemented by others.
5. Use existing geotechnical information available and minimize soils borings for the design of the street and utility improvements. Minimal geotechnical work will be performed through the attached subconsultant proposal.
6. Two Public Meetings to occur during design and construction phases of the project.
7. Spruce / Fifth Streets – 100 year storm sewer design and constrict flows to S. Rice w/ backflow preventer from S. Rice system; Maple Street – 100 year storm sewer design

8. Installation of flapgate structures at S. Rice outfall, I 610 Newcastle outfall, and Southdale area outfall and include in Group C Phase 2 Street and Drainage Construction plans. Depending on exact locations of these structures, significant box structures may be required at the installation locations.

Scope of Services:

Preliminary Engineering

The proposed preliminary engineering scope will provide for an approximate 30% set of construction drawings (plan view w/ existing utilities, survey, and proposed alignment for improvements) along with critical profile constraints based on the location of existing drainage channels and public / private utility obstructions.

The preliminary design will be performed in accordance with current City of Houston Design Standards as well as Texas Commission on Environmental Quality, Texas Department of Licensing Requirements, Harris County Flood Control District, and Texas Manual of Uniform Traffic Control Devices Standards.

Costello will perform the following activities as part of the preliminary engineering services for the project:

1. Complete design survey including topography and cross sections at 50 foot intervals (from ROW to ROW and 10' outside ROW (or to neighboring fence) for all street segments. All trees along the ROW and within any median will be tied in. All visible features associated with existing water, sanitary sewer, and drainage facilities will be tied in.
2. Review any previous geotechnical investigation previously prepared for local construction. Perform minimal geotechnical services as described in the attached proposal.
3. Perform preliminary utility coordination work including initial contacts, obtaining plans, and obtaining current coordination procedures for life of project (gas, electric, phone, cable companies).
4. Based on City's current master planning documents, incorporate results into street segment design
5. Develop preliminary drainage design in accordance w/ the previously described assumptions.
6. Develop preliminary pavement cross section including proposed lane lengths / widths, turn lane widths, median widths, sidewalks/ramps, and utility relocations.
7. Anticipate replacement of sidewalks on at least one side of the ROW for each street segment. Sidewalk recommendations will include locations, use of alternative materials, and uses of steel gratings and other tree protection methods.
8. Perform preliminary tree protection plan (through use of a subconsultant). (See attached proposal)
9. Develop preliminary traffic control plans, construction phasing plans, and access management plans for construction and permanent scenarios
10. Develop approximately 30% Construction Plans including layout sheets, plan view including existing and proposed improvements, and primary details
11. Develop Preliminary Construction Cost Estimate
12. Develop Draft Preliminary Engineering Report (PER) w/ Summaries of results from items 1-11 and deliver 3 copies of the report to the City.
13. Receive comments on the PER and incorporate into the final PER.

Final Design

Complementary tasks associated with Final Design and Construction Phase services include: Outfall permitting coordination, Stormwater Pollution Prevention Plan, Traffic Control Plan, and tree protection services.

No traffic signal work, sanitary sewer main replacements, irrigation, beautification improvements, and no environmental phase 1 or phase 2 work is anticipated for the projects.

1. Prepare and Submit detailed drawings and plans / specifications (90% and final) to appropriate regulatory agency (ies) and pursue approvals from agencies of jurisdiction including City, TDLR, and private utility companies, City of Houston (where required) and HCFCD. Construction plans to include plan, profile, and details for proposed paving, drainage, utilities construction, traffic control, stormwater pollution prevention plan, and construction phasing. A meeting will be held w/ City staff at 90%, and final review.
2. Prepare final construction drawings and project manual for bidding using City of Bellaire technical specifications and City "front end documents" for bids. Deliver 7 sets of construction drawings (3 - 1/2 size and 4 -full size), 2 project manuals and 2 pdf cds.
3. Furnish to the City an updated written Estimate of Probable Costs for the project at 90%, and final submittals.

Bid Phase:

4. Engineer provide construction drawings and project manual to bidders through CivCast website.
5. Attend and coordinate pre-bid meeting.
6. Answer contactor questions and prepare any required addenda.
7. Attend bid opening, tabulate, analyze and review bids for completeness and accuracy.
8. Provide review of Contractors references.
9. Provide bid tabulation and recommendation of award letter

Construction Phase:

10. Provide 15 hard copy sets and 3 cds of addendum posted construction drawings, and addendum posted project manual for construction. City to confirm # of ½ size and full size sets prior to printing.
11. Take general pre-construction photos to accompany pre-construction photos taken by construction contractor.
12. Conduct pre-construction conference and prepare copy of report / minutes.
13. Attend monthly construction progress meetings as needed.
14. Review and approve submittals, shop drawings, RFIs, and make recommendations to City.
15. Make periodic visits, no less that every thirty (30) days during the construction period, to the site to observe the progress and quality of the work, and to determine in general if the work is proceeding in accordance with the Contract Documents. Provide written report of observed progress with monthly pay application.
16. Attend interim / final inspections. Assist to develop master punch list developed in conjunction with City Staff.
17. Accompany TDLR compliance consultants on sidewalk inspection.
18. Revise contract drawings to show the work as actually constructed (based on contractor mark ups), and furnish the City with 3 sets of "record drawings" plans and electronic version in GIS format.

Additional Services:

19. Develop a tree protection plan as needed with City approval.

20. Attend and Coordinate up to 2 public meetings for the project – 1 during the design stage of the project, and 1 prior to commencement of construction activities, or at a different stage as determined by the City Manager.

Services not anticipated include materials testing services, and project representation (inspection services). These services would be performed or contracted out separately by the City.

Compensation

Services will be performed on a lump sum basis with the following fee components. The total Engineering Budget of $500,000 will not be exceeded without prior authorization from the City. Budgets for the individual components of services can be adjusted for efficient use of the total engineering budget.

Topographic Survey - $25,000
Geotechnical Investigation - $7,800
Preliminary Engineering - $140,000
Final Design - $287,500
Bid Phase Services - $7,500
Tree Protection Services - $2,200
Limited Construction Phase Services - $ 30,000

Total Engineering Fees - $500,000

Schedule

We would propose to provide the preliminary engineering report within 60 calendar days of written notice to proceed, 90% construction documents within 60 calendar days of receiving all PER comments, and 100% construction documents within 30 calendar days of receiving all 90% comments.

We look forward to working with the City staff throughout the implementation of this important street reconstruction project. Please call me at 713-579-3850 if you have any questions concerning the content of this proposal.

Sincerely,
Costello, Inc.

Samuel W. Kruse, Jr., P.E.
Vice President, Municipal Services

City Manager
City of Bellaire

CIBOR
GEOCONSULTANTS

Proposal No. 117-007
April 12, 2017

Costello Engineering & Surveying
9990 Richmond Avenue, Suite 450
Houston, Texas 77042

Attention: Mr. Sam Kruse, P.E.
Partner/Vice President

Proposal for Geotechnical Investigation
Pavement and Drainage Improvements Phase 2
Spruce, 5th, Bolivar and Maple Streets
City of Bellaire, Texas

Introduction

Cibor Geoconsultants (Cibor) is pleased to present this proposal to perform a geotechnical investigation to guide in the design and construction of replacement pavement and drainage improvements along a portion of four streets within the City of Bellaire, Texas. The streets are: 1) Spruce between Rice and Farris; 2) 5th between Spruce and Bellaire; 3) Maple between Newcastle and Avenue B; and 4) Bolivar at Pembrook south of Jessamine. We understand that the existing streets will be repaved with a new Portland cement concrete (PCC) pavement structural section along with curb and gutter. We anticipate that the existing subgrade will be re-worked and the top of subgrade elevation adjusted somewhat either through cut or fill. New storm sewers will be installed before pavement is placed. The depth of the storm sewer invert is expected to be less than 15 feet.

Background for this project was provided by Mr. Sam Kruse via an e-mail dated April 7, 2017. The e-mail included a drawing indicating the locations of the four streets undergoing paving and drainage improvements.

Scope of Services

The field exploration, laboratory testing, engineering analyses and reporting format will be performed in a manner consistent with guidelines of the City of Houston – Chapter 11.

Field Work. Based on our understanding of the project as described above, we propose to drill 3 borings to depths of 20 feet. The total footage will be 60 ft. One boring will be drilled near the intersection of Spruce and 5th Street. The second boring will be drilled on Maple and the third boring will be located on Bolivar. All three borings will be drilled approximately along the centerline of the street.

We anticipate having to core the existing pavement and underlying granular base material with a 6-inch-diameter core barrel before drilling begins. The cores will be packaged and transported back to our laboratory.

Sampling will be performed continuously to 15 feet and at 5-ft intervals to the completion depth of the boreholes. Samples of cohesive soils will be obtained with a thin-walled Shelby tube; a split-spoon sampler will be used to obtain samples of granular soils. The soils encountered will be logged by our Field Logger. We will estimate their in-situ moisture content and consistency using a pocket penetrometer. Representative samples of the soils will be obtained, packaged and transported to our laboratory for further testing.

Groundwater levels will be measured during drilling and after 15 minutes. Upon completion of our field work, we will seal the boreholes from the bottom up with cement-bentonite grout using the tremie method. The cored pavements will be sealed with either cold patch or "quick setting redi-mix concrete".

Laboratory Testing. The laboratory testing program will be aimed at classifying the subgrade soils, measuring their undrained shear strength, and assessing their properties to assist in rigid pavement design. As such, we anticipate performing the following types and quantities of tests:

- Nine Liquid and Plastic Limits (Atterberg tests)
- Twenty Water Content Determinations
- Nine Percent Passing the No. 200 Sieve
- Nine Unconfined or Unconsolidated-Undrained Triaxial Tests

Engineering Evaluation and Reporting. Based on the results of the field exploration and laboratory testing, and our engineering analyses, we will prepare a report meeting the format and requirements set forth within Chapter 11 of the City of Houston Design Manual. We will develop the following geotechnical engineering recommendations and conclusions:

- Discussion of our field exploration activities and laboratory testing program.
- Site description and subsurface conditions including area geology, general fault information, soil stratigraphy, soil properties and measured water levels.
- Anticipated soil conditions at the base of excavations for the storm sewer to be installed using open-cut methods, including the need for stabilization of the base, and appropriate bedding and backfill requirements.
- OSHA soil type classifications pertaining to trench shoring and bracing design.
- Need for dewatering or other means of groundwater control.
- Paving recommendations will follow the requirements set forth in Chapter 10 of the City of Houston Design Manual. For rigid paving, the minimum pavement thickness and subgrade treatment will be provided. The selected parameters used in the calculations will be presented.
- Construction considerations including structural fill material and compaction requirements, and preparation of subgrade including proof-rolling and over-excavation of any unsuitable material at design cut grade.

Special Conditions and Assumptions

Several assumptions have been made in developing our approach to the study and budget. If the assumptions and conditions are not valid, they could constitute a change in the scope requiring an adjustment to the project cost. The assumptions and conditions are listed below:

- Access will be provided by the Client.
- Coring/boring locations will be free of any contaminants and/or other environmental issues.
- Environmental assessment, evaluation and/or analyses are outside the scope of our services.
- The boring locations will be accessible to our truck-mounted drilling equipment.
- The boring locations will be selected based on the utility locations which will be provided us by the Owner/Client. We will also initiate a subsurface utility request (Texas 811) before commencing drilling.
- The boring locations will be free of any underground and overhead obstructions other than utilities which may be located nearby based on information provided by the Owner/Client and/or Texas 811.
- Available literature will be reviewed regarding the possibility of faulting in the area. However, a Phase I fault study is beyond the scope of this study.
- A Trench Safety report is beyond the scope of this study.
- Based on our site reconnaissance, we do not believe that subcontracted traffic control, other than appropriate barriers and flagging, will be required.

Cost and Schedule

Our services will be performed in accordance with the attached *General Conditions for Geotechnical Engineering Services*. We propose to use two subcontractors - Franchi's Concrete Drilling, to core the pavements, and Van and Sons for drilling.

The fee for the services described above will be a lump sum of $ 7,800.

We should be able to mobilize to the site within a week of Notice-To-Proceed. Field exploration should be completed within one day. Laboratory testing should be completed within two weeks of finishing the drilling campaign. The final report can be submitted within four to five weeks of receiving Notice-To-Proceed.

Closing

To indicate acceptance of this proposal, please sign in the signature block below and return one copy to us for our files.

Cibor Geoconsultants appreciates the opportunity to submit our proposal to Costello Engineering & Surveying. We look forward to assisting Costello and the City of Bellaire on this project. If you need further information or if you have any questions, please do not hesitate to call us.

Sincerely,

Cibor, Inc.
TBPE Firm Registration No. F-15616

Joseph M. Cibor, P.E.
Principal

Attachments: General Conditions for Geotechnical Engineering Services

Copies Submitted: Electronic PDF Document to Mr. Sam Kruse, P.E. with Costello Engineering & Surveying

CLIENT AUTHORIZATION:

Name	Signature	Title	Date

CIBOR
GEOCONSULTANTS

CIBOR, INC.
GENERAL TERMS AND CONDITIONS FOR GEOTECHNICAL CONSULTING SERVICES

1. SCOPE OF SERVICES

Cibor, Inc. ("Consultant") will perform the Services set forth in the Scope of Services agreed to by Consultant and Client; provided however, Consultant's scope of work shall not include the investigation, detection, or any design which is related to the presence of any hazardous materials or contaminated soil or groundwater. Further, Consultant's scope of work shall not include the investigation, detection, or any design which is related to the presence of any Biological Pollutants. The term "Biological Pollutants" includes, but is not limited to, mold, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms. Client agrees that Consultant will have no liability for any claim regarding bodily injury or property damage alleged, arising from, or caused directly or indirectly by the presence of or exposure to any Biological Pollutants. In addition, Client will defend, indemnify, and hold harmless Consultant from any third party claim for damages alleged to arise from or be caused by the presence of or exposure to any Biological Pollutants. If Client requests in writing prior to acceptance of Scope of Services, Consultant will negotiate a greater limitation amount, and remove Client's responsibilities, in exchange for an increase in fee to develop an expanded scope of work to provide biological pollutant protection.

2. PAYMENTS TO CONSULTANT

Consultant will perform all Services set forth in the Scope of Services and the charges set forth therein. Said charges will not include any additional services required. All invoices are due upon receipt. All amounts unpaid 30 days after the invoice date will include a late payment charge from the date of the invoice, at the rate of 10% per annum or the highest rate permitted by law.

3. STANDARD OF PERFORMANCE; DISCLAIMER OF WARRANTIES

Consultant offers different levels of geotechnical engineering Services to suit the desires and needs of different clients. Although the possibility of error can never be eliminated, more detailed and extensive Services yield more information and reduce the probability of error, but at increased cost. Client must determine the level of Services adequate for its purposes. Client has reviewed the Scope of Services and has determined that it does not need or want a greater level of Services than that being provided. Subject to the limitations inherent in the agreed Scope of Services as to the degree of care, the amount of time and expenses to be incurred, and subject to any other limitations contained in these Terms and Conditions, Consultant may perform its Services consistent with that level of care and skill ordinarily exercised by other professional Consultants practicing in the same locale and under similar circumstances at the time the Services are performed. No other warranty, express or implied, is included or intended by these Terms and Conditions.

4. CLIENT'S RESPONSIBILITIES

In addition to payment for the Services performed under this Agreement, Client agrees to: (a) assist and cooperate with Consultant in any manner necessary and within its ability to facilitate Consultant's performance under the Scope of Services; (b) provide access to and/or obtain permission for Consultant to enter upon all property, whether or not owned by Client, as required to perform and complete the Services and in connection thereto, Consultant will operate with reasonable care to minimize damage to the Project Site(s); however, Client recognizes that the operations and the use of investigative equipment may unavoidably alter conditions or affect the environment at the existing Project Site(s) and ; (c) supply Consultant with all information and documents in Client's possession or knowledge which are relevant to the Services. ~~The cost of repairing any damage at the Project Site(s) will be borne by Client and is not included in the fee unless otherwise agreed to by both parties stated in writing.~~ Client warrants the accuracy of any information supplied by it to Consultant, and acknowledges that Consultant is entitled to rely upon such information without verifying its accuracy. Prior to the commencement of any Services in connection with a specific property, Client will notify Consultant of any known potential or possible health or safety hazard existing on or near the Project Site(s), with particular reference to hazardous materials or conditions.

5. ALLOCATION OF RISK

(a) The total cumulative liability of Consultant, its subcontractor's, and all of their respective shareholders, directors, officers, employees and agents (collectively "Consultant Entities"), to Client arising from Services under this Agreement, including attorney's fees due under this Agreement, will not exceed the gross compensation received by Consultant for the applicable Services or $50,000, whichever is less; provided, however, that such liability is further limited as described below. This limitation applies to all lawsuits, claims or actions that allege errors or omissions in Consultant's Services, whether alleged to arise in tort, contract, warranty, or other legal theory.

(b) Each party ("Indemnitor") shall protect, defend, indemnify and hold harmless the other party (Indemnitee) from and against any claims, damages, losses, and costs arising from this Agreement or the project ("Claims"), including, but not limited to, reasonable attorney's fees and litigation costs, to the extent such claims, damages, losses or costs are caused by the negligence of the Indemnitor regardless of the negligence of the Indemnitee of its employees, affiliated corporations, officers, and sub-tier parties in connection with the project. Further, Client shall defend Consultant from any Claims.

(c) Neither Client nor Consultant will be liable to the other for any special, consequential, incidental or penal losses or damages including but not limited to losses, damages or claims related to the unavailability of property or facilities, shutdowns or service interruptions, loss of use, profits, revenue, or inventory, or for use charges, cost of capital, or claims of the other party and/or its customers.

6. OWNERSHIP AND USE OF DOCUMENTS

(a) All documents provided by Client will remain the property of Client. Consultant will return all such documents to Client upon request, but may retain file copies of such documents.

(b) Unless otherwise agreed in writing, all documents and information prepared by Consultant or obtained by Consultant from any third party in connection with the performance of Services, including, but not limited to, Consultant 's reports, boring logs, maps, field data, field notes, drawings and specifications, laboratory test data and other similar documents (collectively "Documents") are the property of Consultant. Consultant has the right, in its sole discretion, to dispose of or retain the Documents.

7. RELATIONSHIP OF THE PARTIES

Consultant will perform Services under this Agreement as an independent Consultant.

8. TERMINATION OF CONTRACT

Client and Consultant may terminate services at any time upon 10 days written notice. In the event of termination, Client agrees to fully compensate Consultant for services performed including reimbursable expenses to the termination date, as well as demobilization expenses. Consultant will terminate services without waiving any claims or incurring any liability.

9. DISPUTES

This Agreement will be construed in accordance with and governed by the laws of the State of Texas and venue shall be in Harris County, Texas.

Accepted by _____

YELLOWSTONE LANDSCAPE

CONTRACT/ESTIMATE

PROJECT #:		DATE:	

PHONE NUMBERS:

BILLED TO:	Sam Kruse	HOME:		WORK:	713-579-3850
	Costello Engineering	FAX:		MOBILE:	
	9990 Richmond #450	EMAIL:			
	Houston 77042			CUST #:	

SERVICE ADDRESS:	**City of Bellaire Group C Street projects**

WORK TO BE PERFORMED:	COST
Provide consulting services to inspect trees, and prepare a Tree protection measures	
To be included in the construction drawings.	
A set of construction drawings will be provided that have the tree locations and diameters. Plans will be marked up to show tree numbers, tree protection fencing and or root pruning locations. Tree maintenance such as clearance pruning, recommended removals, and or other needed tree maintenance will be provided in a schedule form to be included with the tree protection plan.	
Consulting time will be charged at $90.00 per hour. Estimated time is 24 man hours	$2200.00
Jeff Hanawalt	
If acceptable, please sign and fax back to our office. 713-774-3360. Thank you,	

Yellowstone Landscape will not be held liable for damage to existing utilities, cables, pipes, and all other improvements located under the surface of the property, or unmarked easements - *unless owner or owner's agent identifies and locates, with sufficient markers, all possible hazards prior to commencement of work.*
Yellowstone Landscape will not be responsible for confirming ownership of property or trees located on property where requested work is to be completed. **Work may be performed at different intervals; therefore explaining several invoices from one contract.**
Residential Arbor Customer – Credit card information is required prior to scheduling of work – card will not be charged until work is completed. A service charge of 1.5% per month or 18% APR will be added to all overdue accounts. You will also be liable for all legal and collection fees.

Subtotal _____
Sales Tax 8.25%
Total _____

Accepted By: _____ **Date:** _____

Credit Card Type/Number: _____ **Expiration Date:** _____

Security Code: _____ Billing Address- if different from above _____