

# HARRIS COUNTY

## OFFICE OF THE COUNTY ENGINEER

1001 Preston, Suite 500  
Houston, Texas 77002  
(713) 755-5370

March 18, 2021

Honorable County Judge  
& Commissioners

**SUBJECT: Consultant Agreement – PGAL, Inc.**

Recommendation that the County Judge execute an agreement with PGAL, Inc. in the amount of \$577,807 and an approval of funds not to exceed \$872,590 for Professional Engineering services to provide improvements to North Forest Subdivision located in Precinct 1 (UPIN 19101MF16R01).

Sincerely,

A handwritten signature in black ink that reads "John R. Blount" with a stylized flourish at the end.

John R. Blount, P.E.  
County Engineer

Attachment

cc: Commissioner Rodney Ellis  
Brandon Dudley  
William Taylor  
Amar Mohite  
Mittie Anderson  
Thomas Walker  
Keith Richard

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## PROFESSIONAL SERVICES AGREEMENT

(Professional Engineering Services)

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### 1. PARTIES

- 1.1 Parties. The Parties to this Professional Services Agreement (“Agreement”) are **PGAL, Inc.** (“Engineer”), and **Harris County** (“County”), on behalf of its Harris County Engineering Department (“HCED”). County and Engineer each may also be referred to individually herein as a “Party,” or collectively as the “Parties.”

### 2. PURPOSE

- 2.1 Project Description. County intends to provide Drainage improvements to North Forest Subdivision located in Harris County Precinct 1 (“Project”). This Project is also identified as UPIN 19101MF16R01.
- 2.2 Summary of Scope of Work. In addition to any applicable attachments to this Agreement describing the Scope of Work,
- 2.3 Professional Engineering Services. The professional services to be performed under this Agreement are within the scope of professional engineering, as defined by state law, and will be provided in connection with the professional employment or practice of a person who is licensed or registered as a professional engineer. The professional engineering services shall be performed in accordance with Tex. Occ. Code Ann. §§ 1001.001, et. seq, as amended.
- 2.4 Professional Services Procurement Act. The work to be performed under this Agreement cannot be purchased on the basis of competitive bids since it is encompassed within Texas Government Code §2254.002(2).

### 3. ENGINEER’S REPRESENTATIONS

- 3.1 Applicable Expertise. Engineer and the person executing this Agreement on behalf of Engineer certify and represent that Engineer (including Engineer’s agents, employees, volunteers, and subcontractors, as applicable) possesses the skills, qualifications, expertise, experience, education, knowledge, ability, and financial resources to perform all services and/or deliverables contemplated in this Agreement without significant disruption of those deliverables.
- 3.2 Permits and Licensing. Engineer represents that Engineer (including Engineer’s agents, employees, volunteers, and subcontractors, as applicable) possesses all special certifications, licenses, inspections and permits required by law to carry out the Scope of Work contemplated in this Agreement. Engineer’s agents, employees, volunteers, and subcontractors, as applicable, shall maintain appropriate accreditation and licensing, as required, through the State of Texas or other applicable licensing entities. Prior to the performance of any services under this Agreement, Engineer shall, upon written (including electronic) request, provide proof of valid licensure to HCED (including a listing of all licenses and expiration dates).
- 3.3 Authorized to Conduct Business. Engineer represents that Engineer is authorized to conduct the business and carry out the Scope of Work contemplated in this Agreement. Prior to starting performance under this Agreement, Engineer shall, upon written (including electronic) request, provide proof to HCED of the authority to do business in this state or at the location specified in this Agreement.
- 3.4 Ability to Perform. HCED will award contracts only to the most highly qualified available responsible provider/contractor possessing the ability to perform successfully under the terms, conditions, and budget of a proposed procurement. Consideration will be given to such matters as provider integrity, compliance with public policy, record of past performance, and financial and technical resources. Engineer represents that Engineer has the administrative, managerial, and financial capability to ensure proper planning,

management and completion of the Scope of Work described in this Agreement and further has the administrative capacity and capabilities to carry out all duties and responsibilities under this Agreement.

- 3.5 Conflict of Interest Certification. Pursuant to Chapter 176 of the Texas Local Government Code, Engineer certifies that Engineer has completed any required conflict of interest disclosures or questionnaires (see [www.ethics.state.tx.us](http://www.ethics.state.tx.us)). If this certification is materially incomplete or inaccurate, Engineer acknowledges that County shall have the right to terminate this Agreement without prior notice.
- 3.6 Certificate of Interested Parties Form 1295. Engineer certifies that it has accurately completed and submitted a notarized Certificate of Interested Parties Form 1295 ("Form 1295") in accordance with Texas Government Code §2252.908 and the rules adopted thereunder. Engineer acknowledges that it is responsible for making any and all necessary updates and/or corrections to the applicable Form 1295 during the term of this Agreement. Engineer must either (1) mail the completed Form 1295 to the Harris County Engineering Department at 1001 Preston, 7th Floor, Houston, TX 77002, Attn: Administrative Services or (2) submit the form by email to [HCEDAdminSvcs@hcpid.org](mailto:HCEDAdminSvcs@hcpid.org).
- 3.7 Disbursements to Persons with Outstanding Debt Prohibited. Engineer certifies, by execution of this Agreement, that neither Engineer nor any of Engineer's principals owe any debts as defined in Local Government Code Section 154.045 (including delinquent property taxes). Engineer understands that certain disbursements are prohibited and that County may apply any funds due to Engineer under this Agreement to any outstanding balance of certain debts pursuant to Section 154.045. If this certification is inaccurate, County may also terminate this Agreement. In addition, Engineer hereby assigns any payments under this Agreement to the Harris County Tax Assessor-Collector for the payment of any current or future delinquent taxes.
- 3.8 Internet Access. Engineer shall maintain appropriate internet access, which will enable Engineer to access any secure online invoicing, reporting, or other web-based system designed for more efficient communication with HCED. As requested, Engineer shall submit required reports, invoices and related documents through an applicable secure internet site in a manner required to protect any confidential information submitted. Engineer shall review all instruction materials and/or attend all HCED provided training that is necessary for Engineer to properly utilize applicable web-based information systems.

#### **4. SPECIFIC SCOPE OF WORK/SERVICES AND/OR DELIVERABLES**

- 4.1 Specific work, products, services, licenses and/or deliverables. Engineer shall provide the work, products, services, licenses and/or deliverables required to be provided by Engineer and as set out in this Agreement and in Attachment A and all other referenced attachments incorporated in this Agreement (altogether referred to as the Scope of Work). The provisions in this Agreement labeled 'Scope of Services' or 'Scope of Work' shall take precedence over anything conflicting in any attached Engineer proposal or correspondence. Engineer shall submit any and all project-related documents and invoices through the cloud-based project management software utilized by HCED for planning and management of all projects using real-time project data.
- 4.2 Written Authorization. From time to time during the course of this Agreement, HCED may deliver to Engineer written (including electronic) authorization (sometimes referred to as a notice-to-proceed, task-order, work-order or job-order) for providing certain work, products, services, licenses and/or deliverables contemplated in this Agreement, which Engineer shall then perform in accordance with this Agreement. Engineer shall not begin or proceed to the next design phase of the Scope of Work until Engineer receives from HCED a written (including electronic) authorization to proceed. County shall have no obligation to pay for and Engineer shall have no obligation to provide any work, services, products, or deliverables not rendered in accordance with a prior written authorization as described by this Section. Engineer shall complete the services called for by the calendar days and by the deadlines specified in this Agreement, including exhibits and written authorizations.

## 5. ADDITIONAL AND SPECIAL REQUIREMENTS

- 5.1 Cooperation with Other Service Providers. County may engage the services of other service providers for work related to the work, products, services, licenses and/or deliverables in this Agreement. Engineer shall reasonably cooperate with such other service providers and will not commit or permit any act that may interfere with the performance of work by any other service provider.
- 5.2 Non-Assignability. Unless otherwise authorized in this Agreement, neither party shall assign, in whole or in part, any duty or obligation of performance under this Agreement without the express written permission of the other party, except that the express written permission of HCED shall be considered the permission of County. Such written permission will not be unreasonably withheld, unreasonably conditioned, or unreasonably delayed. However, with notice to HCED, Engineer may assign this Agreement to any affiliate of Engineer that controls, is controlled by, has resulted from a merger with, or is under common control with, Engineer if the assignee is at least as capable and qualified to provide the deliverables contemplated in this Agreement. This provision is not intended to restrict any assignment that is required by Section 9.406 of the Texas Business and Commerce Code.
- 5.3 Independent Contractor/Parties. County expects Engineer to meet the high standards set forth in this Agreement and looks to Engineer for results only. Unless otherwise required by law or regulation, County shall not direct the methods used to obtain those results, and Engineer shall perform the services as an independent contractor under the sole supervision, management, direction, and control of Engineer. As an independent contractor, Engineer will accept directions pertaining to the goals to be attained and the results to be achieved, as applicable, pursuant to this Agreement, but Engineer shall be solely responsible for the manner in which Engineer will perform the services under this Agreement. Any methods that might be discussed in any training sessions given by HCED are not mandatory unless specifically required in writing in this Agreement or by law. Engineer is not obligated to maintain any set, regular hours, nor to perform any set number of hours of service in fulfilling the obligations under this Agreement, unless otherwise specifically set out in this Agreement. This Agreement is not intended to create a joint enterprise, joint venture, business partnership, agency, franchise, or employment relationship, under Texas law. The personnel and staff of Engineer are independent contractors or employees of Engineer and shall not for any purposes be considered employees or agents of County. Engineer assumes full responsibility for the actions of any employees and agents while performing any services incident to this Agreement, and Engineer shall remain solely responsible for the supervision, daily direction, control and payment, if any, of salaries (including withholding of income and social security taxes), workers' compensation or disability benefits and like requirements and obligations.
- 5.4 Employee Retention. Engineer agrees to maintain the organizational and administrative capacity and capabilities to carry out all duties and responsibilities under this Agreement. The personnel Engineer assigns to perform the duties and responsibilities under this Agreement will be properly trained and qualified for the functions they are to perform. If specific qualifications are set forth in job descriptions required by the funding entity and/or in this Agreement, unless a written waiver is granted, Engineer shall only assign personnel with the required qualifications to fulfill those functions. Notwithstanding transfer or turnover of personnel, Engineer remains obligated to perform all duties and responsibilities under this Agreement without degradation and in accordance with the terms of this Agreement.
- 5.5 Significant Organizational Change Notification. Engineer shall notify County immediately and in advance of any significant organizational change that could affect Engineer's ability to carry out all duties and responsibilities under this Agreement, including any change of Engineer's name or identity, ownership or control, or payee identification number. Engineer shall also provide written notice to County within 10 working days of the change. Engineer shall provide ownership information to County immediately upon any such change.
- 5.6 Adverse Actions Reporting. Engineer shall inform HCED, in writing, of any concluded investigation of Engineer (including Engineer's agents, employees, volunteers, and subcontractors, as applicable, providing work, products, services, licenses and/or deliverables under this Agreement) that is conducted by or on behalf of a government entity or other licensing or accreditation entity (including any state board of

examiners) and whose outcome included public censure or other public sanction (or any pending investigations, administrative actions, or lawsuits, that relate to the work under this Agreement or that could adversely affect any performance or obligation in this Agreement). If at any time a license of Engineer's agents, employees, volunteers, and subcontractors, as applicable, providing work, products, services, licenses and/or deliverables under this Agreement required to be maintained to fulfill the Commitments in this Agreement is suspended, revoked or is determined to be out of compliance in Texas or any other state, this Agreement may be terminated immediately without prior notice, at the option of HCED, effective the date of the suspension, revocation or non-compliance. Engineer is not entitled to receive payment for services that were performed by Engineer while the required license was suspended or revoked. Engineer agrees to immediately inform HCED, in writing, of any adverse professional review action that is taken by a professional association or society and that is based on the professional competence or professional conduct of Engineer's agents, employees, volunteers, and subcontractors, as applicable, providing work, products, services, licenses and/or deliverables under this Agreement. County may, at its sole option, terminate this Agreement, upon notice of such adverse professional review action.

- 5.7 Subcontracts. Unless otherwise explicitly set out in this Agreement, Engineer shall not enter into any subcontract for the work, products, services, licenses and/or deliverables under this Agreement unless, prior to any written authorization to proceed with work done in part by the subcontractor, Engineer has provided to HCED the qualifications of the subcontractor to perform and meet the standards of this Agreement. Engineer shall comply with all Texas Administrative Code and Texas professional licensing agency requirements for choosing any professionally-licensed subcontractor.
- 5.8 Professional Standards. Where specifically-applicable standards are not explicitly set forth in this Agreement, as someone with expertise in the field, Engineer must provide the work, products, services, licenses and/or deliverables in accordance with generally-accepted standards applicable to Engineer's profession or industry. Engineer and County agree and acknowledge that County is entering into this Agreement in reliance on the Engineer's competence and qualifications, as those were presented to County by Engineer with respect to professional services. Engineer shall at all times utilize the skill and attention to fully, timely, and properly render professional services for the development of The Project to final completion as set out in, or reasonably inferred from, the Scope of Work/Services. This shall be done in a manner utilizing the degree of care ordinarily used by licensed professionals performing similar services on projects of a similar nature and scope within the State of Texas. A professional engineer assigned by Engineer to manage the Scope of Work who is licensed to practice in the State of Texas shall be present and represent Engineer at meetings of any official nature concerning The Project, including, but not limited to, scope meetings, status meetings, pre-bid meetings, any pre-construction meetings and any construction meetings (for construction-related projects) with County staff and/or contractors, unless otherwise set forth in the Scope of Work or approved in writing by HCED.
- 5.9 County Procedures. To effectively perform the services stated above, Engineer must become familiar with various procedures, policies, data collection systems, and other information of County. Engineer shall adhere to all applicable County engineering guidelines, standards, and design criteria (see <http://www.eng.hctx.net>). HCED will assist Engineer in obtaining the information. Unless otherwise required by law, Engineer agrees to keep any sensitive information confidential and not disclose it to outside parties without first obtaining County's written authorization.
- 5.10 Ownership of Work Product. For the purposes of assigning ownership of Engineer work product, the work performed will be deemed, to the extent authorized by law, to have been done on a works-made-for-hire basis, as that term is understood in copyright law. In the event and to the extent that such works are determined not to constitute works-made-for-hire, Engineer hereby irrevocably assigns and transfers to County all right, title, and interest in such works, including, but not limited to, copyrights. County shall be the absolute and unqualified owner of all completed or partially-completed Engineer work product prepared pursuant to this Professional Services Agreement and shall have the same force and effect as if prepared by County, including mylar reproductions, drawings, preliminary layouts, electronic documents and drawings, record drawings, sketches, plans, cost estimates, inventions, designs, computer input/output information, computer applications, software, firmware, computations, and other documents (including the original electronic file format). Engineer may retain one set of reproducible copies for Engineer's sole use in

preparation of studies or reports for County only. Engineer is expressly prohibited from selling, licensing or donating such documents, or using such documents in the preparation of other work for any other client, without the prior express written permission of HCED. Engineer warrants that Engineer's work product will not in any way constitute an infringement or other violation of any copyright, trade secret, trademark, patent, invention, proprietary information, non-disclosure, or any other right of any third party, and Engineer will defend any claim, suit, or proceeding brought against County on the issue of infringement of any copyright by virtue of anything supplied by Engineer to HCED under this Agreement.

- 5.11 Trade Secrets. In connection with the work, products, services, licenses, Scope of Work, and/or deliverables provided under this Agreement, HCED may disclose to Engineer certain documents, data, and/or other information that is proprietary, confidential, or a trade secret (Trade Secrets). Engineer must not divulge or otherwise make unauthorized use of Trade Secrets or other protected information, procedures, or policies of HCED, any former employee, contractor, client, customer, or consultant, in the exercise of duties under this Agreement. Except to the extent authorized by a third party, neither Party shall copy, recreate, or use any proprietary information of a third party in the performance of services under this Agreement.
- 5.12 Nondisclosure and Confidentiality of Information. To the extent permitted by law, Engineer must keep confidential the contents of all discussions with local, state, and federal officials, as well as the contents of all local, state, and federal records and all other information obtained during performance under this Agreement. To fulfill Engineer's obligations under this Agreement, Engineer may be provided access to information, systems, operations, or procedures that are security sensitive or have been identified as confidential. This confidential information may include information from one of the government entity funding sources, such as a Texas or federal agency. Engineer and the person executing this Agreement on behalf of Engineer acknowledge that (a) access to this information (whether electronic, written or oral, formal or informal) is provided solely to Engineer for the purpose of discharging the duties in this Agreement, (b) premature or unauthorized disclosure of this information can irreparably harm the interests of County and may constitute a violation of state and/or federal law, and (c) the information may represent confidential or proprietary information, the release of which may be restricted or prohibited by law. Therefore, Engineer must (1) not access any information without express written authorization of HCED; (2) not copy, recreate, or use any information or document obtained in connection with this Agreement other than for the performance of this Agreement; (3) to the extent permitted by law, keep confidential the contents of all discussions with county, state, and federal officials, as well as the contents of all county, state, and federal records and all other information obtained during performance under this Agreement, unless authorized in writing by appropriate HCED officials; (4) not, except to the extent required by law, or necessary for the performance of this Agreement, release, disclose, reveal, communicate, impart or divulge any information or any summary or synopsis of the information in any manner or any form whatsoever to outside parties without the express written consent of HCED; (5) take all steps necessary to protect confidential information from disclosure to third parties and have a system in effect that must include a method to ensure the confidentiality of records and other information relating to any person according to applicable federal and state law, rules and regulations; (6) not reproduce, copy, or disseminate such confidential information, except to those who need to know such information and are obligated to maintain its confidentiality, including Engineer's partners, principals, representatives or employees as necessary to fulfill obligations under this Agreement; (7) notify HCED immediately of all requests for confidential information; and (8) immediately report to HCED all unauthorized disclosures or uses of confidential information.
- 5.13 Public Comment and Public Information Act. To the extent permitted by law, all contact with the news media, citizens of County, the State of Texas or other governmental agencies concerning The Project will be the responsibility of HCED. In the event Engineer is subject to the Texas Public Information Act, upon receipt of a written request for any information by Engineer developed in the performance of services under this Agreement, Engineer shall provide written notice to HCED of the request along with a copy of the request, and give HCED the opportunity to respond to the request prior to any release by Engineer. Unless required by law, under no circumstances shall Engineer release any material or information developed in the performance of services under this Agreement without the express prior written permission of HCED.



- 5.14 Applicable Laws. Engineer shall comply (and assure compliance by Engineer's agents, employees, volunteers, and subcontractors, as applicable, providing work, products, services, licenses and/or deliverables under this Agreement) with all applicable state, federal, and local laws, ordinances, regulations, executive orders, rules, directives, standards, guidelines, and instructions relating to the work to be performed. Engineer shall immediately bring to County's attention any conflicts between any applicable state, federal, and local laws, ordinances, regulations, executive orders, rules, directives, standards, guidelines, and instructions relating to the work to be performed. If laws or regulations change and affect any provision of this Agreement, this Agreement shall be deemed amended to conform to those changes in the laws or regulations on the date such laws or regulations become effective. If any such changes (that occur after the effective date of this Agreement and that Engineer should not reasonably have anticipated) require significant changes or additions to the Scope of Work that were not contemplated by the Parties, the Parties shall negotiate in good faith for the purpose of creating reasonable and equitable written modifications to this Agreement.
- 5.15 Records Retention and Management. Engineer shall maintain complete, accurate, and readily accessible records that are necessary to document and support the fulfillment of the obligations in this Agreement, including performance, design, underlying calculations, and financial records, as well as a copy of this Agreement. Engineer shall maintain and make available for inspection the Records for a minimum of four (4) years following either the end of the federal fiscal year in which any obligations were performed under this Agreement or the termination date of this Agreement, whichever is longer (or longer if necessary to resolve any litigation, claims, financial management review, or audit findings).
- 5.16 Authority of Harris County Engineer. The Harris County Engineer ("County Engineer") shall decide any and all questions that may arise as to the interpretation of this Agreement and all questions as to the acceptable fulfillment of this Agreement by Engineer. It is mutually agreed by both Parties that the County Engineer shall act as referee between the Parties in all questions arising under the terms of this Agreement and that the decisions of the County Engineer shall be final and binding alike on all Parties. If agreed to in writing by Engineer and the County Engineer (or designee), Engineer and the County Engineer may make adjustments to the Scope of Work that do not destroy the purposes of this Agreement. In making the aforementioned adjustments to the Scope of Work, Engineer and the County Engineer may adjust any corresponding firm fixed or maximum prices that neither increase the maximum amount of funds that Commissioners Court has authorized to be encumbered nor destroy the purposes of this Agreement. Any of the aforementioned adjustments to the Scope of Work and/or corresponding adjustments to any firm fixed or maximum prices (collectively, "Adjustments") may be reflected by a written Special Amendment to the Scope of Work in this Agreement ("Special Amendment"). Nothing contained in this section shall be construed to authorize the County Engineer to alter, vary, or amend any of the terms or provisions of this Agreement, other than the aforementioned Adjustments. The County Engineer is authorized on behalf of the County to make Adjustments (as defined herein) and execute a corresponding Special Amendment without further action by Commissioners Court. The Harris County Auditor ("County Auditor") is authorized, without further action by Commissioners Court, to certify additional funding for any Adjustments upon execution of a Special Amendment by the County Engineer.
- 5.17. Foreign Terrorists Organizations. In accordance with Tex. Gov't Code Ann. Chapter 2252 Subchapter F, Engineer warrants and represents that, at the time of execution of this Agreement and for the duration of the Term of this Agreement and any Renewal Terms, Engineer does not appear on the Texas State Comptroller's list of companies known to have contracts with or provide supplies or services to a foreign terrorist organization.
- 5.18 Anti-Boycott. In accordance with Tex. Gov't Code Ann. § 2270.002, Engineer warrants and represents that it does not boycott Israel and agrees that it will not boycott Israel during the term of this contract.

## 6. INSURANCE

- 6.1 Coverage and Limits. During the Term of this Agreement and any extensions thereto, Engineer at its sole cost and expense shall provide insurance of such type and with such terms and limits as may be reasonably associated with this Agreement. As a minimum, Engineer shall provide and maintain the following coverage and limits:

- (a) Workers Compensation, as required by the laws of Texas, and Employers' Liability, as well as All States, United States Longshore & Harbor Workers Compensation Act and other endorsements, if applicable to the Project, and in accordance with state law.

Employers' Liability

(i)	Each Accident	\$1,000,000
(ii)	Disease – Each Employee	\$1,000,000
(iii)	Policy Limit	\$1,000,000

- (b) Commercial General Liability, including but not limited to, the coverage indicated below. This policy will provide coverage for personal and bodily injury, including death, and for property damage, and include an endorsement for contractual liability. Coverage shall not exclude or limit the Products/Completed Operations, Contractual Liability, or Cross Liability. Where exposure exists, County may require coverage for watercraft, blasting, collapse, explosions, blowout, cratering, underground damage, pollution, and other coverage. *County shall be named Additional Insured on primary/non-contributory basis.*

(i)	Each Occurrence	\$1,000,000
(ii)	Personal and Advertising Injury	\$1,000,000
(iii)	Products/Completed Operations	\$1,000,000
(iv)	General Aggregate (per project)	\$1,000,000

- (c) Professional Liability/Errors and Omissions, in an amount not less than One Million Dollars (\$1,000,000) per claim and in the aggregate.
- (d) Umbrella/Excess Liability in an amount not less than One Million Dollars (\$1,000,000) per occurrence and in the aggregate. *County shall be named Additional Insured on primary/non-contributory basis.*
- (e) Automobile Liability insurance to include Engineer's liability for death, bodily injury, and property damage resulting from Engineer's activities covering use of owned, hired, and non-owned vehicles, with combined single limit of not less than One Million Dollars (\$1,000,000) for each accident. *County shall be named Additional Insured on primary/non-contributory basis.*

- (f) Any other coverage required of Engineer pursuant to statute.

6.2 Delivery of Policies. Immediately upon execution of this Agreement and before any Services are commenced by Engineer, Engineer shall provide County evidence of all of the above coverage on forms and with insurers acceptable to County. Engineer must maintain a valid Certificate of Insurance as described herein on file with County at all times during the term of this Agreement. Engineer must either (1) mail the Certificate of Insurance to the Harris County Engineering Department at 1001 Preston, 7th Floor, Houston, TX 77002, Attn: Administrative Services or (2) submit it by email to HCEdAdminSvc@hcpid.org.

6.2.1 Issuers of Policies. Coverage shall be issued by company(s) licensed by the Texas Department of Insurance to do business in Texas, unless said coverage is not available or economically feasible except through an excess or surplus lines company, in which case the company(s) should be registered to do business in Texas. Companies shall have an A.M. Best rating of at least A-VII.

6.2.2 Certificates of Insurance. Engineer shall provide unaltered Certificates of Insurance which evidence the required coverage and endorsements and satisfy the following requirements:

- (a) Be less than 12 months old;
- (b) Include all pertinent identification information for the Insurer, including the company name and address, policy number, NAIC number or AMB number, and an authorized signature;
- (c) Include the Project name and reference numbers and indicates the name and address of the Project Manager in the Certificate Holder Box; and



- (d) Be appropriately marked to accurately identify:
  - (i) All coverage and limits of the policy;
  - (ii) Effective and expiration dates;
  - (iii) Waivers of subrogation, endorsement of primary insurance and additional insured language, as described herein.

6.2.3 Certified Copies of Policies and Endorsements. Upon request, Engineer shall furnish certified copies of insurance policies and endorsements to County.

6.2.4 Renewal Certificates. Renewal certificates are due to County at least thirty (30) days prior to the expiration of the current policies.

6.2.5 Subcontractors. If any part of the Agreement is sublet, insurance shall be provided by or on behalf of any subcontractor, and shall be sufficient to cover their portion of the Agreement. Engineer shall furnish evidence of such insurance to County as well.

6.3 Additional Insured. Engineer shall include County and its respective officers, directors, agents, and employees as an Additional Insured on the Commercial General Liability, Automobile Liability, and Umbrella/Excess Liability insurance certificates. Engineer's coverage shall be primary insurance to any similar insurance maintained by County and must contain an endorsement stating such. Coverage to County as an Additional Insured on any of Engineer's insurance coverage shall not be subject to any deductible.

6.4 Deductibles. Engineer shall be responsible for and pay any claims or losses to the extent of any deductible amounts applicable under all such policies and waives any claim it may have for the same against County, its officers, directors, agents, or employees.

6.5 Claims-made Policies. All insurance policies written on a claims-made basis, including Professional Liability/Errors and Omissions, shall be maintained for a minimum of two (2) years following completion of all services under this Agreement ("Extended Reporting Period"). Engineer shall obtain or maintain full prior acts coverage at least to the effective date of this Agreement in the event of a carrier or policy change.

6.6 Waiver of Subrogation. Engineer waives any claim or right of subrogation to recover against County, its officers, directors, agents, and employees ("Waiver of Subrogation"). Each policy required under this Agreement must contain a Waiver of Subrogation endorsement.

6.7 Notice of Cancellation, Non-Renewal, or Material Change. Engineer shall provide County with thirty (30) days' minimum written notification in the event of cancellation, non-renewal, or material change to any or all of the required coverage.

6.8 Remedies for Noncompliance. Failure to comply with any part of this Section is a material breach of this Agreement. Engineer could immediately, and without notice, have all compensation withheld or suspended, be suspended from providing further Services, or be terminated from this Agreement for any lapse in coverage or material change in coverage which causes Engineer to be in noncompliance with the requirements of this Section.

## **7. FUNDING, COMPENSATION AND/OR BASIS FOR PAYMENT, METHOD, AND LIMITATIONS**

7.1. Payments/Compensation. For and in consideration of the work, products, services, licenses or deliverables provided under this Agreement and during the term of this Agreement, subject to the limitations in this Agreement, County shall pay Engineer in accordance with the fee schedule and rates specified in this Agreement, including in the Attachments up to the total maximum amount specifically appropriated, encumbered, and then certified as available by the County Auditor.

7.2. Funding and Appropriations Limit. County shall have no obligation to pay for and Engineer shall have no obligation to provide any work, products, services, licenses and/or deliverables until sufficient funds are certified by the County Auditor. County intends to initially appropriate, encumber, and certify as available by the County Auditor the total maximum sum of **FIVE HUNDRED SEVENTY-SEVEN THOUSAND**

**EIGHT HUNDRED SEVEN DOLLARS AND NO/100 (\$577,807.00)** to pay and discharge any and all liabilities that County may incur arising out of this Agreement. Any other provision notwithstanding, County shall never be liable to pay Engineer any greater amount under this Agreement than is specifically appropriated, encumbered, and then certified as available by the County Auditor.

- 7.3. Additional Certification of Funds Authorized. The amount of purchases under this Agreement will depend on the needs and requirements of County, and the amount of other currently unfunded and/or contingent liability (such as any unfunded indemnity obligations), either currently existing or arising in the future, will depend on the obligations of County under this Agreement. Moreover, it is contemplated that additional funds will be appropriated, encumbered, and certified by the County Auditor during the term of this Agreement in order to meet the needs of County, and complete the work contemplated in this Agreement. Therefore, the County Purchasing Agent and HCED are authorized to encumber and request certification of additional funds by the County Auditor up to an additional amount of **TWO HUNDRED NINETY-FOUR THOUSAND SEVEN HUNDRED EIGHTY-THREE DOLLARS AND NO/100 (\$294,783.00)** to pay and discharge liabilities that County may incur under this Agreement without amending or supplementing this Agreement, and such encumbrance and certification may be documented on a purchase order or on a form approved by the County Auditor. Engineer should notify HCED when Engineer has earned or received 90% of the available funds most recently certified by the County Auditor.
- 7.4. Auditor's Certification of Funds. The issuance of a purchase order pursuant to this Agreement represents certification by the Harris County Auditor that funds, in the amount of the purchase order total, are available to satisfy all financial obligations of Harris County hereunder.
- 7.5. Funding Out/Non-Appropriation. It is further understood that pursuant to Local Government Code Chapter 111, when and if the work, products, services, licenses and/or deliverables and charges provided for herein are equal to or exceed the amounts certified available, Engineer is authorized to terminate some or all of Engineer's work, products, services, licenses and/or deliverables under this Agreement unless the County Auditor certifies that additional funds are available, in which event Engineer agrees to continue to provide the products, services and/or deliverables to the extent funds are available. When all the funds certified by the County Auditor, together with any additional funds thereafter certified, are expended, County will have no further liability, and the sole and exclusive remedy of Engineer will be to immediately terminate this Agreement unless the County Auditor certifies additional funds.
- 7.6. Billing Statements/Invoices. Unless otherwise indicated in this Agreement, no later than the 10th day after the end of each calendar month within the term of this Agreement, Engineer shall submit to HCED a billing statement or invoice for all unpaid products, services and/or deliverables, along with any applicable rates, including the applicable firm fixed price and any applicable percentage completed for specific tasks/deliverables as specified in this Agreement. The data in the billing statement or invoice must be in a format designated by HCED and the County Auditor, and must include any purchase order number. An authorized agent of Engineer must certify and swear under penalty of perjury that the work was performed, the work was properly authorized in writing by HCED, and all information contained in the statement or invoice is true and correct. All products, services and/or deliverables billed must be rendered during this Agreement term. Engineer shall submit to HCED billing statements or invoices limited to work done and products, services and/or deliverables provided pursuant to this Agreement, and Engineer shall not include in such billing statements or invoices any work, products, services, licenses and/or deliverables provided, required to be performed, or billed under or pursuant to any other agreements with County. HCED will review each statement or invoice and approve it with any modifications HCED deems appropriate after mutual consultation and agreement with Engineer. HCED will then forward the approved statement or invoice to the County Auditor for payment. County will pay Engineer the proper amounts due and owing under this Agreement within thirty (30) calendar days of receipt of the approved statement or invoice to extent allowed by law. Each statement or invoice must include a monthly inventory of work, products, services, licenses and/or deliverables provided during the billing period and any other details HCED reasonably requests for verification purposes, which might include:
- (a) The date(s) work, products, services, licenses and/or deliverables were provided;
  - (b) Meetings and lists of attendees, if applicable;

- (c) Detailed description of the work, products, services, licenses and/or deliverables provided;
- (d) The total amount billed, and any other details of the work, hours, or services as may be requested by the County Auditor;
- (e) If applicable, the case number for which services were performed;

- 7.7. Overpayments. Within 10 calendar days after request by HCED, Engineer must reimburse to County all funds paid by County to Engineer that any funding entity or auditor determines have been improperly paid to, or expended by, Engineer. County may withhold, suspend, or reduce any and all payments due to Engineer until any overpayments are reimbursed.
- 7.8. Costs of Substitute Services. If Engineer fails to perform any of its obligations under the Agreement and County procures substitute services upon such terms as are appropriate, County shall deduct the reasonable costs for such services from any payments owed to Engineer under this or other agreements. Engineer must reimburse to County, within thirty (30) calendar days after request by County, any additional costs of such substitute services beyond what has already been deducted by County. County may also withhold, suspend, or reduce payments due to Engineer until the costs of such substitute services are reimbursed to County by Engineer. This provision is not intended to waive or preclude any other remedies the parties may otherwise have in law, equity, or elsewhere in this Agreement and is in addition to and not in lieu of any other remedies.
- 7.9. Billing Audits. County and its designee shall have the right to examine and audit all of Engineer's billings/invoices and all of Engineer's backup and support data for billings/invoices for this Agreement. Upon HCED's request, Engineer agrees to make such data and supporting documentation available to the County Auditor or designee in Harris County, Texas. Engineer shall maintain complete and accurate records necessary to fulfill any obligations in this Agreement, including a copy of this Agreement, including detailed time records identifying each person performing services that were billed on an hourly basis, the corresponding dates of the services, the applicable firm fixed price and the percentage completed for specific tasks as specified in this Agreement, any applicable hourly or cost-plus rates, the total amount billed for each person as applicable, and the total amount billed for all persons as applicable. Engineer shall maintain and make available for inspection (electronically or in Harris County during regular business hours) the Records for a minimum of four (4) years following either the end of the federal fiscal year in which any obligations were performed under this Agreement or the termination date of this Agreement (or longer if necessary to resolve any litigation, claims, financial management review, or audit findings). All payments made by County are subject to re-evaluation and refund or withholding of future payments conditioned on the results of the audit.
- 7.10. County Auditor to Make Final Decision. The decision of the County Auditor as to the amount owed shall be final if there is any dispute between County and Engineer as to the amount owed to Engineer for any monthly statement or invoice submitted by Engineer. County agrees to notify Engineer of any questionable item and is authorized to withhold payment until all questions are resolved either by final audit or by agreement of the Parties.

## **8. TERM OF THE AGREEMENT**

- 8.1 Time Period. The time period for performance ("Term") of this Agreement shall begin March 30, 2021, and end on the later date of (a) Project completion or (b) March 29, 2022.

## **9. TERMINATION PROVISIONS**

- 9.1 Determination of Material and Non-Material Breaches. The County Engineer shall determine whether a breach of this Agreement by either Party is material or non-material. The County Engineer's determination shall be final and binding alike on all Parties.
- 9.2 Non-Material Breaches. If either Party refuses or fails to perform any of its non-material obligations in this Agreement, the other Party may give written notice of the failure. If the breaching Party fails or refuses to cure the failure of any non-material obligation in the notice within ten (10) calendar days after notice is

given, the other Party may terminate this Agreement immediately. HCED is authorized to give notice for County.

### 9.3 Material Breaches.

9.3.1 Suspension. HCED may suspend this Agreement immediately for any material breach by giving a notice of suspension. As soon as the notice of suspension is received, Engineer shall discontinue all services in connection with the performance of this Agreement. HCED is authorized to suspend on behalf of County.

9.3.2 Termination. The County may terminate this Agreement for a material breach at any time by notice in writing to the Engineer.

9.4 No Waiver of Remedies. The provisions in this Section are not intended to waive or preclude any other remedies the parties may otherwise have in law, equity, or elsewhere in this Agreement. The right to terminate for a material and non-material breach is in addition to and not in lieu of any other remedies.

9.5 Termination Statement. As soon as practicable after receiving notice of termination, Engineer must submit a statement or invoice to HCED that complies with the requirements in this Agreement. This statement or invoice must show in detail the unbilled/uninvoiced services performed for County under this Agreement to the date of termination. If the payments were to be made in lump sums and services were rendered after the last lump sum payment, the statement or invoice shall reflect the prorated amount due.

9.6 Return of Documents after Termination. If permitted by law and any established ethical requirements applicable to specific professionals, Engineer shall promptly deliver to HCED all completed or partially completed work product, designs, data, information, and documents prepared under this Agreement on behalf of County. Within 2 business days after the effective date of termination, Engineer shall return to HCED all records, files, documents, notes and other items in Engineer's possession, if any, relating to any assignments or work that Engineer has undertaken or been given under this Agreement, if permitted by law and any established ethical requirements applicable to specific professionals. Engineer shall deliver to HCED all completed or partially-completed designs, drawings and specifications prepared under this Agreement, including the original electronic file format. Nothing in this section is intended to require Engineer to surrender Engineer's own records to HCED after termination.

9.7 Agreement Transition. In the event the Agreement ends by either expiration or termination, Engineer shall, at the request of the County, assist in the transition until such time that a replacement engineer can be named. Engineer acknowledges its responsibility to cooperate fully with the replacement engineer and the County to ensure a smooth and timely transition to the replacement engineer. Such transitional period shall not extend more than ninety (90) days beyond the expiration/termination date of the Agreement, or any extension thereof. During any transition period, all other terms and conditions of the Agreement shall remain in full force and effect as originally written.

## 10. INDEMNIFICATION

10.1 No Waiver of Governmental Immunity. County does not waive any immunity or defense on behalf of itself, its employees or agents as a result of the execution of this Agreement.

10.2 General Indemnity. To the extent allowed by law, Engineer agrees to indemnify and hold harmless County, HCED, their officers, employees, and agents from liability, losses, expenses, demands, reasonable attorneys' fees, and claims for bodily injury (including death) and property damage to the extent caused by the negligence, intentional tort, intellectual property infringement of Engineer (including Engineer's agents, employees, volunteers, and subcontractors/consultants under contract, or any other entity over which Engineer exercises control, in the performance of the services defined in this Agreement). Engineer shall also save County harmless from and against any and all expenses, including reasonable attorneys' fees that might be incurred by the County, in litigation or otherwise resisting such claims or liabilities.

## 11. MISCELLANEOUS

- 11.1 Notices. Any notice required to be given under this Agreement ("Notice") may be given by hand delivery or certified United States Mail, postage prepaid, return receipt requested, addressed to the Parties at the following:

ENGINEER: Derron Vincik, P.E.  
Principal  
PGAL, Inc.  
3131 Briarpark Drive, Suite 200  
Houston, TX 77042-3793  
Email: [dvincik@pgal.com](mailto:dvincik@pgal.com)

COUNTY: John R. Blount, P.E.  
County Engineer  
Harris County Engineering Department  
1001 Preston Street, Floor 7  
Houston, TX 77002-1816  
Email: [AgreementInfo@hcpid.org](mailto:AgreementInfo@hcpid.org)

All other communications may be sent by electronic means or in the same manner as Notices described herein.

- 11.2 Receipt of Notice. Notice shall be considered given and complete upon successful electronic transmission or upon deposit in the United States Mail.
- 11.3 Change of Address. Each Party shall have the right to change its respective address by giving at least ten (10) days' written notice of such change to the other Party.
- 11.4 Force Majeure. Neither Party will be liable for any failure or delay in performing its obligations under this Agreement if such failure or delay is due to any cause beyond the reasonable control of such Party if such cause is generally recognized under Texas law as constituting impossible conditions. The existence of such causes of delay or failure will extend the period of performance in the exercise of reasonable diligence until after the causes of delay or failure have been removed. Each Party must inform the other in writing with proof of receipt within 10 business days of the existence of such Force Majeure event or otherwise waive this right as a defense.
- 11.5 E-Mail Addresses. Engineer affirmatively consents to the disclosure of e-mail addresses that are provided to County or HCED. This consent is intended to comply with the requirements of the Texas Public Information Act, Texas Government Code § 552.137, and shall survive termination of this Agreement. This consent shall apply to e-mail addresses provided by Engineer and any agents acting on Engineer's behalf and shall apply to any e-mail address provided in any form for any reason, whether related to this Agreement or otherwise.
- 11.6 Entire Agreement (Merger). This Agreement contains the entire agreement and understanding between the parties relating to the rights granted to and the obligations of the parties. All prior negotiations, discussions, correspondence and previous understandings are superseded by this Agreement. Any oral representation or modification concerning this Agreement shall be of no force or effect.
- 11.7 No Oral Modifications. Unless otherwise explicitly stated in this Agreement, this Agreement cannot be changed except by a written subsequent modification authorized by all parties.
- 11.8 Inducements. In making the award of this contract, County relied on Engineer's assurances and representations made in this Agreement. Any false assurances and representations by Engineer shall be immediate grounds for termination of this Agreement without prior notice at the option of County.

- 11.9 Contract Construction. The titles assigned to the various Articles of this Agreement are for convenience. Titles shall not be considered restrictive of the subject matter of any Article or other part of this Agreement. Likewise, the provisions of purpose in this Agreement are intended to be a general introduction and are not intended to expand the scope of the Parties' obligations or alter the plain meaning of the terms and conditions in this Agreement.
- 11.10 Ambiguities. Ambiguities, if any, shall not be interpreted against the drafter of this Agreement.
- 11.11 No Waiver of Default. Any waiver by either Party of one or more defaults on the part of the other Party in the performance of obligations under this Agreement is not a waiver of any subsequent defaults.
- 11.12 Remedies Cumulative. Unless otherwise specified elsewhere in this Agreement, the rights and remedies of County are not exclusive, but are cumulative of all rights and remedies that exist now or in the future.
- 11.13 No Third Party Beneficiaries. Unless explicitly provided in this Agreement, there is no intent by either Party to create or establish third party beneficiary status or rights in any third party, and no such third party shall have any right to enforce any right or enjoy any benefit created or established under this Agreement.
- 11.14 Non-Exclusivity. Unless explicitly provided in this Agreement, nothing shall prevent either Party from contracting with other parties for the provision of the same or similar services or deliverables that are contemplated by this Agreement.
- 11.15 Limited Personal Liability. Nothing in this Agreement shall be construed as creating any personal liability on the part of any officer, director, employee, or agent of County.
- 11.16 Dispute Resolution Process. The Parties will meet and confer in good faith to work together to resolve problems or disputes that may arise. In the event a dispute arises between the parties involving the provisions or interpretation of any term or condition of the Agreement, and if both parties desire to attempt to resolve the dispute prior to termination or expiration of the Agreement, or withholding payments, then the parties may refer the issue to a mutually-agreeable dispute resolution process.
- 11.17 Survivability Clause. Any provision, section, subsection, paragraph, sentence, clause or phrase of this Agreement that, by its plain meaning, is intended to survive the expiration or earlier termination of this Agreement, including indemnification provisions, shall survive such expiration or earlier termination. If an ambiguity exists as to survival, the provision shall be deemed to survive.
- 11.18 Savings/Severability Clause. If any provision, section, subsection, paragraph, sentence, clause or phrase of this Agreement, or the application of same to any person or set of circumstances, is held to be invalid, void, or unenforceable by a court of competent jurisdiction, that part of this Agreement shall be reformed, if reasonably possible, to comply with the applicable provisions of law. In any event, the remaining provisions the same shall continue in full force and effect, provided that the unenforceable or invalid provision is not material to the overall purpose and operation of this Agreement. If necessary in order to make this Agreement valid and enforceable, the Parties shall meet to confer upon an amendment or modification.
- 11.19 Time is of the Essence. Time is of the essence with respect to Engineer's performance under this Agreement, and Engineer shall perform all services diligently until completed.
- 11.20 Choice of Law. This Agreement shall be construed according to the laws of the State of Texas without giving effect to its conflict of laws provisions. Venue lies only in Harris County as per Texas Civil Practice and Remedies Code Sec. 15.015, and any alternative dispute resolution, suit, action, claim, or proceeding with respect to or arising out of this Agreement must be brought solely in the courts or locations that are situated in the State of Texas, County of Harris. Both parties irrevocably waive any claim that any proceeding brought in Harris County has been brought in an inconvenient forum.



11.21 Exhibit List. The following attachments are a part of this Agreement:

Exhibit A. Scope of Services  
Exhibit B. Schedule  
Exhibit C. Compensation for Professional Services  
Exhibit D. Engineer Team Acknowledgments

11.22 Tax Exemption. Pursuant to Texas Tax Code §151.309, as a political subdivision, County claims exemption from sales and use taxes and will provide exemption certificates upon written request. County shall not be liable to reimburse or pay any personal property taxes, charges, or fees assessed against Engineer.

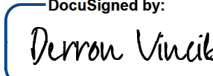
11.23 Electronic or Facsimile Signatures and Duplicate Originals. Pursuant to the requirements of the Uniform Electronic Transactions Act in Chapter 322 of the Texas Business and Commerce Code and the Federal Electronic Signatures in Global and National Commerce Act (beginning at 15 U.S.C. Section 7001), the Parties have agreed that the transactions under this Agreement may be conducted by electronic means. Pursuant to these statutes, this Agreement may not be denied legal effect or enforceability solely because it is in electronic form or because it contains an electronic signature. This Agreement may be executed in duplicate counterparts and with electronic or facsimile signatures with the same effect as if the signatures were on the same document. Each multiple original of this document shall be deemed an original, but all multiple copies together shall constitute one and the same instrument.

11.24 Signatory Authorized to Execute Agreement. The person executing this Agreement on behalf of each Party represents that he or she is duly authorized by the policy of the Party's governing body to legally obligate and execute this Agreement on behalf of the Party.

**HARRIS COUNTY**

By: \_\_\_\_\_  
Lina Hidalgo  
Harris County Judge

**PGAL, INC.**

DocuSigned by:  
  
By: \_\_\_\_\_  
Derron Vincik, P.E.  
Principal

APPROVED AS TO FORM:

ATTEST:

**CHRISTIAN D. MENEFE**  
Harris County Attorney

By: \_\_\_\_\_  
Secretary

By: Sam Kirchhoff  
Sam Kirchhoff  
Assistant County Attorney  
CAO File Number 21GEN0786

## **EXHIBIT A - SCOPE OF WORK**

### **Project Name: North Forest Subdivision Drainage Improvements - 2018 Precinct One (1) UPIN: 19101MF16R01**

#### **Existing Conditions**

The North Forest Subdivision Drainage Improvements project is located in Precinct 1, in the Greens Bayou Watershed, west of IH-45 (North Freeway), between FM 1960 and Richey Road. The project area generally consists of single-family residential homes that were constructed in the late 1960's to early 1970's and is maintained by the North Forest Municipal Utility District.

During Hurricane Harvey approximately 30 properties were flooded as the existing drainage including both the underground storm sewers and the overland flow paths exhibited limited capacity to store flow during the extreme storm event. The properties that reported flood damages were predominantly located in the southeastern part of the subdivision and at the upstream ends of side streets that drain into the main trunk sewer. The largest number of structures reporting flood damage were located along Mistywood Drive and Forest Way Drive. Some of these structures have also recorded repetitive flood damages resulting from other storm events.

The existing storm sewer system was originally designed for a 3-year storm event (33% AEP). The drainage infrastructure primarily consists of underground storm sewers located within the street right-of-way (ROW). Storm water runoff is routed through inlets, storm sewers and overland flow along the streets, and is discharged into HCFCD Channel Unit No. P145-03-03 which then outfalls into Cypress Creek Channel (HCFCD Unit No. P145-03-00), Tributary 1.95 to North Fork Greens Bayou.

#### **Proposed Conditions**

In order to mitigate flooding issues within the North Forest subdivision, it is proposed to increase the capacity of the existing storm sewer system within the subdivision up to the outfall channel, upgrading existing inlets, providing additional inlets to take in the overland flow through the streets as well as providing additional surface detention to provide relief to the overloaded trunk sewer. The size and shape of the additional surface detention is to be determined during the project study phase. Surface detention is to be designed as a subdivision amenity using Low Impact Development (LID) principles.

The proposed improvements will minimize the risk of structural flooding in the subdivision and reduce ponding within the roadways during a NOAA Atlas 14 10 and 100-year storm event.

#### **Professional Services**

Provide Study, Design, and Bid Phase engineering services for this Project. Engineering services shall be performed in accordance with Harris County Engineering Department (HCED) & Harris County Flood Control District (HCFCD) Standards and Guidelines and utilize Harris County Engineering Department Standards and Specifications. All design including sidewalks, signing, and pavement markings shall conform to Harris County Engineering Department (HCED) Standards and the Texas Manual of Uniform Traffic Control Devices (TxMUTCD), except in right-of-ways and/or easements owned by other agencies or utilities, where it shall conform to other agency standards upon agreement by HCED.

Perform Project Management Tasks and related professional services as necessary to develop construction documents, including identifying and resolving any issues. These tasks include collection of all the backup documents, findings for site inspections/visits, potential conflict mitigation, and/or recommendations for HCED staff and/or personnel. HCED staff as appropriate shall include representatives from Precinct, Recovery & Resiliency (RRD), Real Property, Traffic, Construction Programs Division, and Permits.

Perform the following as part of this project:

- A. **Contract Management:** Manage progress and completion of submittals, especially milestone tasks in accordance with Project Schedule.
- B. **Meetings:** Participate in project meetings and other meetings as necessary, including but not limited to:
  - i. **Survey Verification/Utility Meeting** - This meeting shall be held in the field or virtually to verify existing conditions have been captured, properly labeled, and shown on existing ROW maps. (Utility Coordination will be provided by HCED Utility Division during the Design Phase. The Engineer will provide utility coordination during the Study Phase.)
  - ii. **Pre-Drainage and Drainage Concept Meetings** – These meetings will be held to review and verify that the project layout fits within the existing ROW and drainage design meets objectives and criteria.
  - iii. **Pre-Client Meeting with HCED**
  - iv. **Client Presentation Meeting** - This meeting is to present all findings, decisions and design recommendations.
  - v. **Progress and Miscellaneous Meetings** -Additional meetings as needed with HCED staff, HCFCD, and/or with other entities applicable to this project.
- C. **Submittal management and sub-consultant coordination:** Engineer is responsible for the completeness of submittals and schedule adherence of project by Engineering staff as well as sub-consultants. Engineer shall review sub-consultant work prior to submitting to Harris County.
- D. **Utility Coordination:** Perform Level B Subsurface Utility Engineering (SUE), investigations, research, utility conflict table, and other activities necessary to identify existence of utilities and any potential conflicts with the project, so that the Utility Companies/Owners are properly notified to mitigate any issues. Official notification and coordination with utilities will be provided by HCED Utility Division except required survey tasks as related to Level B SUE. Any task related to agreement with utility companies will be responsibility of HCED Utility Division. Level A Subsurface Utility Engineering (SUE) may be required and will be part of Additional Optional Services.

## 1. Study Phase

The study phase shall summarize the findings from research, data collection, site visits, coordination with HCED and other stakeholders, and sub-consultants' findings to prepare a study report to be submitted to Commissioner's Court and present to the client with design recommendations.

- A. **Data Collection:** research and obtain record/archive construction plans/drawings, drainage reports, LiDAR topographic information, Federal Emergency Management Agency (FEMA) hydrologic and hydraulic models, field reconnaissance, GIS base map shapefiles, survey data (NAD83-2011 and NAVD88-2001), and other relevant existing archived data.
- B. **Survey/ROW Submittals**
  - i. **Survey Control Map**
  - ii. **Existing Right-of-Way (ROW) and Topographic Survey (Topo) Map**

- C. Existing Utility Base Map, Utilities contact and conflict tables (Official notification and coordination with utilities will be provided by HCED Utility Division. The Engineer will coordinate with utilities to obtain existing conditions data.)
- D. Survey Verification Meeting
- E. Environmental Assessments and Reports Submittal
  - i. Phase I Environmental Site Assessment for Neighborhood and Proposed Pond Area
  - ii. Wetlands Determination & Delineation for Neighborhood and Proposed Pond Area
  - iii. Historical/Cultural Resources Desktop Study for Neighborhood and Proposed Pond Area
  - iv. Threatened & Endangered Species Study for Neighborhood and Proposed Pond Area
- F. Drainage
  - i. Develop storm sewer and detention pond design concepts and alternatives
  - ii. Drainage Concepts Meeting
  - iii. Drainage Impact Study & report
  - iv. Drainage Area Maps
  - v. Drainage Computations
  - vi. Hydrologic Analysis
  - vii. Detention Impacts
- G. Geotechnical Analysis and Report Submittal
  - i. Evaluate the soil and groundwater conditions to provide geotechnical recommendations for the design and construction for the roadway and storm sewer.
- H. Pre-Client Presentation (W/ HCED)
  - i. Present preliminary recommendations and provide preliminary schematics and exhibits to support discussions to solicit input from HCED
- I. Client Presentation Submittal/Exhibits (W/ Precinct 1)
  - i. Include revisions from Pre-Client Presentation and provide exhibits, supporting reports, and final recommendations
  - ii. Any remaining issues that require decision from HCED and Precinct 1 should be presented at this meeting prior to finalizing the Study Report such that approval can be granted upon report submittal
- J. LID Alternative/Architectural Renderings of Detention Pond
  - i. Provide two alternatives to be presented during Drainage Concepts Meeting
- K. Draft Study Report Submittal
  - i. Executive summary style report with approved and accepted sub-consultant reports
  - ii. Typical Sections
  - iii. Probable Construction Cost Estimate
  - iv. Exhibits of proposed Drainage Design Recommendations
  - v. LID renderings of proposed detention pond
- L. Final Study Report Submittal

- i. Finalized Report required to obtain County Commissioner's Court Approval.

## 2. Design Phase

Design phase submittals shall include, but not be limited to, 11"x17" and 22"x34" Plans in PDF and DGN format, Project Manual (Attachments L: Insurance and General Conditions; Attachment M: Specifications, Special Specifications (if applicable), Special Provisions (if applicable), Cost Estimate, Specification Data, Scope of Work, Notices To Contractors; Report File: SWPPP Report, SWQMP, Geotechnical Reports; Bid Sheet) in PDF and Word, and Construction Cost Estimate with take-off quantities in PDF and excel, utility contact and conflict table.

### A. First Submittal (100% Design)

Prepare bid-ready, unsigned plans following the general format in the Harris County standard civil drawings consisting of the following as applicable to the Project:

- i. General
  - a) Standard Cover
  - b) Sheet Index
  - c) Overall Project Layout
  - d) Typical Sections
  - e) Summary of Quantity
  - f) Standard General Notes
- ii. Traffic Control Plan (TCP)
  - a) TCP will include advance warning signs sheet, and site-specific plans with HCED standard requirements.
- iii. Roadway and Drainage
  - a) Horizontal Alignment Data Sheet
  - b) Drainage Area Map
  - c) Hydraulic Computations
  - d) Survey Control Maps
  - e) Plan and Profile Sheets (1" = 40')
  - f) Detention Pond Layout and Details
  - g) Driveway Summary Table
  - h) Driveway Typical Details
  - i) Miscellaneous Details
  - j) Standard Detail Sheets
- iv. Storm Water Pollution Prevention Plans (SWPPP)
  - a) Standard Notes and Details
  - b) SWPPP Layout Sheets
- v. Signing, Pavement Markings, and Delineation
  - a) Prepare plan sheets with signing locations, pavement markings, delineation, and striping for the project. Proposed signs will be shown in schematic pictorial format and numbered. Existing signs will be designated to remain, to be removed, or to be relocated.

vi. Cross Sections

- a) Earthwork Calculations Summary
- b) Cross Sections

B. Second Submittal

Resolve and respond to review comments of previous submittals and provide updated documents.

C. Final Submittal (Issue for Construction Package) for Bidding

Resolve and respond to review comments of previous Submittal and provide Signed and Sealed permit ready documents and obtain applicable project approvals and signatures.

**3. Bid Phase**

Bid phase consists of preparing bid forms and a project manual for contractor bidding of documents prepared during the design phase. Also included are responses to contractor RFIs, preparation of addenda as needed during the bid phase, attendance at pre-bid meetings, and evaluation of bid tabulations.

A. Bid Forms/Project Manual

- i. Prepare Bid Forms/Project Manual

B. RFI

- i. Respond to RFIs

C. Meetings (Pre-bid)

- i. Engineer shall attend and participate in pre-bid meetings

D. Prepare Addendum

- i. Provide clarifications to Contract Documents and answer bid questions as needed, revise plans, drawings for addendum issuance.

E. Evaluate Bids

- i. Evaluate and provide Recommendation of Award letter for Construction Package(s). HCED shall bid and the Engineer prepare the bid tabulation using the standard template.

**4. Survey**

Survey shall consist of research, investigations, field work, mapping, and documentation to prepare existing right of way maps, parcel plats, right of entry letters, topographic survey, and level B SUE based on survey datum NAD83-2011 and NAVD88-2001.

A. Survey Control, Existing Row and Topographic Survey



- i. Topographic survey (TSPS Category 6, Condition 2) and Right of Way Survey (Category 1B, Condition 2) of the areas indicated. This will include portions of the following roads or streets: Ella Boulevard, North Forest Dr., Forest Way, Shady Glade, Morningshade Dr., Mistywood Dr. and cross-sections of P145-03-03. Survey will extend 10 feet behind existing back of curb. Topographic survey will not extend into the fenced back yards of landowners. Provide plan view and TIN file. Locate above ground observed Level B SUE and utilities marked by Texas One-Call. The topographic survey deliverable file will include the existing subdivision road right of way lines of above referenced streets. A separate set of existing right of way map is excluded. Set Survey Control for the project. Provide Survey Control Map with sheet index showing Landtech Primary Control Points. Locate, verify and tie and match into existing control set by others for existing sidewalk and access project for Ella Blvd. Utilities will be color-coded to match the utility conflict table.

**B. Obtain Threshold Elevations at Primary Entrance for Approximately 32 Structures In and Around The North Forest Subdivision**

- i. Extend existing control and provide an elevation on the top of the threshold at the primary entrance door of approximately 32 structures identified by Harris County as having structure flood water inundation during Hurricane Harvey.

**C. Level B SUE**

- i. Review existing utility records as they are available to identify the current locations of existing public and private utilities.
- ii. Evaluate other available resources to attempt to obtain additional information relating to the existence of utilities within the project limits.
- iii. Survey to pick up Level B marked, identified or otherwise observed utilities that a Texas One-Call may produce in the process of completing the topographic survey.
- iv. Evaluate the potential conflict locations between the existing utilities and proposed improvements planned by Harris County.
- v. Provide conflict analysis to indicate locations where utility conflicts cannot be mitigated.
- vi. Perform Level B SUE per ASCE 38-02 criteria on traceable utility facilities. Estimate 2 utilities through each corridor. The limits include:
  - a. North Forest Blvd from IH 45 to Ella Blvd.
  - b. Mistywood from Skywood to 700' south of North Forest Blvd. and 150' east of Forest Way Dr. to Forest Way Dr.
  - c. Shady Glade Dr. from 150' south of Mistywood Dr. to Mistywood Dr. and 150' north of Forest Way Dr. to Forest Way Dr.
  - d. Morningshade Dr. from North Forest to the west terminus
  - e. Forest Way Dr. from north limit to south limit
  - f. Ella Blvd. from 750' west to 1100' east of North Forest
  - g. Northeast corner of pipeline corridor adjacent to potential outfall location

**D. Deliverables**

- i. Survey Control Map with Temporary Benchmarks
- ii. Existing Right-of-Way (ROW) and Topographic Survey (Topo) Map
- iii. Existing Utility Base Map of public and private utilities with horizontal and vertical data
- iv. Conflict determination based on Level B SUE results
- v. Color-coded utility conflict and contact table

**5. Geotechnical**

According to Harris County Engineering Department's request and geotechnical guidelines, and HCFCD's geotechnical guidelines, the Engineer proposes to drill 9 soil borings: seven at 15 feet deep and two at 20 feet deep for the storm sewer. The total drilling footage is 145 feet. The Engineer will perform a site reconnaissance prior to drilling and mark the boring locations. The Engineer will contact the Texas 811 System to confirm utility locations; however, Texas 811 does not locate water, sanitary, or storm sewer lines.

The Engineer anticipates that all the roadway borings can be accessed by a truck-mounted drill rig, and traffic control and pavement coring will be required. The Engineer will use an off-duty officer to provide traffic control during our field exploration. One asphalt pavement core and twelve concrete cores will be cut, while the asphalt at B-2 location will be drill through. The Engineer will collect samples continuously in the top 20 feet (or boring termination depth for the borings less than 20 feet deep) and at 5-foot intervals thereafter. Undisturbed samples will be obtained of cohesive soils by pushing a Shelby tube (ASTM D-1587). Standard Penetration Test samples will be obtained of granular soils (ASTM D-1586). Representative portions of all soil samples will be sealed, packaged, and transported to our laboratory. The Engineer will note any visual evidence or odor indicating hazardous materials if encountered in the samples. Water level readings will be noted during drilling and obtained upon completion of drilling; boreholes located on pavement will be grouted with cement-bentonite upon completion of drilling and the pavement patched with non-shrink grout or asphalt depending on the existing pavement type.

Laboratory testing may consist of moisture contents, Atterberg limits, percentage passing No. 200 sieve, sieve analysis, and unconfined compression and unconsolidated-undrained triaxial tests depending on the soil types encountered. Two (2) consolidated-undrained (CU) triaxial tests, two (2) double hydrometer analysis, and 6 crumb tests will be performed depending on the soil types encountered. The Engineer will perform a preliminary fault study, which includes reviewing in-house published fault maps to identify if any documented faults crossing the subdivision.

The Engineer will analyze the field and laboratory data to develop geotechnical engineering recommendations for (i) boring logs shown existing pavement and base thicknesses, subsurface soils and ground water depth encountered in the borings; (ii) geotechnical guidelines for the storm sewer installation including open cut and/or auger methods; (iii) recommendations for replacement concrete pavement or asphalt thickness and subgrade preparation; and (iv) geotechnical recommendations and dewatering guidelines for the facility construction.

The Engineer assumes (i) the site will be open and accessible to a truck-mounted drilling rig for pavement area, and the field personnel will use Level D during the field exploration; (ii) any right-of-way for private property access permits if required, except for HC ROW, for drilling will be provided to the Engineer at no charge; (iii) standby time, Phase I fault study, safety training, surveying, tree clearing, fence removal/restoration, working with hazardous materials, environmental sampling/testing/evaluation, and plan/specification review are not included in the scope of work.

The Engineer will perform a site reconnaissance 2 weeks after receiving notice to proceed. Weather permitting, and assuming no field delays, the Engineer plans to start the field exploration about 1.5 to 2 weeks after all necessary permits are obtained (note that the permitting for private properties entry may take up to 3 to 4 weeks). The field exploration will take about 3 to 4 weeks.

Laboratory soil testing will require 4 to 6 weeks (due to CU triaxial tests) to complete after completion of the drilling, and the draft report will take 3 to 4 weeks after laboratory testing is completed. The Engineer will submit final report and trench safety letter two weeks after receiving review comments on the draft report.

A. Deliverables:

- i. Soil Boring Layout
- ii. Soil Boring Logs
- iii. Geotechnical Report (Summary of findings and recommendations for fault lines, existing site conditions, subsurface soil and groundwater, side slope analysis, subgrade preparations, and backfill and compaction)

## 6. Environmental

Provide research, field reconnaissance, and documentation to prepare a Phase I Environmental Site Assessment, Cultural Resources Desktop Analysis, and Threatened and Endangered Species Evaluation.

A. Phase I Environmental Site Assessment per ASTM Standards

Services include the completion of a Phase I Environmental Site Assessment (ESA) for the proposed project area. The Phase I ESA will consist a site inspection and reporting per ASTM E 1527-13 and will include observations of the project area; regulatory database record review; interview(s) with knowledgeable persons, as applicable; and other appropriate inquiries. The investigation will focus on the identification of Recognized Environmental Conditions (RECs) concerning project area and adjacent properties. Results will be provided in a Phase I ESA Report, prepared following ASTM E 1527-13.

The covered services do not include any quantitative sampling (Phase II), waste removal (Phase III) activities, assessment of any structures located in the project area for lead-based paint or asbestos- containing materials. Any records identified that discuss these issues will be provided with the Phase I ESA report as a courtesy. According to ASTM E 1527-13, Client has the responsibility to “undertake a review of recorded land title records and judicial records for environmental liens and Activity and Use Limitations,” typically through a title company, real estate attorney, or title professional. CMEC can order a search of these records at the request of the Client and for an additional fee.

B. Wetlands Determination & Delineation

Prepare a Draft Jurisdictional Determination (DJD) report using the field effort and approach that follows the requirements of the U.S. Army Corps of Engineers (USACE) - Galveston District as specified by their Compliance Section. This effort and approach includes following the June 5, 2007 guidance from the U.S. Environmental Protection Agency and the USACE. Wetlands will be identified and delineated using the routine determination method published in the 1987 Corps of Engineers Wetlands Delineation Manual (Technical Report Y-87-1 On-line Edition) as amended by the November 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region. Non-wetland waters (e.g., streams, bayous, drainage channels, etc.) meeting the regulatory definition of waters of the United States

will be identified and delineated by locating the ordinary high water mark (OHWM). Field data should be collected following the USACE - Galveston District's Standard Operating Procedures concerning global positioning system (GPS) surveys. The DJD shall be prepared under the supervision of an individual having a minimum of five years' experience in wetland identification and delineation. Preferably, the supervising individual would be a Professional Wetland Scientist (PWS) certified by the Society of Wetland Scientists. The DJD report shall be a stand-alone report complete with descriptive text, Wetland Determination Data Forms, site photographs, exhibits, and draft Approved Jurisdictional Determination Forms, as appropriate, in both electronic and hard copy formats. The DJD report shall document any identified waters of the United States, including wetlands, at a level of detail sufficient for the USACE - Galveston District to make an approved jurisdictional determination for the project site. In the absence of aquatic resources, the DJD report shall include sufficient data for the USACE – Galveston District to determine the investigated site(s) as upland or non- jurisdictional areas. If the USACE determines that a Nationwide Permit (NWP) with pre- construction notification is required for this project, then the required permit documentation shall be prepared and coordinated for approval.

#### C. Historical/Cultural Resources Desktop Study

Conduct an archeological background review and historic resources desktop study identifying recorded historical and archeological sites within the project vicinity based on review of available records, databases, maps, and other sources of cultural resource data obtained from the Texas Archeological Research Laboratory (TARL), the Texas Historical Commission (THC), as well as databases maintained by other agencies. Identify all archeological properties listed on the National Register of Historic Places (NRHP) and/or designated as State Antiquities Landmarks (SAL) based on the TARL and THC records review. Identify any historic resources listed on the NRHP, non-archeological SALs, and other known historic resources. Prepare a letter summarizing historical and archeological information including maps. If the project requires USACE permitting or other federal permit or funding, include a recommendation for historic resources survey, including a recommended Area of Potential Effect (APE), level of effort, and information from Harris County Appraisal District regarding dates of construction of improvements within the APE. This data will not be released for public review in accordance with THC requirements. This task includes submittal of the initial coordination letter to THC.

#### D. Threatened & Endangered Species Report

Conduct a preliminary screening for threatened and endangered species to identify and evaluate the potential presence of threatened/endangered species habitat features on the investigated site. Qualified personnel will note the threatened and endangered plant and animal species listed in the appropriate county, determine the habitat features for the listed species, and conduct a visual noninvasive field survey of the project site to evaluate the presence of the described habitat features for the listed species. The results of this analysis will be documented in a summary memorandum.

#### E. Deliverables

- i. Phase I ESA Report
- ii. Draft Jurisdictional Determination Report
- iii. Cultural Resources Desktop Analysis Report
- iv. Threatened and Endangered Species Report

## 7. Drainage

Analyze existing and proposed storm sewer systems for the North Forest subdivision up to the outfall into HCFCD Unit No. P145-03-03, perform hydrological and hydraulic impact analysis studies for offsite flows from adjacent drainage areas, and prepare a written Drainage Impact Analysis Report to be submitted for HCFCD review and approval.

The analysis will be in accordance with "Harris County Flood Control District Policy Criteria & Procedure Manual (PCPM) for Approval and Acceptance of Infrastructure, October 2018 and Interim Guidelines for PCPM, July 2019".

The following are the tasks that will be performed as part of this project:

### B. Drainage (Hydrologic and Hydraulic) Analysis:

- i. Project Management with public agencies such as Harris County Flood Control District and Harris County Engineering Department (HCED) including coordination and attending meetings
- ii. Data Collection
- iii. Site Visits
- iv. Hydrology and Hydraulic Analysis (Existing) for 2-, 10- and 100-yr storm events using XPStorm
- v. Hydrology and Hydraulic Analysis (Proposed) for 2-, 10- and 100-yr storm events using XPStorm
- vi. Determine Level of Service (LoS) of existing and proposed drainage systems
- vii. Prepare drainage slides for presentation to the County on existing and proposed conditions analysis results and recommended drainage improvements
- viii. Coordination with and submission of SWMM models and Drainage Impact Analysis and Mitigation Report (including exhibits and appendices) to HCFCD
- ix. Revise Drainage Impact Analysis Report (if needed) based on HCFCD comments and coordinate with HCFCD for review and approval

### C. Deliverables:

- i. Drainage Impact Study & Mitigation Report
- ii. Drainage Area Maps
- iii. Drainage Computations
- iv. Hydrologic Analysis

## 8. Landscape Architectural

### A. Scope of Work

- i. Provide landscape architecture services for two Conceptual Design options for the recreational and LID amenities associated with the proposed detention basin of the project. This process will explore possible options that best serve the community and project needs and may or may not include passive recreational amenities such as walking trails, site furnishings, picnic areas, bike racks, and or naturalized habitat areas.
- ii. Landscape design criteria shall meet the client's need and expectation as well as Harris County Engineers (HCE), and/or Harris County Flood Control District (HCFCD) landscape requirements.

- iii. LID features will be designed in conjunction with the project Civil Engineers design and are not intended to be stand-alone features as they are integrated into the overall drainage design. LID features will be designed in accordance with the Harris County Low Impact Development and Green Infrastructure Design Criteria for Stormwater Management.

**B. Task I: Conceptual Design**

- i. Perform a site visit to verify existing conditions provided on the survey, take photos, and verify location/assess general condition of existing trees to remain.
- ii. Preliminary coordination with civil engineer on detention requirements and green infrastructure locations.
- iii. Attend up 8 bi-weekly coordination meetings with the client, relevant stakeholders, and consultant team.
- iv. Prepare one to two (1-2) Presentation Boards comprised of reference images to present possible recreation amenities for public comment.
- v. Attend 1 public meeting to present possible recreation amenities for public comment.
- vi. Develop up to two (2) alternative overall landscape design concepts using the basic pond layout and indications of direction of flow from project Civil Engineers.
- vii. Upon approval from the client, finalize one (1) landscape design concept for final deliverable.
- viii. Develop preliminary opinion of probable construction cost (OPCC) of selected concept for client review.
- ix. Conceptual design shall be complete upon the delivery of one (1) labeled illustrative site plan, up to three (3) illustrative perspectives, and the OPCC. Additional graphics for marketing, fundraising, or otherwise will be considered an additional service.

**C. Deliverables:**

- i. 2 Alternative Landscape Design Concepts
- ii. 3 Architectural Renderings of Chosen Concept

## **9. Optional Additional Services**

The following tasks will be completed under Optional Additional Services:

**A. General:**

- i. Public Engagement
  - a) Provide exhibits and project information to incorporate into presentation slides.
  - b) Attend public meeting.
- ii. Changes in Scope

**B. Subsurface Utility Engineering:**

- i. Level A SUE (2 Test Holes)

**C. Geotechnical:**

- i. Additional Roadway Geotechnical



- a) Six soil borings at 15 feet deep with a total drilling footage of 90 feet.

ii. Pond Geotechnical

- a) Seven 20-foot deep borings for the detention pond.
- b) The Engineer anticipates that all the detention pond borings can be accessed by ATV drill rig, while tree clearing and entry permits will be required. Entry permits are to be provided to the Engineer at no cost to the Engineer. Detention pond borings will be backfilled with bentonite chips.
- c) The Engineer will analyze the field and laboratory data to develop geotechnical engineering recommendations for (i) boring logs with gINT logs for detention pond borings, subsurface soils and ground water depth encountered in the borings; (ii) evaluation whether the soils at detention pond area are dispersive; (iii) geotechnical guidelines for the storm sewer installation including open cut and/or auger methods; (iv) slope stability analyses on one or two selected cross-sections for each of the proposed detention pond under short-term, long-term, and rapid drawdown conditions; and recommendations for the stable slope inclination; geotechnical recommendations for the outfall pipes installation; (v) geotechnical recommendations and dewatering guidelines for the facility construction.

D. Survey:

i. Extend Survey Control and Topo Along Deer Lick Dr.

- a) Extend topographic survey and existing right-of-way of Deer Lick Drive from Northforest Dr. to its termination to the south (approximately 800 linear feet). Locate any SUE marks by others and locate approximately 6 additional geotechnical bore locations. Add to existing plan view topo survey and update DTM/TIN files.
- b) Level B SUE Along Deer Lick

ii. Provide Topographic Survey for Proposed Detention

- a) Topographic Survey Cat.6, Cond. II of proposed detention area as shown on attached exhibit. The requested detention area covers (3) separate properties as indicated above and is shown as a shaded triangular shaped area approximately 21.5 acres in size and being heavily wooded. Services will include a 100 ft. by 100 ft. grid interval for spot elevations and plan view, DTM/TIN file of this area.
- b) Level B SUE for Detention Pond Site

iii. Preliminary Boundary Lines for Pond Feasibility

- a) Feasibility line work (Preliminary uncertified) delineating the property boundary lines per current vesting deed for 3 parcels of land of different sizes. Set control for feasibility areas. Mail out right-of-entry letters for access to property. Encumbrances for each property or subdividing the vesting deed line work is excluded.

iv. Property Boundaries

- a) Cat. 1A, Cond. 3 survey and real property description of 3 requested proposed detention area acquisition parcels for proposed detention. Tracts are all or out of the following tracts of land as follows (per email exhibit from PGAL) and per the HCAD Tax Map: A heavily wooded 37.8 acre tract (HCAD No. 0451720000090), a heavily wooded 5.2 acre tract (HCAD No. 0451720000636) and a 9.2 acre tract (HCAD No. 0451720000695). Proposed acquisition parcels will be shown on the ROW-TOPO maps included in the project deliverables. A separate Parcel Plat for each parcel will not be provided.

E. Environmental:

i. Phase II Environmental Site Assessment

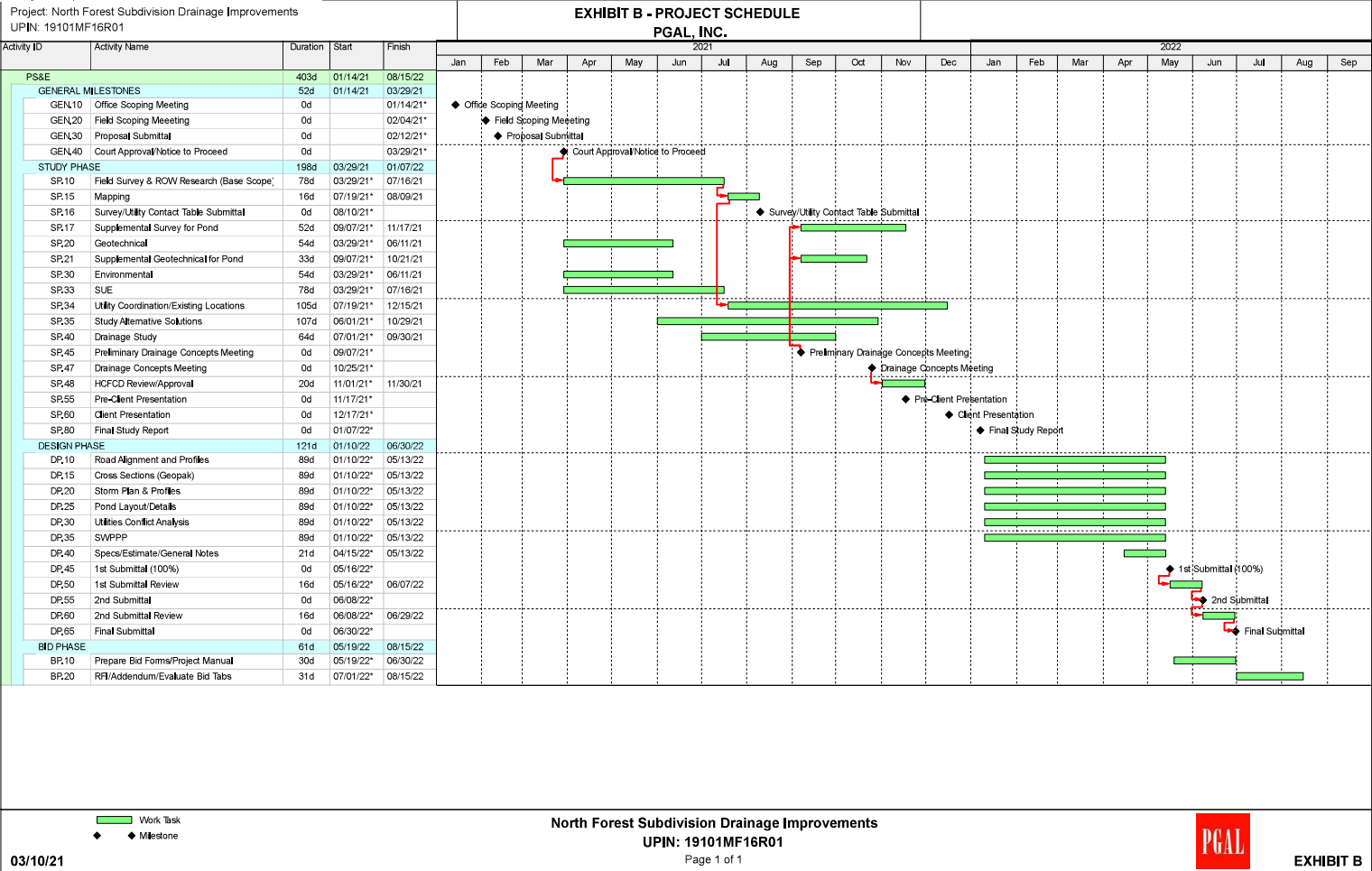
- a) Conduct a Phase II Environmental Site Assessment (ESA) to determine the presence of subsurface contamination in or adjacent to the project area. The Phase II ESA will comply with ASTM E1903.
- b) Before fieldwork, a work plan will be developed detailing proposed sampling locations, depths, sampling methods, and borehole plugging methods. Fieldwork will include soil and groundwater sampling within the project area and, if necessary, nearby private property where right-of-entry (ROE) is granted. Up to 6 (six) borings can be completed under this scope and fee. The total number of necessary borings could be less than or greater than 6 (six). In-field readings of volatile organic compounds (VOCs) will be used to determine if constituents of concern are likely present in samples. Borings will be placed so that the potential of detecting subsurface contaminants is maximized. Underground utility locates will be requested via 811 services 72-hours in advance of work. CMEC and sub-contractors are not liable for any damages to underground structures or utilities if misidentified. Borings will be installed using direct push technology and will reach a maximum depth of twenty (20) feet below ground surface (bgs). Soil cuttings will be logged and visually inspected for signs of hydrocarbons or petroleum or chemical odors. A photoionization detector (PID) will be used to field screen soil cuttings. Where groundwater is encountered, water samples will be collected. Boreholes will be abandoned with hydrated bentonite and patched to match existing surface material. Proper disposal of soil cuttings will be required when there are signs of hydrocarbons, chemicals, or elevated PID readings. Contaminated cuttings will be transported and disposed of in a proper landfill in accordance with applicable State regulations. If traffic control is required, those services will be contracted to a third-party provider and will result in an additional fee.
- c) Soil and groundwater samples will be submitted to a Texas Commission on Environmental Quality (TCEQ) approved laboratory that is accredited through Texas Laboratory Accreditation Program (TLAP) and the National Environmental Laboratory Accreditation Conference (NELAC). Depending on the constituents of concern, groundwater and soil samples may be analyzed petroleum related constituents such as Total Petroleum Hydrocarbons (TPH) by and Benzene, Toulene, Ethylbenzene, and/or Xylene (BTEX) and Methyl tert-butyl ether (MTBE). Samples may be analyzed for other constituents of concern as necessary based on

identified potential subsurface contaminants. Soil samples will be analyzed for percent moisture.

- d) A report complying with ASTM E1903 Phase II ESA standards will be prepared. The report will include a summary of methods, photos, maps, soil boring logs, analytical results, laboratory reports, waste disposal documentation, and recommendations. An electronic version of the report will be provided. CMEC will address one round of Client comments. Email reports of preliminary findings can be provided at Client's request.

ii. Archeological Intensive Survey and Historic Resources Reconnaissance Survey

- a) If the results of the archeological background study warrant it, a full archeological pedestrian survey will be conducted. Prior to any fieldwork, the results of the background study will be used to develop an application for a Texas Antiquities Permit for the entire project area (including both the subdivision improvements and the proposed pond location). Once a permit has been issued, CMEC will conduct an intensive survey of the project location following the guidelines adopted by the Texas THC and elaborated by the Council of Texas Archeologists and will involve at minimum the excavation of shovel test units. Following survey, a draft report of the background, findings, and recommendations for further work (if any) to be submitted to City for review. Once approved, the report will be submitted to the THC for review and concurrence. Following concurrence, all project materials will be curated at the Center for Archaeological Studies in San Marcos. Note that review of both the Texas Antiquities Application and the draft survey report may take up to 30 days each as allowed by law.
- b) If coordination with THC identifies a historic resources survey as necessary, CMEC will conduct a survey of the APE commensurate with THC survey standards. CMEC anticipates that the APE will be the footprint of the drainage improvements and that the scope of the survey will be the evaluation of the neighborhood for NRHP-eligibility and the identification of historic-age infrastructure within the APE. Following survey, a draft report of the background, findings, and recommendations for further work (if any) will be submitted to Harris County Engineering District for review. Once approved, the report will be submitted to the THC for review and concurrence. Note that the review of the draft survey report by THC may take up to 30 days. If archeological survey and historic resources survey are both warranted, the results will be combined into one report for submission to Harris County Engineering Department and THC.



**"EXHIBIT C" - Compensation for Professional Services**  
**Project Name: North Forest Subdivision Drainage Improvements**  
**Project Limits: North Forest Subdivision**  
**UPIN: 19101MF16R01**  
**Construction Cost Estimate: \$6,186,180**

<b>1 Study Phase</b>		
a) Professional Services for Study Phase		<b>\$141,279.00</b>
<b>2 Design Phase</b>		
a) Professional Services for Design Phase		<b>\$260,279.00</b>
<b>3 Bid Phase</b>		<b>\$9,504.00</b>
<b>4 Survey</b>		
a) Survey Control, Topographic Survey	\$70,786.00	
b) Existing ROW Maps	\$36,100.00	
c) Level B SUE	\$34,732.00	
d) Utility Contact Table	\$4,030.00	
e) Finished Floor Elevations at 32 Properties	\$6,240.00	
		<b>\$151,888.00</b>
<b>5 Geotechnical</b>		
a) Geotechnical Investigations and Report	\$19,781.00	
		<b>\$19,781.00</b>
<b>6 Environmental</b>		
a) Phase 1 Environmental Site Assessment (ESA)	\$4,474.00	
b) Historical/Cultural Resources Desktop Review	\$2,940.00	
c) Threatened & Endangered Species Review	\$1,330.00	
d) Section 10 RHA, Section 404 CWA Delineation	\$8,510.00	
		<b>\$17,254.00</b>
<b>7 Drainage</b>		
a) Analysis and Impact Analysis Report	\$75,390.00	
		<b>\$75,390.00</b>
<b>8 Landscaping</b>		
a) Low Impact Development (LID) Alternatives/Architectural Renderings	\$25,000.00	
		<b>\$25,000.00</b>

<b>Subtotal Basic Services (1-8):</b>	<b>\$700,375.00</b>
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**9 Optional Additional Services**

a) Survey - M&B and ROW Maps for HCAD No. 0451720000090	<b>\$7,460.00</b>
b) Survey - M&B and ROW Maps for HCAD No. 0451720000636	<b>\$5,370.00</b>
c) Survey - M&B and ROW Maps for HCAD No. 0451720000695	<b>\$5,960.00</b>
d) Survey - Prelim Boundary Lines for Pond Feasibility (\$1664/parcel)	<b>\$4,990.00</b>
e) Survey - Level A SUE - 2 test holes	<b>\$5,750.00</b>
f) Survey - Topographic Survey for Proposed Pond (\$1250/acre)	<b>\$25,421.00</b>
g) Survey - Extend Survey Control and Topo Along Deer Lick	<b>\$8,568.00</b>
h) Geotechnical Detention Pond - Additional cores/borings	<b>\$29,719.00</b>
i) Geotechnical - Additional Investigation Along Deer Lick	<b>\$12,812.00</b>
j) Environmental - Phase II Environmental Assessment	<b>\$24,647.00</b>
k) Environmental - Historical/Cultural Resources Intensive	<b>\$16,518.00</b>
l) Changes in Scope	\$20,000.00
m) Public Engagement Services	\$5,000.00

<b>Subtotal Optional Additional Services (9):</b>	<b>\$172,215.00</b>
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<b>TOTAL SERVICES (BASIC &amp; OPTIONAL ADDITIONAL)</b>	<b>\$872,590.00</b>
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**Partially encumbered funding amount \$577,807.00**  
**(see circled above)**  
**Not to exceed contract value \$872,590.00**



## **EXHIBIT D: ENGINEER TEAM ACKNOWLEDGMENTS**

1. The following is the group of providers selected to perform the obligations described in the Agreement.
2. If any firm listed below actively holds certification in any of the following categories, that information shall be identified in the table under "Special Designation" Box:
  - **MWBE** (Minority and Women Owned Business Enterprise)
  - **SBE** (Small Business Enterprise)
  - **HUB** (Historically Underutilized Business)
  - **DBE** (Disadvantaged Business Enterprise)
3. Also, all contract values must be identified in the table under "Contract Value".

<b>Responsibility</b>	<b>Firm</b>	<b>Special Designation</b>	<b>Contract Value</b>
<b>Prime</b>	<b>PGAL, Inc.</b>		<b>\$436,062.00</b>
<b>Surveying</b>	<b>Landtech, Inc.</b>	<b>DBE/SBE/HUB</b>	<b>\$163,620.00</b>
<b>Geotechnical</b>	<b>Aviles Engineering Corporation</b>	<b>DBE/HUB</b>	<b>\$62,312.00</b>
<b>Environmental</b>	<b>COX   McLain Environmental Consulting, Inc.</b>	<b>DBE/SBE/HUB</b>	<b>\$58,419.00</b>
<b>Drainage</b>	<b>Isani Consultants, Inc.</b>	<b>DBE/SBE/HUB</b>	<b>\$75,390.00</b>
<b>SUE</b>	<b>Midtown Engineers, LLC</b>	<b>DBE/HUB</b>	<b>\$51,787.00</b>
<b>Landscape Architecture</b>	<b>Asakura Robinson Company, LLC</b>	<b>DBE/HUB</b>	<b>\$25,000.00</b>

Percent of contract in dollars allocated to (MWBE, SBC, HUB or DBE) Consultants 50.0 %.

- The Engineer understands that it is solely responsible and liable to the County for the completion of all obligations under the Agreement.
- If the contract value of the subconsultant fee(s) are modified from the original amount, it must be approved by the Engineering Department's MWBE, SBC, HUB or DBE Compliance Officer.



## ORDER OF COMMISSIONERS COURT

The Commissioners Court of Harris County, Texas, met in regular session at its regular term at the Harris County Administration Building in the City of Houston, Texas, on \_\_\_\_\_, with all members present except \_\_\_\_\_.

A quorum was present. Among other business, the following was transacted:

### ORDER AUTHORIZING AGREEMENT BETWEEN HARRIS COUNTY AND PGAL, INC. FOR PROFESSIONAL ENGINEERING SERVICES

Commissioner \_\_\_\_\_ introduced an order and moved that Commissioners Court adopt the order. Commissioner \_\_\_\_\_ seconded the motion for adoption of the order. The motion, carrying with it the adoption of the order, prevailed by the following vote:

	Yes	No	Abstain
Judge Lina Hidalgo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comm. Rodney Ellis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comm. Adrian Garcia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comm. Tom S. Ramsey, P.E.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comm. R. Jack Cagle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The meeting chair announced that the motion had duly and lawfully carried, and this order was duly and lawfully adopted. The order adopted follows:

#### **IT IS ORDERED** that:

1. The Harris County Judge is authorized to execute the attached Agreement between **Harris County** and **PGAL, Inc.** for Professional Engineering Services. The attached Agreement, including any addendums, may be executed with an electronic or facsimile signature. The Harris County Engineering Department is authorized to request the Harris County Purchasing Agent to expend up to **\$577,807.00** in consideration of the work, products, services, licenses and/or deliverables provided under this Agreement. The County Purchasing Agent and Harris County Engineering Department are authorized to encumber and request certification of additional funds by the County Auditor up to an additional amount of **\$294,783.00** without having to amend or supplement this Agreement.
2. The Harris County Engineering Department and all other Harris County officials and employees are authorized to do any and all things necessary or convenient to accomplish the purpose of this Order.