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STANDARD FORM OF AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
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AMERICAN SOCIETY OF CIVIL ENGINEERS

This Agreement has been prepared for use with the Standard General Conditions of the Construction Contract (No. 1910-8, 1996 Edition) of the Engineers Joint Contract Documents Committee. Their provisions are interrelated, and a change in one may necessitate a change in the other. For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. 1910-17) (1996 Edition). For guidance on the completion and use of this Agreement, see EJCDC Users Guide, No. 1910-50.

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STANDARD FORM OF AGREEMENT
BETWEEN OWNER AND ENGINEER
FOR
PROFESSIONAL SERVICES

THIS IS AN AGREEMENT effective as of October 18, 2022 (“Effective Date”) between
the CITY OF KILLEEN (“OWNER”) and Freese and Nichols, Inc. (“ENGINEER”).

OWNER and ENGINEER in consideration of their mutual covenants as set forth herein agree as follows: To provide
engineering services as described in Exhibit A of this contract in the amount of \$1,485,240.00

ARTICLE 1 - SERVICES OF ENGINEER

1.01 Scope

A. ENGINEER shall provide the Basic and Additional Services set forth herein and in Exhibit A.

B. Upon this Agreement becoming effective, ENGINEER is authorized to begin Basic Services as set forth in Exhibit A.

C. If authorized by OWNER, ENGINEER shall furnish Resident Project Representative(s) with duties, responsibilities and limitations of authority as set forth in Exhibit D.

ARTICLE 2 - OWNER'S RESPONSIBILITIES

2.01 General

A. OWNER shall have the responsibilities set forth herein and in Exhibit B.

ARTICLE 3 - TIMES FOR RENDERING SERVICES

3.01 General

A. ENGINEER's services and compensation under this Agreement have been agreed to in anticipation of the orderly and continuous progress of the Project through completion. Unless specific periods of time or specific dates for providing services are specified in this Agreement, ENGINEER's obligation to render services hereunder will be for a period which may reasonably be required for the completion of said services.

B. If in this Agreement specific periods of time for rendering services are set forth or specific dates by which services are to be completed are provided, and if such periods of time or dates are changed through no fault of ENGINEER, the rates and amounts of compensation provided for herein shall be subject to equitable adjustment. If OWNER has requested changes in the scope, extent, or character of the Project, the time of performance of ENGINEER's services shall be adjusted equitably.

C. For purposes of this Agreement the term "day" means a calendar day of 24 hours.

3.02 Suspension

A. If OWNER fails to give prompt written authorization to proceed with any phase of services after

completion of the immediately preceding phase, or if ENGINEER's services are delayed through no fault of ENGINEER, ENGINEER may, after giving seven days written notice to OWNER, suspend services under this Agreement.

B. If ENGINEER's services are delayed or suspended in whole or in part by OWNER, or if ENGINEER's services are extended by Contractor's actions or inactions for more than 90 days through no fault of ENGINEER, ENGINEER shall be entitled to equitable adjustment of rates and amounts of compensation provided for elsewhere in this Agreement to reflect, reasonable costs incurred by ENGINEER in connection with, among other things, such delay or suspension and reactivation and the fact that the time for performance under this Agreement has been revised.

ARTICLE 4 - PAYMENTS TO ENGINEER

4.01 Methods of Payment for Services and Reimbursable Expenses of ENGINEER

A. *For Basic Services.* OWNER shall pay ENGINEER for Basic Services performed or furnished under Exhibit A, Part 1, as set forth in Exhibit C.

B. *For Additional Services.* OWNER shall pay ENGINEER for Additional Services performed or furnished under Exhibit A, Part 2, as set forth in Exhibit C.

C. *For Reimbursable Expenses.* In addition to payments provided for in paragraphs 4.01.A and 4.01.B, OWNER shall pay ENGINEER for Reimbursable Expenses incurred by ENGINEER and ENGINEER's Consultants as set forth in Exhibit C.

4.02 Other Provisions Concerning Payments

A. *Preparation of Invoices.* Invoices will be prepared in accordance with ENGINEER's standard invoicing practices and will be submitted to OWNER by ENGINEER, unless otherwise agreed. The amount billed in each invoice will be calculated as set forth in Exhibit C.

B. *Payment of Invoices.* Invoices are due and payable within 30 days of receipt. If OWNER fails to make any payment due ENGINEER for services and expenses within 30 days after receipt of ENGINEER's invoice therefore, the amounts due ENGINEER will be increased at the rate of 1.0% per month (or the maximum rate of interest permitted by law, if less) from said thirtieth day. In addition, ENGINEER may, after giving seven days written notice to OWNER, suspend services under this Agreement until ENGINEER has been paid in full all amounts due for services, expenses, and other related charges. Payments will be credited first to interest and then to principal.

C. *Disputed Invoices.* In the event of a disputed or contested invoice, only that portion so contested may be withheld from payment, and the undisputed portion will be paid.

D. *Payments Upon Termination.*

1. In the event of any termination under paragraph 6.06, ENGINEER will be entitled to invoice OWNER and will be paid in accordance with Exhibit C for all services performed or furnished and all Reimbursable Expenses incurred through the effective date of termination.

2. In the event of termination by OWNER for convenience or by ENGINEER for cause, ENGINEER, in addition to invoicing for those items identified in subparagraph 4.02.D.1, shall be entitled to invoice OWNER and shall be paid a reasonable amount for services and expenses directly attributable to termination, both before and after the effective date of termination, such as reassignment of personnel, costs of terminating contracts with ENGINEER's Consultants, and other related close-out costs, using methods and rates for Additional Services as set forth in Exhibit C. Engineer shall not incur additional expenses after receipt of notice of termination, and shall make reasonable efforts to minimize costs.

E. *Records of ENGINEER's Costs.* Records of ENGINEER's costs pertinent to ENGINEER's compensation under this Agreement shall be kept in accordance with generally accepted accounting practices. To the extent necessary to verify ENGINEER's charges and upon OWNER's timely request, copies of such records will be made available to OWNER at cost.

F. *Legislative Actions.* In the event of legislative actions after the Effective Date of the Agreement by any level of government that impose taxes, fees, or costs on ENGINEER's services or other costs in connection with this Project or compensation therefor, such new taxes, fees, or costs shall be invoiced to and paid by OWNER as a Reimbursable Expense to which a Factor of 1.0 shall be applied. Should such taxes, fees, or costs be imposed, they shall be in addition to ENGINEER's estimated total compensation.

ARTICLE 5 - OPINIONS OF COST

5.01 Opinions of Probable Construction Cost

A. ENGINEER's opinions of probable Construction Cost provided for herein are to be made on the basis of ENGINEER's experience and qualifications and represent

ENGINEER's best judgment as an experienced and qualified professional generally familiar with the industry. However, since ENGINEER has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding or market conditions, ENGINEER cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary from opinions of probable Construction Cost prepared by ENGINEER. If OWNER wishes greater assurance as to probable Construction Cost, OWNER shall employ an independent cost estimator as provided in Exhibit B.

5.02 Designing to Construction Cost Limit

A. If a Construction Cost limit is established between OWNER and ENGINEER, such Construction Cost limit and a statement of ENGINEER's rights and responsibilities with respect thereto will be specifically set forth in Exhibit F, "Construction Cost Limit," to this Agreement.

5.03 Opinions of Total Project Costs

A. ENGINEER assumes no responsibility for the accuracy of opinions of Total Project Costs.

ARTICLE 6 - GENERAL CONSIDERATIONS

6.01 Standards of Performance

A. The standard of care for all professional engineering and related services performed or furnished by ENGINEER under this Agreement will be the care and skill ordinarily used by members of ENGINEER's profession practicing under similar circumstances at the same time and in the same locality. ENGINEER makes no warranties, express or implied, under this Agreement or otherwise, in connection with ENGINEER's services.

B. ENGINEER shall be responsible for the technical accuracy of its services and documents resulting therefrom, and OWNER shall not be responsible for discovering deficiencies therein. ENGINEER shall correct such deficiencies without additional compensation except to the extent such action is directly attributable to deficiencies in OWNER-furnished information.

C. ENGINEER shall perform or furnish professional engineering and related services in all phases of the Project to which this Agreement applies. ENGINEER shall serve as OWNER's prime professional for the Project. ENGINEER may employ such ENGINEER's Consultants as ENGINEER deems necessary to assist in the performance or furnishing of the services. ENGINEER shall not be required to employ any ENGINEER's Consultant unacceptable to ENGINEER.

D. ENGINEER and OWNER shall comply with applicable Laws or Regulations and OWNER-mandated standards. This Agreement is based on these requirements as of its Effective Date. Changes to these requirements after the Effective Date of this Agreement may be the basis for modifications to OWNER's responsibilities or to ENGINEER's scope of services, times of performance, or compensation.

E. OWNER shall be responsible for, and ENGINEER may rely upon, the accuracy and completeness of all requirements, programs, instructions, reports, data, and other information furnished by OWNER to ENGINEER pursuant to this Agreement. ENGINEER may use such requirements, reports, data, and information in performing or furnishing services under this Agreement.

F. OWNER shall make decisions and carry out its other responsibilities in a timely manner and shall bear all costs incident thereto so as not to delay the services of ENGINEER.

G. Prior to the commencement of the Construction Phase, OWNER shall notify ENGINEER of any variations from the language indicated in Exhibit E, "Notice of Acceptability of Work," or of any other notice or certification that ENGINEER will be requested to provide to OWNER or third parties in connection with the Project. OWNER and ENGINEER shall reach agreement on the terms of any such requested notice or certification, and OWNER shall authorize such Additional Services as are necessary to enable ENGINEER to provide the notices or certifications requested.

H. ENGINEER shall not be required to sign any documents, no matter by whom requested, that would result in the ENGINEER's having to certify, guarantee or warrant the existence of conditions whose existence the ENGINEER cannot ascertain. OWNER agrees not to make resolution of any dispute with the ENGINEER or payment of any amount due to the ENGINEER in any way contingent upon the ENGINEER's signing any such certification.

I. During the Construction Phase, ENGINEER shall not supervise, direct, or have control over Contractor's work, nor shall ENGINEER have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected by Contractor, for safety precautions and programs incident to the Contractor's work in progress, nor for any failure of Contractor to comply with Laws and Regulations applicable to Contractor's furnishing and performing the Work.

J. ENGINEER neither guarantees the performance of any Contractor nor assumes responsibility for any

Contractor's failure to furnish and perform the Work in accordance with the Contract Documents.

K. ENGINEER shall not be responsible for the acts or omissions of any Contractor(s), subcontractor or supplier, or of any of the Contractor's agents or employees or any other persons (except ENGINEER's own employees) at the Site or otherwise furnishing or performing any of the Contractor's work; or for any decision made on interpretations or clarifications of the Contract Documents given by OWNER without consultation and advice of ENGINEER.

L. The General Conditions for any construction contract documents prepared hereunder are to be the "Standard General Conditions of the Construction Contract" as prepared by the Engineers Joint Contract Documents Committee (Document No. 1910-8, 1996 Edition) unless both parties mutually agree to use other General Conditions as specifically referenced in Exhibit H.

6.02 Authorized Project Representatives

A. Contemporaneous with the execution of this Agreement, ENGINEER and OWNER shall designate specific individuals to act as ENGINEER's and OWNER's representatives with respect to the services to be performed or furnished by ENGINEER and responsibilities of OWNER under this Agreement. Such individuals shall have authority to transmit instructions, receive information, and render decisions relative to the Project on behalf of each respective party.

6.03 Design without Construction Phase Services

A. Should OWNER provide Construction Phase services with either OWNER's representatives or a third party, ENGINEER's Basic Services under this Agreement will be considered to be completed upon completion of the Final Design Phase or Bidding or Negotiating Phase as outlined in Exhibit A.

B. It is understood and agreed that if ENGINEER's Basic Services under this Agreement do not include Project observation, or review of the Contractor's performance, or any other Construction Phase services, and that such services will be provided by OWNER, then OWNER assumes all responsibility for interpretation of the Contract Documents and for construction observation or review and waives any claims against the ENGINEER that may be in any way connected thereto.

6.04 Use of Documents

A. All Documents are instruments of service in respect to this Project, and ENGINEER shall retain an ownership and property interest therein (including the right of reuse at

the discretion of the ENGINEER) whether or not the Project is completed.

B. Copies of OWNER-furnished data that may be relied upon by ENGINEER are limited to the printed copies (also known as hard copies) that are delivered to the ENGINEER pursuant to Exhibit B. Files in electronic media format of text, data, graphics, or of other types that are furnished by OWNER to ENGINEER are only for convenience of ENGINEER. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk.

C. Copies of Documents that may be relied upon by OWNER are limited to the printed copies (also known as hard copies) that are signed or sealed by the ENGINEER. Files in electronic media format of text, data, graphics, or of other types that are furnished by ENGINEER to OWNER are only for convenience of OWNER. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk.

D. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the party delivering the electronic files. ENGINEER shall not be responsible to maintain documents stored in electronic media format after acceptance by OWNER.

E. When transferring documents in electronic media format, ENGINEER makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by ENGINEER at the beginning of this Project.

F. OWNER may make and retain copies of Documents for information and reference in connection with use on the Project by OWNER. Such Documents are not intended or represented to be suitable for reuse by OWNER or others on extensions of the Project or on any other project. Any such reuse or modification without written verification or adaptation by ENGINEER, as appropriate for the specific purpose intended, will be at OWNER's sole risk and without liability or legal exposure to ENGINEER or to ENGINEER's Consultants. OWNER shall indemnify and hold harmless ENGINEER and ENGINEER's Consultants from all claims, damages, losses, and expenses, including attorneys' fees arising out of or resulting therefrom.

G. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

H. Any verification or adaptation of the Documents for extensions of the Project or for any other project will entitle ENGINEER to further compensation at rates to be agreed upon by OWNER and ENGINEER.

6.05 Insurance

A. ENGINEER shall procure and maintain insurance as set forth in Exhibit G, "Insurance."

B. OWNER shall procure and maintain insurance as set forth in Exhibit G, "Insurance." OWNER shall cause ENGINEER and ENGINEER's Consultants to be listed as additional insureds on any general liability or property insurance policies carried by OWNER which are applicable to the Project.

C. OWNER shall require Contractor to purchase and maintain general liability and other insurance as specified in the Contract Documents and to cause ENGINEER and ENGINEER's Consultants to be listed as additional insureds with respect to such liability and other insurance purchased and maintained by Contractor for the Project

D. OWNER and ENGINEER shall each deliver to the other certificates of insurance evidencing the coverages indicated in Exhibit G. Such certificates shall be furnished prior to commencement of ENGINEER's services and at renewals thereafter during the life of the Agreement.

E. All policies of property insurance shall contain provisions to the effect that ENGINEER's and ENGINEER's Consultants' interests are covered and that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder.

F. At any time, OWNER may request that ENGINEER, at OWNER's sole expense, provide additional insurance coverage, increased limits, or revised deductibles that are more protective than those specified in Exhibit G. If so requested by OWNER, with the concurrence of ENGINEER, and if commercially available, ENGINEER shall obtain and shall require ENGINEER's Consultants to obtain such additional insurance coverage, different limits, or revised deductibles for such periods of time as requested by OWNER, and Exhibit G will be supplemented to incorporate these requirements.

6.06 Termination

A. The obligation to provide further services under this Agreement may be terminated:

1. *For cause,*

a. By either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.

b. By ENGINEER:

1) upon seven days written notice if ENGINEER believes that ENGINEER is being requested by OWNER to furnish or perform services contrary to ENGINEER's responsibilities as a licensed professional; or

2) upon seven days written notice if the ENGINEER's services for the Project are delayed or suspended for more than 90 days for reasons beyond ENGINEER's control.

3) ENGINEER shall have no liability to OWNER on account of such termination.

c. Notwithstanding the foregoing, this Agreement will not terminate as a result of such substantial failure if the party receiving such notice begins, within seven days of receipt of such notice, to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.

2. *For convenience,*

a. By OWNER effective upon the receipt of notice by ENGINEER.

B. The terminating party under paragraphs 6.06.A.1 or 6.06.A.2 may set the effective date of termination at a time up to 30 days later than otherwise provided to allow ENGINEER to demobilize personnel and equipment from the Site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.

6.07 Controlling Law

A. This Agreement is to be governed by the law of the State of Texas and venue shall be in Bell County.

6.08 Successors, Assigns, and Beneficiaries

A. OWNER and ENGINEER each is hereby bound and the partners, successors, executors, administrators and legal representatives of OWNER and ENGINEER (and to the extent permitted by paragraph 6.08.B the assigns of OWNER and ENGINEER) are hereby bound to the other party to this Agreement and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements and obligations of this Agreement.

B. Neither OWNER nor ENGINEER may assign, sublet, or transfer any rights under or interest (including, but without limitation, moneys that are due or may become due) in this Agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

C. Unless expressly provided otherwise in this Agreement:

1. Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by OWNER or ENGINEER to any Contractor, Contractor's subcontractor, supplier, other individual or entity, or to any surety for or employee of any of them.

2. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of OWNER and ENGINEER and not for the benefit of any other party. The OWNER agrees that the substance of the provisions of this paragraph 6.08.C shall appear in the Contract Documents.

6.09 Hazardous Environmental Condition

A. OWNER represents to Engineer that to the best of its knowledge a Hazardous Environmental Condition does not exist.

B. OWNER has disclosed to the best of its knowledge to ENGINEER the existence of all Asbestos, PCB's, Petroleum, Hazardous Waste, or Radioactive Material located at or near the Site, including type, quantity and location.

C. If a Hazardous Environmental Condition is encountered or alleged, ENGINEER shall have the obligation to notify OWNER and, to the extent of applicable Laws and Regulations, appropriate governmental officials.

D. It is acknowledged by both parties that ENGINEER's scope of services does not include any services related to a Hazardous Environmental Condition. In

the event ENGINEER or any other party encounters a Hazardous Environmental Condition, ENGINEER may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Project affected thereby until OWNER: (i) retains appropriate specialist consultant(s) or contractor(s) to identify and, as appropriate, abate, remediate, or remove the Hazardous Environmental Condition; and (ii) warrants that the Site is in full compliance with applicable Laws and Regulations.

E. OWNER acknowledges that ENGINEER is performing professional services for OWNER and that ENGINEER is not and shall not be required to become an “arranger,” “operator,” “generator,” or “transporter” of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act of 1990 (CERCLA), which are or may be encountered at or near the Site in connection with ENGINEER’s activities under this Agreement.

F. If ENGINEER’s services under this Agreement cannot be performed because of a Hazardous Environmental Condition, the existence of the condition shall justify ENGINEER’s terminating this Agreement for cause on 30 days notice.

6.10 Allocation of Risks

A. Indemnification

1. To the fullest extent permitted by law, ENGINEER shall indemnify and hold harmless OWNER, OWNER’s officers, directors, partners, and employees from and against any and all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) caused solely by the negligent acts or omissions of ENGINEER or ENGINEER’s officers, directors, partners, employees, and ENGINEER’s Consultants in the performance and furnishing of ENGINEER’s services under this Agreement.

2. To the fullest extent permitted by law, OWNER shall indemnify and hold harmless ENGINEER, ENGINEER’s officers, directors, partners, employees, and ENGINEER’s Consultants from and against any and all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) caused solely by the negligent acts or omissions of OWNER or OWNER’s officers, directors, partners, employees, and OWNER’s consultants with respect to this Agreement or the Project.

3. In addition to the indemnity provided under paragraph 6.10.A.2 of this Agreement, and to the fullest extent permitted by law, OWNER shall indemnify and hold harmless ENGINEER and its officers, directors, partners, employees, and ENGINEER’s Consultants from and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) caused by, arising out of or resulting from a Hazardous Environmental Condition, provided that (i) any such cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than completed Work), including the loss of use resulting therefrom, and (ii) nothing in this paragraph 6.10.A.4. shall obligate OWNER to indemnify any individual or entity from and against the consequences of that individual’s or entity’s own negligence or willful misconduct.

4. The indemnification provision of paragraph 6.10.A.1 is subject to and limited by the provisions agreed to by OWNER and ENGINEER in Exhibit I, “Allocation of Risks,” if any.

6.11 Notices

A. Any notice required under this Agreement will be in writing, addressed to the appropriate party at its address on the signature page and given personally, or by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.

6.12 Survival

A. All express representations, indemnifications, or limitations of liability included in this Agreement will survive its completion or termination for any reason.

6.13 Severability

A. Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and ENGINEER, who agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

6.14 Waiver

A. Non-enforcement of any provision by either party shall not constitute a waiver of that provision, nor shall it

affect the enforceability of that provision or of the remainder of this Agreement.

6.15 Headings

A. The headings used in this Agreement are for general reference only and do not have special significance.

ARTICLE 7 - DEFINITIONS

7.01 Defined Terms

A. Wherever used in this Agreement (including the Exhibits hereto) and printed with initial or all capital letters, the terms listed below have the meanings indicated, which are applicable to both the singular and plural thereof:

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Documents.

2. *Additional Services*--The services to be performed for or furnished to OWNER by ENGINEER in accordance with Exhibit A, Part 2 of this Agreement.

3. *Agreement*--This "Standard Form of Agreement between OWNER and ENGINEER for Professional Services," including those Exhibits listed in Article 8 hereof.

4. *Application for Payment*--The form acceptable to ENGINEER which is to be used by Contractor in requesting progress or final payments for the completion of its Work and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

5. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

6. *Basic Services*--The services to be performed for or furnished to OWNER by ENGINEER in accordance with Exhibit A, Part 1, of this Agreement.

7. *Bid*--The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

8. *Bidding Documents*--The advertisement or invitation to Bid, instructions to bidders, the Bid form and attachments, the Bid bond, if any, the proposed Contract Documents, and all Addenda, if any.

9. *Change Order*--A document recommended by ENGINEER, which is signed by Contractor and OWNER to authorize an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Construction Agreement.

10. *Construction Agreement*--The written instrument which is evidence of the agreement, contained in the Contract Documents, between OWNER and Contractor covering the Work.

11. *Construction Contract*--The entire and integrated written agreement between the OWNER and Contractor concerning the Work.

12. *Construction Cost*--The cost to OWNER of those portions of the entire Project designed or specified by ENGINEER. Construction Cost does not include costs of services of ENGINEER or other design professionals and consultants, cost of land, rights-of-way, or compensation for damages to properties, or OWNER's costs for legal, accounting, insurance counseling or auditing services, or interest and financing charges incurred in connection with the Project, or the cost of other services to be provided by others to OWNER pursuant to Exhibit B of this Agreement. Construction Cost is one of the items comprising Total Project Costs.

13. *Contract Documents*--Documents that establish the rights and obligations of the parties engaged in construction and include the Construction Agreement between OWNER and Contractor, Addenda (which pertain to the Contract Documents), Contractor's Bid (including documentation accompanying the Bid and any post-Bid documentation submitted prior to the notice of award) when attached as an exhibit to the Construction Agreement, the notice to proceed, the bonds, appropriate certifications, the General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Construction Agreement, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders, and ENGINEER's written interpretations and clarifications issued on or after the Effective Date of the Construction Agreement. Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents.

14. *Contract Price*--The moneys payable by OWNER to Contractor for completion of the Work in accordance with the Contract Documents and as stated in the Construction Agreement.

15. *Contract Times*--The numbers of days or the dates stated in the Construction Agreement to: (i) achieve Substantial Completion, and (ii) complete the Work so that it is ready for final payment as evidenced by ENGINEER's written recommendation of final payment.

16. *Contractor*--An individual or entity with whom OWNER enters into a Construction Agreement.

17. *Correction Period*--The time after Substantial Completion during which Contractor must correct, at no cost to OWNER, any Defective Work, normally one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee or specific provision of the Contract Documents.

18. *Defective*--An adjective which, when modifying the word Work, refers to Work that is unsatisfactory, faulty, or deficient, in that it does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents, or has been damaged prior to ENGINEER's recommendation of final payment.

19. *Documents*--Data, reports, Drawings, Specifications, Record Drawings, and other deliverables, whether in printed or electronic media format, provided or furnished in appropriate phases by ENGINEER to OWNER pursuant to this Agreement.

20. *Drawings*--That part of the Contract Documents prepared or approved by ENGINEER which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings are not Drawings as so defined.

21. *Effective Date of the Construction Agreement*--The date indicated in the Construction Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Construction Agreement is signed and delivered by the last of the two parties to sign and deliver.

22. *Effective Date of the Agreement*--The date indicated in this Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

23. *ENGINEER's Consultants*--Individuals or entities having a contract with ENGINEER to furnish services with respect to this Project as ENGINEER's independent professional associates, consultants,

subcontractors, or vendors. The term ENGINEER includes ENGINEER's Consultants.

24. *Field Order*--A written order issued by ENGINEER which directs minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

25. *General Conditions*--That part of the Contract Documents which sets forth terms, conditions, and procedures that govern the Work to be performed or furnished by Contractor with respect to the Project.

26. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCB's, Petroleum, Hazardous Waste, or Radioactive Materials in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

27. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

28. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, standards, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

29. *PCB's*--Polychlorinated biphenyls.

30. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

31. *Radioactive Materials*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

32. *Record Drawings*--The Drawings as issued for construction on which the ENGINEER, upon completion of the Work, has shown changes due to Addenda or Change Orders and other information which ENGINEER considers significant based on record documents furnished by Contractor to ENGINEER and which were annotated by Contractor to show changes made during construction.

33. *Reimbursable Expenses*--The expenses incurred directly by ENGINEER in connection with the

performing or furnishing of Basic and Additional Services for the Project for which OWNER shall pay ENGINEER as indicated in Exhibit C.

34. *Resident Project Representative*--The authorized representative of ENGINEER, if any, assigned to assist ENGINEER at the Site during the Construction Phase. The Resident Project Representative will be ENGINEER's agent or employee and under ENGINEER's supervision. As used herein, the term Resident Project Representative includes any assistants of Resident Project Representative agreed to by OWNER. The duties and responsibilities of the Resident Project Representative are as set forth in Exhibit D.

35. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

36. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to ENGINEER to illustrate some portion of the Work.

37. *Site*--Lands or areas indicated in the Contract Documents as being furnished by OWNER upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands furnished by OWNER which are designated for use of Contractor.

38. *Specifications*--That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

39. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

40. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements the General Conditions.

41. *Total Project Costs*--The sum of the Construction Cost, allowances for contingencies, the total costs of services of ENGINEER or other design professionals and consultants, cost of land, rights-of-way, or compensation for damages to properties, or OWNER's costs for legal, accounting, insurance counseling or auditing services, or interest and financing charges incurred in connection with the Project, or the cost of other services to be provided by others to OWNER pursuant to Exhibit B of this Agreement.

42. *Work*--The entire completed construction or the various separately identifiable parts thereof required to be provided under the Contract Documents with respect to this Project. Work includes and is the result of performing or furnishing labor, services, and documentation necessary to produce such construction and furnishing, installing, and incorporating all materials and all equipment into such construction, all as required by the Contract Documents.

43. *Work Change Directive*--A written directive to Contractor issued on or after the Effective Date of the Construction Agreement and signed by OWNER upon recommendation of the ENGINEER, ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change directed or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

44. *Written Amendment*--A written amendment of the Contract Documents signed by OWNER and Contractor on or after the Effective Date of the Construction Agreement and normally dealing with the non-engineering or non-technical rather than strictly construction-related aspects of the Contract Documents.

ARTICLE 8 - EXHIBITS AND SPECIAL PROVISIONS

8.01 Exhibits Included

- A. Exhibit A, "ENGINEER's Services."
- B. Exhibit B, "OWNER's Responsibilities."
- C. Exhibit C, "Payments to Engineer for Services and Reimbursable Expenses."

D. Exhibit D, "Duties, Responsibilities and Limitations of Authority of Resident Project Representative."

E. Exhibit E, "Notice of Acceptability of Work."

F. Exhibit F, "Construction Cost Limit."

G. Exhibit G, "Insurance."

H. Exhibit H, "Special Provisions."

I. Exhibit I, "DBE Goal."

8.02 Total Agreement

A. This Agreement (consisting of pages 1 to 12 inclusive, together with the Exhibits identified above) constitutes the entire agreement between OWNER and ENGINEER and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

By signing this contract, Engineer hereby verifies that it does not boycott Israel and will not boycott Israel during the term of this contract. Boycotting Israel is defined in Texas Government Code section 808.001 to mean refusing to deal with, terminating business activities with, or taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the Effective Date of which is indicated on page 1.

OWNER: City of Killeen

ENGINEER: Freese and Nichols, Inc.

By: Kent Cagle

By: Chris B. Bosco

Title: City Manager

Title: Principal

Date Signed: _____

Date Signed: 9/15/2022

Address for giving notices:

Address for giving notices:

P.O. Box 1329

801 Cherry Street, Suite 2800

Killeen, TX 76540-1329

Fort Worth, TX 76102

Designated Representative (paragraph 6.02.A):

Designated Representative (paragraph 6.02.A):

Edwin Revell

Spencer Maxwell

Title: Executive Director of Development Service

Title: Associate

Phone Number: 254-501-7628

Phone Number: 817-735-7523

Facsimile Number: 254-5017633

Facsimile Number: 817-735-7491

E-Mail Address: erevell@killeentexas.gov

E-Mail Address: sbm@freese.com

This is **EXHIBIT A**, consisting of 22 pages, referred to in and part of the **Agreement between OWNER and ENGINEER for Professional Services** dated _____, _____.

Initial:

OWNER _____
ENGINEER *EN*

ENGINEER's Services

Article 1 of the Agreement is amended and supplemented to include the following agreement of the parties. ENGINEER shall provide Basic and Additional Services as set forth below.

PART 1 – FREESE AND NICHOLS, INS. PROPOSAL – SCOPE OF SERVICES
(SEE NEXT PAGE)

September 7, 2022

Mr. Andrew Zagars, PE
City Engineer
Engineering Division
3201 South W S Young Drive
Killeen, TX 76542

Re: Chaparral Road Schematic

Dear Mr. Zagars:

Freese and Nichols, Inc. (FNI) is pleased to submit our scope and fee proposal for the Chaparral Road Schematic Design. We propose a three-part contract scope and fee.

- **Schematic Design Contract** – This phase will include survey, SUE (Level “B”), Alignment Study, Hydrology & Hydraulic Analysis, TxDOT Design Schematic, Environmental documentation, Intersection Traffic Analysis, Grant Application, and Stakeholder Collaboration/Public Outreach.
- **Final Design and ROW Contract** – This phase will include any additional data collection (if needed), Level “A” SUE, development of the plans, specifications, and estimates (PS&E), utility relocation design, ROW acquisition and bid phase services.
- **Construction Management Contract** – This phase will include construction management, inspection, materials testing, and LGPP documentation.

FNI proposes a schematic design lump sum fee not to exceed **\$1,485,240**. Refer to the attached scope of services and level of effort spreadsheet for a detailed breakdown of the proposed services. The following is a summary of the schematic design major contract scope of work items.

Work to be Performed	Fee Summary	Days
Task 1: Design Management	\$97,020	525
Task 2: Alignment Study	\$32,900	65
Task 3: Funding Application	\$85,290	60
Task 4: Schematic Design	\$363,890	460
Task 5: Environmental Assessment	\$214,370	400
Task 6: Subsurface Utility Engineering	\$141,050	30
Task 7: Survey	\$212,870	60
Task 8: Hydrologic and Hydraulic Analysis	\$183,980	60
Task 9: Traffic Analysis	\$49,810	40
Task 10: Public Outreach	\$104,060	60
Schematic Design Contract	\$1,485,240	525



The objective of this scope of services is to obtain TxDOT approval on the schematic design and environmental documents. In addition, we included scope for submitting grant applications to obtain additional funding for the project. Thank you for the opportunity to be of service to the City of Killeen. If you have any questions concerning this proposal, please do not hesitate to contract me at 817-735-7357.

Sincerely,
FREESE AND NICHOLS, INC.

A handwritten signature in black ink, appearing to read 'CBosco', with a long horizontal flourish extending to the right.

Chris Bosco, PE
Group Manager

A handwritten signature in black ink, appearing to read 'Spencer B. Maxwell', with a long horizontal flourish extending to the right.

Spencer B. Maxwell, PE, PTOE, PMP
Project Manager

Attachment SC
Scope of Services
Chaparral Road Improvements

PROJECT DESCRIPTION

The City of Killeen (Owner) plans to reconstruct and realign Chaparral Road from SH 195 to FM 3481 as a four-lane arterial. The project will be designed and constructed in two phases. Phase I extends from SH 195 to E. Trimmier Road (approx. 4.6 miles). Phase II extends from E. Trimmier Road to FM 3481 (approx. 2 miles). The project is being designed and constructed in accordance with TxDOT specifications and standards. This scope of services is for concept design, environmental and schematic design for Phases I & II. Refer to the attached project limits exhibit. FNI shall render the following basic and special services in connection with the development of the Project:

WORK TO BE PERFORMED

Task 1.	Design Management (<i>Phase I & II</i>)	Basic Services
Task 2.	Alignment Study (<i>Phase I & II</i>)	Special Services
Task 3.	Funding Application (<i>Phase I & II</i>)	Special Services
Task 4.	Schematic Design (<i>Phase I & II</i>)	Basic Services
Task 5.	Environmental Assessment (<i>Phase I & II</i>)	Special Services
Task 6.	Subsurface Utility Engineering (<i>Phase I</i>)	Special Services
Task 7.	Survey (<i>Phase I</i>)	Special Services
Task 8.	Hydrologic and Hydraulic Analysis (<i>Phase I & II</i>)	Special Services
Task 9.	Traffic Analysis (<i>Phase I & II</i>)	Special Services
Task 10.	Public Outreach (<i>Phase I & II</i>)	Special Services

BASIC AND SPECIAL SERVICES: Basic and Special Services to be performed by FNI are described as follows:

TASK 1. DESIGN MANAGEMENT

ENGINEER will manage the work outlined in this scope to ensure efficient and effective use of ENGINEER's and CITY's time and resources. ENGINEER will manage change, communicate effectively, coordinate internally and externally as needed, and proactively address issues with the CITY's Project Manager and others as necessary to make progress on the work.

1.1 Managing the Team

- Lead, manage and direct design team activities
- Develop and Implement QC/QA plan

1.2 Communications and Reporting

- Attend project kickoff meeting with CITY staff to confirm and clarify scope and understand CITY objectives.
- Conduct and document project update meetings with CITY.
- Prepare and submit monthly progress reports and invoices
- Prepare and submit baseline Project Schedule initially, and Project Schedule updates quarterly.

- Coordination with regulatory agencies, ENGINEER shall communicate with regulatory agencies such that their regulatory requirements are appropriately reflected in the designs. ENGINEER shall work with regulatory authorities to obtain approval of the designs and make changes necessary to meet their requirements.

1.3 ASSUMPTIONS

- Assuming 18 project update meetings over the life of the design phase. 6 in-person meetings and 12 virtual progress meetings

1.4 DELIVERABLES

- Monthly progress reports and invoices
- Baseline design schedule
- Quarterly schedule updates

TASK 2. ALIGNMENT STUDY

The purpose of the alignment study is for the ENGINEER to prepare, identify, develop, communicate through the defined deliverables, and recommend the design concept that successfully addresses the design problem, and to obtain the CITY's endorsement of this concept. ENGINEER will utilize concepts and criteria contained in the current CITY and TXDOT Design Manuals.

ENGINEER will develop the conceptual design of the infrastructure as follows.

2.1 Alignment Study

- The ENGINEER will prepare alignment options for Phases I & II base on City GIS data. The study will evaluate construction cost, right-of-way impacts, environmental impacts, and future development for each alignment option.

2.2 ASSUMPTIONS

- ENGINEER will prepare 3 alignment options between W. Trimmier Road and E. Trimmier Road. (Phase I)
- ENGINEER will prepare 3 alignment options between Rosewood Drive and FM 3481. (Phase II)

2.3 DELIVERABLES

- Plan View Exhibits for each alignment option based on GIS data
- Conceptual Level Cost Estimate for each alignment option
- Alignment Evaluation matrix for each option consider ROW impacts, relocations, environmental impact, utility conflicts, development, and construction cost.

TASK 3. FUNDING APPLICATION

3.1 Support Development of Materials for Grant Applications

The City of Killeen plans to apply for a RAISE Grant for this project in 2023. FNI will support the City's application efforts by providing the following professional services:

- Prepare project outline with merit criteria
- Assist City staff to organize, schedule, and prompt City for their contributions to the application submittal
- Compile information provided by the City that has been prepared for the ongoing projects within the project limits
- Prepare project overview document that speaks to the eight selection criteria, project readiness, costs, and requested funding
- Prepare writeups supporting the project's benefits in terms of the eight funding evaluation criteria as described in the RAISE Grant Notice of Funding Opportunity
- Prepare writeups that describe project readiness related to environmental clearances and acquisition of ROW.
- Prepare materials supporting a Cost Benefit Analysis using materials provided by the City and guidance provided by the USDOT
- Assist City staff to develop the framework for request for Letters of Support for the application
- Assist City staff to compile the prepared information into a set of materials to be submitted online for the RAISE Grant application.
- FNI will assist the City in applying for up to 2 other funding grant programs such as the federal bridge improvement program, TxDOT Funding, or another federal grant program that supports off-system transportation improvements.

3.2 ASSUMPTIONS

- The City of Killeen will organize stakeholders and civic leaders for support and contribution to the application submittal
- The City of Killeen will obtain letters of support for the application

3.3 DELIVERABLES

- RAISE grant application
- Applications for up to 2 other grant programs for off-system transportation improvements

TASK 4. SCHEMATIC DESIGN

The purpose of the schematic design is for the ENGINEER to develop a TxDOT design schematic based on the preferred alignment selected by the city as part of the alignment study. ENGINEER will utilize design criteria contained in the current CITY and TxDOT Design Manuals.

ENGINEER will develop the schematic design of the infrastructure as follows.

4.1 Data Collection

- In addition to data obtained from the CITY, ENGINEER will research and make efforts to obtain pertinent information to aid in coordination of the proposed improvements

with any planned future improvements that may influence the project. ENGINEER will also identify and seek to obtain data for existing conditions that may impact the project including traffic volumes, utilities, agencies, City Master Plans, and property ownership as available from the Tax Assessor's office.

- 4.2 Develop typical sections to accommodate vehicular traffic and pedestrian needs.
- 4.3 Prepare plan view geometric intersection design layouts for the intersections of W. Trimmier, Featherline Road, Old Chaparral alignment school connection, E. Trimmier, Rosewood Drive. Based on the results of the traffic study the concepts maybe roundabouts or conventional intersections.
- 4.4 Prepare intersection approaches for the connection to SH 195 and FM 3481.
- 4.5 Evaluate and Prepare roadway design adjacent to the new high school considering pedestrian crossing from the neighborhood and access management into the school.
- 4.6 Evaluate ROW and Easement needs along the entire project limits (Phase I & II). Prepare ROW strip map exhibit.
- 4.7 Develop construction phasing plan to support schematic development and construction cost estimates.
- 4.8 Prepare roadway drainage area map to support the roadway profile development. Prepare conceptual level plan view inlet calculations. Develop pipe system layout to support the development of the roadway design concept, construction phasing planning, and outfall locations.
- 4.9 Prepare project cross sections at 100' station and at critical design points
- 4.10 Prepare Bridge Layout for Trimmier Creek Bridge. Plan and Profile in accordance with TxDOT requirements.
- 4.11 Investigate City water and Sewer conflicts within the ROW and identify the City utilities that need to be relocated or replaced as part of the roadway construction.
- 4.12 Prepare 30%/60%/90 Schematic Roll plot in accordance with TxDOT requirements that incorporates the intersection designs, SUE level B utility data, and defines the existing and proposed right-of-way and easements.
- 4.13 Meet with adjacent property owners as needed (up to 10 meetings, 5 Virtual, and 5 In Person)
- 4.14 Provide cost estimates for construction, ROW, and utility relocations as the project develops, and provide updates as requested.
- 4.15 ASSUMPTIONS
 - Schematic will be developed in accordance with TxDOT standards

4.16 DELIVERABLES

- Bridge Layout
- TxDOT Schematic Roll Plot
- Cross Section Sheets
- Construction Cost Estimate

TASK 5. ENVIRONMENTAL ASSESSMENT

5.1 TxDOT Environmental Documentation

This scope includes preparation of technical documentation support for review by the TxDOT, to be prepared in accordance with the most recent guidance. It is assumed that the proposed project will be cleared as an Environmental Assessment (EA) with one public meeting. A contingency task for a public hearing is also included in this scope of services but will only be utilized if determined necessary.

5.2 Technical Reports and Scoping Documents

- Prepare the appropriate scoping documents according to the TxDOT guidelines and policy. TxDOT's Work Development Plan (WDP) 1 and WDP 2 document would be completed to determine which technical reports would be required for the proposed project.
- Environmental technical reports shall be produced. The State will determine which reports will be necessary for any given project. Environmental technical reports must be provided to the State with sufficient detail and clarity to support environmental determination(s).
- Environmental technical reports will include appropriate National Environmental Policy Act of 1969 (NEPA) or federal regulatory language in addition to the purpose and methodology used in delivering the service. Technical reports will include sufficient information to determine the significance of impacts. Anticipated technical reports are listed below:
 - Archeological Background Study
 - Archeological Survey and Report (See task 5.3)
 - Historical Project Coordination Request
 - Historic Resources Survey and Report (See task 5.3)
 - Air Quality MSAT Report
 - Traffic Noise Analysis and Model
 - Surface Waters Analysis Form
 - Species Analysis and BMP Form
 - Species Analysis Spreadsheet
 - Hazardous Materials Initial Site Assessment
 - Community Impacts Assessment
 - Indirect and Cumulative Impacts Analysis

- Public Involvement (See Special Services)

5.3 Archeological Survey and Report

- Fieldwork – The FNI team will shovel test every 100 m along undisturbed segments of the proposed route following the completion of the desktop evaluation. Additional shovel tests will be placed judgmentally along the portions of the existing road that are to be expanded. Survey standards will meet the minimum requirements adopted by the THC (Council of Texas Archeologists 2020). If additional archaeological sites are found during the survey, ARC is required to record them.
- Deliverables - FNI will produce a technical report that meets the standards adopted by the THC (Council of Texas Archeologists 2018) and presents a review of the natural environment and cultural history of the project area, a research design and methodology, and the results of our field investigations, along with conclusions and recommendations of our findings.
- Curation - Records and collected artifacts must be curated in perpetuity with an approved curatorial facility, to fulfill requirements in the TAP. A representative of the City of Killeen must sign the required curatorial paperwork. Though curation cannot be completed until the THC has approved the report, this task will not prevent FNI from proceeding with construction of the project. If any artifacts are collected on private land, they will be returned to the landowner at their request.

5.4 Historic Resources Survey and Report

- Reconnaissance Survey for Non-Archeological Historic-Age Resources
 - In consultation with the State, FNI shall determine the APE and the study limits of the survey area, conduct a literature review appropriate to the project area and its historic-age resources, and prepare a research design for a reconnaissance survey for non-archeological historic-age resources. The research design shall provide a succinct summary of the literature review results including known historic resources and results of public involvement tasks, clear descriptions of identification, evaluation and documentation tasks required, and associated budget figures and production schedules. FNI shall submit an electronic format copy of the research design to the State. The State assumes responsibility for transmitting the research design to the THC, as applicable under the PA-TU, and transmitting THC comments to the Technical Expert. FNI shall revise the research design to reflect comments by the State and THC.
 - FNI shall conduct a reconnaissance survey conforming to the methodology outlined in the THC- approved research design. The reconnaissance survey shall not be implemented without prior approval of the research design by the State and THC. In addition, prior to reconnaissance survey, the technical expert shall ensure that efforts have been made by the appropriate project officials to obtain right-of-entry (ROE) to properties in the study area that have the potential for historic properties if applicable. Each historic-age resource (defined in accordance with 36 CFR 60 as a building, structure, object, historic district or non-archeological site at least 50 years old at the time of letting) in the APE shall be documented in the following manner.

- FNI shall provide photographic documentation for each historic-age resource sufficient in number and perspective to satisfy THC documentation requirements. At a minimum this shall include an oblique view with the primary façade and the subject filling the frame. Properties listed or preliminarily determined eligible for the NRHP shall require additional photographs to be taken, including photographs that show the relationship between the historic resource and the proposed project area. Properties with more than one historic-age resource shall also require additional photographs.
- FNI shall produce an inventory of all resources, provided in a table form that details their project ID numbers, locations and addresses, property type and subtype classifications, stylistic influences, construction dates, integrity issues and preliminary eligibility recommendations.
- FNI shall provide a technical report detailing the results of the reconnaissance survey. In the report, FNI shall describe the findings of the reconnaissance survey, including preliminary assessments of direct, indirect and cumulative effects on historic properties, and make recommendations to the State for the need, if any, to conduct intensive survey efforts. The technical report shall have sufficient detail and clarity to provide THC with a basis for making determinations of NRHP eligibility without requiring submission of additional documentation or shall have sufficient detail and clarity to make recommendations concerning the scope of the intensive survey. The technical report should include an outline of the purpose and methodology of the project, a summary of the background history of project area, presenting historic contexts relevant to the time period associated with the historic-age resources in which to evaluate significance of resources for NRHP eligibility, and observations on patterns of settlement, development trends, resource distribution and analysis of survey data. All appropriate NEPA or federal regulatory language shall be included to provide sufficient clarity concerning eligibility determinations.

5.5 ASSUMPTIONS

- The project will meet the requirements of Section 404 Nationwide permit 14 without a PCN
- TxDOT EA level document
- The project will not require section 4(f)
- The project will not require Phase II testing or Phase III mitigation for cultural resources
- The project will not require the recording of more than one archaeological site.
- The project will not require more than 40 shovel tests.
- The proposed project would not result in an adverse effect to a historic property or State Archeological Landmark under the National Historic Presentation Act.

5.6 DELIVERABLES

- Environmental Assessment Technical Resource Reports

TASK 6. SUBSURFACE UTILITY ENGINEERING (SUE)

FNI will perform the SUE services required for this project in general conformance with the recommended practices and procedures described in ASCE Publication CI/ASCE 38-02 (Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data). As described in the mentioned ASCE publication, four levels have been established to describe the quality of utility location and attribute information used on plans. The four quality levels are defined in cumulative order (least to greatest) as follows.

- Quality Level D: QL-D is the most basic level of information for utility locations. It comes solely from existing utility records or verbal recollections, both typically unreliable sources. It may provide an overall "feel" for the congestion of utilities but is often highly limited in terms of comprehensiveness and accuracy. QL-D is useful primarily for project planning and route selection activities.
- Quality Level C: QL-C is probably the most commonly used level of information. It involves surveying visible utility facilities (e.g., manholes, valve boxes, etc.) and correlating this information with existing utility records (QL-D information). When using this information, it is not unusual to find that many underground utilities have been either omitted or erroneously plotted. Its usefulness, therefore, is primarily on rural projects where utilities are not prevalent or are not too expensive to repair or relocate.
- Quality Level B: QL-B involves the application of appropriate surface geophysical methods to determine the existence and horizontal position of virtually all utilities within the project limits. This activity is called "designating." The information obtained in this manner is surveyed to project control. It addresses problems caused by inaccurate utility records, abandoned or unrecorded facilities, and lost references. The proper selection and application of surface geophysical techniques for achieving QL-B data is critical. Information provided by QL-B can enable the accomplishment of preliminary engineering goals. Decisions regarding location of storm drainage systems, footers, foundations, and other design features can be made to successfully avoid conflicts with existing utilities. Slight adjustments in design can produce substantial cost savings by eliminating utility relocations.
- Quality Level A: QL-A, also known as "locating," is the highest level of accuracy presently available and involves the full use of the subsurface utility engineering services. It provides information for the precise plan and profile mapping of underground utilities through the nondestructive exposure of underground utilities, and also provides the type, size, condition, material, and other characteristics of underground features.

To assist with the Schematic design phase, FNI will perform a SUE Level D and Level B investigation.

6.1 Level D SUE (Record Research):

- Perform this portion of the scope for all areas of the project: entire alignment from SH195 to Stillhouse Lake Road and proposed right of way
- Contact the municipalities, county, utilities, pipeline operators, Texas Railroad Commission to request information and study historical aerial images for indication of utility trenches and scars.

6.2 Level B SUE (Designating):

- Perform this portion of the scope from SH195 to East Trimmier Road along both existing and proposed optional alignments.
- Coordinate with Client to determine a work plan, schedule and permission to work on site. Client will provide Right of Entry and permits where needed.
- Use utility record information (gathered during Level D work above) to assist in designating field work.
- Designate means to record and mark the horizontal location of the existing tone-able utility facilities using non-destructive surface geophysical techniques. Tone-able utilities are typically utilities that are conductive or internally accessible with a traceable fish tape or sonde. Water and communication vaults can be investigated from above ground. Ground Penetrating Radar (GPR) will be used to investigate nonconductive lines where site conditions are suitable. Overhead utilities will be documented, but a full inventory of the utilities on each pole will not be undertaken.
- A non-water base paint, utilizing the APWA color code scheme, will be used on all surface markings of underground utilities.
- Use survey data to draft a color-coded composite utility facility plan showing utility type, quality levels, line sizes. Line sizes of designated utility facilities detailed on the deliverable are from the best available records and that an actual line size is normally determined from a test hole vacuum excavation.
- Clearly identify SUE Quality Levels in the file. All utilities that were discovered from prior record research but cannot be depicted in Quality Level B standards will be shown as Level C or D where appropriate. These utilities will have a unique line style and symbology in the deliverable

6.3 Utility Coordination

- Utility adjustment coordination includes utility coordination meetings with individual utility companies, communication and coordination with utilities, conflict assessment and analysis, and preparation of utility agreements, including reimbursable and non-reimbursable. All utility coordination activities will be in accordance with the City of Killeen and TxDOT Guidelines. There are ten (10) Utilities anticipated along the project corridor, including City of Killeen Water and Wastewater, City of Harker Heights Water and Wastewater, Bell County WCID No. 1 Water and wastewater, Central Texas Water Supply Corporation, Kempner Water Supply, Bartlett Electric Cooperative, Oncor Electric, Lumen (formerly CenturyLink), Charter/Spectrum and Atmos Energy. Utility adjustment coordination includes utility relocation verification, status reports and site visits. The scope of services for schematic phase is as follows:
 - Develop Utility Contact List. FNI will establish contact with existing Utility Companies within and adjacent to the Project and create a utility contact list. This list will be maintained throughout the project.
 - Schematic Conflict Assessment. FNI shall create a Schematic Utility conflict map overlaid on the schematic strip map, all correlated with the existing utility file created by SUE. FNI will create a conflict summary report to supplement the map.

- Conflict Mitigation Meetings. FNI will conduct up to four (4) meetings with individual utility owners to discuss anticipated impacts, estimated cost/relocation durations, and opportunities to optimize design to avoid utility conflicts.

6.4 ASSUMPTIONS

- Above ground geophysical techniques cannot guarantee to find all buried utility lines. This is particularly true with when GPR is being used in unfavorable conditions. Soil conditions may not be conducive to GPR use. As a result, its effectiveness in finding buried utilities can be limited.
- FNI team will perform subsurface utility engineering in accordance with ASCE 38/02 Standard Guidelines for the Collection and Depiction of Subsurface Utility Data. FNI team will exercise all reasonable and customary care in the performance of SUE services, realizing the safety of personnel and prevention of damage are the prime considerations in the detection and mapping of subsurface utility features. However, a possibility exists that some utilities may not be detected and/or mapped using standard SUE procedures previously described.
- While uncommon, utilities possessing characteristics mentioned below can be missed while using the standard SUE procedures:
 - Utilities buried excessively deep, beyond detection limits of standard locating equipment.
 - Abandoned utilities
 - Utilities with no apparent surface features and no records provided
 - Non-conductive utilities.
 - Utilities buried in soil unsuitable for GPR detection

6.5 DELIVERABLES

- Microstation CAD file of Level B and Level D SUE data
- Plan/plan sheets of the Level B and Level D SUE data

TASK 7. SURVEY

7.1 Aerial Lidar / imagery Collection & Mapping / 1' Contour Mapping

- Aerial lidar data will be collected for a ~150ft wide corridor along the provided alignment via unmanned drone equipped with a Phoenix Recon XT scanner to develop 1' contour mapping.
 - Surveyor will establish approximately five (5) primary control points, nineteen (19) secondary control points, and forty-three (43) aerial targets prior to the flight and perform the essential ground survey necessary to determine horizontal position and elevation off all ground control points.
 - All aerial survey data will be tied horizontally to the Texas State Plane Coordinate System of 1983 (NAD83, 2011) and vertically to NAVD88 (realized using Geoid12B).
 - CobbFendley will perform visible aboveground feature extraction (excluding trees and obscured areas), breakline extraction, and surface data extraction

at a grid interval of no more than 25-feet for a ~100ft wide corridor along the provided alignment as seen on the attached Exhibit.

- Aerial imagery collection will be performed via unmanned drone. FNI will fly at an altitude sufficient to acquire aerial imagery in coordination with the collected LiDAR data. The collected imagery will be calibrated and orthorectified to serve as background imagery and support planimetric features extraction within the provided scope limits.

7.2 Right-of-way Strip Map Category 2 Route Survey

- Apparent ROW strip map to assist in the Schematic Phase of the project.
- FNI will retrace the apparent right-of-way of Chaparral Road in the subject area. FNI will create a .DWG or .DGN Cad files as requested.
- FNI will show ownership names and parcel lines based on the current tax records. This information is publicly available and shall not be relied on as a Boundary Survey or Title Report.

7.3 Supplemental Category 6 Topographic Survey

- Additional topographic on the ground Survey.
 - FNI will locate visible improvements that will supplement items that were obscured during the aerial mapping.
 - FNI will establish additional control and check points to be used as QA/QC for 1' contour mapping.
 - The survey will include locating trees within the apparent right-of-way of Chaparral Road. For parcels determined to be probable "right-of-way acquisition tracts" where right-of-entry has been granted tree locations will be extended approximately 40' past the apparent right-of-way.
 - Subsurface evidence of utilities will be limited to QL-B SUE. No 811 locator calls will be conducted for this project.
 - Combining aerial and on the ground surveying to prepare mapping of 1' contours.
 - The deliverable shall be AutoCad or MicroStation digital files unless otherwise specified.

7.4 ASSUMPTIONS

- The Lidar Drone Survey will include Phase I & Phase II
- Field Survey and Boundary Design Survey is for Phase I (Only)

7.5 DELIVERABLES

- DTM data and supporting files including TIN, LandXML and one foot (1') contours.
- 2D planimetric map data as extracted from aerial lidar and imagery as Microstation DGN.
- Digital ortho-imagery

TASK 8. HYDROLOGICAL AND HYDRAULIC ANALYSIS

8.1 Hydraulic Analysis

- H&H adverse impact analysis, including flood mitigation
- Cross culvert/bridge hydraulic analysis and design
- Drainage report summarizing impact analysis and cross culvert/bridge needs per alternative

8.2 Pre-project Condition H&H Analysis – Results of this analysis will represent existing conditions and will be compared to the proposed condition to determine potential impact of project. Update effective HEC-HMS hydrologic models for:

- Rock Creek Tributary 1
- Trimmier Creek – Chaparral Creek will be a component of this model

8.3 Update rainfall data based on Atlas14, subdivide drainage areas at critical analysis points, develop other hydrologic parameters based on subdivided areas, and update effective HEC-HMS model to define pre-project conditions. Two land use scenarios will be evaluated per model. Existing land use conditions will be used to determine flood mitigation needs. Ultimate land use conditions will be used for sizing drainage infrastructure.

8.4 Update effective HEC-RAS hydraulic models for the following major crossings:

- Rock Creek
- Rock Creek Tributary 1
- Chaparral Creek (Trimmier Creek)

8.5 Update flows using ultimate land use conditions, cross sectional data using latest topographic data, and cross culverts using survey data.

8.6 Extend Trimmier Creek effective HEC-RAS model to connect the two studied portions through the project area. Update flows using ultimate land use conditions, cross sectional data using latest topographic data, and bridge geometry using survey data.

8.7 Evaluate capacity of up to twenty-five (25) existing minor cross culverts along Chaparral Road. Populate flows using the Rational Method and Atlas 14 rainfall data based on ultimate land use conditions. Evaluate capacity of existing cross culverts for criteria compliance

8.8 Perform Adverse Impact Analysis between pre-project and project conditions for the preferred alignment to verify peak discharge is increased by no more than 1% using existing land use conditions.

8.9 Update pre-project conditions hydrologic models developed for the preferred alignment based on ultimate land use conditions.

8.10 Size existing minor and major culvert crossings to meet design criteria. Culverts will be

sized such that the 100-yr headwater depth is less than 3" above crown of road or less than 3" above top of curb, whichever is lower.

- Size up to four (4) existing major crossings using discharge results
- Size up to one (1) new major crossing for each design option
- Size up to 25 existing minor crossings using peaks discharges
- Size up to six (6) new minor crossings for each design option. Populate peak discharges using the Rational Method based on ultimate land use conditions.

8.11 Mitigation Analysis - Evaluate and develop preliminary designs to mitigate any increase in peak discharge that exceeds 1%. This could include identifying potential detention locations inside ROW either above or below ground, and on offsite land for purchase by City of Killeen. Up to two scenarios will be evaluated at eight (8) locations for up to 16 scenarios. Preliminary design will include conceptual modeling of potential solutions, infrastructure sizing to eliminate adverse impact and schematic layout drawings.

8.12 Prepare a technical report summarizing task items above for the preferred alignment.

8.13 ASSUMPTIONS

- This scope of work assumes the effective hydrologic models were developed in HEC-HMS and workmaps identifying drainage area locations are available. If an alternate software was used or workmaps are not available, additional updates might be an additional service.

8.14 DELIVERABLES

- Technical Drainage Report

TASK 9. Traffic Engineering

The objective of the traffic study is to evaluate the major intersections along Chaparral Road between SH 195 and FM 3481 in Killeen, TX, to assess the anticipated operation for a traffic signal versus a roundabout. The preliminary traffic analysis will guide the design team to determine the appropriate roadway typical sections for the ultimate and phased design of the project.

FNI will perform the traffic analysis for four (4) intersections (W. Trimmier Rd., Featherline Rd., Chaparral Rd. at high school, and E. Trimmier Rd). The study will include a traffic signal warrant analysis at the intersection of Chaparral Rd at FM 3481.

9.1 Data Collection and Review

Gather Existing Data: Perform desktop review of the corridor and the study area and assemble data necessary for subsequent traffic analyses to include.

- Existing roadway network, adjacent land use, traffic access, and circulation.
- Existing roadway and intersection geometry and type of existing intersection traffic

control within the study area.

- City Master Thoroughfare Plan and Future Land Use to gather information on planned thoroughfares in the study area and potential future development.
- The Site plan for the proposed Junior High School along Chaparral Road. In addition, site plans, development programs, and land use densities for any other uses planned within the study area. The City will help identify and define level and intensity of any proposed development, and planned roadway improvements including implementation timeline.

Collect Traffic Counts: Collect current traffic count data necessary for operational analyses to include:

- 24-Hour intersection turning movement counts (TMC) at the following five (5) locations within the study area. FNI will engage Gram Traffic Counting, Inc. to collect necessary traffic data within the study area. Traffic counts will be collected on a Tuesday, Wednesday, or Thursday while schools are in session.
 - Chaparral Road @ W. Trimmier Rd
 - Chaparral Road @ W. Featherline Rd
 - Chaparral Road @ High School
 - Chaparral Road @ E. Trimmier Rd
 - Chaparral Road @ FM 3481
- Collect historic traffic volume count information as available from the City, and TXDOT to supplement newly collected data.
- Review and summarize the traffic count data for input into the study analysis.

9.2 Perform Traffic Operational Analysis

- **Develop Traffic Volumes for Analysis:** Estimates of opening year 2027 and design year 2047 traffic volumes for peak hours will be developed for the study intersections based on the following methodology and in consultation with City staff.
 - **Trips from New Development:** Estimate trips from the proposed Junior high School and other future development along the study corridor. Trips would be estimated utilizing the 11th Edition of the ITE Trip Generation Manual. Estimate trip distribution and assign the trips to the study area network.
 - **Background Trips:** A forecast of non-development site related traffic volumes that can be expected to exist on the area roadway system within the study area for the opening year and design year will be developed. These traffic projections will be based on existing traffic volumes and historic/projected annual growth rates.
 - **Total Analysis Volumes:** Site generated trips will be combined with the background trips to obtain total traffic for future year traffic analysis.
 - Prepare stick diagrams showing current and projected volumes for the intersections.
- **Traffic Operations Analysis of Future Conditions:** Develop AM and PM peak hour traffic operational analysis model for the Opening year and design year conditions to

evaluate delay and LOS for the four study intersections, using the methods Highway Capacity Manual (latest edition). The evaluation would compare the operations under the traditional signalized intersection versus a modern roundabout configuration. Additional evaluation parameters such as queue lengths will be used as applicable. The LOS results will be compiled into a tabular format and reviewed with City staff.

- **Identify and Recommend Intersection Configurations:** Based on the findings of the operational analysis and identified impacts, and input from the City and project stakeholders, recommendations will be developed for the intersection configurations.
- **Signal Warrant Analysis:** Analyze the intersection traffic count data to determine if the intersection of Chaparral Road at FM 3481 meets the traffic signal warrants based on volumes (Warrant 1, 2 & 3) as set forth in the latest edition of the Texas Manual on Uniform Traffic Control Devices (TMUTCD). Warrant analysis would be based on the opening year traffic and proposed lane geometry conditions at the intersection. Document the findings in a technical memorandum along with the supporting documentation.

9.3 Prepare Technical Memorandum

- **Draft Technical Memorandum:** Prepare a draft technical memorandum documenting the data, analysis, findings, and recommendations of the study and submit to the City of review and comment. The City will provide one consolidated set of City Staff review comments. The draft memorandum will be submitted in electronic PDF format.
- **Final Technical Memorandum:** Prepare a final technical memorandum (PDF format) addressing the draft review comments and submit to the City.

9.4 ASSUMPTIONS

- All deliverables will be provided in an electronic format via email.
- All analysis will be performed in accordance with the Texas Manual on Uniform Traffic Control Devices (TMUTCD), the Highway Capacity Manual (HCM), Institute of Transportation Engineers (ITE) Trip Generation Manual, City of Killeen Guidelines, City of Killeen Standards, TxDOT Guidelines, and TxDOT Standards.

9.5 DELIVERABLES

- Technical Memorandum

TASK 10. Public Outreach

10.1 Public Engagement Planning

- Public engagement kickoff meeting
- Public engagement planning coordination meetings with the City

10.2 Public Engagement

- Develop Public Involvement Plan
- Prepare Database list for key stakeholders and property owners
- Conduct up to 4 stakeholder workshop meetings

- Setup and meeting with property owners (20 Virtual Meetings)
- Stakeholder Communication project updates
- Prepare project website
- Prepare project communication exhibits and materials

10.3 Public Meeting No. 1

- Plan, coordinate, execute, and conduct Public Involvement to consist of one (1) Open House/Public Meeting during the feasibility/schematic stage of the project. FNI shall execute the logistics with selecting and securing the Open House Public Meeting site with the City. FNI shall identify local media publications and prepare all State-approved Public Meeting notices and individual notices of same per the Project Mailing List. The City shall publish and pay for legal notices in local media publications and individual project mailers. FNI will prepare sign-in sheets, comment sheets, a power point presentation, and other materials for an Open House Public Meeting as necessary, as well as provide informed, affable personnel to support the Open House Public Meeting. FNI shall compile comments received at the Open House Public Meeting and document the same in the form of an Open House Public Meeting Summary and prepare written responses to Public Meeting comments. All public involvement shall abide by 43 TAC 11.80-11.90, CFR Title 23, Part 771 and the STATE's Environmental Manual. Public involvement deliverables are anticipated to include:
 - PowerPoint presentation, meeting agendas, technical handouts, meeting minutes with local, state, and federal agencies and officials.
 - FNI shall prepare project updates to be included on TxDOT's website.
 - Technical handouts for the public meeting. FNI shall provide printed hardcopies as well as digital files (Microsoft word and pdf) format.
 - Exhibits/displays for the public meeting.
 - Summary of the public meeting. Information should include, but is not limited to, number of people attending, handouts, summary of verbal input, summary of written input, and written responses to verbal and written comments for the public meeting. Electronic copies of the summaries for the public meetings shall be provided via email.

10.4 Public Meeting no. 2 or Public Hearing

- FNI shall plan, coordinate, execute and conduct one (1) Public Hearing. FNI shall execute the logistics with selecting and securing the Public Hearing site with the City. FNI shall identify local media publications and prepare all State-approved Public Hearing notices and individual notices of same per the Project Mailing List. The City shall publish and pay for legal notices in local media publications and individual project mailers. FNI shall prepare sign-in sheets, comment sheets, power point presentation, and other materials for the Public Hearing as necessary, as well as provide informed, affable personnel to support the Public Hearing. FNI shall compile comments received at the Public Hearing and document the same in the form of a Public Hearing Summary and prepare written responses to Public Hearing comments. The City shall provide a court-reporter transcript for the Public Hearing. All public

involvement shall abide by 43 TAC 11.80-11.90, CFR Title 23, Part 771 and the STATE's Environmental Manual. Public involvement deliverables are anticipated to include:

- PowerPoint presentation, meeting agendas, technical handouts, meeting minutes with local, state, and federal agencies and officials. FNI shall provide hard copies for these meetings and electronic versions in MS Word and PDF format.
- FNI shall prepare project updates to be included on TxDOT's website. These updates shall include information on the status of the project, project schedule, the scheduled public hearing, .pdf files showing the proposed meeting, and contact information. These updates shall be in MS Word document format or Adobe .pdf format as appropriate for the type of file included. Provision, establishment of domain, and maintenance of a project website is not included in this proposal.
- Technical handouts for the public hearing. FNI shall provide printed hardcopies as well as digital files (Microsoft word and pdf) format.
- Exhibits/displays for the public hearing.
- PowerPoint presentation for the public hearing along with script.
- Summary and Analysis for public hearing. Information should include, but is not limited to, number of people attending, handouts, summary of verbal input, summary of written input, and written responses to verbal and written comments for the public hearing. Electronic copies of the summaries for the public meetings and hearing shall be provided via email.

ADDITIONAL SERVICES: Additional Services to be performed by FNI, which are not included in the above basic and special services are described as follows:

1. Field layouts or the furnishing of construction line and grade surveys.
2. Preliminary and Final Design Plans, Specifications and Estimates (PS&E)
3. Field Survey and Boundary Survey for Phase II (E. Trimmier to FM 3481)
4. GIS mapping services or assistance with these services.
5. Geotechnical Investigation and Pavement Design Services
6. Level A SUE for the entire project Phase I & II (SH 195 to FM 3481)
7. Level B SUE for Phase II (E. Trimmier to FM 3481)
8. Right-of-way and Easement Documents
9. Right-of-way Acquisition Services
10. Final Bridge and Retaining Wall Design
11. Lighting Study and Illumination Design
12. Traffic Signals and Pedestrian hybrid beacon final design
13. Preparing data and reports for assistance to OWNER in preparation for hearings before regulatory agencies, courts, arbitration panels or any mediator, giving testimony, personally or by deposition, and preparations therefore before any regulatory agency, court, arbitration panel or mediator.
14. Bid Phase Services
15. Furnishing the services of a full-time Resident Project Representative to act as OWNER's on-site representative during the Construction Phase.
16. Assisting OWNER in preparing for, or appearing at litigation, mediation, arbitration, dispute review boards, or other legal and/or administrative proceedings in the defense or prosecution of claims disputes with Contractor(s).

17. Assisting OWNER in the defense or prosecution of litigation in connection with or in addition to those services contemplated by this AGREEMENT. Such services, if any, shall be furnished by FNI on a fee basis negotiated by the respective parties outside of and in addition to this AGREEMENT.
18. Performing investigations, studies, and analysis of work proposed by construction contractors to correct defective work.
19. Design, contract modifications, studies or analysis required to comply with local, State, Federal or other regulatory agencies that become effective after the date of this agreement.
20. Services required to resolve bid protests or to rebid the projects for any reason.
21. Providing basic or additional services on an accelerated time schedule. The scope of this service include cost for overtime wages of employees and consultants, inefficiencies in work sequence and plotting or reproduction costs directly attributable to an accelerated time schedule directed by the OWNER.
22. Preparing statements for invoicing or other documentation for billing other than for the standard invoice for services attached to this professional services agreement.
23. Visits to the site in excess of the number of trips included in basic and special services for periodic site visits, coordination meetings, or contract completion activities.
24. Any services required as a result of default of the contractor(s) or the failure, for any reason, of the contractor(s) to complete the work within the contract time.
25. Providing services after the completion of the construction phase not specifically listed in the scope of services.
26. Providing services made necessary because of unforeseen, concealed, or differing site conditions or due to the presence of hazardous substances in any form.
27. Providing services to review or evaluate construction contractor(s) claim(s), provided said claims are supported by causes not within the control of FNI.
28. Providing value engineering studies or reviews of cost savings proposed by construction contractors after bids have been submitted.
29. Provide follow-up professional services during Contractor's warranty period.
30. Scour analysis.
31. LOMR, CLOMR or other FEMA coordination
32. Appearances before regulatory agencies.
33. Waters of the U.S. delineation report submittal to the USACE
34. Nationwide permit pre-construction notification (PCN) submittal to the USACE
35. NEPA Environmental Impact Statement (EIS)
36. USFWS Section 7 Consultation
37. Section 4(f)/6(f) Determination
38. Presence/Absence Survey for State or Federally Listed Threatened or Endangered Species
39. Compensatory mitigation plan for waters of the US
40. Section 404 Individual Permit Application
41. Phase II/III ESA
42. Tree Survey and Mitigation
43. Stream and Wetland Condition Assessment
44. Noise workshop

TIME OF COMPLETION: FNI is authorized to commence work on the Project upon execution of this AGREEMENT and agrees to complete the services within 525 calendar days after receiving authorization to proceed.

If FNI's services are delayed through no fault of FNI, FNI shall be entitled to adjust contract schedule consistent with the number of days of delay. These delays may include but are not limited to delays in Owner or regulatory reviews, delays on the flow of information to be provided to FNI, governmental approvals, etc. These delays may result in an adjustment to compensation as outlined on the face of this AGREEMENT and in Exhibit B of the original Contract. Delays caused by FNI will not be subject to this adjustment in compensation.

RESPONSIBILITIES OF OWNER: Owner shall perform the following in addition to the responsibilities from the original contract in a timely manner so as not to delay the services of FNI:

1. Assist FNI by placing at FNI's disposal all available information pertinent to the Project including previous reports and any other data relative to design or construction of the Project.
2. Provide such accounting, independent cost estimating and insurance counseling services as may be required for the Project, such legal services as Owner may require or FNI may reasonably request with regard to legal issues pertaining to the Project including any that may be raised by Contractor(s), such auditing service as Owner may require to ascertain how or for what purpose any Contractor has used the moneys paid under the construction contract, and such inspection services as Owner may require to ascertain that Contractor(s) are complying with any law, rule, regulation, ordinance, code or order applicable to their furnishing and performing the work.

This is **EXHIBIT B**, consisting of 2 pages, referred to in and part of the **Agreement between OWNER and ENGINEER for Professional Services** dated _____, _____.

Initial:

OWNER _____
ENGINEER CB

OWNER's Responsibilities

Article 2 of the Agreement is amended and supplemented to include the following agreement of the parties.

B2.01 In addition to other responsibilities of OWNER as set forth in this Agreement, OWNER shall:

A. Provide ENGINEER with all criteria and full information as to OWNER's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility, and expandability, and any budgetary limitations; and furnish copies of all design and construction standards which OWNER will require to be included in the Drawings and Specifications; and furnish copies of OWNER's standard forms, conditions, and related documents for ENGINEER to include in the Bidding Documents, when applicable.

B. Furnish to ENGINEER any other available information pertinent to the Project including reports and data relative to previous designs, or investigation at or adjacent to the Site.

C. Following ENGINEER's assessment of initially-available Project information and data and upon ENGINEER's request, furnish or otherwise make available such additional Project related information and data as is reasonably required to enable ENGINEER to complete its Basic and Additional Services. Such additional information or data would generally include the following:

1. Property descriptions.
2. Zoning, deed, and other land use restrictions.
3. Property, boundary, easement, right-of-way, and other special surveys or data, including establishing relevant reference points.
4. Explorations and tests of subsurface conditions at or contiguous to the Site, drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site, or hydrographic surveys, with appropriate professional interpretation thereof.
5. Environmental assessments, audits, investigations and impact statements, and other relevant environmental or cultural studies as to the Project, the Site, and adjacent areas.
6. Data or consultations as required for the Project but not otherwise identified in the Agreement or the Exhibits thereto.

D. Give prompt written notice to ENGINEER whenever OWNER observes or otherwise becomes aware of a Hazardous Environmental Condition or of any other development that affects the scope or time of performance of ENGINEER's services, or any defect or nonconformance in ENGINEER's services or in the work of any Contractor.

E. Authorize ENGINEER to provide Additional Services as set forth in Part 2 of Exhibit A of the Agreement as required.

F. Arrange for safe access to and make all provisions for ENGINEER to enter upon public and private property as required for ENGINEER to perform services under the Agreement.

G. Examine all alternate solutions, studies, reports, sketches, Drawings, Specifications, proposals, and other documents presented by ENGINEER (including obtaining advice of an attorney, insurance counselor, and other advisors

or consultants as OWNER deems appropriate with respect to such examination) and render in writing timely decisions pertaining thereto.

H. Provide reviews, approvals, and permits from all governmental authorities having jurisdiction to approve all phases of the Project designed or specified by ENGINEER and such reviews, approvals, and consents from others as may be necessary for completion of each phase of the Project.

I. Provide, as required for the Project:

1. Accounting, bond and financial advisory, independent cost estimating, and insurance counseling services.
2. Legal services with regard to issues pertaining to the Project as OWNER requires, Contractor raises, or ENGINEER reasonably requests.
3. Such auditing services as OWNER requires to ascertain how or for what purpose Contractor has used the moneys paid.
4. Placement and payment for advertisement for Bids in appropriate publications.

J. Advise ENGINEER of the identity and scope of services of any independent consultants employed by OWNER to perform or furnish services in regard to the Project, including, but not limited to, cost estimating, project peer review, value engineering, and constructability review.

K. Furnish to ENGINEER data as to OWNER's anticipated costs for services to be provided by others for OWNER so that ENGINEER may make the necessary calculations to develop and periodically adjust ENGINEER's opinion of Total Project Costs.

L. If OWNER designates a construction manager or an individual or entity other than, or in addition to, ENGINEER to represent OWNER at the Site, define and set forth as an attachment to this Exhibit B the duties, responsibilities, and limitations of authority of such other party and the relation thereof to the duties, responsibilities, and authority of ENGINEER.

M. If more than one prime contract is to be awarded for the Work designed or specified by ENGINEER, designate a person or entity to have authority and responsibility for coordinating the activities among the various prime Contractors, and define and set forth the duties, responsibilities, and limitations of authority of such individual or entity and the relation thereof to the duties, responsibilities, and authority of ENGINEER as an attachment to this Exhibit B that is to be mutually agreed upon and made a part of this Agreement before such services begin.

N. Attend the pre-bid conference, bid opening, pre-construction conferences, construction progress and other job related meetings, and Substantial Completion and final payment inspections.

O. Provide the services of an independent testing laboratory to perform all inspections, tests, and approvals of Samples, materials, and equipment required by the Contract Documents, or to evaluate the performance of materials, equipment, and facilities of OWNER, prior to their incorporation into the Work with appropriate professional interpretation thereof.

P. Provide inspection or monitoring services by an individual or entity other than ENGINEER (and disclose the identity of such individual or entity to ENGINEER) as OWNER determines necessary to verify:

1. That Contractor is complying with any Laws and Regulations applicable to Contractor's performing and furnishing the Work.
2. That Contractor is taking all necessary precautions for safety of persons or property and complying with any special provisions of the Contract Documents applicable to safety.

Q. Provide ENGINEER with the findings and reports generated by the entities providing services pursuant to paragraphs B2.01.O and P.

This is **EXHIBIT C**, consisting of 2 page, referred to in and part of the **Agreement between OWNER and ENGINEER for Professional Services** dated _____, _____

Initial:

OWNER _____
ENGINEER CD

Payments to ENGINEER for Services and Reimbursable Expenses

Article 4 of the Agreement is amended and supplemented to include the following agreement of the parties:

ARTICLE 4 -- PAYMENTS TO THE ENGINEER

C4.01 *For Basic Services Having A Determined Scope*

A. OWNER shall pay ENGINEER for Basic Services set forth in Exhibit A, except for services of ENGINEER's Resident Project Representative and Post-Construction Phase, services, if any, as follows:

1. Progress payments in the amount of \$1,485,240.00 based on the following assumed distribution of compensation:

a. Design Management	<u>\$97,020.00</u>
b. Alignment Study	<u>\$32,900.00</u>
c. Funding Application	<u>\$85,290.00</u>
d. Schematic Design	<u>\$363,890.00</u>
e. Environmental Assessment	<u>\$214,370.00</u>
f. Subsurface Utility Engineering	<u>\$141,050.00</u>
g. Survey	<u>\$212,870.00</u>
h. Hydrologic and Hydraulic Analysis	<u>\$183,980.00</u>
i. Traffic Analysis	<u>\$49,810.00</u>
j. Public Outreach	<u>\$104,060.00</u>
Total	\$1,485,240.00

2. ENGINEER may alter the distribution of compensation between individual phases noted herein to be consistent with services actually rendered, but shall not exceed the total amount unless approved in writing by the OWNER.

3. The amount includes compensation for ENGINEER's services and services of ENGINEER's Consultants, if any. Appropriate amounts have been incorporated to account for labor, overhead, profit, and Reimbursable Expenses.

4. The portion of the amount billed for ENGINEER's services will be based upon ENGINEER's estimate of the proportion of the total services actually completed during the billing period.

5. If more prime contracts are awarded for work designed or specified by ENGINEER for this Project than identified in Exhibit A, the ENGINEER shall be compensated an additional amount to be negotiated; however, in no case shall the amount of compensation exceed eighteen percent (18%) of the Project's estimated construction costs for all Basic Services for each prime contract added.

Compensation to FNI for Basic Services in Attachment SC shall be the lump sum of One Million Four Hundred Eighty Five Thousand Two Hundred Forty Dollars (\$1,485,240).

If FNI sees the Scope of Services changing so that Additional Services are needed, including but not limited to those services described as Additional Services in Attachment SC, FNI will notify OWNER for OWNER's approval before proceeding. Additional Services shall be computed based on the following Schedule of Charges.

<u>Position</u>	<u>Hourly Rate</u>	
	<u>Min</u>	<u>Max</u>
Professional 1	79	138
Professional 2	103	161
Professional 3	99	226
Professional 4	155	235
Professional 5	185	330
Professional 6	200	390
Construction Manager 1	98	127
Construction Manager 2	85	163
Construction Manager 3	125	154
Construction Manager 4	146	200
CAD Technician/Designer 1	65	136
CAD Technician/Designer 2	106	158
CAD Technician/Designer 3	138	200
Corporate Project Support 1	54	110
Corporate Project Support 2	70	175
Corporate Project Support 3	111	262
Intern / Coop	47	80

Rates for In-House Services and Equipment

<u>Mileage</u>	<u>Bulk Printing and Reproduction</u>			<u>Equipment</u>		
Standard IRS Rates		<u>B&W</u>	<u>Color</u>	Valve Crew Vehicle (hour)		\$75
	Small Format (per copy)	\$0.10	\$0.25	Pressure Data Logger (each)		\$100
<u>Technology Charge</u>	Large Format (per sq. ft.)			Water Quality Meter (per day)		\$100
\$8.50 per hour	Bond	\$0.25	\$0.75	Microscope (each)		\$150
	Glossy / Mylar	\$0.75	\$1.25	Pressure Recorder (per day)		\$200
	Vinyl / Adhesive	\$1.50	\$2.00	Ultrasonic Thickness Gauge (per day)		\$275
				Coating Inspection Kit (per day)		\$275
	Mounting (per sq. ft.)	\$2.00		Flushing / Cfactor (each)		\$500
	Binding (per binding)	\$0.25		Backpack Electrofisher (each)		\$1,000
					<u>Survey Grade</u>	<u>Standard</u>
				Drone (per day)	\$200	\$100
				GPS (per day)	\$150	\$50

OTHER DIRECT EXPENSES:

Other direct expenses are reimbursed at actual cost times a multiplier of 1.10. They include outside printing and reproduction expense, communication expense, travel, transportation and subsistence away from the FNI office. For other miscellaneous expenses directly related to the work, including costs of laboratory analysis, test, and other work required to be done by independent persons other than staff members, these services will be billed at a cost times a multiplier of 1.10. For Resident Representative services performed by non-FNI employees and CAD services performed In-house by non-FNI employees where FNI provides workspace and equipment to perform such services, these services will be billed at cost times a multiplier of 2.0. This markup approximates the cost to FNI if an FNI employee was performing the same or similar services.

These ranges and/or rates will be adjusted annually in February. Last updated 2022.

This is **EXHIBIT D**, consisting of 1 pages, referred to in and part of the **Agreement between OWNER and ENGINEER for Professional Services** dated _____, _____.

Initial:

OWNER _____

ENGINEER CD _____

Duties, Responsibilities, and Limitations of Authority of Resident Project Representative

“NOT APPLICABLE”

This is **EXHIBIT E**, consisting of 1 pages, referred to in and part of the **Agreement between OWNER and ENGINEER for Professional Services** dated _____, _____.

Initial:

OWNER _____
ENGINEER CD _____

NOTICE OF ACCEPTABILITY OF WORK

“NOT APPLICABLE”

This is **EXHIBIT F**, consisting of 1 page, referred to in and part of the **Agreement between OWNER and ENGINEER for Professional Services** dated _____, _____.

Initial:

OWNER _____
ENGINEER CD

Construction Cost Limit

“NOT APPLICABLE”

This is **EXHIBIT G**, consisting of 1 page, referred to in and part of the **Agreement between OWNER and ENGINEER for Professional Services** dated _____, _____.

Initial:

OWNER _____
ENGINEER CID

Insurance

Paragraph 6.05 of the Agreement is amended and supplemented to include the following agreement of the parties.

G6.05 Insurance

A. The limits of liability for the insurance required by paragraph 6.05.A and 6.05.B of the Agreement are as follows:

1. By ENGINEER:

- | | |
|---|--------------|
| a. Workers' Compensation: | Statutory |
| b. Employer's Liability -- | |
| 1) Each Accident: | \$ 500,000 |
| 2) Disease, Policy Limit: | \$ 500,000 |
| 3) Disease, Each Employee: | \$ 500,000 |
| c. General Liability -- | |
| 1) Each Occurrence (Bodily Injury and Property Damage): | \$ 1,000,000 |
| 2) General Aggregate: | \$ 2,000,000 |
| d. Excess or Umbrella Liability -- | |
| 1) Each Occurrence: | \$ 4,000,000 |
| 2) General Aggregate: | \$ 4,000,000 |
| e. Automobile Liability -- | |
| 1) Bodily Injury: | |
| a) Each Accident | \$ _____ |
| 2) Property Damage: | |
| a) Each Accident | \$ _____ |

[or]

- | | |
|---|------------|
| 1) Combined Single Limit
(Bodily Injury and Property Damage):
Each Accident | \$ 500,000 |
|---|------------|

f. Other (specify): On all policies except Workers Compensation and Professional Liability - "City of Killeen is named as Additional Insured on the General Liability and Auto Liability policies."

This is **EXHIBIT H**, consisting of 1 page, referred to in and part of the **Agreement between OWNER and ENGINEER for Professional Services** dated _____, _____.

Initial:

OWNER _____
ENGINEER CD

Special Provisions

“NOT APPLICABLE”

This is **EXHIBIT I**, consisting of 1 page, referred to in and part of the **Agreement between OWNER and ENGINEER for Professional Services** dated _____, _____.

Initial:

OWNER _____
ENGINEER CD

DBE Goal

“NOT APPLICABLE”



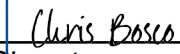
Contract Verification

Texas law provides that a governmental entity may not enter into certain contracts for goods and services with a company unless the company provides written verification regarding aspects of the company's business dealings.

- Texas Government Code, Chapter 2271 – the company must verify that it does not boycott Israel and will not boycott Israel during the term of the contract. *Boycott Israel is defined in Government Code Chapter 808.*
- Texas Government Code, Chapter 2274 – the company must verify that it does not boycott energy companies and will not boycott energy companies during the term of the contract. *Boycott energy company is defined in Government Code Chapter 809.*
- Texas Government Code, Chapter 2274 – the company must verify that it does not have a practice, policy, guidance or directive that discriminates against a firearm entity or firearm trade association and will not discriminate during the term of the contract against a firearm entity or firearm trade association. Verification is not required from a sole source provider. *Discriminate, firearm entity and firearm trade association are defined in Government Code Chapter 2274.*

Affected by the above statutes are contracts 1) with a company with ten (10) or more full-time employees, and 2) valued at \$100,000 or more to be paid wholly or partly from public funds. A contract with a sole proprietorship is not included.

By signing below, I verify that the company listed below does not boycott Israel, does not boycott energy companies and does not discriminate against firearms entities or firearm trade associations and will not do so during the term of the contract entered into with the City of Killeen. I further certify that I am authorized by the company listed below to make this verification.

DocuSigned by:

Signature
Chris Bosco
Printed Name
9/8/2022
Date

Freese and Nichols, Inc.
Company Name
Principal
Title