

**PROFESSIONAL ENGINEERING SERVICES AGREEMENT
BETWEEN THE TOWN OF PROSPER, TEXAS, AND TNP, INC.
FOR THE IMPROVEMENTS TO FISHTRAP ROAD FROM STUBER ELEMENTARY TO DNT
PROJECT (PRJ#2012-ST)**

This Agreement for Professional Engineering Services, hereinafter called "Agreement," is entered into by the **Town of Prosper, Texas**, a municipal corporation, duly authorized to act by the Town Council of said Town, hereinafter called "Town," and **TNP, Inc.**, a Texas corporation, acting through a duly authorized officer, hereinafter called "Consultant," relative to Consultant providing professional engineering services to Town. Town and Consultant when mentioned collectively shall be referred to as the "Parties."

WITNESSETH:

WHEREAS, Town desires to obtain professional survey and civil engineering services in connection with the **Improvements to Fishtrap Road from Stuber Elementary to DNT Project (PRJ#2012-ST)**, hereinafter called "Project";

For the mutual promises and benefits herein described, Town and Consultant agree as follows:

1. **Term of Agreement.** This Agreement shall become effective on the date of its execution by both Parties, and shall continue in effect thereafter until terminated as provided herein.
2. **Services to be Performed by Consultant.** The Parties agree that Consultant shall perform such services as are set forth and described in Exhibit A - Scope of Services and incorporated herein as if written word for word. All services provided by Consultant hereunder shall be performed in accordance with the degree of care and skill ordinarily exercised under similar circumstances by competent members of their profession. In case of conflict in the language of Exhibit A and this Agreement, this Agreement shall govern and control. Deviations from the Scope of Services or other provisions of this Agreement may only be made by written agreement signed by all Parties to this Agreement.
3. **Prompt Performance by Consultant.** Consultant shall perform all duties and services and make all decisions called for hereunder promptly and without unreasonable delay as is necessary to cause Consultant's services hereunder to be timely and properly performed. Notwithstanding the foregoing, Consultant agrees to use diligent efforts to perform the services described herein and further defined in any specific task orders, in a manner consistent with these task orders; however, the Town understands and agrees that Consultant is retained to perform a professional service and such services must be bound, first and foremost, by the principles of sound professional judgment and reasonable diligence.
4. **Compensation of Consultant.** Town agrees to pay to Consultant for satisfactory completion of all services included in this Agreement a total fee of Nine Hundred Thousand Dollars (\$900,000) for the Project as set forth and described in Exhibit B - Compensation Schedule and incorporated herein as if written word for word. Lump sum fees shall be billed monthly based on the percentage of completion. Hourly not to exceed fees shall be billed monthly based on hours of work that have been completed. Direct Costs for expenses such as mileage, copies, scans, sub-consultants, and similar costs are included in fees and shall be billed as completed.

Consultant agrees to submit statements to Town for professional services no more than once per month. These statements will be based upon Consultant's actual services performed and reimbursable expenses incurred, if any, and Town shall endeavor to make prompt payments. Each statement submitted by Consultant to Town shall

be reasonably itemized to show the amount of work performed during that period. If Town fails to pay Consultant within sixty (60) calendar days of the receipt of Consultant's invoice, Consultant may, after giving ten (10) days written notice to Town, suspend professional services until paid.

Nothing contained in this Agreement shall require Town to pay for any work that is unsatisfactory as reasonably determined by Town or which is not submitted in compliance with the terms of this Agreement.

The Scope of Services shall be strictly limited. Town shall not be required to pay any amount in excess of the original proposed amount unless Town shall have approved in writing in advance (prior to the performance of additional work) the payment of additional amounts.

5. **Town's Obligations.** Town agrees that it will (i) designate a specific person as Town's representative, (ii) provide Consultant with any previous studies, reports, data, budget constraints, special Town requirements, or other pertinent information known to Town, when necessitated by a project, (iii) when needed, assist Consultant in obtaining access to properties necessary for performance of Consultant's work for Town, (iv) make prompt payments in response to Consultant's statements and (v) respond in a timely fashion to requests from Consultant. Consultant is entitled to rely upon and use, without independent verification and without liability, all information and services provided by Town or Town's representatives.

6. **Ownership and Reuse of Documents.** Upon completion of Consultant's services and receipt of payment in full therefore, Consultant agrees to provide Town with copies of all materials and documents prepared or assembled by Consultant under this Agreement and that Town may use them without Consultant's permission for any purpose relating to the Project. Any reuse of the documents not relating to the Project shall be at Town's risk. Consultant may retain in its files copies of all reports, drawings, specifications and all other pertinent information for the work it performs for Town.

7. **Town Objection to Personnel.** If at any time after entering into this Agreement, Town has any reasonable objection to any of Engineer's personnel, or any personnel, professionals and/or consultants retained by Engineer, Engineer shall promptly propose substitutes to whom Town has no reasonable objection, and Engineer's compensation shall be equitably adjusted to reflect any difference in Engineer's costs occasioned by such substitution.

8. **Insurance.** Consultant shall, at its own expense, purchase, maintain and keep in force throughout the duration of this Agreement applicable insurance policies as described in Exhibit C - Insurance Requirements and incorporated herein as if written word for word. Consultant shall submit to Town proof of such insurance prior to commencing any work for Town.

9. **Indemnification.** CONSULTANT DOES HEREBY COVENANT AND AGREE TO RELEASE, INDEMNIFY AND HOLD HARMLESS TOWN AND ITS OFFICIALS, OFFICERS, AGENTS, REPRESENTATIVES, EMPLOYEES AND INVITEES FROM AND AGAINST LIABILITY, CLAIMS, SUITS, DEMANDS AND/OR CAUSES OF ACTION, (INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEY'S FEES AND COSTS OF LITIGATION), WHICH MAY ARISE BY REASON OF DEATH OR INJURY TO PROPERTY OR PERSONS BUT ONLY TO THE EXTENT OCCASIONED BY THE NEGLIGENT ACT, ERROR OR OMISSION OF CONSULTANT, ITS OFFICIALS, OFFICERS, AGENTS, EMPLOYEES, INVITEES OR OTHER PERSONS FOR WHOM CONSULTANT IS LEGALLY LIABLE WITH REGARD TO THE PERFORMANCE OF THIS AGREEMENT.

IN THE EVENT THAT TOWN AND CONSULTANT ARE CONCURRENTLY NEGLIGENT, THE PARTIES AGREE THAT ALL LIABILITY SHALL BE CALCULATED ON A COMPARATIVE BASIS OF FAULT AND

RESPONSIBILITY AND THAT NEITHER PARTY SHALL BE REQUIRED TO DEFEND OR INDEMNIFY THE OTHER PARTY FOR THAT PARTY'S NEGLIGENT OR INTENTIONAL ACTS, ERRORS OR OMISSIONS.

10. **Notices.** Any notices to be given hereunder by either Party to the other may be affected either by personal delivery, in writing, or by registered or certified mail to the following addresses:

TNP, Inc.
Tom Rutledge, Principal
5237 N. Riverside Dr.
Fort Worth, TX 76137
trutledge@tnpinc.com

Town of Prosper
Harlan Jefferson, Town Manager
PO Box 307
Prosper, TX 75078
harlan_jefferson@prospertx.gov

11. **Termination.** The obligation to provide further services under this Agreement may be terminated by either Party in writing upon thirty (30) calendar days notice. In the event of termination by Town, Consultant shall be entitled to payment for services rendered through receipt of the termination notice.

12. **Sole Parties and Entire Agreement.** This Agreement shall not create any rights or benefits to anyone except Town and Consultant, and contains the entire agreement between the Parties. Oral modifications to this Agreement shall have no force or effect.

13. **Assignment and Delegation.** Neither Town nor Consultant may assign its rights or delegate its duties without the written consent of the other Party. This Agreement is binding on Town and Consultant to the extent permitted by law. Nothing herein is to be construed as creating any personal liability on the part of any Town officer, employee or agent.

14. **Texas Law to Apply; Successors; Construction.** This Agreement shall be construed under and in accordance with the laws of the State of Texas. It shall be binding upon, and inure to the benefit of, the Parties hereto and their representatives, successors and assigns. Should any provisions in this Agreement later be held invalid, illegal or unenforceable, they shall be deemed void, and this Agreement shall be construed as if such provision had never been contained herein.

15. **Conflict of Interest.** Consultant agrees that it is aware of the prohibited interest requirement of the Town Charter, which is repeated in Exhibit D - Conflict of Interest Affidavit and incorporated herein as if written word for word, and will abide by the same. Further, a lawful representative of Consultant shall execute the Affidavit included in the exhibit. Consultant understands and agrees that the existence of a prohibited interest during the term of this Agreement will render the Agreement voidable.

Consultant agrees that it is further aware of the vendor disclosure requirements set forth in Chapter 176, Local Government Code, as amended, and will abide by the same. In this connection, a lawful representative of Consultant shall execute the Conflict of Interest Questionnaire, Form CIQ, attached hereto as Exhibit E - Conflict of Interest Questionnaire and incorporated herein as if written word for word.

16. **Venue.** The Parties herein agree that this Agreement shall be enforceable in Prosper, Texas, and if legal action is necessary to enforce it, exclusive venue shall lie in Collin County, Texas.

17. **Mediation.** In the event of any disagreement or conflict concerning the interpretation of this Agreement, and such disagreement cannot be resolved by the signatories hereto, the signatories agree to submit such disagreement to non-binding mediation.

18. **Prevailing Party.** In the event a Party initiates or defends any legal action or proceeding to enforce or interpret any of the terms of this Agreement, the prevailing party in any such action or proceeding shall be entitled to recover its reasonable costs and attorney's fees (including its reasonable costs and attorney's fees on any appeal).

19. **"Anti-Israel Boycott" Provision.** In accordance with Chapter 2270, Texas Government Code, a Texas governmental entity may not enter into a contract with a company for the provision of goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract. Chapter 2270 does not apply to a (1) a company that is a sole proprietorship; (2) a company that has fewer than ten (10) full-time employees; or (3) a contract that has a value of less than One Hundred Thousand Dollars (\$100,000.00). Unless the company is not subject to Chapter 2270 for the reasons stated herein, the signatory executing this Agreement on behalf of the company verifies by its signature to this Agreement that the company does not boycott Israel and will not boycott Israel during the term of this Agreement.

20. **Signatories.** Town warrants and represents that the individual executing this Agreement on behalf of Town has full authority to execute this Agreement and bind Town to the same. Consultant warrants and represents that the individual executing this Agreement on its behalf has full authority to execute this Agreement and bind Consultant to same.

IN WITNESS WHEREOF, the Parties, having read and understood this Agreement, have executed such in duplicate copies, each of which shall have full dignity and force as an original, on the _____ day of _____, 20____.

TNP, INC.

TOWN OF PROSPER, TEXAS

By: _____
Signature

Tom Rutledge
Printed Name

Principal
Title

Date

By: _____
Signature

Harlan Jefferson
Printed Name

Town Manager
Title

Date

**EXHIBIT A
SCOPE OF SERVICES**

(Scope of Services Attached Hereto)

SURVEYING

Project Limits

Fishtrap Road Segment No. 5 approximately 7,800 Linear Feet from PISD Stuber Elementary School east to Dallas North Tollway extending 125 feet from Centerline of existing roadway where accessible, including 200 feet upstream and downstream of all creek crossings.

A. Design Survey

1. Establish horizontal and vertical project control Points.
2. Tie right-of-way lines and corners, property lines and corners, buildings, fence lines, edges of pavement and all other visible surface features. Existing utility structures shall be located.
3. Trees greater than 6" at chest height within project area will be located. Heavily wooded areas will be surveyed around the perimeter and labeled accordingly.
4. Vertical topographic information tying pavement, drives, walls, manholes (top and inverts), storm drain inlets (top and inverts), and other improvements as needed within the project areas for the design.
5. Provide roadway cross sections at fifty-foot (50') intervals.
6. A topographic drawing in digital format showing 1-foot contour intervals and the items listed above will be prepared.
7. Provide as-built topographic survey of channel improvements as required for LOMR.

B. Boundary Analysis Verification

1. Title research and deeds obtained for the subject property and the adjoining property owners.
2. A thorough investigation of boundary markers/corners will be made on the subject property and the adjoining properties to confirm existing boundary.
3. A boundary analysis of the property will be made by a Registered Professional Land Surveyor.
4. A final Property base will be prepared to incorporate into the Topographic Survey.

Data will be delivered in Texas Coordinate System of 1983 North Central Zone (4202) scaled to Surface with a combined scale factor supplied.

C. Right-of-way and Easement (Anticipate 17 Exhibits)

1. Right-of-Way and/or Easement exhibits will be completed as needed.
2. All exhibits will be submitted to the Town who will in-turn use to procure the additional ROW/Easements

GEOTECHNICAL

PROJECT DESCRIPTION

We understand that the existing Fishtrap Road/East 1st Street will be improved. The roadways are currently a two-lane asphalt road. The proposed roadway improvements start approximately at Station 55+00 and ends at Station 129+00. At present, we do not have any thoroughfare classification for the improved roadways. The total length of roadway improvements is about 7,400 feet. Also, two bridges will be constructed approximately at Station 58+00 and 71+00 above the existing drainage features.

SCOPE OF SERVICES

The object of this geotechnical investigation will be to obtain subsurface data, perform laboratory tests and to develop geotechnical recommendations for the proposed new pavements and bridges. All services provided will be performed in accordance with and limited to those generally accepted engineering standards prevailing at the time and in the area that the work is performed.

Field Services

We propose to perform a total of eleven (11) pavement borings at the spacing of approximately 750 feet along the proposed new alignment of roadways to depths of 20 feet below existing site grades. Additionally, four (4) bridge borings will be drilled to maximum depths of about 60 feet or 15 feet into competent bedrock. Pavement borings will generally alternate between each roadway direction as site conditions allow. The bridge borings will extend at least 15 feet below the creek bottom elevation.

The borings will be drilled and sampled using a truck-mounted drilling rig. Conventional tube or split-barrel (standard penetration test) samples will be collected as appropriate for the soils encountered. Samples will be collected continuously in 2-foot increments to a depth of 10 feet, then at 5-foot intervals thereafter. Bulk samples of each material type encountered in the upper 5-feet will be obtained from each boring. The recovered subsurface samples will be preserved and labeled as to the appropriate boring number and depth in the field.

These materials will be described in further detail in the laboratory by a staff geologist or engineer. Bedrock strata, if encountered, will be tested in-place using the Texas Cone Penetration Test. Groundwater, if observed, will be recorded during and at the completion of drilling. After final groundwater observations, the borings will be backfilled with the excavated cuttings.

Laboratory Services

Selected laboratory testing of the samples will be performed to evaluate soil index properties and volume change potential characteristics of the subsurface materials, and to provide data for analysis. These tests may include but may not be limited to the following:

- Moisture content
- Atterberg limits
- Percent passing No. 200 mesh sieve
- Overburden swell
- Optimum Moisture-Density relationship (Standard Proctor)
- Soluble Sulfate Content
- pH Lime Series

CONSULTANT will retain recovered samples for 30 days after submission of the geotechnical data report unless other arrangements are made by the client.

Engineering Analysis and Report

Data obtained from the field investigations, laboratory tests and past experience will be used in the engineering analysis and development of recommendations. Information to be provided includes the following:

- A plan sheet indicating the approximate location of each boring
- A log of each boring with the boring number, depth of each stratum, material description, soil classification with laboratory test results, and groundwater information
- A discussion of subsurface soil and groundwater conditions
- A brief discussion of the site geology
- Estimates of soil movement related to expansive soils
- Outline of the engineering properties of native soils and any existing fill, if encountered
- Recommendations for foundation type, depth and allowable loading, uplift considerations and Seismic Site Class (2012 IBC)
- Earthwork recommendations, including material type(s) and backfill requirements
- Pavement and pavement subgrade recommendations
- Geotechnical Report for Roadways Checklist
- Summary of Geotechnical Recommendations Form
- Electronic copy of the report

CONDITIONS

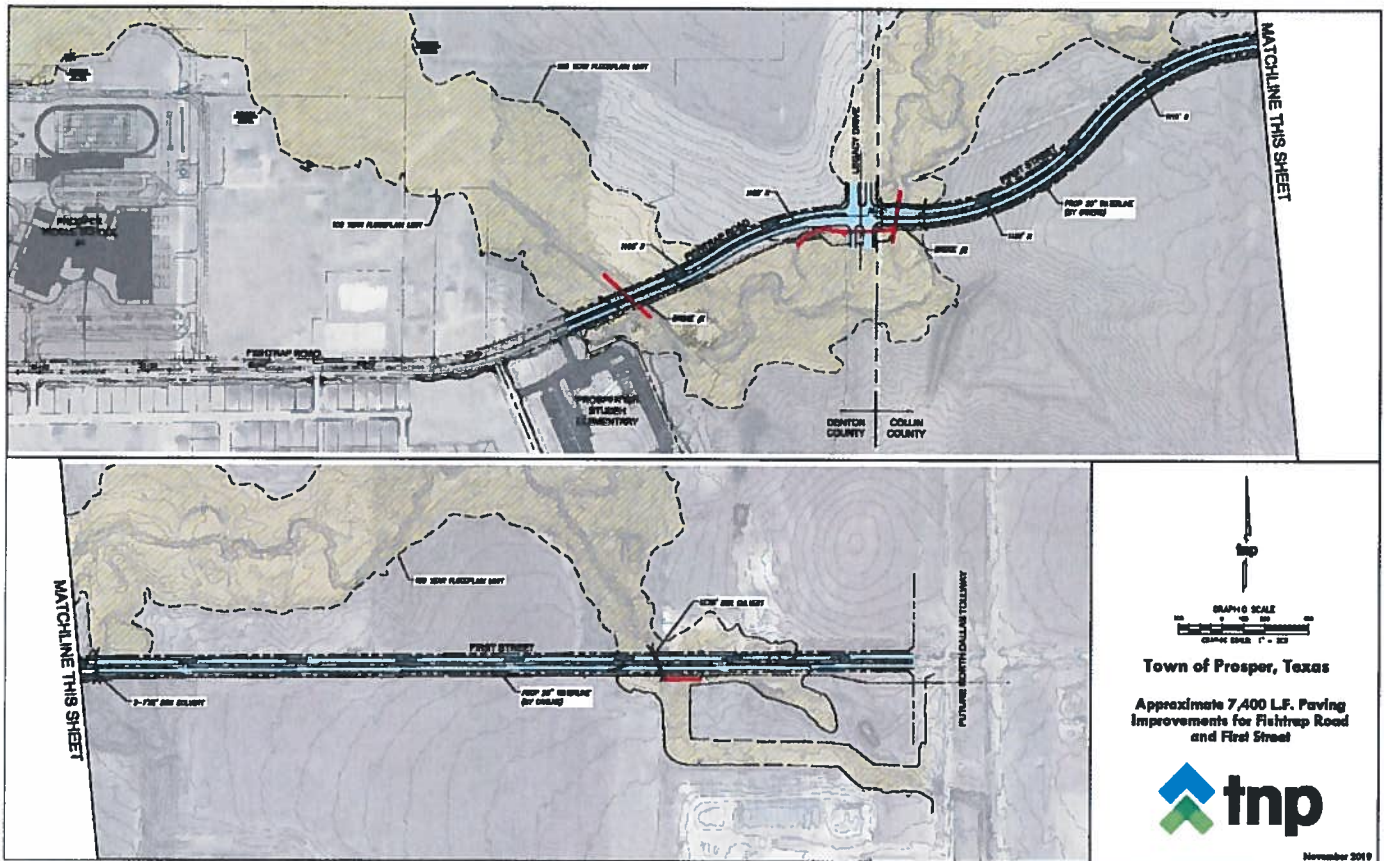
We respectfully request that the TOWN provide the following:

- Landowner permission, right(s) of entry, permits, easements or other access CONSULTANT will contact DigTess/Texas One Call for general subsurface utility clearing within the easements. Locating and marking any private non-franchise subsurface utilities or other structures or items which might be damaged during the field exploration program is not part of this scope. TOWN must provide these services before drilling can proceed; however, these services can be provided by third party vendor to TOWN for an additional fee. TOWN will not be responsible for damage utilities that are not clearly marked.

ENVIRONMENTAL SERVICES

Location

The project site is associated with Segment 5 of Fishtrap Road improvements in the Town of Prosper, Collin and Denton Counties, Texas. The approximate centerline of the proposed road graphically depicted in the below.



Regulatory Framework

Waters of the United States

Jurisdictional waters of the United States are protected under guidelines outlined in Sections 401 and 404 of the Clean Water Act (CWA), and in Executive Order 11990 (Protection of Wetlands). The U.S. Army Corps of Engineers (USACE) has the primary regulatory authority for enforcing Section 404 requirements for waters of the United States, including wetlands. Examples of common waters of the United States include

- All waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce.
- Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1) through (6) of 33 Code of Federal Regulations (CFR) 328.3. The term *adjacent* means bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are “adjacent wetlands.”

Activities requiring construction (i.e., earthwork, placing fill, excavating, constructing dams, diverting creeks,

channelizing creeks, etc.) within waters of the United States generally require a permit from the USACE. The type of permit depends upon the activity and the water resources affected. Typical permits include Nationwide Permits (NWP), Regional General Permits, Letters of Permission, and Individual Permits, ranked from simple to complex, respectively.

Protected Species

The Endangered Species Act (ESA) was enacted to protect and conserve endangered and threatened species and critical habitat. The U.S. Fish and Wildlife Service (USFWS) in the Department of the Interior and the National Marine Fisheries Service (NMFS) in the National Oceanic and Atmospheric Administration (within the Department of Commerce) share responsibility for administration of the ESA. Section 7 of the ESA requires that Federal agencies consult with the Services to ensure that any projects authorized, funded, or carried out by them are not likely to jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of critical habitat of such species. The ESA Section 7 regulations are found at 50 Code of Federal Regulations (CFR) part 402.

Cultural Resources

As the project will transpire on property owned or within easements controlled by the Town of Prosper, which is a political subdivision of the State of Texas, the proposed project will be subjected to the provisions of the Antiquities Code of Texas (ACT). The ACT was passed in 1969 and requires that the Texas Historical Commission (THC) staff review an action that has the potential to disturb historic and archeological sites on public land. Actions that require review under the ACT include any project that will have ground-disturbing activities on land owned or controlled by a political subdivision of the site and include easements on private property. However, if the activity occurs inside a designated historic district, affects a recorded archeological site, or requires onsite investigations the project will need to be reviewed by the THC regardless of project size.

In addition, as the project will require a Section 404 of the CWA NWP from the USACE, portions of the project will be subject to the provisions of the National Historic Preservation Act (NHPA) of 1966, as amended. The NHPA (54 U.S. Code [U.S.C.] 300101 et seq.), specifically Section 106 of the NHPA (54 U.S.C. 306108) requires the State Historic Preservation Officer (SHPO), an official appointed in each State or territory, to administer and coordinate historic preservation activities, and to review and comment on all actions licensed by the federal government that will have an effect on properties listed in the National Register of Historic Place (NRHP), or eligible for such listing. Per 36 CFR Part 800, the federal agency responsible for overseeing the action must make a reasonable and good faith effort to identify cultural resources.

Appendices B and C of 33 CFR 325 establish the procedures followed by the USACE to fulfill the requirements set forth in the NHPA, National Environmental Policy Act (NEPA), and other applicable historic preservation laws as they relate to the USACE regulatory program. These procedures require that the district engineer take into account the effects, if any, of a proposed undertaking on historic properties within a permit area. The limits of the permit area are constrained by the extent of federal regulation and responsibility over the undertaking, the magnitude of impacts to waters of the United States under the USACE jurisdiction, and the presence of high probability areas for cultural resources.

Description of Services

Waters of the United States Delineation

CONSULTANT will provide professional services to delineate all waters of the United States, including wetlands, within the project corridor. CONSULTANT wetland ecologist will delineate the jurisdictional limits of the streams based on 33 CFR 328.3[e] and delineate the jurisdictional limits of any wetlands based on the 1987 USACE Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0), and any current Regulatory Guidance Letters. The boundaries of all

of these water features identified in the field will be recorded with a Global Positioning System (GPS) unit that is capable of sub-meter accuracy. After the delineation is completed, CONSULTANT will digitize these waters of the United States for use by the client for planning, impact calculation, and illustration purposes. Based on the proposed alignment and the associated delineation, CONSULTANT will develop impact calculations, which will assist in the NWP 14 – Linear Transportation Projects Pre-Construction Notification (PCN) to the USACE.

Nationwide Permit 14 – Linear Transportation Projects Pre-Construction Notification

Based on the current site plans and previous knowledge of the site, to successfully complete the proposed road, crossing of aquatic resources, including herbaceous wetlands would be required. Under NWP 14 – Linear Transportation Projects, a PCN is required under General Condition 32, if there is discharge in a special aquatic site, such as a wetland.

Although this project may only have minor impacts (i.e., those that are allowed under the NWP program), the NWP PCN must detail the planning process, the components of the project, impacts to waters of the United States as a result of the proposed project, and compensatory mitigation for those unavoidable impacts. The cornerstone of the NWP PCN would be to detail the ecological features of the waters of the United States present on the site and how these ecological features relate to the functional condition of the waters. CONSULTANT would detail these ecological functions and values based on the current condition of the site. Once these baseline conditions are accepted by the USACE, these will be the functions and values that will be mitigated for. All permit applications to the USACE require mitigation for unavoidable impacts to waters of the United States. There are three forms of mitigation which are primarily identified and conducted during project planning: avoidance, minimization, and compensatory. Avoidance and minimization mitigation strategies must be completed and documented before any permit is authorized by the USACE. Although the project does not have significant impacts, there are still requirements, by law, that there are no net loss of the functions and values of jurisdictional waters. To accomplish this goal, the USACE and U.S. Environmental Protection Agency (EPA) have issued guidance stating their preference for the use of mitigation banks. To reduce the losses associated with in-stream impacts, the USACE Fort Worth District published their guidance for Stream Mitigation Method, which places preference to mitigation in mitigation banks with in-stream credits. CONSULTANT will calculate the mitigation requirements following this guidance and coordinate with the client on the cost aspects of this component of the project.

Utilizing the USACE standard form for NWP 14 PCN submittals, CONSULTANT will assemble and submit the following to the USACE:

- Description of the proposed action;
- Description of the site, including a delineation of the waters of the United States;
 - Functional assessment;
 - Wetland data forms;
 - Representative photographs; and
 - Supporting illustrations;
- Description of the project's avoidance and minimization efforts;
- Quantitative and qualitative description of the unavoidable impacts to the waters of the United States; and
- If required, proposed conceptual mitigation plan (i.e., mitigation bank credit determinations).

Protected Species

This effort will include coordinating with USFWS and Texas Parks and Wildlife Department (TPWD) to determine the species listed in Dallas County, habitat surveys for listed protected species and a report presenting the findings of the surveys. Research of available data will determine the listed species and their preferred habitat. Species-specific surveys will not be covered in this scope of services, since they require substantial time throughout particular seasons using specific protocols. Habitat surveys are designed to determine whether the site contains preferred protected species habitat and the likelihood of the presence of that species. A summary of the results of the survey will be included within the letter report. Specifically, the report will describe the habitats

present on the site, the protected species that are listed in Dallas County and their preferred habitats, and an evaluation of whether or not this preferred habitat is present on the site.

Cultural Resources Pedestrian Survey and Agency Coordination

CONSULTANT will provide the following services:

- obtain a Texas Antiquities Permit
- complete a full pedestrian survey to document archeological sites and historic-age buildings, bridges, or other structures older than 50 years of age within the project area;
- assess potential indirect visual impacts to non-archeological cultural resources if federal permitting is required;
- document any cultural resources encountered to make preliminary determinations of eligibility for inclusion in the NRHP or designated as a State Archeological Landmark (SAL);
- analyze any artifacts recorded and/or collected (if applicable);
- assess any previously recorded archeological sites within the project area for their present condition (if applicable);
- complete and submitting State of Texas Archeological Site Data Forms or Update Forms for any new or previously recorded sites to Texas Archeological Research Laboratory (TARL);
- draft a technical report that documents the cultural resource background review, survey methods, survey results, any necessary NRHP eligibility assessment, and recommendations;
- conduct all necessary coordination with the THC to obtain cultural resources clearance for the project; and
- submit all project records for permanent curation at TARL per ACT requirements.

Archeological Backhoe Trenching

Due to the depth of the proposed impacts and potential for previously undisturbed sediments within the tributary to Doe Branch floodplain, archeological investigations will include backhoe trenching. Backhoe trenching will be conducted where impacts will exceed 3 feet in depth within previously undisturbed portions of the Tributary to Doe Branch floodplain. Specifically, backhoe trenches will be excavated at the proposed locations for the installation of piers for the proposed pedestrian boardwalk. Through a review of preliminary design plans.

Backhoe trenches will average 4.5 meters (15 feet) in length and will be excavated to a depth of 4.3 meters (14 feet). When a trench has been excavated to a depth of approximately 1.2 meters (4 feet), an Occupational Safety and Health Administration (OSHA) competent field supervisor will assess the stability of the trench prior to examining the exposed profile and recording soil stratigraphic data. If soil stability is low, the trench may be widened through benching and/or limited to a safe depth for detailed recording of the soil profile. After the trench has been recorded, the backhoe will continue excavation. Backhoe trench profiles will be monitored for the presence of archeological materials. A representative soil sample from each stratigraphic layer will be screened through 0.64-centimeter (0.25-inch) hardware mesh. The remaining excavated soil will be visually inspected as it is placed on the spoil pile. Cultural materials, if observed, will be recorded and an approximate depth will be documented. If cultural material is identified within a backhoe trench, a column sample will be hand excavated from the trench profile. The column sample will be excavated in 20-centimeter (7.9-inch) levels to the base of the trench or to sterile deposits. Trench excavation will cease once the trench has reached the vertical extent of Holocene soils, bedrock, water table, or approaches the maximum depth the backhoe can safely excavate. Each excavated trench will be photographed, backfilled, and geospatially recorded using a handheld GPS unit.

Coordination with USACE for NWP Verification

Once submitted, IES will coordinate with the USACE regarding their comments and concerns. The coordination effort will include time for meetings with the client through the development of the designs and the USACE once the NWP has been submitted.

Information Furnished by Town

The TOWN (or its representative) will provide rights of entry to the site and digital engineering files of the project site.

Schedule

From notice-to-proceed (NTP), TOWN will draft an Antiquities Permit Application within 14 days. Once reviewed, signed and submitted, TOWN will receive the Antiquities Permit from the THC within 30 days. CONSULTANT will initiate the cultural resources survey within 5 days of receiving the approved permit. The draft report will be provided to within 21 days of survey completion. CONSULTANT will address all report comments within 5 days of receipt and will submit the report to the THC. The THC has a mandatory 30-day project review window. CONSULTATN will provide the THC's report review comment within 1 day of receipt. From NTP to THC comment receipt, CONSULTANT anticipates a total time of approximately **90 days**, which includes the two mandatory THC review periods.

Concurrently CONSULTANT will complete and submit the delineation deliverable to the TOWN no later than 3 weeks from NTP. Upon receiving THC comment, CONSULTANT will incorporate any comments into the permit and submit to the client within 1 week. After authorization from the client, CONSULTANT will submit the permit to the USACE. From NTP to USACE approval, CONSULTANT anticipates a total time of approximately **135 days**, which includes all mandatory THC and USACE review periods. In the event that the project requires a waiver of a NWP condition, the agency will require additional review times than specified herein.

Special Conditions

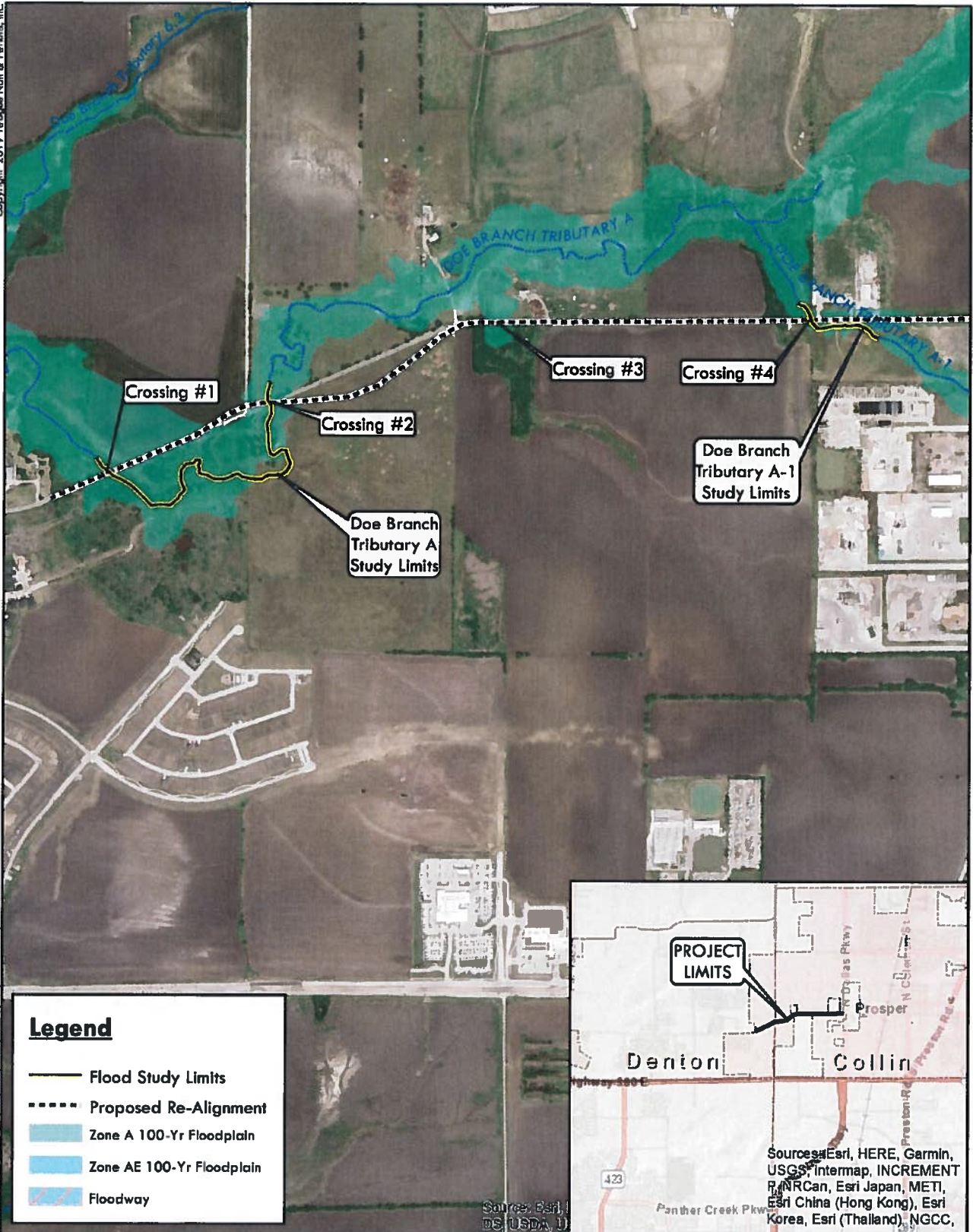
This scope of services does not include any other environmental surveys, which the USACE Fort Worth District may request. These additional surveys may include, but not be limited to, species-specific absence/presence surveys for any state- or federally- listed protected species, any benthic or macro-invertebrate surveys, etc. If any of these additional surveys are requested by the USACE Fort Worth District, CONSULTANT can provide a cost estimate or qualified permitted contractor recommendation for the survey.

In the event that the proposed project cannot be designed to comply with NWP 14, the project would have to be approved by the USACE under an Individual Permit. The services necessary to prepare and coordinate an Individual Permit are specifically excluded from this scope of services.

FLOOD STUDY TASK ITEMS

1. **FLOOD STUDY** – CONSULTANT will perform a floodplain analysis of Doe Branch Tributary A and Tributary A-1 at the crossings of the proposed Fishtrap Road improvements in the Town of Prosper in Denton and Collin Counties (refer to Exhibit A). The analysis will be performed in accordance with the Town of Prosper standards and the minimum requirements of the National Flood Insurance Program (NFIP) as administered by the Federal Emergency Management Agency (FEMA). Tasks associated with the floodplain analysis include:
 - a. **Data Collection** – CONSULTANT will coordinate with the appropriate agencies obtain the following:
 - i) LIDAR contour data for the Doe Branch Tributary A watershed.
 - ii) Future land use map(s) for the Town of Prosper.
 - b. **Hydrologic Analysis** – CONSULTANT will develop a HEC-HMS hydrologic computer model for the Doe Branch Tributary A and Tributary A-1 watershed upstream of the eastern-most stream

- crossing within the Fishtrap Road re-alignment project using available contour, land use, and soil data. Peak discharge data will be developed for both Doe Branch Tributary A and Tributary A-1 at the four anticipated stream crossings.
- c. Hydraulic Analysis – CONSULTANT will develop a HEC-RAS hydraulic computer model for both Doe Branch Tributary A and Tributary A-1 for the segments of Fishtrap Road that lie within the existing Zone A floodplain, which are generally from Station 55+00 to 73+00 on Tributary A and Station 114+00 to 124+00 on Tributary A-1. The hydraulic model will extend sufficiently downstream and upstream of the Fishtrap Road right-of-way to facilitate a comparison of pre- and post-project flood elevations.
- i) Cross section data for the hydraulic model will be generated using contour data generated from the topographic survey of the project site. Cross sections will be generated for both Doe Branch Tributary A and Tributary A-1 through the entire length of the project site, including up to three sections downstream of the site for estimating the starting flood elevation, and up to three sections upstream of the project site for evaluating the effects of the proposed project on the upstream property.
 - ii) CONSULTANT will compute the expected 100-year flood elevations along both Doe Branch Tributary A and Tributary A-1 and delineate the approximate limits of the 100-year flood limits using the onsite contour data.
 - iii) CONSULTANT will coordinate with TOWN regarding the sizes of the bridge/culvert structures at each crossing needed to avoid increases in the floodplain elevation beyond those allowable by TOWN's current floodplain policies.
- d. Scour Analysis – CONSULTANT will perform a scour analysis to determine anticipated scour depths at bridge piers within the floodplain at the two proposed bridge crossings over Doe Branch Tributary A. It is assumed the two crossings over Doe Branch Tributary A-1 will be culverts, not bridges, and will thus not require a scour analysis.
- i) Perform a scour analysis for the proposed bridge structures at Doe Branch Tributary A Crossing #1 and #2 for the 1-, 10- and 100-year frequencies.
 - ii) Prepare each scour analysis using guidance from HEC-18. The Engineer shall select the methodology based on the site conditions such as the presence of cohesive or cohesionless soil, rock or depth of rock, proposed foundation type, and existing site performance. A Stream Migration Study is not included in this scope of services.
 - iii) Provide the structural designers the potential scour depths and any recommended countermeasures including bridge design modifications and/or revetment.
 - iv) Determine the riprap size for scour countermeasures.
 - v) Develop a summary of the scour analyses to include in the hydraulic report.
- e. Report – CONSULTANT prepare a brief report summarizing the assumptions made, methodologies used, and conclusions reached during the flood study.



Legend

- Flood Study Limits
- Proposed Re-Alignment
- Zone A 100-Yr Floodplain
- Zone AE 100-Yr Floodplain
- Floodway

PROJECT LIMITS

Denton Collin

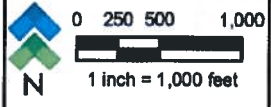
Highway 580 E

Prosper

Panther Creek Pkwy

Prosper Rd

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC,



Denton/Collin, Texas

Fishtrap Road Alignment Study

EX. A: FLOOD STUDY LIMITS

November 2019

This document is released for the purpose of interim review under the authority of Michael J. Dalles, P.E. 65938 on 10/30/19. It is not to be used for permitting, bidding or construction purposes.

2. CONDITIONAL LETTER OF MAP REVISION (CLOMR)

CONSULTANT will prepare a submittal package to accompany a request to FEMA for a Conditional Letter of Map Revision (CLOMR), which will determine whether the improvements associated with the Fishtrap Road realignment, if constructed as proposed, will warrant a change in the Flood Insurance Rate Map (FIRM). In general, construction cannot begin within areas designated as Special Flood Hazard Areas (SFHA) until FEMA issues the CLOMR.

It should be noted that there are typically long review times for FEMA to process CLOMR requests, and the total time required to complete the process can take from 6 to 9 months.

It is also important that TOWN understands that a CLOMR does not change the FIRM. In order to officially change the FIRM and legally remove the property from the floodplain, FEMA requires an as-built survey and a follow-up flood study which uses the data that represents how the project is constructed.

Items to be included in the CLOMR submittal include:

- a. Complete the applicable FEMA forms as required for CLOMR submittals which include property information, hydrologic/hydraulic data, and acknowledgement from the local floodplain administrator that the proposed changes are in compliance with FEMA's standards.
- b. Obtain copies of the Deeds or Plat Maps of the properties showing the recordation information (e.g., Book/Volume and Page numbers or Document/Instrument number) and containing the recorder's seal and recordation dates.
- c. Prepare documented Species Act Compliance. Per FEMA's current requirements for filling within floodplain areas, Endangered Species Act (ESA) compliance is required independently of FEMA's process. The Town of Prosper needs to ensure that permits are obtained per requirement under Section 60.3(a)(2) of FEMA's regulations, which requires communities to review proposed development to assure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, including section 404 of the Federal Water Pollution Control Act Amendments of 1972. To satisfy ESA requirements, CONSULTANT will identify whether threatened or endangered species exist on the subject property and whether the project associated with the CLOMR request would adversely affect species or designated critical habitat:
 - Review federal and state databases for possible threatened and endangered species that could possibly have habitat in the vicinity of the Project.
 - Conduct a site visit to determine the potential impacts on threatened and endangered species as a result of the fill placement at the Property.
 - Prepare a letter report summarizing the findings of the ESA investigation.
- d. Assemble the required technical data to support the proposed flood map revision request, including a narrative describing the proposed floodplain changes, methodologies used to evaluate the changes, and the results of the physical changes to the floodplain, associated exhibits, and the hydrologic and hydraulic computer models.
- e. Prepare a draft public notice describing the proposed revisions to the effective floodplain. The draft public notice will be included in the CLOMR submittal to FEMA and upon FEMA's approval of the notice, it will be published in a local newspaper. The cost of publishing the public notice is not included in this Scope of Services and shall be paid by TOWN.
- f. FEMA requires that a review and processing fee must be submitted for map revision requests related to modifications of the floodplain limits. **The FEMA review fee would be paid by TOWN prior**

to submitting the CLOMR request and is not included in the base scope of services. The current FEMA review fee associated with CLOMRs of this type (Physical Map Revision Based on a Bridge, Culvert, Channel, Hydrology, or Combination Thereof), as published in the Federal Register, dated January 21, 2015 is \$6,500. The FEMA review fees are subject to change and are outside of CONSULTANT's control.

- g. Agency Coordination – CLOMR Submittal
 - i) Submit a draft copy of the CLOMR request package to the Town of Prosper floodplain administrator for review prior to submitting to FEMA. CONSULTANT shall revise the information in the CLOMR submittal per the floodplain administrators' review comments, if any.
 - ii) Submit the CLOMR request package to FEMA for review and revise the information in the CLOMR submittal per review comments for FEMA, if any.

3. LETTER OF MAP REVISION (LOMR)

Upon completion of construction of the proposed Fishtrap Road re-alignment, CONSULTANT will prepare a submittal package to accompany a request to FEMA for a Letter of Map Revision (LOMR) to officially change the Flood Insurance Rate Map (FIRM), revising the floodplain maps to reflect the existing on-the-ground conditions within the project site. Items to be included in the LOMR submittal include:

- a. Update the hydraulic models of Doe Branch Tributary A and Tributary A-1 to reflect the post-construction topography per the as-built survey data.
- b. Complete the applicable FEMA forms as required for LOMR submittals which include property information, hydrologic/hydraulic data, and acknowledgement from the local floodplain administrator that the proposed changes are in compliance with FEMA's standards.
- c. Copies of the Deeds or Plat Maps of the properties showing the recordation information (e.g., Book/Volume and Page numbers or Document/Instrument number) and containing the recorder's seal and recordation dates.
- d. Assemble the required technical data to support the proposed flood map revision request, including a narrative describing the proposed floodplain changes, methodologies used to evaluate the changes, and the results of the physical changes to the floodplain, associated exhibits, and the hydrologic and hydraulic computer models.
- e. As required by FEMA, a public notice shall be published in a local newspaper describing the proposed revisions to the effective floodplain. The draft public notice will be included in the LOMR submittal to FEMA and upon FEMA's approval of the notice, it will be published in a local newspaper. The cost of publishing the public notice is not included in this Scope of Services and shall be paid by TOWN.
- f. FEMA requires that a review and processing fee must be submitted for map revision requests related to modifications of the floodplain limits. **The FEMA review fee would be paid by TOWN prior to submitting the LOMR request and is not included in the base scope of services.** The current FEMA review fee associated with LOMRs of this type (LOMR Based on As-Built Information Submitted as a Follow-up to a CLOMR), as published in the Federal Register, dated January 21,

2015 is \$8,000. The FEMA review fees are subject to change and are outside of CONSULTANT's control.

- g. CONSULTANT shall submit a draft copy of the LOMR request package to the Town of Prosper floodplain administrators for review prior to submitting to FEMA. CONSULTANT shall revise the information in the LOMR submittal per the floodplain administrator's review comments, if any.
- h. CONSULTANT shall Submit the LOMR request package to FEMA for review and revise the information in the LOMR submittal per review comments for FEMA, if any.

ROADWAY, BRIDGE AND DRAINAGE DESIGN

PROJECT DESCRIPTION

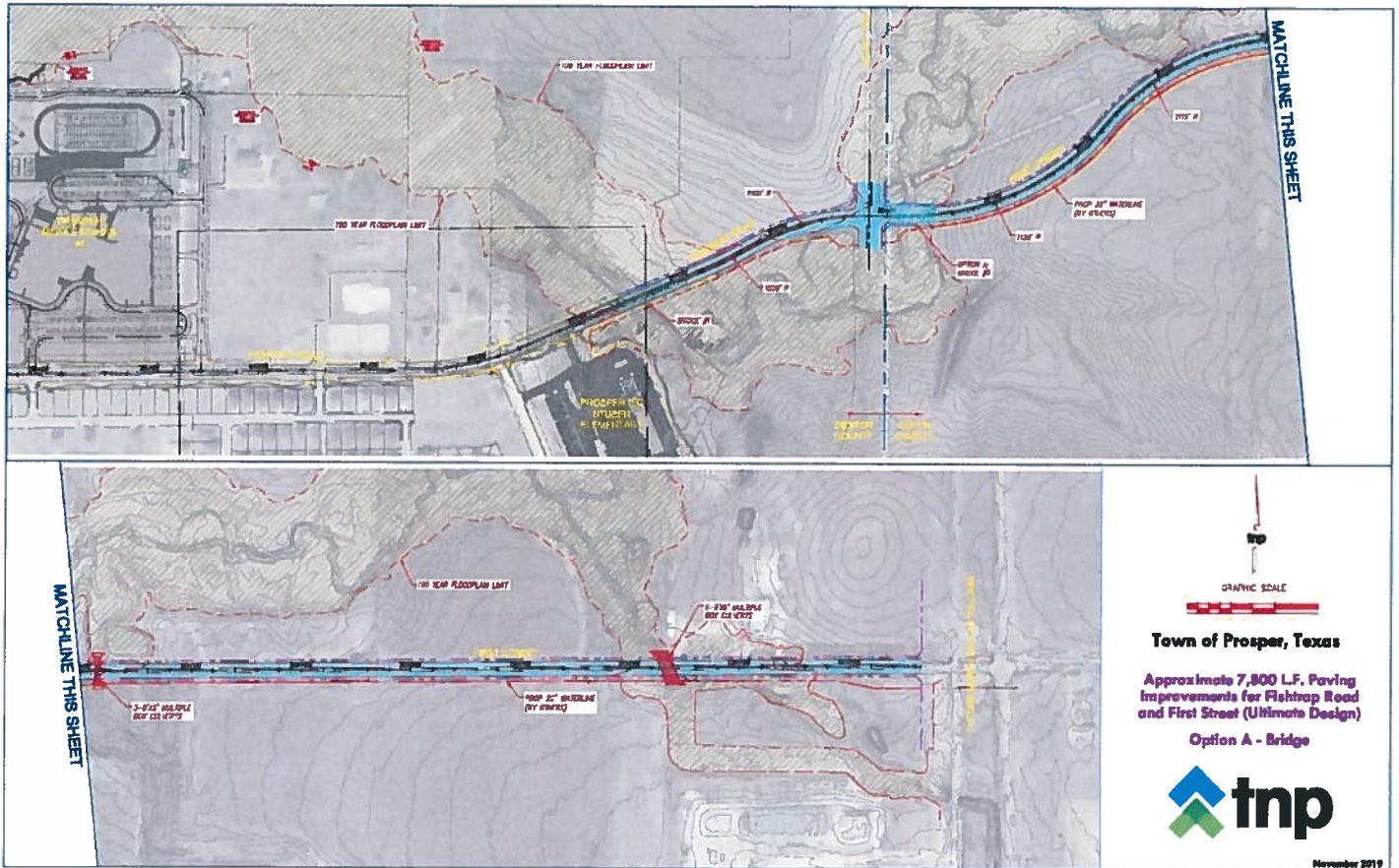
Fishtrap-1st Street is currently a 2-lane asphalt roadway with borrow ditch drainage and cross culvert drainage structures at drainage crossings. The Town recently had installed under a separate engineering contract, a new 16" Waterline along the southerly side of the existing roadway. As part of a separate agreement, TNP developed an Alignment Study to determine the most reasonable alignment and route for an approximate 7,800 Liner feet, new 4-Lane Median Divided Roadway. This new roadway will generally follow the same path of the new waterline (See Alignment Study below). This approved alignment for the new roadway is considered the basis for the scope and design of this Project.

There are two major floodway crossings of the existing roadway. The current drainage structures that are in place are undersized and inadequate to pass the 100-years drainage under the roadway per the Town's criteria. Based on preliminary evaluations, it has been determined the best means to cross this flood plain is to construct bridges as part of the roadway design. The scope of the bridge design is defined under the Bridge Design below.

As part of the design process, CONSULTANT will make 50%, 80% and 100% design submittals to the Town for review and approval. Each submittal will contain the representative plan and profile design for the percent of work completed and will be accompanied by an Engineer's Opinion of Probable Construction Cost (OPCC). CONSULTANT will meet with staff to present the design and review comments as may be necessary to help facilitate the review and approval process.

A project schedule has been included herein and is subject to the Town's final approval. It is understood there is no set date for bidding and construction of these improvements therefore, the schedule represents the time line for surveying and design only. During the design process, CONSULTANT will coordinate with the Town to determine a probable goal for construction schedule.

ALIGNMENT STUDY PROPOSED 4 LANE, MEDIAN DIVIDED ROADWAY



ENGINEERING

Contract Documents

Upon completion of the topographic design survey, CONSULTANT will begin design for the roadway widening and associated drainage improvements. A set of plans and contract documents will be prepared for the Project. The Contract Documents will consist of the full set of Town approved plans and Contract Book which will include the General Conditions, Notice to Bidders, Bid Form-Proposal and all supporting Special Provisions and Technical Specifications necessary to procure the bids and construct the project.

CONSULTANT will coordinate all work as necessary to interface with Town staff and provide milestone updates on design as well as meet with Town staff to review scope, opinion of cost and project schedules. Once final plans have been completed, CONSULTANT will deliver original plan documents with Engineer's seal and signature, sufficient for printing and distribution for bidding. CONSULTANT will prepare final cost opinions upon delivery of final contract documents to confirm project budget. CONSULTANT will provide all necessary documentation and information as required for staff and presentation to Council as may be necessary prior to bidding.

BRIDGE DESIGN

The CONSULTANT (Bridge Engineer) shall prepare bridge layouts and structural details for a 2- Phased Bridge construction sequence that allows continuous on-going single lane east bound and west bound traffic during each phase of bridge replacement construction. The Engineer shall prepare a 30% submittal to the City consisting of East Bound and West Bound bridge plan, elevations and sections for City review and approval before detailing is started. The Engineer shall perform final design of preferred foundation type for all bridge structures in accordance with the TxDOT's Bridge Division Geotechnical Manual and foundation design guidelines.

The CONSULTANT (Bridge Engineer) shall perform 2 Phase and final, detailed designs in accordance with the current TxDOT Bridge Design Manual and AASHTO LRFD design requirements utilizing a conventional precast, prestressed concrete slab beam or I-Girder superstructure and conventional reinforced concrete bents with conventional substructures. The CONSULTANT shall perform final, detailed bridge design utilizing cast-in-place concrete deck and prestressed concrete beam superstructure and multicolumn reinforced concrete bents and abutments. The CONSULTANT shall produce summary tables of all bridge structure quantities, provide beam end bearing seat elevations tables and provide bent and abutment control elevations. The CONSULTANT shall prepare the above described layout for each bridge and transmit these documents to the city. The bridge layouts shall include:

Plan View

- a. Bearing of roadway center-line
- b. Bridge bent and abutment skew angles
- c. Control stations at the beginning and ending of structures
- d. Dimensioned widths of bridge, roadway, shoulders, and sidewalks
- e. Limits of riprap
- f. North arrow
- g. Cross-slope and super-elevation data
- h. Traffic flow directional arrows
- i. Railing type
- j. Bent stations and bearings
- k. Approach pavement crown width
- l. Typical Bridge sections showing construction stages, beam types and spacing
- m. Expansion Joint and seal type

Profile View

- a. Profile grade
- b. Vertical curve data
- c. Finished roadway elevation at beginning and end of the bridge
- d. Overall length of the structure
- e. Existing and proposed ground lines clearly marked
- f. Profile view grid elevations and stations
- g. Type of foundation, number; size; and length of foundation elements
- h. Bent numbers
- i. Soil core data from Wincore generated soil boring plots including penetrometer values and soil classification
- j. Fixed or expansion condition at each beam end
- k. Column heights
- l. Any other information required in the State's Bridges and Structures Operation and Planning Manual, Bridge Design Manual, and Bridge Detailing Manual.

The CONSULTANT shall prepare all bridge designs, plan sheets, and details in conformance with the TxDOT Bridges and Structures Operation and Planning Manual, TxDOT Bridge Design Manual, and Bridge Detailing Manual. No detailed design work is to be performed until the Town has given the Engineer approval of the preliminary 30% Bridge Layout.

The CONSULTANT shall determine the location of proposed soil borings for bridge design in accordance with the latest edition of the TxDOT Geotechnical Manual.

Bridge details, total quantities and estimate of probable construction cost will be provided by the Engineer for the 50%, 80% and 100% submittals.

CONSULTANT (Bridge Engineer) construction Phase services shall include review and approval of contractor provided shop drawings for prestress beams, bridge rail, abutment armor joints and steel cover plates. Further services shall include review and approval of various material submittals and preparation of responses to contractor Requests for Information, (RFI's). CONSULTANT (Bridge Engineer) shall conduct a minimum of six (6) site inspections during construction to verify main bridge elements are within acceptable construction tolerances and in compliance with Project Bridge Plans.

BIDDING AND CONSTRUCTION

Bidding

Once plans are approved for bidding, CONSULTANT will reproduce the comprehensive contract documents to be used for distribution to perspective bidders. CONSULTANT will provide the necessary support to Town staff to represent the plans and answer questions to perspective bidders and issue addendums as necessary. CONSULTANT will be available as necessary to represent the Town during the entire bidding processes including the bid opening to receive and open bids and prepare a bid tabulation of the bids. CONSULTANT will assist Town staff to review all bids and evaluate the apparent low bidder and make recommendation in writing to Council as well as present the bid to the Council as necessary.

Construction Phase

It is understood that the Town will administer and oversee the construction of the project with Town staff. CONSULTANT will assist Town staff in the execution of the contract documents by the approved low bidder. Once the contracts are executed, CONSULTANT will prepare for and assist as necessary a preconstruction conference with the contractor, his subcontractors and Town staff.

Town will provide all construction administration and inspection from preconstruction through final acceptance. During the course of construction, CONSULTANT will be available to periodically meet onsite with Town staff as may be necessary to review construction conflicts or provide support for plan interpretation. For purposes of this Agreement, CONSULTANT will provide up to twenty-four (24) site visits or meetings. CONSULTANT will review all shop drawings and provide written responses to RFI's, Change Orders or other written documents required to support the Town as necessary for execution and completion of the work.

RECORD DRAWINGS

Upon completion and final acceptance of the Project, CONSULTANT will deliver to the Town a Record set of drawings that reflect the as-built condition of the roadway improvements. Record drawings will be prepared on the basis of any information provided by the contractor that reflects field changes and or change orders to the project. Plans will be marked "RECORD DRAWINGS" and delivered in electronic format to the Town.

PROVISIONS

1. AUTHORIZATION TO PROCEED

Signing this agreement shall be construed as authorization by CLIENT for TNP, Inc. to proceed with the work, unless otherwise provided for in this agreement.

2. LABOR COSTS

TNP, Inc.'s Labor Costs shall be the amount of salaries paid TNP, Inc.'s employees for work performed on CLIENTS Project plus a stipulated percentage of such salaries to cover all payroll-related taxes, payments, premiums, and benefits.

3. DIRECT EXPENSES

TNP, Inc.'s Direct Expenses shall be those costs incurred on or directly for the CLIENT's Project, including but not limited to necessary transportation costs including mileage at TNP, Inc.'s current rate when its, or its employee's, automobiles are used, meals and lodging, laboratory tests and analyses, computer services, word processing services, telephone, printing and binding charges. Reimbursement for these expenses shall be on the basis of actual charges when furnished by commercial sources and on the basis of usual commercial charges when furnished by TNP, Inc.

4. OUTSIDE SERVICES

When technical or professional services are furnished by an outside source, when approved by CLIENT, an additional amount shall be added to the cost of these services for TNP, Inc.'s administrative costs, as provided herein.

5. OPINION OF PROBABLE COST

In providing opinions of probable cost, the CLIENT understands that TNP, Inc. has no control over costs or the price of labor, equipment, or materials, or over the Contractor's method of pricing, and that the opinions of probable cost provided to CLIENT are to be made on the basis of the design professional's qualifications and experience. TNP, Inc. makes no warranty, expressed or implied, as to the accuracy of such opinions as compared to bid or actual costs.

6. PROFESSIONAL STANDARDS

TNP, Inc. shall be responsible, to the level of competency presently maintained by other practicing professional engineers in the same type of work in the State of Texas, for the professional and technical soundness, accuracy, and adequacy of all design, drawings, specifications, and other work and materials furnished under this Authorization. TNP, Inc. makes no other warranty, expressed or implied.

7. TERMINATION

Either CLIENT or TNP, Inc. may terminate this authorization by giving 10 days written notice to the other party. In such event CLIENT shall forthwith pay TNP, Inc. in full for all work previously authorized and performed prior to effective date of termination. If no notice of termination is given, relationships and obligations created by this Authorization shall be terminated upon completion of all applicable requirements of this Authorization.

8. MEDIATION

In an effort to resolve any conflicts that arise during the design or construction of the project or following the completion of the project, the CLIENT and the CONSULTANT agree that all disputes between them arising out of or relating to this Agreement shall be submitted to nonbonding mediation unless the parties mutually agree otherwise.

The CLIENT and the CONSULTANT further agree to include a similar mediation provision in all agreements with independent contractors and consultants retained for the project and to require all independent contractors and consultants retained also to include a similar mediation provision in all agreements with subcontractors, subconsultants, suppliers or fabricators so retained, thereby providing for mediation as the primary method for dispute resolution between the parties to those

agreements.

9. LEGAL EXPENSES

In the event legal action is brought by CLIENT or TNP, Inc. against the other to enforce any of the obligations hereunder or arising out of any dispute concerning the terms and conditions hereby created, the losing party shall pay the prevailing party such reasonable amounts for fees, costs and expenses as may be set by the court.

10. PAYMENT TO TNP, INC.

Monthly invoices will be issued by TNP, Inc. for all work performed under the terms of this agreement. Invoices are due and payable on receipt. If payment is not received within 30 days of invoice date, all work on CLIENT's project shall cease and all work products and documents shall be withheld until payment is received by TNP. Time shall be added to the project schedule for any work stoppages resulting from CLIENT's failure to render payment within 30 days of invoice date. Interest at the rate of 1½% per month will be charged on all past-due amounts, unless not permitted by law, in which case, interest will be charged at the highest amount permitted by law.

11. LIMITATION OF LIABILITY

TNP, Inc.'s liability to the CLIENT for any cause or combination of causes is in the aggregate, limited to an amount no greater than the fee earned under this agreement.

12. ADDITIONAL SERVICES

Services not specified as Basic Services in Scope and Attachment 'A' will be provided by TNP, Inc. as Additional Services when required. The CLIENT agrees upon execution of this contract that no additional authorization is required. Additional services will be paid for by CLIENT as indicated in Article II, Compensation.

13. SALES TAX

In accordance with the State Sales Tax Codes, certain surveying services are taxable. Applicable sales tax is not included in the fee set forth and will be added on and collected when required by state law. Sales tax at the applicable rate will be indicated on invoice statements.

14. SURVEYING SERVICES

In accordance with the Professional Land Surveying Practices Act of 1989, the CLIENT is informed that any complaints about surveying services may be forwarded to the Texas Board of Professional Land Surveying, 12100 Park 35 Circle, Building A, Suite 156, MC-230, Austin, Texas 78753, (512) 239-5263.

15. LANDSCAPE ARCHITECT SERVICES

The Texas Board of Architectural Examiners has jurisdiction over complaints regarding the professional practices of persons registered as landscape architects in Texas. The CLIENT is informed that any complaints about landscape architecture services be forwarded to the Texas Board of Architectural Examiners, Hobby Building: 333 Guadalupe, Suite 2-350, Austin, Texas 78701, Telephone (512) 305-9000, Fax (512) 305-8900.

16. INVALIDITY CLAUSE

In case any one or more of the provisions contained in this Agreement shall be held illegal, the enforceability of the remaining provisions contained herein shall not be impaired thereby.

17. PROJECT SITE SAFETY

TNP, Inc. has no duty or responsibility for project site safety.

18. CONSTRUCTION MEANS AND METHODS AND JOBSITE SAFETY

Means and methods of construction and jobsite safety are the sole responsibility of the contractor.

**EXHIBIT B
COMPENSATION/PRICING SCHEDULE**

(Compensation/Pricing Schedule Attached Hereto)

EXHIBIT B

COMPENSATION to be on a basis of the following **Basic Services based on the following:**

FISHTRAP RD.-1ST STREET (SEGMENT 5)

This fee represents a comprehensive surveying and engineering for improvements to Fishtrap-1st Street from Stuber Elementary east to DNT.

BASE PROPOSAL ITEMS: _____ **NINE HUNDRED THOUSAND DOLLARS (\$900,000)**

SURVEYING: _____ **Eighty-two Thousand Dollars (\$82,000)**

Topographic Design Survey: _____ Sixty-three Thousand Dollars (\$56,500)

Right-of-Way & Easement Parcels (17 Parcels*): _____ Twenty-nine Thousand Dollars (\$25,500)

*1,500 per Each Parcel

GEOTECHNICAL ENGINEERING: _____ **Forty Thousand Dollars (\$40,000)**

Field Borings and Written Report: _____ Forty Thousand Dollars (\$40,000)

ENVIRONMENTAL SERVICES: _____ **Forty-One Thousand Dollars (\$41,000)**

Waters of the US Delineation: _____ Five Thousand Dollars (\$5,000)

Nationwide Permit 14 Pre-Construction Notification: _____ Eleven Thousand Dollars (\$11,000)

USACE for NWP Verification: _____ Six Thousand Dollars (\$6,000)

Protected Species Assessment: _____ Two Thousand Five Hundred Dollars (\$2,500)

Cultural Resources Survey and Coordination: _____ Sixteen Thousand Five Hundred Dollars (\$16,500)

FLOOD PLAIN DRAINAGE STUDY: _____ **Twenty-seven Thousand Dollars (\$27,000)**

Flood Study: _____ Twenty-seven Thousand Dollars (\$27,000)

4 LN MEDIAN DIVIDED ROADWAY, 1-BRIDGE & DRAIN. IMPROV: Seven Hundred Ten Thousand Dollars (\$710,000)

50% Roadway, Bridge and Drainage: _____ Three Hundred Fifty-five Thousand Dollars (\$355,000)

80% Roadway, Bridge and Drainage: _____ Five Hundred Sixty-eight Thousand Dollars (\$568,000)

100% Roadway, Bridge and Drainage: _____ Seven Hundred Ten Thousand Dollars (\$710,000)

ALTERNATE ITEMS – ONLY IF REQUIRED AND AUTHORIZED BY TOWN: ONE HUNDRED SEVENTY-FIVE THOUSAND DOLLARS (\$175,000)

FLOOD PLAIN MAP REVISION (Only if Required): _____ **Thirty-three Thousand Dollars (\$33,000)**

As-Built Topo Survey for LOMR Preparation: _____ Eight Thousand Dollars (\$8,000)

Conditional Letter of Map Revision (CLOMR): _____ Fourteen Thousand Dollars (\$14,000)

Letter of Map Revision (LOMR): _____ Eleven Thousand Dollars (\$11,000)

REVISE PLANS @ 80% CD'S TO A 2-LANE ROADWAY, 1-BRIDGE & DRAINAGE IMPROV: One Hundred Forty-two Thousand Dollars (\$142,000)

Additional Cost to Revise from 4-lane section to a 2-lane section @ 80% Design, Add: One Hundred Forty-two Thousand Dollars (\$142,000)

1. **ADDITIONAL SERVICES:** **ADDITIONAL SERVICES** shall be any service provided by the ENGINEER which is not specifically included in **BASIC SERVICES** as defined. **ADDITIONAL SERVICES** shall include, but shall not be limited to:

- a. Subcontract charges not described in **BASIC SERVICES** or Attachment 'D';
- b. Traffic Studies;
- c. Traffic Signals;
- d. Street Lights;
- e. Sidewalks;
- f. Landscaping Improvements;
- g. FEMA Fees;
- h. USACE Fees or Permits;
- i. Other Regulatory Fees or Permits;
- j. Construction Administration or Inspection Services

ADDITIONAL SERVICES shall be considered additional work and shall be reimbursed at standard TNP hourly rates or TNP standard rates for items provided in-house, or direct expenses times a multiplier of 1.10 for non-labor, subcontract or mileage items.

2. **PAYMENT TERMS:** CLIENT shall be billed monthly for services rendered and pay promptly upon receipt of invoice. Delays of transmitting payments to CONSULTANT more than 30 days from invoice date may result in cessation of services until payment is received.

Billing Rates

Teague Nall and Perkins, Inc.

2019 - 2020 Standard Hourly Rates

Effective January 1, 2019 to December 31, 2020

Engineering/Landscape Architecture/ROW	Hourly Billing Rate
Principal or Director	\$250
Team Leader	\$230
Senior Project Manager	\$220
Project Manager	\$175
Senior Engineer	\$230
Project Engineer	\$160
Engineer III/IV	\$135
Engineer I/II	\$125
Landscape Architect / Planner	\$160
Landscape Designer	\$120
Senior Designer	\$140
Designer	\$130
Senior CAD Technician	\$125
CAD Technician	\$110
IT Technician	\$170
Clerical	\$80
ROW Manager	\$190
Senior ROW Agent	\$160
ROW Agent	\$125
Relocation Agent	\$160
ROW Admin	\$70
Intern	\$70

Surveying	Hourly Billing Rate
Survey Manager	\$230
Registered Professional Land Surveyor (RPLS)	\$195
Field Coordinator	\$140
S.I.T. or Senior Survey Technician	\$140
Survey Technician	\$110
1-Person Field Crew w/Equipment**	\$145
2-Person Field Crew w/Equipment**	\$175
3-Person Field Crew w/Equipment**	\$200
4-Person Field Crew w/Equipment**	\$220
Flagger	\$50
Abstractor (Property Deed Research)	\$90
Small Unmanned Aerial Systems (sUAS) Equipment & Crew	\$400
Terrestrial Scanning Equipment & Crew	\$250

Utility Management, Utility Coordination, and SUE	Hourly Billing Rate
Senior Utility Coordinator	\$165
Utility Coordinator	\$150
SUE Project Manager	\$190
SUE Engineer	\$170
Field Coordinator	\$140
Sr. Utility Location Specialist	\$140
Utility Location Specialist	\$90
1-Person Designator Crew w/Equipment***	\$145
2-Person Designator Crew w/Equipment***	\$170
2-Person Vac Excavator Crew w/Equip (Exposing Utility Only)	\$275
Core Drill (equipment only)	\$750
SUE QL-A Test Hole (0 < 4 ft)	\$1,250
SUE QL-A Test Hole (> 4 < 6 ft)	\$1,500
SUE QL-A Test Hole (> 6 < 8 ft)	\$1,750
SUE QL-A Test Hole (> 8 < 10 ft)	\$2,000
SUE QL-A Test Hole (> 10 < 12 ft)	\$2,250
SUE QL-A Test Hole (> 12 < 14 ft)	\$2,500

Construction Management, Construction Engineering and Inspection (CEI)	Hourly Billing Rate
Construction Inspector II	\$100
Construction Inspector III	\$110
Senior Construction Inspector	\$130
Construction Superintendent	\$180
Senior Project Manager	\$220

Direct Cost Reimbursables

Any permit fees, filing fees, or other fees related to the project and paid on behalf of the client by TNP to other entities shall be invoiced at 1.10 times actual cost.

Notes:

All subcontracted and outsourced services shall be billed at rates comparable to TNP's billing rates above or cost times a multiplier of 1.10.

** Rates shown are for 2019 and 2020 and are subject to change in subsequent years.*

*** Survey equipment may include truck, ATV, Robotic Total Station, GPS Units and Digital Level.*

**** Includes crew labor, vehicle costs, and field supplies.*

PROJECT SCHEDULE

Project Schedule

Project schedule provided below is a comprehensive project schedule for design phase only. The bidding and construction of this project has yet to be determined and will be coordinated with the Town during the design phase of the project. The scope of this contract will be to provide a complete set of design documents for bidding and construction. A full and complete schedule will be negotiated with the Town upon execution of this agreement with a contract amendment based on the desire of the Town to bid and construct these improvements.

Schedule is as follows:

CONCIL AWARD

12.10.19: Council Award of Professional Services Agreement

DESIGN SURVEY

12.16.19: Begin Design Survey (12-weeks)

03.06.20: Complete Design Survey (Existing ROW and Topographic Design)

DESIGN PHASE

03.09.20 – 08.07.20: Engineering Design 50% Construction Documents (Approx. 5-months)

08.07.20: Submit 50% CD's and OPCC to Town for Review (Approx. 4-week Review)

09.04.20: Receive Town Comments

09.07.20 – 11.06.20: Engineering Design 80% Construction Documents (Approx.2-months)

11.06.20: Submit 80% CD's and OPCC to Town for Review (Approx. 4-week Review)

12.04.20: Receive Town Comments (Confirm 2 Lane or 4 Lane Design and Bid)

12.07.20 - 02.07.21: 100% CD's and OPCC to Town for Final Approval (Approx. 2-months)

ACQUISITION OF RIGHT-OF-WAY

08.07.20 – 10.16.20: Prepare ROW and Easement Documents

10.19.20 – 02.19.21: Acquisition of ROW and Easements

FRANCHISE RELOCATIONS

08.07.20: Send notifications and 50% CD's Franchise Companies

02.22.21 – 5.28.21: Franchise Utility Relocations (Approx. 3-months)

05.28.21: All Franchise Utilities Cleared

BIDDING/CONSTRUCTION SCHEDULE

BIDDING PHASE

Date by Town: Bidding (Min. 4-week bid time)
Date by Town: Bid Opening
Date by Town: Evaluation of low bidder and check references.
Date by Town: Recommendation to Council.

CONTRACT AWARD

Set by Town: Town Council Award (Council 2nd and 4th Tuesday of month)
Set by Town: Preparation of Contracts, Bonds & Insurance

CONSTRUCTION PHASE

TBD: Preconstruction Meeting
TBD: Notice to Proceed
TBD: Projected Completion Date

Notes:

1. This NTP date is based on having Franchise Utilities being cleared by 05.28.21. In the event the clearing of franchise utilities has been delayed, this NTP date may be delayed.
2. These are estimated timelines based on efforts to complete the survey, engineering per the contract and projected franchise utility relocations.
3. During the process of design & plan deliverables, CONSULTANT will provide updated project schedules to the Town which could require this schedule to be adjusted for reasons beyond the control of TNP or the Town.

EXHIBIT C
INSURANCE REQUIREMENTS

Service provider shall procure and maintain for the duration of the contract, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the vendor, his agents, representatives, employees or subcontractors. The cost of such insurance shall be borne by the service provider. A certificate of insurance meeting all requirements and provisions outlined herein shall be provided to the Town prior to any services being performed or rendered. Renewal certificates shall also be supplied upon expiration.

A. MINIMUM SCOPE OF INSURANCE

Coverage shall be at least as broad as:

1. ISO Form Number GL 00 01 (or similar form) covering Commercial General Liability. "Occurrence" form only, "claims made" forms are unacceptable, except for professional liability.
2. Workers Compensation insurance as required by the Labor Code of the State of Texas, including Employers' Liability Insurance.
3. Automobile Liability as required by the State of Texas, covering all owned, hired, or non-owned vehicles. Automobile Liability is only required if vehicle(s) will be used under this contract.
4. Professional Liability, also known as Errors and Omissions coverage.

B. MINIMUM LIMITS OF INSURANCE

Service Provider shall maintain throughout contract limits not less than:

1. Commercial General Liability: \$500,000 per occurrence /\$1,000,000 in the aggregate for third party bodily injury, personal injury and property damage. Policy will include coverage for:
 - a. Premises / Operations
 - b. Broad Form Contractual Liability
 - c. Products and Completed Operations
 - d. Personal Injury
 - e. Broad Form Property Damage
2. Workers Compensation and Employer's Liability: Workers Compensation limits as required by the Labor Code of the State of Texas and Statutory Employer's Liability minimum limits of \$100,000 each accident, \$300,000 Disease- Policy Limit, and \$100,000 Disease- Each Employee.
3. Automobile Liability: \$500,000 Combined Single Limit. Limits can only be reduced if approved by the Town. Automobile liability shall apply to all owned, hired, and non-owned autos.
4. Professional Liability aka Errors and Omissions: \$500,000 per occurrence and in the aggregate.

C. DEDUCTIBLES AND SELF-INSURED RETENTIONS

Any deductible or self-insured retentions in excess of \$10,000 must be declared to and approved by the Town.

- a. The Town, its officers, officials, employees, boards and commissions and volunteers are to be added as "Additional Insured's" relative to liability arising out of activities performed by or on behalf of the provider, products and completed operations of the provider, premises owned, occupied or used by the provider. The coverage shall contain no special limitations on the scope of protection afforded to the Town, its officers, officials, employees or volunteers.

D. OTHER INSURANCE PROVISIONS

The policies are to contain, or be endorsed to contain the following provisions:

1. General Liability and Automobile Liability Coverages

- a. The Town, its officers, officials, employees, boards and commissions and volunteers are to be added as "Additional Insured's" relative to liability arising out of activities performed by or on behalf of the provider, products and completed operations of the provider, premises owned, occupied or used by the provider. The coverage shall contain no special limitations on the scope of protection afforded to the Town, its officers, officials, employees or volunteers.
- b. The provider's insurance coverage shall be primary insurance in respects to the Town, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by the Town, its officers, officials, employees or volunteers shall be in excess of the provider's insurance and shall not contribute with it.
- c. Any failure to comply with reporting provisions of the policy shall not affect coverage provided to the Town, its officers, officials, employees, boards and commissions or volunteers.
- d. The provider's insurance shall apply separately to each insured against whom the claim is made or suit is brought, except to the insured's limits of liability.

2. Workers Compensation and Employer's Liability Coverage:

The insurer shall agree to waive all rights of subrogation against the Town, its officers, officials, employees and volunteers for losses arising from work performed by the provider for the Town.

3. All Coverages:

Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled or non-renewed by either party, reduced in coverage or in limits except after 30 days written notice to the Town for all occurrences, except 10 days written notice to the Town for non-payment.

4. Professional Liability and / or Errors and Omissions:

"Claims made" policy is acceptable coverage, which must be maintained during the course of the project, and up to two (2) years after completion and acceptance of the project by the Town.

E. ACCEPTABILITY OF INSURERS

The Town prefers that Insurance be placed with insurers with an A.M. Best's rating of no less than A- VI, or better.

F. VERIFICATION OF COVERAGE

Service Provider shall provide the Town with certificates of insurance indicating the coverages required. The certificates are to be signed by a person authorized by that insurer to bind coverage on its behalf. Certificates of insurance similar to the ACORD Form are acceptable. Town will not accept Memorandums of Insurance or Binders as proof of insurance. The Town reserves the right to require complete, certified copies of all required insurance policies at any time.

Certificate holder to be listed as follows:

Town of Prosper
P.O. Box 307
Prosper, TX 75078

EXHIBIT E

CONFLICT OF INTEREST QUESTIONNAIRE For vendor doing business with local governmental entity	FORM CIQ
<p>This questionnaire reflects changes made to the law by H.B. 22, 84th Leg., Regular Session.</p> <p>This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).</p> <p>By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code.</p> <p>A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.</p>	OFFICE USE ONLY
<p>1 Name of vendor who has a business relationship with local governmental entity.</p>	<p>Date Received</p>
<p>2 <input type="checkbox"/> Check this box if you are filing an update to a previously filed questionnaire. (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)</p>	
<p>3 Name of local government officer about whom the information is being disclosed.</p> <p style="text-align: center;">_____</p> <p style="text-align: center;">Name of Officer</p>	
<p>4 Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.</p> <p style="margin-left: 40px;">A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?</p> <p style="margin-left: 80px;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </p> <p style="margin-left: 40px;">B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?</p> <p style="margin-left: 80px;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </p>	
<p>5 Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.</p>	
<p>6 <input type="checkbox"/> Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).</p>	
<p>7</p> <p style="text-align: center;"> _____ Signature of vendor doing business with the governmental entity </p> <p style="text-align: right; margin-right: 100px;"> _____ Date </p>	