



#16.815

WORK AUTHORIZATION #3  
FM 1903 and FM 36

<b>Client:</b> Hunt County Hunt County Courthouse 2507 Lee Street Greenville, Texas 75401	<b>FNI Project No.:</b> HUC21XXXXX
	<b>Phase/Task/Dept. No.:</b>
	<b>Date:</b> June 01, 2021
This authorization is in accordance with the terms and conditions outlined in the Professional Services Agreement executed on April 11, 2017 and Amendments.	
<b>Project Description:</b> Hunt County Transportation Bond Project – FM 1903 & FM 36 (from IH 30 to SH 66) including realignment of FM 36 to FM 6	
<b>Description of Services:</b> The Scope of Services includes roadway and bridge design services to provide TxDOT with Final Plans, Specifications, and Estimates (PS&E). All interim and final design submittals shall meet current TxDOT standards and policies. The design section will be a 5-lane curb and gutter roadway as developed in the current design schematic. New bridges will be designed to span West Caddo Creek, and Elm Creek. Support services will include geotechnical investigations, underground utility surveys and right-of-way mapping and parcel descriptions to reflect additional right-of-way and easements required for the project. See attached detailed SCOPE OF SERVICES.	
<b>Compensation shall be as follows:</b> FNI shall be paid for the services described above at on a cost-plus basis (not-to exceed) fee of Two Million, Eighty-Two Thousand, Five Hundred Forty-Three Dollars (\$2,082,543). Refer to the attached billing rate table and fee summary table and for a detailed breakdown.	
	<b>Amount of this Authorization</b> <b>\$2,082,543</b>
<b>Schedule:</b> The project schedule shall be in accordance with the attached "FM 36 and FM 1903 Project Timeline". Schedule performance is contingent on timely reviews by TxDOT of interim design submittals.	

**The above described services shall proceed upon return of this Task Authorization. Services will be billed as they are done. All other provisions, terms, and conditions of the agreement for services which are not expressly amended shall remain in full force and effect.**

- A contract modification will be submitted.
- This Task Authorization will serve as notice to proceed.

**FREESE AND NICHOLS, INC.:**

**HUNT COUNTY:**

BY: \_\_\_\_\_  
 Chris Bosco, P.E.  
 Print or Type Name

BY: \_\_\_\_\_  
 Bobby W. Stovall  
 Print or Type Name

TITLE: Principal

TITLE: Hunt County Judge

DATE: \_\_\_\_\_

DATE: 6/22/2021

FILED FOR RECORD  
 at 1:00 o'clock P M  
June  
JUL 22 2021  
 JENNIFER LINDENZWEIG  
 County Clerk, Hunt County, TX  
 By: \_\_\_\_\_

## **SCOPE OF SERVICES**

### **Hunt County - Work Authorization #3 Professional Engineering Design Services**

#### **Final Engineering Design for: FM 1903 & FM 36**

#### **BACKGROUND AND OBJECTIVE**

The scope of services set forth herein represents final engineering design services for proposed safety and capacity improvements along FM 1903 and FM 36 from IH 30 to SH 66 in Caddo Mills, Texas. This work effort will advance preliminary engineering and environmental tasks executed under Work Authorization #2 that identified right-of-way and easement requirements, preliminary bridge lengths/locations, and environmental documentation as needed to comply with the National Environmental Policy Act (NEPA). In collaboration with TxDOT – Paris District, the preferred roadway section has been identified as featuring a 5-lane, curb and gutter roadway with a two-way left turn lane and sidewalks. To be consistent with NCTCOG regional corridor planning efforts, FM 36 will be realigned from Gilmer Street to the west to intersect with SH 66 at FM 6.

The objective of this work authorization is to prepare final plans, specifications, and estimates (PS&E) for construction contract letting by TxDOT-Paris District. The final plans and specifications, in combination with the acquisition of new Right-of-Way (by TxDOT), and relocation of existing utilities will result in the project being ready for bidding and construction.

Final PS&E design deliverables will be developed in close coordination with Hunt County, TxDOT-Paris District, and TxDOT's consultant team currently designing IH 30 at FM 1903 interchange improvements. The final PS&E package and Right -of-Way Mapping deliverables will be developed in accordance with all TxDOT policies and procedures and shall be submitted directly to TxDOT-Paris District for review and approval.

#### **SCOPE OF SERVICES**

##### **1. Project Management**

- a. Prepare and maintain milestone Project Work Schedule depicting various tasks, milestones, and deliverables. Prepare monthly progress reports and project status updates.
- b. Prepare and direct stakeholder coordination / design reviews and meetings with TxDOT, FNI subconsultants, TxDOT's IH 30 consultant team, Hunt County, affected property owners, City of Caddo Mills, and franchise utility owners.
- c. Perform interdisciplinary design and progress meetings with consultant design team. Maintain and updated critical path design schedule and resource assignments.
- d. Provide on-going quality assurance and quality control to ensure completeness of product and compliance with TXDOT policies and procedures.

e. Utility Coordination.

- i. Utility kickoff meeting – Provide initial roadway and storm drain designs to all affected city and franchise utilities. Discuss any planned utility improvements and opportunities to avoid impact to existing facilities. Review all as-built or proposed utility plans.
- ii. Utility conflict meeting – Prepare a utility conflict matrix that identifies the apparent disposition of all existing underground utilities located within or immediately adjacent to the project right-of-way.
- iii. Follow up meetings and coordination – Continue the exchange of information and plans with utility owners to coordinate final roadway and bridge design with utility relocation plans. Review preliminary and final utility relocation plans prior to each utility owner's formal Utility Installation Request (UIR) to TxDOT.

2. Geotechnical Investigation and Engineering.

Reference attached Scope of Services proposals from HVJ Associates for Geotechnical Study (Revised May 26, 2021) and Pavement Design Report (Dated May 25, 2021). The scope of services generally describes geotechnical field exploration, lab testing, and engineering recommendations for 3 bridges, 5 box culverts, a total of 2,400 linear feet of retaining walls, and pavement designs needed for the project.

3. Right-of-Way Mapping Services.

Reference attached Scope of Services proposal from Gorrondona & Associates, Inc. (dated June 1, 2021) for Right-of-Way (ROW) maps and property descriptions for 19 ROW and drainage easement parcels needed for the project.

4. Roadway Design and Plans Production.

Develop roadway design and component plans and related deliverables in accordance with the TxDOT Roadway Design Manual (RDM) and PS&E Preparation Manual. The typical roadway section will be a 5-lane curb and gutter urban roadway with sidewalks and featuring a 2-way center turn lane. Coordinate design with TxDOT's consultant for on-going design activities for the IH 30 frontage road connections to FM 1903. Component plans sets to include Typical Sections, Paving Plan and Profile, Intersection Details, Special Details and Profiles, Cross Sections, Signalization, Signing and Markings and Erosion Control Plans.

5. Drainage Design and Plans Production

Develop Drainage Design and component plans and related deliverables in accordance with the TxDOT Hydraulic Design Manual and PS&E Preparation Manual. The proposed storm drain system will be a closed system consisting of curb inlets and reinforced concrete pipe conduits. Component plans sets to include Drainage Area Map, Drainage Calculations, Storm Drain Plan and Profile, Lateral Profiles, and Culvert Layout sheets.

6. Bridge and Miscellaneous Structures Design.

Develop bridge design and plans for new bridges along the proposed realignment of FM 36 over West Caddo Creek and replace the existing bridge on FM 1903 over Elm Creek. Design retaining walls deemed necessary to minimize impacts to the floodplain or adjacent properties. Prepare design and component plan sets in accordance with the TxDOT Bridge Design Manual and PS&E Preparation Manual. Component plans to include Bridge Layout, Typical Transverse Section, Abutment, Bent, and Girder Layouts, Retaining Wall Layouts, and Retaining Wall Alignment Data.

7. Subsurface Utility (SUE) location services.

Referenced attached Scope of Services Proposal from The Rios Group dated May 26, 2021, for designating up to 135,000 LF of underground utilities.

8. Bidding and Construction Phase Services.

- i) Participate in Pre-Bid Meetings and assist TxDOT in providing response to bidder questions. Prepare addenda to the bid documents, as necessary.
- ii) Attend Preconstruction Meeting with TxDOT, CEI team and contractor.
- iii) Review shop drawing and materials submittals as intended for approval of the engineer-of-record as referenced in the construction specifications.
- iv) Provide clarification as to the designer's intent and assist the TxDOT and Construction Engineering and Inspection CEI team responding to formal requests for information (RFI's).
- v) Attend up to 6 site visits during construction as needed to assist the CEI team as requested by TxDOT.

DELIVERABLES

Work products will include all required design plans, design reports/documentation, cost estimates, and special construction specifications described in the TxDOT PS&E Preparation Manual. Design submittals for TxDOT review will be made at the 60%, 90%, 95%, and Final (100%) Design Phases.

ADDITIONAL SERVICES

The following are excluded from this Scope of Services:

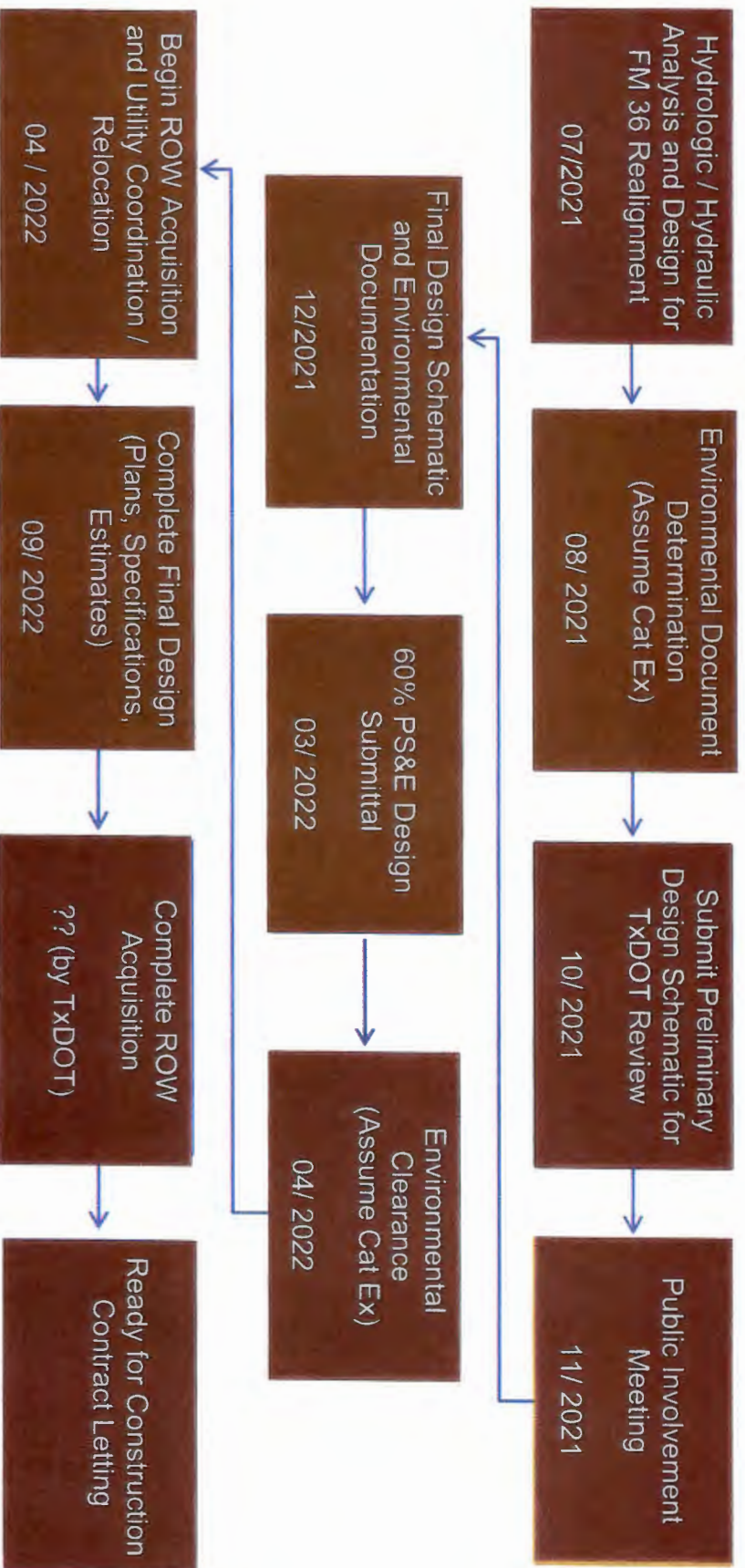
1. Right-of-Way Acquisition Services.

- a) Property Appraisals, Appraisal Reviews, and Cost-to-Cure Analysis.
- b) Expert Witness Testimony for Eminent Domain Legal Proceedings.

2. Construction Contract Administration Services.

- a) Review of contractor pay requests.
- b) Review of contractor change order requests.
- c) Review of contractor value engineering proposals.
- d) Material sampling and laboratory testing.

FM 1903 and FM 36 Design Development Time Line to Shovel Ready





## Gorrondona & Associates, Inc

July 1, 2021

Freese & Nichols, Inc.  
2711 North Haskell Ave., Suite 3300  
Dallas, Texas 75204  
Attn: Mr. Wayne Hartt, PE

**Re: FM 36 & FM 1903 – Begin project at FM 1903 & IH 30 along FM 1903 and FM 36 to end project at intersection of FM 6 and SH 66.**

Dear Mr. Hartt:

Gorrondona & Associates, Inc. (G&A) is pleased to submit this proposal for professional land surveying services for the above referenced projects. Right of Way Mapping, for acquiring a portion of FM 36 TxDOT Paris District Right of Way Mapping Project begins at FM 1903 & IH 30 along FM 1903 and FM 36 to end project at intersection of FM 6 and SH 66 in Caddo Mills, Texas. The surveyor shall prepare up to thirty-six (36) right-of-way parcel documents, Horizontal and Vertical Control sheets, ROW Map Sheet and GIS geodatabase. The following itemized surveying tasks are requested for the project:

### **RIGHT OF WAY SERVICES**

- 1) **PROJECT CONTROL** - Establish 2 (two) project control throughout the project area using Global Positioning System (GPS) methodology. Horizontal values will be based on the Texas State Plane Coordinate System NAD 83 North Central Zone and scaled to surface by using the TxDOT Hunt County surface adjustment factor. Elevations will be GPS derived based on the NAVD88 datum. Prepare 8 ½" X 11" control sheets in TxDOT standards for the 2 (two) primary control monuments.
- 2) **RESEARCH/RIGHT OF ENTRY LETTERS/ABSTRACT MAP** – Research current ownership and create a Right-of Entry database. Prepare ROE letters and mail via certified mail. Maintain ROE database and update with responses from ROE letters. The Surveyor shall create an Abstract Map showing the current ownership, deed sketches along the project corridor.
- 3) **PROPERTY DESCRIPTIONS** The Surveyor shall set new ROW Monuments at each break in the proposed and existing ROW (Not to be set on existing ROW if located within a take) (Pink Plastic ROW Marker) and verify that parent tract ownership is current. Create up to thirty-six (36) EXHIBIT "A" documents with the original signature and seal on each document. EXHIBIT "A" documentation count includes the creation of any Affidavit Parcels, Multi-Part Parcels and Easements. Create one (1) set of Parcel Calculation sheets (for each parcel) which includes: the parcel number, point of commencing, commencing calls, the point of beginning, and the coordinate of each point within the parcel.

- 4) ROW MAP The Surveyor shall create a set of the ROW map sheets printed on Mylar at full size. The ROW maps shall show all utility and channel easements along with associated recording data for each easement. The Surveyor shall show all recorded conveyance documents for the Existing ROW, Drainage Easements; and Access Denial lines. If a recorded instrument cannot be found, then the statement "No Deed of Record Found" shall be shown for that portion. All proposed ROW lines and current Proposed Easements shall be identified. All TxDOT Parcels shall be numbered and parent tract owner's name and recording information shall be shown. Parcels that are shown on multiple sheets shall only be described on the sheet in which the fee block is shown (Unless the parcel is too big to fit on a single sheet). The statement "See Sheet "X" for Parcel "X" shall be placed near said parcel. Station-Offsets shall be identified at each break in the existing and proposed ROW (Station-Offsets do not need to be shown on the existing ROW if it's included in a take). Station-Offsets shall correlate with the EXHIBIT "A" documents (Extremes on the proposed ROW). Tick marks with Grid coordinates shall be placed in the four (4) corners of the map sheets.
  
- 5) The Surveyor shall create the GIS Geodatabase for the FM 36 ROW Mapping Project following the current TxDOT standards *at the time of creation*. The current standards are located at <http://www.txdot.gov/inside-txdot/division/right-of-way/delineation-system.html>. The Surveyor shall correlate all adjoining and parent tract deeds, subdivision plats and all Existing ROW deeds within the project limits. The Surveyor shall show the Parent tract and ROW dedication recordings under the SRC\_CMNT field in the Geodatabase. The Surveyor shall create a CD or DVD that is dated and includes the GIS Map Set (Geodatabase), copies of all associated ROW deeds, adjoining tract deeds, parent tract deeds and subdivision plats; a set of all electronic MicroStation, PDF and Word files required to reprint the EXHIBIT "A" documents, and copies for all Right-Of-Entry letters sent and the responses to each Right-Of-Entry letter.

**DELIVERABLES:**

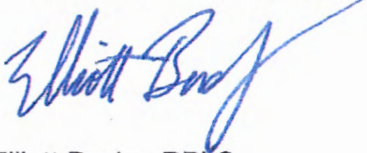
1. PDF of signed and sealed 8 ½" x 11" control sheets
2. PDF of signed and sealed 8 ½" x 11" Property Descriptions
3. PDF of 22"x34" Right of way Map
4. ARCGIS Geodatabase
5. DGN file of ROW map and Parcels.

ROE Letters (19 @ \$150)	\$ 5,400.00
Research/Ownership Spreadsheet/Abstract Map	\$ 11,280.00
Project Control	\$ 5,304.00
Property Descriptions	\$138,330.00
ROW Map	\$ 45,750.00
GIS Geodatabase	\$ 8,960.00

**Survey Subtotal** **\$215,024.00**

Gorrondona & Associates, Inc. can complete the above itemized surveying tasks for a fee of **\$215,024.00**. If you have any questions or need additional information, please contact me at (214)712-0600.

Sincerely,  
**GORRONDONA & ASSOCIATES, INC.**



Elliott Busby, RPLS  
Dallas Area Manager





8701 John Carpenter Freeway, Suite 250  
Dallas, Texas 75247-4640  
214.678.0227 Ph  
214.678.0228 Fax  
[www.hvj.com](http://www.hvj.com)

March 19, 2017 (Revised on May 26, 2021)

Mr. Wayne P. Hartt, PE  
Freese and Nichols, Inc. (FNI)  
5805 Main St. Suite B  
Frisco, TX 75034

Re: Hunt County Transportation Bond Program  
Geotechnical Investigation SH 36 from Joshua Street to FM 1903, and FM 1903 from SH 36 to IH-30  
Hunt County, Texas  
Owner: Hunt County  
HVJ Proposal No. DG 17 10044.7-G and DG 17 10044.8-G – Revision 1

Dear Mr. Hartt:

HVJ Associates® is pleased to submit this proposal for providing a geotechnical study for the above referenced project. This proposal outlines our understanding of the scope of the project and presents our approach and our fees for providing the study. This is a revision of the proposal submitted on March 19, 2017. The proposed services are for the alignments along SH 36 and FM 1903 combined (alignments were previously presented in two separate proposals).

We understand that the project involves approximately 1.6 miles of improvements along SH 36 from Joshua Street to FM 1903, and 1.6 miles of improvements along FM 1903 from SH 36 to IH-30, in Hunt County, Texas. Improvements include:

- Widening from a 2-lane to 5-lane divided roadway
- One bridge construction, about 70 feet long (single span) at West Caddo Creek;
- One bridge construction, about 210 feet long (3 70-foot spans) at West Caddo Creek;
- One bridge construction, about 50 feet long (single span) at West Caddo Creek Tributary;
- One bridge widening about 150 feet long (3 50-foot spans) at Elm Creek Creek;
- 800 total linear feet of MSE retaining wall at West Caddo Creek Tributary;
- 1,600 total linear feet of MSE retaining wall at Elm Creek; and
- A series of box culverts (7 ft x 4 ft box, 9 ft x 4 ft box, triple 9 ft x 3 ft box, and quadruple 6 ft x 6 ft box);

The project design and construction documents will be subject to review by Hunt County and TxDOT.

The purpose of this investigation is to perform a geotechnical field exploration and provide geotechnical recommendations in general accordance with the TxDOT geotechnical manual. This

Mr. Wayne Hartt, PE  
DG-17-10044.7 – Revision 1  
May 26, 2021

investigation does not include pavement design. We understand that pavement design will be under a separate contract with HVJ Associates, Inc.

### **Scope of Work**

The location of proposed soil borings for bridge design, embankment settlement analysis, retaining walls, pavement design, and slope stability and along storm drain alignment shall be determined in accordance with the latest edition of the State's Geotechnical Manual. Once we receive review from Freese and Nichols of the general locations and depths of proposed borings, we will perform soil borings (field work), soil testing and prepare the boring logs in accordance with the latest edition of the 2020 TxDOT Geotechnical Manual.

We propose drilling:

- Eight (8) bridge borings, advanced to 80 feet below existing ground or 20 feet into bedrock. Spacing of bridge borings shall not exceed 300 feet.
- Fourteen (14) retaining wall borings, advanced to 35 feet below existing ground. Spacing of bridge borings shall not exceed 200 feet.
- Eight (8) culvert borings, advanced to 30 feet below existing ground or 5 feet into bedrock. A minimum of one boring will be located at each proposed culvert location.
- Fifteen (15) pavement borings, advanced to 15 feet below existing ground. Spacing of pavement borings shall not exceed 1,500 feet.

Sampling will be performed continuously to depth of 10 feet and then at 5-foot intervals until termination. The borings will be used to determine site stratigraphy and to obtain samples for laboratory testing.

Selected laboratory testing will be conducted on samples that are representative of the materials obtained during the field exploration. The tests will be used to evaluate and classify the soils, identify subsurface site characteristics, and provide data for analysis.

All the field and laboratory tests will be performed according to ASTM or TxDOT standards, where applicable, or with other established procedures. Results of the field and laboratory data will be used to provide geotechnical recommendations for the proposed improvements.

A geotechnical report of our study will be prepared by an engineer specializing in soil mechanics and foundation engineering after reviewing available structural, geological, boring, and laboratory data. In general, the following items will be included in our report:

- Plan of borings,
- Table of laboratory results,
- Boring logs with geological formations,
- Generalized subsurface conditions,
- Groundwater level observations,
- Laboratory test results,
- Bridge foundation recommendations,
- Utility construction recommendations,

Mr. Wayne Hartt, PE  
DG-17-10044.7 – Revision 1  
May 26, 2021

- Retaining wall external stability analysis,
- Culvert foundation recommendations,
- Potential Vertical Rise (PVR) calculations (TxDOT procedure), and
- Construction considerations.

#### **Schedule**

HVJ expects to complete this assignment in approximately ten to twelve weeks following receipt of a written notice to proceed and all the right of entries required to complete the field work. If weather conditions and site access permits our field activities the following is our estimated schedule:

- Field Work (Marking boring locations, clearing utilities, obtaining permits if necessary, coordinating and completing drilling): 3-5 weeks
- Laboratory Testing: 4 weeks
- Engineering & Report Preparation: 3 weeks

HVJ assumes that right of entry for all properties will be obtained by Freese and Nichols. If requested, verbal recommendations can be provided throughout the progress of the investigation as testing is completed.

A draft report will be submitted for review by Freese and Nichols. After approval of HVJ's draft report, a final report of the study will be submitted.

#### **Fee and Conditions**

Based on the scope of work outlined, the fee for our services will be **\$254,969.00**. A breakdown for the cost estimate is included with this letter. Our accounting procedures call for the submittal of invoices on a month-end basis or at the conclusion of the project should its duration last less than a month. Our credit terms are net 30 days. Our invoicing schedule will follow as:

- Completion of Field Work: up to 60% Fees
- Completion of Lab Work: up to 80% Fees
- Submitted Draft Report up to 95% Fees
- Engineering & Report Preparation: up to 100% Fees

The following assumptions were made in preparing this proposal:

- Boring locations are accessible to truck mounted drilling equipment.
- Right of Entry to access boring locations by way or on residential properties will be obtained by Freese and Nichols.
- The exact boring locations will be located for approval in accordance with the proposal.
- Traffic control will be required for the street closure.
- HVJ will provide the traffic control for drilling and prepare a traffic control plan as required by the County/TxDOT for street occupancy and street cut permits. This level of effort assumes that standard TxDOT traffic control details are acceptable to Hunt County and the cities where the drilling will take place, and does not include the development of special traffic control plan drawings.
- We assume borings requiring traffic control will be drilled in the course of 7 consecutive daylight hours.

Mr. Wayne Hartt, PE  
DG-17-10044.7 – Revision 1  
May 26, 2021

- Retaining walls are assumed to be MSE fill-type walls. The maximum fill height is assumed to be 10 feet (at the bridge crossings).
- Field survey of the boring locations and elevation will be performed by Freese and Nichols.
- Laboratory samples will be held for no more than a period of 60 days following completion of the final report or 120 days following completion of the draft report, whichever is less.

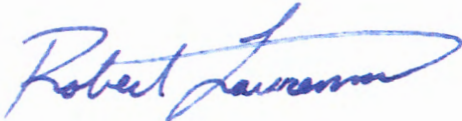
The scope of services described is appropriate for the project configuration presented to us. If anomalous conditions are encountered, or if the project configuration changes significantly, a change in work scope may be required. HVJ Associates® will recommend such changes when and if it is deemed necessary. No changes will be implemented without prior authorization from Freese and Nichols.

HVJ Associates® will use the Texas One Call System to locate buried utilities. We will take care to minimize damage to existing facilities; however, our activities may result in some damage to vegetation or unidentified existing utilities. This proposal specifically excludes any costs associated with restoration of vegetation or repair of utilities damaged by our operations that were not previously identified by Texas One Call and / or TxDOT.

If this letter meets with your approval, please sign and complete the indicated spaces below and forward a copy of the letter to us. HVJ Associates® is pleased to be of service on this project. Please call us if you have any questions or require additional information.

Sincerely,

**HVJ NORTH TEXAS - CHELLIAH CONSULTANT, INC.**



Robert H. Lawrence, PE  
Department Manager

Agreed to this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

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

Title: \_\_\_\_\_

Firm: \_\_\_\_\_

Phone No. \_\_\_\_\_

Date to Start Work: \_\_\_\_\_

**Estimate for Geotechnical Investigation**

SH 36 - from Joshua St. to FM 1903, and FM 1903 from SH 36 to IH-30  
 Hunt County, Texas  
 Freese and Nichols  
 HVJ Project No.: DG-17-10044.7-G and DG-17-10044.8-G  
 May 26, 2021 (Revision 1)

**Geotechnical Fee Estimate Breakdown (2017-2019)**

**Geotechnical Field Work:**

- Eight (8) Bridge borings (80 feet deep each, or 20 feet into bedrock)
- Fourteen (14) Retaining Wall borings (35 feet deep each)
- Eight (8) CBC borings (30 feet deep each, or 5 feet into bedrock)
- Fifteen (15) pavement borings (15 feet deep)
- Three (3) bulk samples

Drill Rig Mobilization/Demobilization	1	@	\$750.00	LS	\$750.00
Drilling and Sampling Soil with Texas Cone Penetration (0' - 100')	1130	ft @	\$33.00	per ft	\$37,290.00
Coring Rock with Texas Cone Penetration (0' - 100')	240	ft @	\$40.00	per ft	\$9,600.00
Drilling and Sampling without Texas Cone Penetration (0' - 50')	225	ft @	\$30.00	per ft	\$6,750.00
Traffic Control	27	@	\$2,500.00	per day	\$67,500.00
Pavement Coring Mobilization, Equipment, Crew	4	@	\$500.00	per day	\$2,000.00
Pavement Coring (0" - 12")	45	@	\$120.00	per core	\$5,400.00
Pavement Patching	45	@	\$50.00	each	\$2,250.00
Lodging and Meals (3 person crew)	27	@	\$450.00	per day	\$12,150.00
Field Coordination, Staking and Logging - Staff Engineer/Geologist	290	@	\$105.00	per hour	\$30,450.00
Vehicle Trips (includes trips for support trucks)	28	@	\$100.00	per trip	\$2,800.00
				<b>Subtotal</b>	<b>\$176,946.00</b>
<b>Laboratory Testing</b>					
Moisture Content	302	ca @	\$12.00	each	\$3,624.00
Atterberg Limits	174	ca @	\$65.00	each	\$11,310.00
Percent Passing No. 200 Sieve	174	ca @	\$45.00	each	\$7,830.00
Sieve Analysis	16	ca @	\$55.00	each	\$880.00
Hydrometer	16	ca @	\$125.00	each	\$2,000.00
One Dimensional Consolidation Properties of Soil	11	ca @	\$375.00	each	\$4,125.00
Determination of Sulfat Content	11	ea @	\$120.00	each	\$1,320.00
Unconfined Compressive Strength - Soil	106	ca @	\$55.00	each	\$5,830.00
Unconsolidated-Undrained (UU) Triaxial Testing - Soil	22	ca @	\$120.00	each	\$2,640.00
Consolidated-Undrained (CU) Triaxial Testing - Soil (multi-stage)	2	ca @	\$1,200.00	each	\$2,400.00
Unconfined Compressive Strength - Rock	38	ca @	\$80.00	each	\$3,040.00
California Bearing Ration - CBR (three-point)	2	ca @	\$550.00	each	\$1,100.00
Texas Triaxial Test	1	ca @	\$1,800.00	each	\$1,800.00
				<b>Subtotal</b>	<b>\$47,899.00</b>
<b>Geotechnical Engineering</b>					
Senior Project Engineer, P.E.	16	hr @	\$195.00	per hour	\$3,120.00
Project Manager, P.E.	30	hr @	\$165.00	per hour	\$4,950.00
Project Engineer, P.E.	44	hr @	\$140.00	per hour	\$6,160.00
Staff Engineer, E.I.T.	140	hr @	\$105.00	per hour	\$14,700.00
Engineering Aide/Admin	20	hr @	\$60.00	per hour	\$1,200.00
				<b>Subtotal</b>	<b>\$30,130.00</b>
				<b>Total</b>	<b>\$254,969.00</b>



1701 Directors Boulevard  
Suite 910  
Austin, TX 78744  
737-222-5151  
[www.hvj.com](http://www.hvj.com)

May 25, 2021

Mr. Wayne P. Hartt, PE  
Freese and Nichols, Inc. (FNI)  
5805 Main St. Suite B  
Frisco, TX 75034

Re: Hunt County Transportation Bond Program  
Pavement Engineering Design  
FM 36 (FM 1903 to SH 66) & FM 1903 (IH 30 to FM 36)  
Hunt County, Texas  
Owner: Hunt County  
HVJ Proposal No. DG 17 10044.7-P & DG 17 10044.8-P

Dear Mr. Hartt:

HVJ Associates, Inc.(HVJ) is pleased to submit this scope and fee proposal for providing a pavement design report for the subject sites. This letter outlines HVJ's approach for providing a pavement design for the proposed pavement reconstruction.

### **Project Description**

It is understood that the project will improve operations along FM 36 (FM 1903 to SH 66) and FM 1903 (IH 30 to FM 36), approximately 3.5 miles. Currently a rural 2-lane roadway, improvements will include reconstruction and widening to a 5-lane divided roadway with curb and gutter and sidewalks. The project design and construction documents will be subject to review by Hunt County and TxDOT under applicable regulatory authorities.

### **Pavement Design Scope**

HVJ North Texas will perform a geotechnical investigation as described in HVJ Proposals DG 17 10044.7 and DG-1710044.8. Utilizing the subsurface and laboratory information from that project, HVJ will design two flexible pavement section alternatives including subgrade stabilization if necessary to achieve a 20-year design life. Planned cross section design alternatives include: Hot Mix Asphalt Concrete (HMAC) over Flexible Base, and HMAC over HMAC Base. The pavement design will include consideration of traffic loads to be provided by FNI and/or Hunt County in the form of TxDOT TP&P data. The traffic data required includes current and projected traffic counts and truck percentages. The TxDOT pavement design procedure using FPS21 analysis program will be used along with Texas Triaxial and Mechanistic design checks, as well as any available local pavement design guide.

HVJ proposes to utilize nondestructive deflection testing (NDT) with the Falling Weight Deflectometer (FWD) to calculate subgrade design parameters for input into the FPS21 software, as per TxDOT requirements. The data may also be used to finalize boring locations to ensure

Mr. Wayne Hartt, PE  
DG 17 10044.7-P & .8-P  
May 25, 2021

geotechnical data is collected for any changes in subgrade conditions identified along the alignment in profiles of the NDT data.

HVJ will review the construction documents at the various submittal phases to confirm HVJ's pavement design recommendations are properly addressed.

### **Engineering Report Deliverable**

HVJ anticipates providing pavement design deliverables. In general, the following items will be included in HVJ's geotechnical report:

- Flexible pavement thickness design recommendations
- Subgrade stabilization, if determined necessary

HVJ will review the construction documents (plans and specifications) for the 60% and 90% submittals during the Design Phase to confirm HVJ's pavement design recommendations are properly addressed.

### **Schedule**

The estimated schedule for the geotechnical and pavement design work is as follows:

Field Investigations (NDT)	2 Weeks after NTP
Draft Pavement Design Report	3 Weeks after completion of laboratory testing
Final Pavement Design Report	2 Weeks after receipt of all comments from County and TxDOT

### **Fees**

Based on the scope of work and conditions as outlined below, the estimated fee for HVJ services will not exceed \$32,659. Attached is a breakdown of the proposed fees for the project area area based on recently approved TxDOT rates.

### **Insurance**

Insurance certificates verifying HVJ's general liability, auto, worker compensation, and errors and omissions insurance coverage, listing FNI as a certificate holder, will be provided upon request.

### **Invoices**

Invoices will be submitted at the end of each month based on the time spent on the work and items completed. HVJ credit terms are 30 days net.

### **Conditions:**

The following assumptions were made:

- No temporary pavement design alternatives are planned for design.

Mr. Wayne Hartt, PE  
DG 17 10044.7-P & .8-P  
May 25, 2021

- Only flexible pavement design is included in the scope. No concrete pavement design is included.
- HVJ will review up to two design submittals anticipated at 60% and 90%.
- FNI will request TxDOT TP&P Pavement Design Analysis format from the Paris District.
- No travel for site meetings or conferences are included and it is assumed that all communications can be via telephone conference calls or emails.

HVJ is pleased to be of service on this project. We look forward to working with you on this project.

Sincerely,

**HVJ ASSOCIATES, INC.**

A handwritten signature in blue ink that reads "R. F. Carmichael III". The signature is written in a cursive style with a stylized flourish at the end.

R. F. (Frank) Carmichael III, PE  
Project Manager

FC/fc/rj



Mr. Wayne Hartt, PE  
 DG 17 10044.7-P & .8-P  
 May 25, 2021

**PAVEMENT DESIGN & NDT**

**FM 36 & FM 1903**

**FREESE NICHOLS**

**HVJ Project No. DG1710044.7-P & DG1710044.8-P**

**Engineering & Administrative Personnel**

Project Manager, PE	20	\$241.80	per hour	\$4,836.00
Pavement Engineer, PE	54	\$169.91	per hour	\$9,175.14
Engineer-in-Training, EIT	87	\$114.36	per hour	\$9,949.32
Engineering Technician	22	\$98.03	per hour	\$2,156.66
Administrative/Clerical	2	\$75.15	per hour	\$150.30

**SubTotal Labor \$26,267.42**

**Direct Costs**

Non-Destructive Deflection Testing				
Mileage	500	\$0.56	per mile	\$280.00
Falling Weight Deflection (FWD)	1	\$2,900.00	day	\$2,900.00
Traffic Control Services, Arrow Boards and Attenuator trucks - Medium Project (Includes labor, equipment and fuel)				
	1	\$2,800.00	day	\$2,800.00
Lodging/Hotel - Taxes and Fees	2	\$35.00	day/person	\$70.00
Lodging/Hotel (Taxes/fees not included)	2	\$96.00	day/person	\$192.00
Meals (Excluding alcohol & tips) (Overnight stay required)	3	\$50.00	day/person	\$150.00

**SubTotal Directs \$6,392.00**

**Total Project \$32,659.42**

May 26, 2021

Wayne Hart, P.E.  
Freese & Nichols, Inc.  
5805 Main St. Suite B  
Frisco, TX 75034  
Attn: Mr. Wayne Hartt, PE

**RE: Subsurface Utility Engineering  
Hunt County Project - FM 36 & FM 1903 – UTL21-333**

Dear Mr. Hartt:

The Rios Group, Inc. (TRG) is pleased to submit a cost proposal for Subsurface Utility Engineering (SUE) required for the above referenced project. This proposal is based on our phone conversation on March 19, 2019.

#### **Introduction**

TRG will perform the SUE work required for this project in general accordance 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 as follows:

- Quality Level D (QLD) – Information derived from existing utility records;
- Quality Level C (QLC) – QLD information supplemented with information obtained by surveying visible above-ground utility features such as valves, hydrants, meters, manhole covers, etc.
- Quality Level B (QLB) – Two-dimensional (x,y) information obtained through the application and interpretation of non-destructive surface geophysical methods. Also known as “**designating**” this quality level provides the horizontal position of subsurface utilities within approximately one foot.
- Quality Level A (QLA) – Three dimensional (x,y,z) utility information obtained utilizing non-destructive vacuum excavation equipment to expose utilities at critical points which are then tied down by surveying. Also known as “**locating**”, this quality level provides precise horizontal and vertical positioning of utilities within approximately 0.05 feet.

It is the responsibility of the SUE provider to perform due-diligence regarding records research (QLD) and acquisition of available utility records. The due-diligence provided for this project will consist of visually inspecting the work area for evidence of utilities and reviewing the available utility record information. Utilities that are not identified through these efforts will be here forth referred to as “unknown” utilities. TRG personnel will scan the defined work area using electronic prospecting equipment to search for “unknown” utilities. However, TRG is not responsible for designating and locating these “unknown” utilities.

### **Scope of Work**

Based on information provided by Freese and Nichols, Inc. (FNI), TRG has developed a preliminary scope for the SUE work required for this project. The scope of work may be modified, with FNI's concurrence, during the performance of the SUE fieldwork if warranted by actual field findings.

The scope of this proposal includes QLB SUE only. Utilities to be designated include water, waste water, communication, electric and gas/petroleum pipelines. Overhead inventory is included in the scope of SUE investigation for this project. Designating will be performed within the following limits:

- FM 36 - designate all utilities within public ROW starting at the intersection of FM 36 and Joshua St. traveling 9800' south to approximately 1700' south of the intersection of FM 36 and FM 1903.
- FM 1903 - designate all utilities within public ROW starting at the intersection of FM 1903 and FM 36 traveling 8000' east to approximately 300' before the intersection of the of FM 1903 and Interstate 30.

### **Designating Procedures**

Prior to beginning field designating activities, TRG's field manager will review the project scope of work and available utility records. Once these initial reviews are complete, the field manager and technicians will begin designating the approximate horizontal position of known subsurface utilities within the specified project limits. A suite of geophysical equipment (electromagnetic induction, magnetic) will be used to designate metallic/conductive utilities (e.g. steel pipe, electrical cable, telephone cable). TRG will establish routine/ordinary traffic control (cones and free-standing signage, etc.) whenever required as part of our standard pricing. If non-routine traffic control measures are required (barricades, flag person, changeable message board, etc.), these services will be considered extra.

Accurate collection and recording of designated utilities is a critical component of the SUE process. TRG utilizes a proven method of collecting and recording survey information once the utilities have been designated in the field. TRG's field manager will produce detailed sketches depicting each utility as well as relevant surface features such as roadways, buildings, manholes, fire hydrants, utility pedestals, valves, meters, etc. Each utility will be labeled with a unique ID code. For example, if two different water lines exist on the project, one will be labeled W1 and the other W2. Paint and pin flags will be used to designate the utilities in the field. A labeled pin flag or paint mark will be used to mark each location where a survey shot is required. The locations will be numbered sequentially for each individual utility line. For example, if there are 10 shots required on water line W1, the points will be numbered W1-1 through W1-10.

### **Deliverables**

TRG will produce a utility file, in AutoCAD or MicroStation format, depicting the type and horizontal location of the designated utility. The size of the utility will be presented in the utility file if this information is indicated on available record drawings. TRG will also provide signed and sealed SUE plan sheet when directed by FNI. FNI will furnish background files necessary to prepare and QA/QC deliverables.

### **Schedule**

Field work can commence within approximately 3 weeks after receipt of NTP. TRG estimates that the SUE designation can be completed in approximately 40 working days. weeks, broken down as follows:

- SUE QLB designating – 30 working days
- Survey of QLB and process data – 5 working days (by others)
- Preparation of QLB CADD deliverable – 5 working days

### **Proposed Fees**

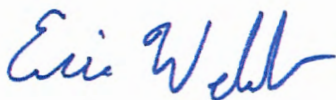
TRG proposes to provide the services as described above for a cost of **One Hundred Fifty-Six Thousand Five Hundred Fifty Dollars & 00/100 (\$156,550.00)**. A breakdown of cost is included by separate “Table 1” exhibits for each phase.

*Please note, this proposal is based on assumed quantities after review of the project. TRG will only invoice for actual quantities. This is a not-to-exceed amount. If it appears that quantities will be exceeded, TRG will notify FNI. and request authorization to submit a supplemental agreement to increase the fee prior to proceeding with additional work.*

We look forward to working with FNI on this project. If there are questions or if additional information is needed, please do not hesitate to contact us.

Sincerely,

**The Rios Group, Inc.**



**Eric Webb**  
**Sr. Project Manager**



**THE RIOS GROUP**

**Estimate for Subsurface Utility Engineering  
Hunt County FM 36 and FM 1903**

Table 1

Direct Expenses	Rate	Units	Unit Description	Sub-Total	Notes
Admin./Permit	\$500.00	0	LS	\$ -	
Traffic Control	\$1,200.00	0	Daily	\$ -	
Survey	\$1,750.00	0	Daily	\$ -	
Lodging	\$100.00	30	Daily	\$ 3,000.00	
Meals	\$35.00	30	Daily	\$ 1,050.00	
<b>Sub-Total</b>					\$ 4,050.00

QL "B", "C&D"	Rate	Units	Unit Description	Sub-total	Notes
QL "B" by LF	\$1.50	85,000	LF	\$ 127,500.00	
QL "C&D"	\$0.50	50,000	LF	\$ 25,000.00	Includes aerial utilities
<b>Sub-Total</b>					\$ 152,500.00

SUE QL "A" (Test Holes)					
Depth	In Pavement Using Coring Machine	Assumed Quantity	Outside Pavement	Assumed Quantity	
0-4 ft.	\$ 1,150.00	0	\$ 950.00	0	\$ -
4-8 ft.	\$ 1,450.00	0	\$ 1,250.00	0	\$ -
8-12 ft.	\$ 1,750.00	0	\$ 1,550.00	0	\$ -
12-18 ft.	\$ 2,500.00	0	\$ 2,300.00	0	\$ -
QL "A" Daily	\$ 3,300.00	0	Daily		\$ -
<b>QL "A" Sub-Total</b>		0		0	\$ -

<b>Total Estimated Cost =</b>				<b>\$ 156,550.00</b>
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Notes:



#16.815

WORK AUTHORIZATION #3  
SH 24 and SH 11

<b>Client:</b> Hunt County Hunt County Courthouse 2507 Lee Street Greenville, Texas 75401	<b>FNI Project No.:</b> HUC21XXXXX
	<b>Phase/Task/Dept. No.:</b>
	<b>Date:</b> June 01, 2021
<b>This authorization is in accordance with the terms and conditions outlined in the Professional Services Agreement executed on April 11, 2017 and Amendments.</b>	
<b>Project Description:</b> Hunt County Transportation Bond Project – SH 24 and SH 11 Limits - SH 24 from south of Culver Street to north of Live Oak Street and SH 11 (Culver Street) from West of SH 24 to East of Monroe Street	
<b>Description of Services:</b> The Scope of Services includes roadway design services to provide TxDOT with Final Plans, Specifications, and Estimates (PS&E). All interim and final design submittals shall meet current TxDOT standards and policies. The roadway design will reflect the traffic calming concepts previously developed and presented to Texas A&M Commerce and the City of Commerce. These include pedestrian and signalization improvements at the intersections along SH 24 at Culver Street, University Ave., and Live Oak Street. A raised median will be designed along SH 11 between Culver Street and Monroe Street. See attached detailed SCOPE OF SERVICES.	
<b>Compensation shall be as follows:</b> FNI shall be paid for the services described above at on a cost-plus basis (not-to exceed) fee of Seven Hundred Fourteen Thousand, Six Hundred Eighty-Six Dollars (\$714,686). Refer to the attached billing rate table and fee summary table and for a detailed breakdown.	
	<b>Amount of this Authorization</b> <b>\$714,686</b>
<b>Schedule:</b> The project schedule shall be in accordance with the attached "SH 24 and SH 11 Project Timeline". Schedule performance is contingent upon timely review of interim design submittals by TxDOT.	

The above described services shall proceed upon return of this Task Authorization. Services will be billed as they are done. All other provisions, terms, and conditions of the agreement for services which are not expressly amended shall remain in full force and effect.

- A contract modification will be submitted.
- This Task Authorization will serve as notice to proceed.

**FREESE AND NICHOLS, INC.:**

**HUNT COUNTY:**

BY: \_\_\_\_\_

BY:  \_\_\_\_\_

Chris Bosco, P.E.  
Print or Type Name

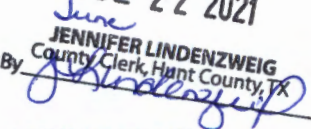
Bobby W. Stovall  
Print or Type Name

TITLE: Principal

TITLE: Hunt County Judge

DATE: \_\_\_\_\_

DATE: 6/22/2021

FILED FOR RECORD  
 at 1:00 o'clock P M  
 JUL 22 2021  
 June  
 JENNIFER LINDENZWEIG  
 County Clerk, Hunt County, TX  
 By: 

## **SCOPE OF SERVICES**

### **Hunt County - Work Authorization #3 Professional Engineering Design Services**

#### **Final Engineering Design for: SH 24 and SH 11 in Commerce Texas**

#### **BACKGROUND AND OBJECTIVE**

The scope of services set forth herein represents final engineering design services for proposed safety and capacity improvements along SH 24 from south of SH 11 (Culver St.) to north of Live Oak Street, and SH 11 (Culver Street) from west of SH 24 to east of Monroe Street in Commerce, Texas. This work effort will advance preliminary engineering and environmental tasks executed under Work Authorizations #1 that identified concepts to improved safety by through implementation of traffic calming features. The roadway design will reflect the traffic calming concepts previously developed and presented and accepted by Texas A&M University/Commerce and the City of Commerce. These include pedestrian and signalization improvements at the intersections along SH 24 at Culver Street, University Ave., and Live Oak Street. A raised median will be designed along SH 11 between Culver Street and Monroe Street.

The objective of this work authorization is to prepare final plans, specifications, and estimates (PS&E) for construction contract letting by TxDOT-Paris District. The final plans and specifications, in combination with agreements to be executed between TAMU/C, TxDOT and private property owners, along with relocation of existing utilities found to conflict with the project will result in the project being ready for bidding and construction.

Final PS&E design deliverables will be developed in close coordination with Hunt County, TxDOT-Paris District, TAMU/C, and the City of Commerce. The final PS&E deliverables will be developed in accordance with all TxDOT policies and procedures and shall be submitted directly to TxDOT-Paris District for review and approval.

#### **SCOPE OF SERVICES**

1. Project Management
  - a. Prepare and maintain milestone Project Work Schedule depicting various tasks, milestones, and deliverables. Prepare monthly progress reports and project status updates.
  - b. Prepare and direct stakeholder coordination / design reviews and meetings with TxDOT, TAMU/C, City of Commerce, Hunt County, affected property owners, and franchise utility owners.
  - c. Perform interdisciplinary design and progress meetings with consultant design team. Maintain and updated critical path design schedule and resource assignments.
  - d. Provide on-going quality assurance and quality control to ensure completeness of product and compliance with TXDOT policies and procedures.

e. **Utility Coordination.**

- i. **Utility kickoff meeting – Provide initial roadway and storm drain designs to all affected city and franchise utilities. Discuss any planned utility improvements and opportunities to avoid impact to existing facilities. Review all as-built or proposed utility plans.**
- ii. **Utility conflict meeting – Prepare a utility conflict matrix that identifies the apparent disposition of all existing underground utilities located within or immediately adjacent to the project right-of-way.**
- iii. **Follow up meetings and coordination – Continue the exchange of information and plans with utility owners to coordination final roadway and bridge design with utility relocation plans. Review preliminary and final utility relocation plans prior to each utility owner’s formal Utility Installation Request (UIR) to TxDOT.**

2. **Geotechnical Investigation and Engineering.**

Reference attached Scope of Services proposals from HVJ Associates for Geotechnical Study (dated May 26, 2021) generally describing geotechnical field exploration, lab testing, and engineering recommendations for traffic signal support foundations.

3. **Right-of-Way Mapping Services – Not Applicable**

4. **Roadway Design and Plans Production.**

Develop roadway design and component plans and related deliverables in accordance with the TxDOT Roadway Design Manual (RDM) and PS&E Preparation Manual. Component plans sets to include Typical Sections, Paving Plan and Profile, Intersection Details, Special Details and Profiles, Cross Sections, Signalization, Signing and Markings and Erosion Control Plans.

5. **Drainage Design and Plans Production**

Develop Drainage Design and component plans and related deliverables in accordance with the TxDOT Hydraulic Design Manual and PS&E Preparation Manual. The proposed stormwater drainage system design will include modifications to the existing drainage infrastructure as needed to accommodate proposed roadway modifications. Component plans sets to include Drainage Area Map, Drainage Calculations, Storm Drain Plan and Profile, Lateral Profiles, and Culvert Layout sheets.

6. **Bridge and Miscellaneous Structures Design – Not Applicable**



Hunt County Professional Services Agreement with and Freese and Nichols, Inc.  
W.A. No. 3 – Scope of Services for SH 24 and SH 11 Final Engineering Design

7. Bidding and Construction Phase Services.

- i) Participate in Pre-Bid Meetings and assist TxDOT in providing response to bidder questions. Prepare addenda to the bid documents, as necessary.
- ii) Attend Preconstruction Meeting with TxDOT, CEI team and contractor.
- iii) Review shop drawing and materials submittals as intended for approval of the engineer-of-record as referenced in the construction specifications.
- iv) Provide clarification as to the designer's intent and assist the TxDOT and Construction Engineering and Inspection CEI team responding to formal requests for information (RFI's).
- v) Attend up to 6 site visits during construction as needed to assist the CEI team as requested by TxDOT.

DELIVERABLES

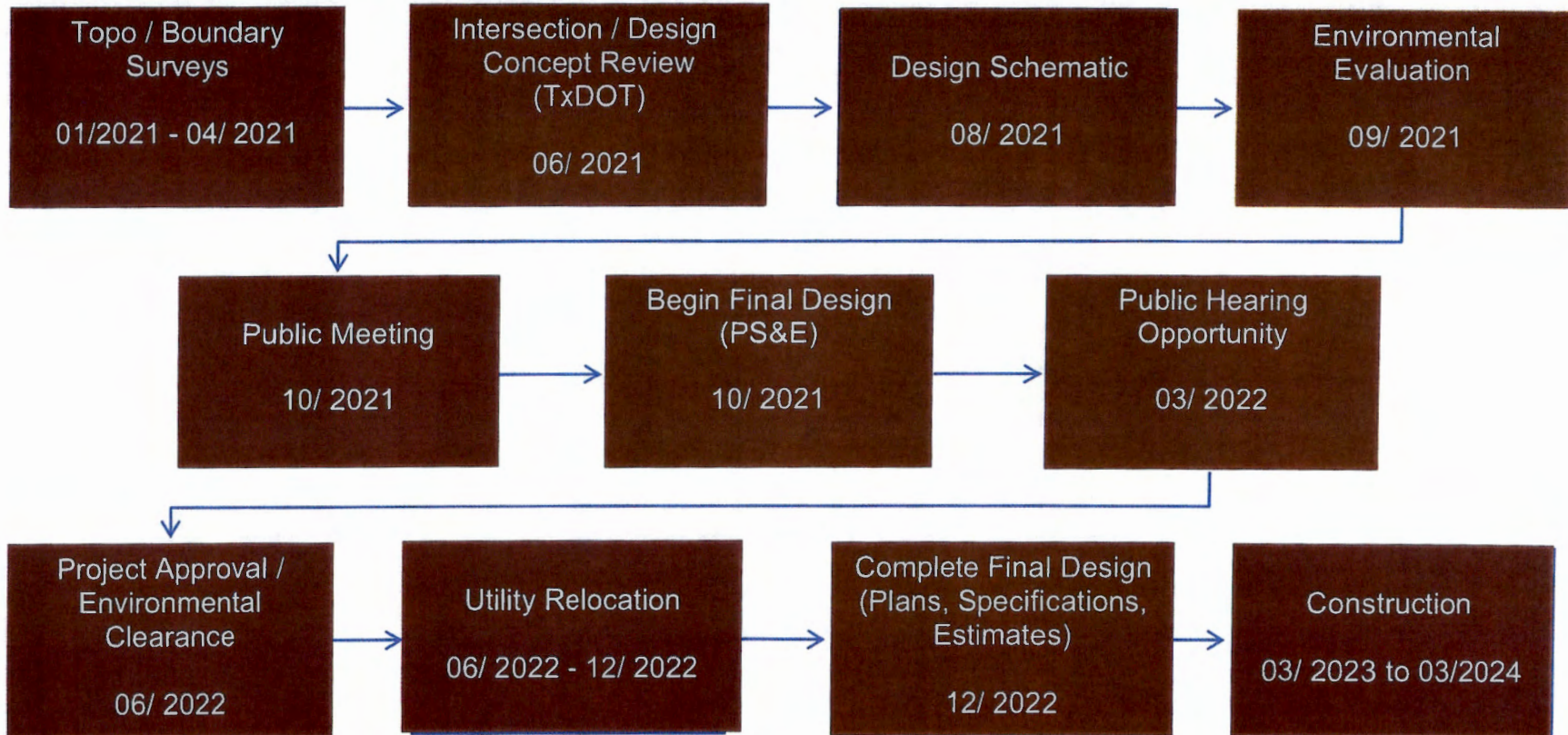
Work products will include all required design plans, design reports/documentation, cost estimates, and special construction specifications described in the TxDOT PS&E Preparation Manual. Design submittals for TxDOT review will be made at the 60%, 90%, 95%, and Final (100%) Design Phases.

ADDITIONAL SERVICES

The following are excluded from this Scope of Services:

1. Right-of-Way Acquisition Services.
  - a) Property Appraisals, Appraisal Reviews, and Cost-to-Cure Analysis.
  - b) Expert Witness Testimony for Eminent Domain Legal Proceedings.
2. Construction Contract Administration Services.
  - a) Review of contractor pay requests.
  - b) Review of contractor change order requests.
  - c) Review of contractor value engineering proposals.
  - d) Material sampling and laboratory testing.

## SH 24 / SH 11 Project Time Line





8701 John Carpenter Freeway, Suite 250  
Dallas, Texas 75247-4640  
214.678.0227 Ph  
214.678.0228 Fax  
[www.hvj.com](http://www.hvj.com)

May 26, 2021

Mr. Wayne P. Hartt, PE  
Freese and Nichols, Inc. (FNI)  
5805 Main St. Suite B  
Frisco, TX 75034

Re: Hunt County Transportation Bond Program  
Geotechnical Investigation SH 24 and SH 11 Pavement Widening and Overlay  
Hunt County, Texas  
Owner: Hunt County  
HVJ Proposal No. DG 17 10044.9 – Revision 1

Dear Mr. Hartt:

HVJ Associates® is pleased to submit this proposal for providing a geotechnical study for the above referenced project. This proposal outlines our understanding of the scope of the project and presents our approach and our fees for providing the study. This is a revision of the proposal submitted on March 19, 2017.

We understand that the project involves approximately 0.68 miles of improvements along SH 34 from Live Oak to Culver Street, and 0.55 miles along SH 11 (Culver Street) from SH 24 to Monroe Street, in Hunt County, Texas. Improvements also include installing three traffic control signals, at the intersection of SH 24 and SH 11 (Culver Street), at the intersection of SH 24 and University Drive (in the median), and at the intersection of SH 24 and Live Oak Street. We understand that the existing pavement thickness and base/stabilization thickness will be matched for the pavement widening and overlay that will be implemented. The project design and construction documents will be subject to review by Hunt County and TxDOT.

The purpose of this investigation is to perform a geotechnical field exploration and provide geotechnical recommendations in general accordance with the TxDOT geotechnical manual. This investigation does not include pavement design. We understand that pavement design will be under a separate contract with HVJ Associates, Inc.

### **Scope of Work**

The location of proposed pavement cores and traffic signal borings shall be determined in accordance with the latest edition of the State's Geotechnical Manual. Once we receive review from Freese and Nichols of the general locations and depths of proposed boring, we will perform soil borings (field work), soil testing and prepare the boring logs in accordance with the latest edition of the 2020 TxDOT Geotechnical Manual.

Mr. Wayne Hartt, PE  
DG 17 10044.9 – Revision 1  
May 26, 2021

We propose drilling :

- Six (6) pavement cores, to recover pavement and base thicknesses. Spacing of pavement cores shall not exceed 1,500 feet.
- Three (3) traffic signal foundation borings, advanced to 50 feet below existing ground or 20 feet into bedrock.

Sampling will be performed continuously to depth of 10 feet and then at 5-foot intervals until termination. The borings will be used to determine site stratigraphy and to obtain samples for laboratory testing.

Selected laboratory testing will be conducted on samples that are representative of the materials obtained during the field exploration. The tests will be used to evaluate and classify the soils, identify subsurface site characteristics, and provide data for analysis.

All the field and laboratory tests will be performed according to ASTM or TxDOT standards, where applicable, or with other established procedures. Results of the field and laboratory data will be used to provide geotechnical recommendations for the proposed improvements.

A geotechnical report of our study will be prepared by an engineer specializing in soil mechanics and foundation engineering after reviewing available structural, geological, boring, and laboratory data. In general, the following items will be included in our report:

- Plan of borings,
- Table of laboratory results,
- Boring logs with geological formations,
- Generalized subsurface conditions,
- Groundwater level observations,
- Laboratory test results,
- Pavement core and base information, and
- Overhead sign structure foundation recommendations, and
- Construction considerations.

#### **Schedule**

HVJ expects to complete this assignment in approximately six to eight weeks following receipt of a written notice to proceed and all the right of entries required to complete the field work. If weather conditions and site access permits our field activities the following is our estimated schedule:

- Field Work (Marking boring locations, clearing utilities, obtaining permits if necessary, coordinating and completing drilling): 2-3 weeks
- Laboratory Testing: 2 weeks
- Engineering & Report Preparation: 2-3 weeks

HVJ assumes that right of entry for all properties will be obtained by Freese and Nichols. If requested, verbal recommendations can be provided throughout the progress of the investigation as testing is completed.

A draft report will be submitted for review by Freese and Nichols. After approval of HVJ's draft report, a final report of the study will be submitted.

Mr. Wayne Hartt, PE  
DG 17 10044.9 – Revision 1  
May 26, 2021

## Fee and Conditions

Based on the scope of work outlined, the fee for our services will be **\$34,095.00**. A breakdown for the cost estimate is included with this letter. Our accounting procedures call for the submittal of invoices on a month-end basis or at the conclusion of the project should its duration last less than a month. Our credit terms are net 30 days. Our invoicing schedule will follow as:

- Completion of Field Work: up to 60% Fees
- Completion of Lab Work: up to 80% Fees
- Submitted Draft Report up to 95% Fees
- Engineering & Report Preparation: up to 100% Fees

The following assumptions were made in preparing this proposal:

- Boring locations are accessible to truck mounted drilling equipment.
- Right of Entry to access boring locations by way or on residential properties will be obtained by Freese and Nichols.
- The exact boring locations will be located for approval in accordance with the proposal.
- Traffic control will be required for the street closure.
- HVJ will provide the traffic control for drilling and prepare a traffic control plan as required by the County/TxDOT for street occupancy and street cut permits. This level of effort assumes that standard TxDOT traffic control details are acceptable to Hunt County and the cities where the drilling will take place, and does not include the development of special traffic control plan drawings.
- We assume borings requiring traffic control will be drilled in the course of 7 consecutive daylight hours.
- Field survey of the boring locations and elevation will be performed by Freese and Nichols.
- Laboratory samples will be held for no more than a period of 60 days following completion of the final report or 120 days following completion of the draft report, whichever is less.

The scope of services described is appropriate for the project configuration presented to us. If anomalous conditions are encountered, or if the project configuration changes significantly, a change in work scope may be required. HVJ Associates® will recommend such changes when and if it is deemed necessary. No changes will be implemented without prior authorization from Freese and Nichols.

HVJ Associates® will use the Texas One Call System to locate buried utilities. We will take care to minimize damage to existing facilities; however, our activities may result in some damage to vegetation or unidentified existing utilities. This proposal specifically excludes any costs associated with restoration of vegetation or repair of utilities damaged by our operations that were not previously identified by Texas One Call and / or TxDOT.

If this letter meets with your approval, please sign and complete the indicated spaces below and forward a copy of the letter to us. HVJ Associates® is pleased to be of service on this project. Please call us if you have any questions or require additional information.

Mr. Wayne Hartt, PE  
DG 17 10044.9 – Revision 1  
May 26, 2021

Sincerely,

**HVJ NORTH TEXAS - CHELLIAH CONSULTANT, INC.**



Robert H. Lawrence, PE  
Department Manager

Agreed to this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

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

Title: \_\_\_\_\_

Firm: \_\_\_\_\_

Phone No. \_\_\_\_\_

Date to Start Work: \_\_\_\_\_

**Estimate for Geotechnical Investigation**  
 SH 24 and SH 11 Pavement Widening and Overlay  
 Hunt County, Texas  
 Freese and Nichols  
 HVJ Project No.: DG-17-10044.9-G  
 May 26, 2021 (Revision 1)

**Geotechnical Fee Estimate Breakdown**

**Geotechnical Field Work:**

- Three (3) traffic signal foundation borings (50 feet deep, or 20 feet into bedrock)

- Six (6) Pavement Cores

Drill Rig Mobilization/Demobilization	1	@	\$750.00 LS	\$750.00
Drilling and Sampling Soil with Texas Cone Penetration (0' - 100')	150	ft @	\$33.00 per ft	\$4,950.00
Drilling and Sampling Soil with Texas Cone Penetration (0' - 100')	0	ft @	\$40.00 per ft	\$0.00
Drilling and Sampling Soil with Texas Cone Penetration (0' - 100')	0	ft @	\$30.00 per ft	\$0.00
Traffic Control	3	@	\$2,500.00 per day	\$7,500.00
Pavement Coring Mobilization, Equipment, Crew	2	@	\$500.00 per day	\$1,000.00
Pavement Coring (0" - 12")	8	@	\$120.00 per core	\$960.00
Pavement Patching	8	@	\$50.00 each	\$400.00
Lodging and Meals (3 person crew)	3	@	\$450.00 per day	\$1,350.00
Field Coordination, Staking and Logging - Staff Engineer/Geologist	50	@	\$105.00 per hour	\$5,250.00
Vehicle Trips (includes trips for support trucks)	4	@	\$100.00 per trip	\$400.00
			<b>Subtotal</b>	<b>\$22,560.00</b>

**Laboratory Testing**

Moisture Content	30	ea @	\$12.00 each	\$360.00
Atterberg Limits	12	ea @	\$65.00 each	\$780.00
Percent Passing No. 200 Sieve	12	ea @	\$45.00 each	\$540.00
Sieve Analysis	3	ea @	\$55.00 each	\$165.00
Hydrometer	3	ea @	\$125.00 each	\$375.00
One Dimensional Consolidation Properties of Soil	0	ea @	\$375.00 each	\$0.00
Determination of Sulfate Content	2	ea @	\$120.00 each	\$180.00
Unconfined Compressive Strength - Soil	9	ea @	\$55.00 each	\$495.00
Unconsolidated-Undrained (UU) Triaxial Testing - Soil	3	ea @	\$120.00 each	\$360.00
Consolidated-Undrained (CU) Triaxial Testing - Soil (multi-stage)	0	ea @	\$1,200.00 each	\$0.00
Unconfined Compressive Strength - Rock	6	ea @	\$80.00 each	\$480.00
California Bearing Ration - CBR (three-point)	0	ea @	\$550.00 each	\$0.00
Texas Triaxial Test	0	ea @	\$1,800.00 each	\$0.00
			<b>Subtotal</b>	<b>\$3,735.00</b>

**Geotechnical Engineering**

Senior Project Engineer, P.E.	4	hr @	\$195.00 per hour	\$780.00
Project Manager, P.E.	8	hr @	\$165.00 per hour	\$1,320.00
Project Engineer, P.E.	12	hr @	\$140.00 per hour	\$1,680.00
Staff Engineer, E.I.T.	36	hr @	\$105.00 per hour	\$3,780.00
Engineering Aide/Admin	4	hr @	\$60.00 per hour	\$240.00
			<b>Subtotal</b>	<b>\$7,800.00</b>

**Total** **\$34,095.00**



#16.815

WORK AUTHORIZATION #3  
FM 1570 N

<b>Client:</b> Hunt County Hunt County Courthouse 2507 Lee Street Greenville, Texas 75401	<b>FNI Project No.:</b> HUC21XXXX
	<b>Phase/Task/Dept. No.:</b>
	<b>Date:</b> June 01, 2021
This authorization is in accordance with the terms and conditions outlined in the Professional Services Agreement executed on April 11, 2017 and Amendments.	
<b>Project Description:</b> Hunt County Transportation Bond Project – FM 1570 N (IH 30 to SH 66)	
<b>Description of Services:</b> The Scope of Services includes roadway design services to provide TxDOT with Final Plans, Specifications, and Estimates (PS&E). All interim and final design submittals shall meet current TxDOT standards and policies. The design section will be a 5-lane curb and gutter roadway as developed in the current design schematic. Support services will include geotechnical investigations and right-of-way surveying and parcel descriptions to reflect required drainage easements. See attached detailed SCOPE OF SERVICES.	
<b>Compensation shall be as follows:</b> FNI shall be paid for the services described above at on a cost-plus basis (not-to exceed) fee of One Million, One Hundred Fifty-Four Thousand, One Hundred Seventy Five Dollars (\$1,154,175). Refer to the attached billing rate table and fee summary table and for a detailed breakdown.	
	<b>Amount of this Authorization</b> <b>\$1,154,175</b>
<b>Schedule:</b> The project schedule shall be in accordance with the attached "FM 1570 Project Timeline". Schedule performance is contingent on timely reviews by TxDOT of interim design submittals.	

*The above described services shall proceed upon return of this Task Authorization. Services will be billed as they are done. All other provisions, terms, and conditions of the agreement for services which are not expressly amended shall remain in full force and effect.*

- A contract modification will be submitted.
- This Task Authorization will serve as notice to proceed.

**FREESE AND NICHOLS, INC.:**

**HUNT COUNTY:**

BY: \_\_\_\_\_

BY: \_\_\_\_\_

Chris Bosco, P.E.  
Print or Type Name

Bobby W. Stovall  
Print or Type Name

TITLE: Principal

TITLE: Hunt County Judge

DATE: \_\_\_\_\_

DATE: 6/22/2021

FILED FOR RECORD  
at 1:00 o'clock P M

JUL 22 2021  
June  
JENNIFER LINDENZWEIG  
County Clerk, Hunt County, TX  
By: \_\_\_\_\_



## **SCOPE OF SERVICES**

### **Hunt County - Work Authorization #3 Professional Engineering Design Services**

#### **Final Engineering Design for: FM 1570 N (from IH 30 to SH 66)**

#### **BACKGROUND AND OBJECTIVE**

The scope of services set forth herein represents final engineering design services for proposed safety and capacity improvements along FM 1570 from IH 30 to SH 66 in Greenville, Texas. This work effort will advance preliminary engineering and environmental tasks executed under Work Authorization #2 that identified right-of-way and easement requirements, preliminary bridge lengths/locations, and environmental documentation as needed to comply with the National Environmental Policy Act (NEPA). In collaboration with TxDOT – Paris District, the preferred roadway section has been identified as featuring a 5-lane, curb and gutter roadway with a two-way left turn lane and sidewalks to generally fit within the existing 100' right-of-way.

The objective of this work authorization is to prepare final plans, specifications, and estimates (PS&E) for construction contract letting by TxDOT-Paris District. The final plans and specifications, in combination with the acquisition drainage easements (by TxDOT), and relocation of existing utilities will result in the project being ready for bidding and construction.

Final PS&E design deliverables will be developed in close coordination with Hunt County, TxDOT-Paris District, and TxDOT's consultant team currently designing IH 30 at FM 1570 interchange improvements. The final PS&E package and Right -of-Way Parcel deliverables will be developed in accordance with all TxDOT policies and procedures and shall be submitted directly to TxDOT-Paris District for review and approval.

#### **SCOPE OF SERVICES**

##### **1. Project Management**

- a. Prepare and maintain milestone Project Work Schedule depicting various tasks, milestones, and deliverables. Prepare monthly progress reports and project status updates.
- b. Prepare and direct stakeholder coordination / design reviews and meetings with TxDOT, FNI subconsultants, TxDOT's IH 30 consultant team, Hunt County, affected property owners, City of Greenville, and franchise utility owners.
- c. Perform interdisciplinary design and progress meetings with consultant design team. Maintain and updated critical path design schedule and resource assignments.
- d. Provide on-going quality assurance and quality control to ensure completeness of product and compliance with TXDOT policies and procedures.

e. Utility Coordination.

- i. Utility kickoff meeting – Provide initial roadway and storm drain designs to all affected city and franchise utilities. Discuss any planned utility improvements and opportunities to avoid impact to existing facilities. Review all as-built or proposed utility plans.
- ii. Utility conflict meeting – Prepare a utility conflict matrix that identifies the apparent disposition of all existing underground utilities located within or immediately adjacent to the project right-of-way.
- iii. Follow up meetings and coordination – Continue the exchange of information and plans with utility owners to coordination final roadway and bridge design with utility relocation plans. Review preliminary and final utility relocation plans prior to each utility owner's formal Utility Installation Request (UIR) to TxDOT.

2. Geotechnical Investigation and Engineering.

Reference attached Scope of Services proposals from HVJ Associates for Geotechnical Study (Revised May 26, 2021) and Pavement Design Report (Dated May 25, 2021). The scope of services generally describes geotechnical field exploration, lab testing, and engineering recommendations for pavement designs needed for the project.

3. Right-of-Way Mapping Services.

Reference attached Scope of Services proposal from Gorrondona & Associates, Inc. (dated June 1, 2021) to set new ROW monuments and prepare key map sheets and property descriptions for 9 drainage easement parcels needed for the project.

4. Roadway Design and Plans Production.

Develop roadway design and component plans and related deliverables in accordance with the TxDOT Roadway Design Manual (RDM) and PS&E Preparation Manual. The typical roadway section will be a 5-lane curb and gutter urban roadway with sidewalks and featuring a 2-way center turn lane. Coordinate design with TxDOT's consultant for on-going design activities for the IH 30 frontage road connections to FM 1570. Component plans sets to include Typical Sections, Paving Plan and Profile, Intersection Details, Special Details and Profiles, Cross Sections, Signalization, Signing and Markings and Erosion Control Plans.

5. Drainage Design and Plans Production

Develop Drainage Design and component plans and related deliverables in accordance with the TxDOT Hydraulic Design Manual and PS&E Preparation Manual. The proposed storm drain system will be a closed system consisting of curb inlets and reinforced concrete pipe conduits. Component plans sets to include Drainage Area Map, Drainage Calculations, Storm Drain Plan and Profile, Lateral Profiles, and Culvert Layout sheets.

Hunt County Professional Services Agreement with and Freese and Nichols, Inc.  
W.A. No. 3 – Scope of Services for FM 1570 (N) Final Engineering Design

6. Bridge and Miscellaneous Structures Design – No bridges or miscellaneous structures designs are anticipated for this project.
  
7. Bidding and Construction Phase Services.
  - i) Participate in Pre-Bid Meetings and assist TxDOT in providing response to bidder questions. Prepare addenda to the bid documents, as necessary.
  - ii) Attend Preconstruction Meeting with TxDOT, CEI team and contractor.
  - iii) Review shop drawing and materials submittals as intended for approval of the engineer-of-record as referenced in the construction specifications.
  - iv) Provide clarification as to the designer's intent and assist the TxDOT and Construction Engineering and Inspection CEI team responding to formal requests for information (RFI's).
  - v) Attend up to 6 site visits during construction as needed to assist the CEI team as requested by TxDOT.

## DELIVERABLES

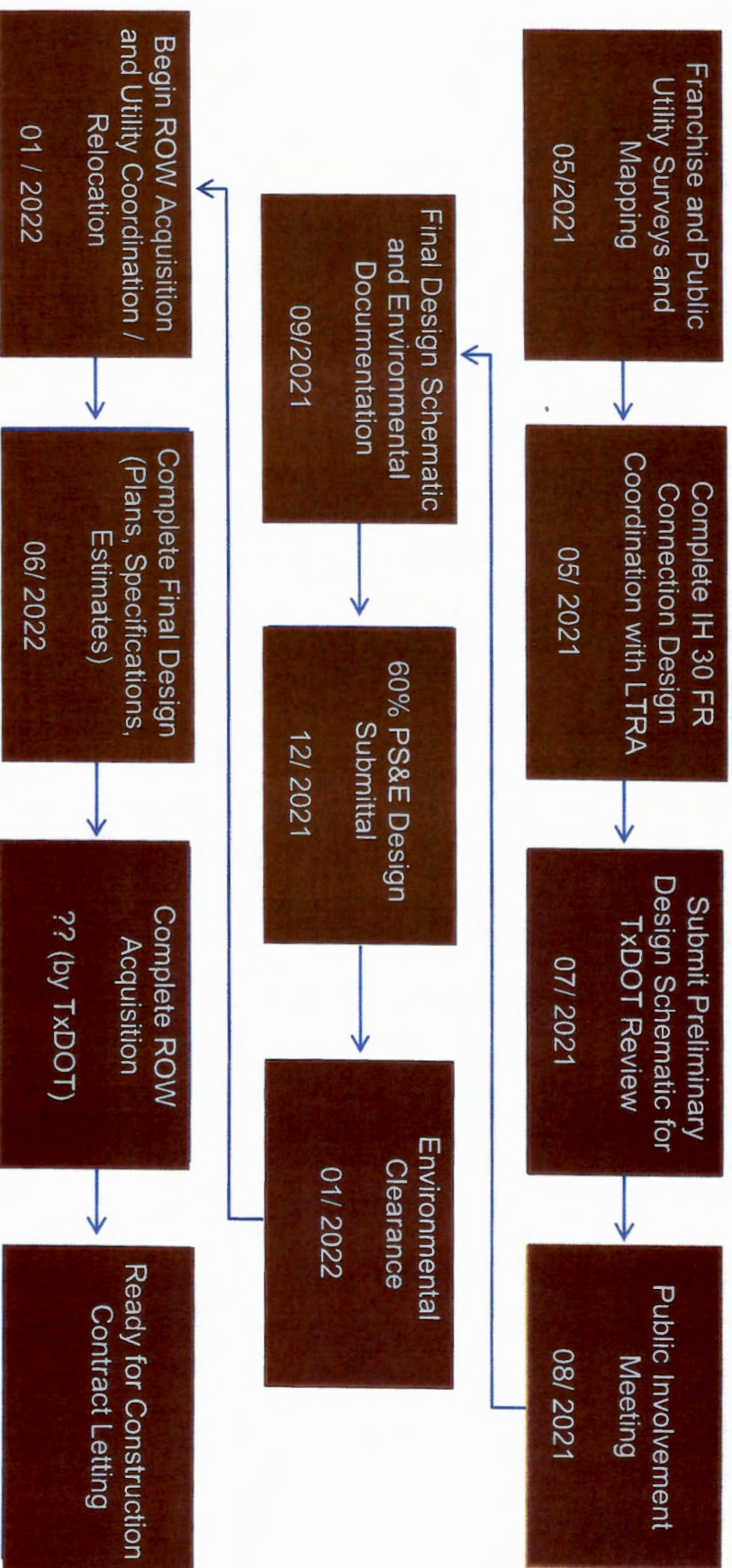
Work products will include all required design plans, design reports/documentation, cost estimates, and special construction specifications described in the TxDOT PS&E Preparation Manual. Design submittals for TxDOT review will be made at the 60%, 90%, 95%, and Final (100%) Design Phases.

## ADDITONAL SERVICES

The following are excluded from this Scope of Services:

1. Right-of-Way Acquisition Services.
  - a) Property Appraisals, Appraisal Reviews, and Cost-to-Cure Analysis.
  - b) Expert Witness Testimony for Eminent Domain Legal Proceedings.
  
2. Construction Contract Administration Services.
  - a) Review of contractor pay requests.
  - b) Review of contractor change order requests.
  - c) Review of contractor value engineering proposals.
  - d) Material sampling and laboratory testing.

FM 1570 N and FM 1570 S Design Development Time Line to Shovel Ready





June 1, 2021

Freese & Nichols, Inc.  
2711 North Haskell Ave., Suite 3300  
Dallas, Texas 75204  
Attn: Mr. Wayne Hartt, PE

**Re: FM 1570 North**

Dear Mr. Hartt:

Gorrondona & Associates, Inc. (G&A) is pleased to submit this proposal for professional land surveying services for the above referenced projects. Property Descriptions, for acquiring a drainage easement for FM 1570 TxDOT Paris District. The Project is along FM 1570 from intersection IH 30 and FM 1570 to the intersection of SH 66. The surveyor shall prepare up to Nine (9) drainage parcel documents, and Key Map. The following itemized surveying tasks are requested for the project:

**RIGHT OF WAY SERVICES**

- 1) **PROJECT CONTROL** - Establish 2 (two) project control throughout the project area using Global Positioning System (GPS) methodology. Horizontal values will be based on the Texas State Plane Coordinate System NAD 83 North Central Zone and scaled to surface by using the TxDOT Hunt County surface adjustment factor. Elevations will be GPS derived based on the NAVD88 datum. Prepare 8 ½" X 11" control sheets in TxDOT standards for the 2 (two) primary control monuments.
- 2) **RESEARCH AND RIGHT OF ENTRY LETTERS** – Research current ownership and create a Right-of Entry database. Prepare ROE letters and mail via certified mail. Maintain ROE database and update with responses from ROE letters.
- 3) **PROPERTY DESCRIPTIONS** - The Surveyor shall set new ROW Monuments at each break in the proposed and existing ROW (Not to be set on existing ROW if located within a take) (Pink Plastic ROW Marker) and verify that parent tract ownership is current. Create up to nine (9) EXHIBIT "A" documents with the original signature and seal on each document. EXHIBIT "A" documentation count includes the creation of any Affidavit Parcels, Multi-Part Parcels and Easements. Create one (1) set of Parcel Calculation sheets (for each parcel) which includes: the parcel number, point of commencing, commencing calls, the point of beginning, and the coordinate of each point within the parcel.
- 4) **KEY MAP**- The Surveyor shall create a set of the key map sheets printed on Mylar at full size. The key maps shall show all utility and channel easements along with associated recording data for each easement and the proposed drainage easements and parcel number. The key will show the base line and outline of each proposed drainage easement.

**DELIVERABLES:**

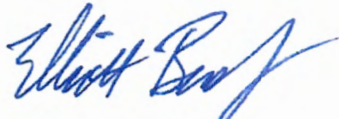
1. PDF of signed and sealed 8 ½" x 11" control sheets
2. PDF of signed and sealed 8 ½" x 11" Property Descriptions
3. PDF of 22"x34" Key Map

ROE Letters (9 @ \$150)	\$ 1,350.00
Research/Ownership Spreadsheet	\$ 1,756.00
Property Descriptions	\$ 27,556.00
Key Map	\$ 8,075.00

**Survey Subtotal** **\$38,737.00**

Gorrondona & Associates, Inc. can complete the above itemized surveying tasks for a fee of **\$38,737.00**. If you have any questions or need additional information, please contact me at (214)712-0600.

Sincerely,  
**GORRONDONA & ASSOCIATES, INC.**



Elliott Busby, RPLS  
Dallas Area Manager



8701 John Carpenter Freeway, Suite 250  
Dallas, Texas 75247-4640  
214.678.0227 Ph  
214.678.0228 Fax  
[www.hvj.com](http://www.hvj.com)

March 19, 2017 (Revised on May 26, 2021)

Mr. Wayne P. Hartt, PE  
Freese and Nichols, Inc. (FNI)  
5805 Main St. Suite B  
Frisco, TX 75034

Re: Hunt County Transportation Bond Program  
Geotechnical Investigation FM 1570 Phase 1 from IH-30 to SH 66  
Hunt County, Texas  
Owner: Hunt County  
HVJ Proposal No. DG 17 10044.1-G – Revision 1

Dear Mr. Hartt:

HVJ Associates® is pleased to submit this proposal for providing a geotechnical study for the above referenced project. This proposal outlines our understanding of the scope of the project and presents our approach and our fees for providing the study. This is a revision of the proposal submitted on March 19, 2017.

We understand that the project involves approximately 3.2 miles of improvements along FM 1570 from IH-30 to SH 66 in Hunt County. Improvements include widening from a 2-lane to 5-lane roadway, and pavement reconstruction. The project design and construction documents will be subject to review by Hunt County and TxDOT.

The purpose of this investigation is to perform a geotechnical field exploration and provide geotechnical recommendations in general accordance with the TxDOT geotechnical manual. This investigation does not include pavement design. We understand that pavement design will be under a separate contract with HVJ Associates, Inc.

### **Scope of Work**

The location of proposed soil borings for pavement design shall be determined in accordance with the latest edition of the State's Geotechnical Manual. Once we receive review from Freese and Nichols of the general locations and depths of proposed borings, we will perform soil borings (field work), soil testing and prepare the boring logs in accordance with the latest edition of the 2020 TxDOT Geotechnical Manual.

We propose drilling thirteen (13) pavement borings located in accordance with the TxDOT geotechnical manual. Pavement borings will be advanced to 15 feet below existing ground or to bedrock. Spacing of pavement borings shall not exceed 1,500 feet.

Mr. Wayne Hartt, PE  
DG 17 10044.1 – Revision 1  
May 26, 2021

Sampling will be performed continuously to depth of 10 feet and then at 5-foot intervals until termination. The borings will be used to determine site stratigraphy and to obtain samples for laboratory testing.

Selected laboratory testing will be conducted on samples that are representative of the materials obtained during the field exploration. The tests will be used to evaluate and classify the soils, identify subsurface site characteristics, and provide data for analysis.

All the field and laboratory tests will be performed according to ASTM or TxDOT standards, where applicable, or with other established procedures. Results of the field and laboratory data will be used to provide geotechnical recommendations for the proposed improvements.

A geotechnical report of our study will be prepared by an engineer specializing in soil mechanics and foundation engineering after reviewing available structural, geological, boring, and laboratory data. In general, the following items will be included in our report:

- Plan of borings,
- Table of laboratory results,
- Boring logs with geological formations,
- Generalized subsurface conditions,
- Groundwater level observations,
- Laboratory test results, and
- Potential Vertical Rise (PVR) calculations (TxDOT procedure).

#### **Schedule**

HVJ expects to complete this assignment in approximately six to eight weeks following receipt of a written notice to proceed and all the right of entries required to complete the field work. If weather conditions and site access permits our field activities the following is our estimated schedule:

- Field Work (Marking boring locations, clearing utilities, obtaining permits if necessary, coordinating and completing drilling): 2-3 weeks
- Laboratory Testing: 2 weeks
- Engineering & Report Preparation: 2-3 weeks

HVJ assumes that right of entry for all properties will be obtained by Freese and Nichols. If requested, verbal recommendations can be provided throughout the progress of the investigation as testing is completed.

A draft report will be submitted for review by Freese and Nichols. After approval of HVJ's draft report, a final report of the study will be submitted.

#### **Fee and Conditions**

Based on the scope of work outlined, the fee for our services will be **\$51,940.00**. A breakdown for the cost estimate is included with this letter. Our accounting procedures call for the submittal of invoices on a month-end basis or at the conclusion of the project should its duration last less than a month. Our credit terms are net 30 days. Our invoicing schedule will follow as:

- Completion of Field Work: up to 60% Fees



Mr. Wayne Hartt, PE  
DG 17 10044.1 – Revision 1  
May 26, 2021

- Completion of Lab Work: up to 80% Fees
- Submitted Draft Report up to 95% Fees
- Engineering & Report Preparation: up to 100% Fees

The following assumptions were made in preparing this proposal:

- Boring locations are accessible to truck mounted drilling equipment.
- Right of Entry to access boring locations by way or on residential properties will be obtained by Freese and Nichols.
- The exact boring locations will be located for approval in accordance with the proposal.
- Traffic control will be required for the street closure.
- HVJ will provide the traffic control for drilling and prepare a traffic control plan as required by the County/TxDOT for street occupancy and street cut permits. This level of effort assumes that standard TxDOT traffic control details are acceptable to Hunt County and the cities where the drilling will take place, and does not include the development of special traffic control plan drawings.
- We assume borings requiring traffic control will be drilled in the course of 7 consecutive daylight hours.
- Field survey of the boring locations and elevation will be performed by Freese and Nichols.
- Laboratory samples will be held for no more than a period of 60 days following completion of the final report or 120 days following completion of the draft report, whichever is less.

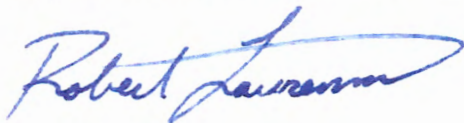
The scope of services described is appropriate for the project configuration presented to us. If anomalous conditions are encountered, or if the project configuration changes significantly, a change in work scope may be required. HVJ Associates® will recommend such changes when and if it is deemed necessary. No changes will be implemented without prior authorization from Freese and Nichols.

HVJ Associates® will use the Texas One Call System to locate buried utilities. We will take care to minimize damage to existing facilities; however, our activities may result in some damage to vegetation or unidentified existing utilities. This proposal specifically excludes any costs associated with restoration of vegetation or repair of utilities damaged by our operations that were not previously identified by Texas One Call and / or TxDOT.

If this letter meets with your approval, please sign and complete the indicated spaces below and forward a copy of the letter to us. HVJ Associates® is pleased to be of service on this project. Please call us if you have any questions or require additional information.

Sincerely,

**HVJ NORTH TEXAS - CHELLIAH CONSULTANT, INC.**



Robert H. Lawrence, PE

Mr. Wayne Hartt, PE  
DG 17 10044.1 – Revision 1  
May 26, 2021

Department Manager

Agreed to this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

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

Title: \_\_\_\_\_

Firm: \_\_\_\_\_

Phone No. \_\_\_\_\_

Date to Start Work: \_\_\_\_\_

**Estimate for Geotechnical Investigation**

FM 1570 Phase 1 - from IH-30 to SH 66  
 Hunt County, Texas  
 Freese and Nichols  
 HVJ Project No.: DG-17-10044.1-G  
 May 26, 2021 (Revision 1)

**Geotechnical Fee Estimate Breakdown**

**Geotechnical Field Work:**

- Thirteen (13) pavement borings (15 feet deep)
- Three (3) bulk samples

Drill Rig Mobilization/Demobilization	1	@	\$750.00	LS	\$750.00
Drilling and Sampling Soil with Texas Cone Penetration (0' - 100')	0	ft @	\$33.00	per ft	\$0.00
Coring Rock with Texas Cone Penetration (0' - 100')	0	ft @	\$40.00	per ft	\$0.00
Drilling and Sampling without Texas Cone Penetration (0' - 50')	195	ft @	\$30.00	per ft	\$5,850.00
Traffic Control	4	@	\$2,500.00	per day	\$10,000.00
Pavement Coring Mobilization, Equipment, Crew	4	@	\$500.00	per day	\$2,000.00
Pavement Coring (0" - 12")	13	@	\$120.00	per core	\$1,560.00
Pavement Patching	13	@	\$50.00	each	\$650.00
Lodging and Meals (3 person crew)	4	@	\$450.00	per day	\$1,800.00
Field Coordination, Staking and Logging - Staff Engineer/Geologist	60	@	\$105.00	per hour	\$6,300.00
Vehicle Trips (includes trips for support trucks)	5	@	\$100.00	per trip	\$500.00
				<b>Subtotal</b>	<b>\$29,410.00</b>

**Laboratory Testing**

Moisture Content	65	ea @	\$12.00	each	\$780.00
Atterberg Limits	39	ea @	\$65.00	each	\$2,535.00
Percent Passing No. 200 Sieve	39	ea @	\$45.00	each	\$1,755.00
Sieve Analysis	0	ea @	\$55.00	each	\$0.00
Hydrometer	0	ea @	\$125.00	each	\$0.00
One Dimensional Consolidation Properties of Soil	0	ea @	\$375.00	each	\$0.00
Determination of Sulfate Content	26	ea @	\$120.00	each	\$3,120.00
Unconfined Compressive Strength - Soil	26	ea @	\$55.00	each	\$1,430.00
Unconsolidated-Undrained (UU) Triaxial Testing - Soil	0	ea @	\$120.00	each	\$0.00
Consolidated-Undrained (CU) Triaxial Testing - Soil (multi-stage)	0	ea @	\$1,200.00	each	\$0.00
Unconfined Compressive Strength - Rock	0	ea @	\$80.00	each	\$0.00
California Bearing Ration - CBR (three-point)	2	ea @	\$550.00	each	\$1,100.00
Texas Triaxial Test	1	ea @	\$1,800.00	each	\$1,800.00
				<b>Subtotal</b>	<b>\$12,520.00</b>

**Geotechnical Engineering**

Senior Project Engineer, P.E.	6	hr @	\$195.00	per hour	\$1,170.00
Project Manager, P.E.	8	hr @	\$165.00	per hour	\$1,320.00
Project Engineer	22	hr @	\$140.00	per hour	\$3,080.00
Staff Engineer, E.I.T.	40	hr @	\$105.00	per hour	\$4,200.00
Admin/Typist	4	hr @	\$60.00	per hour	\$240.00
				<b>Subtotal</b>	<b>\$10,010.00</b>

**Total** **\$51,940.00**



1701 Directors Boulevard  
Suite 910  
Austin, TX 78744  
737-222-5151  
[www.hvj.com](http://www.hvj.com)

May 25, 2021

Mr. Wayne P. Hartt, PE  
Freese and Nichols, Inc. (FNI)  
5805 Main St. Suite B  
Frisco, TX 75034

Re: Hunt County Transportation Bond Program  
Pavement Engineering Design FM 1570 Phase 1  
Hunt County, Texas  
Owner: Hunt County  
HVJ Proposal No. DG 17 10044.1-P

Dear Mr. Hartt:

HVJ Associates, Inc.(HVJ) is pleased to submit this scope and fee proposal for providing a pavement design report for the subject site. This letter outlines HVJ's approach for providing a pavement design for the proposed pavement reconstruction.

### **Project Description**

It is understood that the project will improve operations along FM 1570 from IH-30 to SH 66, approximately 3.2 miles. Currently a rural 2-lane roadway, improvements will include reconstruction and widening to a 5-lane roadway. Project will terminate 350 ft. north of I-30 Frontage Road. The project design and construction documents will be subject to review by Hunt County and TxDOT under applicable regulatory authorities.

### **Pavement Design Scope**

HVJ North Texas will perform a geotechnical investigation as described in HVJ Proposal DG 17 10044.1. Utilizing the subsurface and laboratory information from that project, HVJ will design two flexible pavement section alternatives including subgrade stabilization if necessary to achieve a 20-year design life. Planned cross section design alternatives include: Hot Mix Asphalt Concrete (HMAC) over Flexible Base, and HMAC over HMAC Base. The pavement design will include consideration of traffic loads to be provided by FNI and/or Hunt County in the form of TxDOT TP&P data. The traffic data required includes current and projected traffic counts and truck percentages. The TxDOT pavement design procedure using FPS21 analysis program will be used along with Texas Triaxial and Mechanistic design checks, as well as any available local pavement design guide.

HVJ proposes to utilize nondestructive deflection testing (NDT) with the Falling Weight Deflectometer (FWD) to calculate subgrade design parameters for input into the FPS21 software, as per TxDOT requirements. The data may also be used to finalize boring locations to ensure geotechnical data is collected for any changes in subgrade conditions identified along the alignment in profiles of the NDT data.

Mr. Wayne Hartt, PE  
DG 17 10044.1-P  
May 25, 2021

HVJ will review the construction documents at the various submittal phases to confirm HVJ's pavement design recommendations are properly addressed.

### **Engineering Report Deliverable**

HVJ anticipates providing pavement design deliverables. In general, the following items will be included in HVJ's geotechnical report:

- Flexible pavement thickness design recommendations
- Subgrade stabilization, if determined necessary

HVJ will review the construction documents (plans and specifications) for the 60% and 90% submittals during the Design Phase to confirm HVJ's pavement design recommendations are properly addressed.

### **Schedule**

The estimated schedule for the geotechnical and pavement design work is as follows:

Field Investigations (ND	2 Weeks after NTP
Draft Pavement Design Report	3 Weeks after completion of laboratory testing
Final Pavement Design Report	2 Weeks after receipt of comments from County and TxDOT

### **Fees**

Based on the scope of work and conditions as outlined below, the estimated fee for HVJ services will not exceed \$25,839. Attached is a breakdown of the proposed fees for the project area based on recently approved TxDOT rates.

### **Insurance**

Insurance certificates verifying HVJ's general liability, auto, worker compensation, and errors and omissions insurance coverage, listing FNI as a certificate holder, will be provided upon request.

### **Invoices**

Invoices will be submitted at the end of each month based on the time spent on the work and items completed. HVJ credit terms are 30 days net.

### **Conditions**

The following assumptions were made:

- No temporary pavement design alternatives are planned for design.
- Only flexible pavement design is included in the scope. No concrete pavement design is included.
- HVJ will review up to two design submittals anticipated at 60% and 90%.

Mr. Wayne Hartt, PE  
DG 17 10044.1-P  
May 25, 2021

- FNI will request TxDOT TP&P Pavement Design Analysis format from the Paris District.
- No travel for site meetings or conferences are included and it is assumed that all communications can be via telephone conference calls or emails.

HVJ is pleased to be of service on this project. We look forward to working with you on this project.

Sincerely,

**HVJ ASSOCIATES, INC.**

A handwritten signature in blue ink that reads "R. F. Carmichael, III". The signature is written in a cursive style with a large initial "R" and a stylized "C".

R. F. (Frank) Carmichael, III PE  
Project Manager

FC/fc/rj

Mr. Wayne Hartt, PE  
 DG 17 10044.1-P  
 May 25, 2021

**PAVEMENT DESIGN & NDT**

**FM 1570 PH I**

**FREESE NICHOLS**

**HVJ Project No. DG1710044.1-P**

**Engineering & Administrative Personnel**

Project Manager, PE	16	\$241.80	per hour	\$3,868.80
Project Engineer, PE	41	\$169.91	per hour	\$6,966.31
Engineer-in-Training, EIT	55	\$114.36	per hour	\$6,289.80
Engineering Technician	22	\$98.03	per hour	\$2,156.66
Administrative/Clerical	2	\$75.15	per hour	\$150.30

**SubTotal Labor \$19,431.87**

**Direct Costs**

**Non-Destructive Deflection Testing**

Mileage	500	\$0.56	per mile	\$280.00
Falling Weight Deflectometer (FWD) Testing	1	\$2,900.00	day	\$2,900.00
Traffic Control Services, Arrow Boards and Attenuator trucks - Medium Project (Includes labor, equipment and fuel)	1	\$2,800.00	day	\$2,800.00
Lodging/Hotel - Taxes and Fees	2	\$35.00	day/person	\$70.00
Lodging/Hotel (Taxes/fees not included)	2	\$96.00	day/person	\$192.00
Meals (Excluding alcohol & tips) (Overnight stay required)	3	\$55.00	day/person	\$165.00

**SubTotal Directs \$6,407.00**

**Total Project \$25,838.87**



#16.815

WORK AUTHORIZATION #3  
FM 1570 N

<b>Client:</b> Hunt County Hunt County Courthouse 2507 Lee Street Greenville, Texas 75401	<b>FNI Project No.:</b> HUC21XXXXX
	<b>Phase/Task/Dept. No.:</b>
	<b>Date:</b> June 01, 2021
<b>This authorization is in accordance with the terms and conditions outlined in the Professional Services Agreement executed on April 11, 2017 and Amendments.</b>	
<b>Project Description:</b> Hunt County Transportation Bond Project – Program Management Services	
<b>Description of Services:</b> FNI will provide program level services to continue supporting the objectives of Hunt County through collaboration with the Transportation Steering Committee, TxDOT Paris District, NCTCOG, and other stakeholders. This will include developing and refining program level budgets, participating in quarterly calls with Hunt County, TxDOT and NCTCOG, support for public presentations, annual reports, and program brochures as needed to communicate the goals and accomplishments of the Transportation Bond Program.	
<b>Compensation shall be as follows:</b> FNI shall be paid for the services described above at on a cost-plus basis (not-to exceed) fee of Seventy Five Thousand Dollars (\$75,000). Refer to the attached billing rate table and fee summary table and for a detailed breakdown.	
	<b>Amount of this Authorization</b> <span style="float: right;"><b>\$75,000</b></span>
<b>Schedule:</b> The project schedule is anticipated to perform support as needed thru June 2023.	

*The above described services shall proceed upon return of this Task Authorization. Services will be billed as they are done. All other provisions, terms, and conditions of the agreement for services which are not expressly amended shall remain in full force and effect.*

- A contract modification will be submitted.
- This Task Authorization will serve as notice to proceed.

**FREESE AND NICHOLS, INC.:**

**HUNT COUNTY:**

BY: \_\_\_\_\_

BY:  \_\_\_\_\_

Chris Bosco, P.E.  
Print or Type Name

Bobby W. Stovall  
Print or Type Name

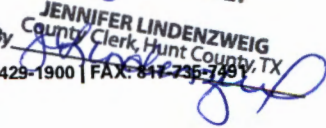
TITLE: Principal

TITLE: Hunt County Judge

DATE: \_\_\_\_\_

DATE: 6/22/2021

FILED FOR RECORD  
at 1:00 o'clock P M

June 22 2021  
JENNIFER LINDENZWEIG  
County Clerk, Hunt County, TX  
By 



Freese and Nichols, Inc.  
June 2021

Billing Rates for Work Authorization No. 3  
Tranportation Bond Projects - Final Design Services

Freese and Nichols, Inc. Personnel Classifications	2017 Contract W.A. #1 and #2 Hourly Billing Rate	Escalation Rate 3 yr @ 2.5%	2021 WA #3 Hourly Billing Rate
Principal	\$ 240.00	1.0769	\$ 258.45
Project Manager	\$ 209.00	1.0769	\$ 225.07
Sr. Engineer	\$ 178.00	1.0769	\$ 191.69
Project Engineer	\$ 156.00	1.0769	\$ 167.99
Engineer in Training - Level 2	\$ 137.00	1.0769	\$ 147.53
Engineer in Training - Level 1	\$ 113.00	1.0769	\$ 121.69
Cadd Tech Designer - Level 3	\$ 153.00	1.0769	\$ 164.76
Cadd Tech - Level 2	\$ 126.00	1.0769	\$ 135.69
Cadd Tech - Level 1	\$ 96.00	1.0769	\$ 103.38
Sr. Envi Scientist (P6)	\$ 240.00	1.0769	\$ 258.45
Env. Scientist Level V (P5)	\$ 209.00	1.0769	\$ 225.07
Env. Scientist Level IV (P4)	\$ 178.00	1.0769	\$ 191.69
Env. Scientist Level II (P1)	\$ 96.00	1.0769	\$ 103.38
GIS Analyst (P1)	\$ 96.00	1.0769	\$ 103.38
Corporate Project Support - 1	\$ 92.00	1.0769	\$ 99.07
Corporate Project Support - 2	\$ 111.00	1.0769	\$ 119.53
Corporate Project Support -3	\$ 148.00	1.0769	\$ 159.38
Intern	\$ 57.00	1.0769	\$ 61.38





#16,815

WORK AUTHORIZATION #3  
FM 1570 S

<b>Client:</b> Hunt County Hunt County Courthouse 2507 Lee Street Greenville, Texas 75401	<b>FNI Project No.:</b> HUC21XXXXX		
	<b>Phase/Task/Dept. No.:</b>		
	<b>Date:</b> June 01, 2021		
This authorization is in accordance with the terms and conditions outlined in the Professional Services Agreement executed on April 11, 2017 and Amendments.			
<b>Project Description:</b> Hunt County Transportation Bond Project – FM 1570 S (IH 30 to SH 34)			
<b>Description of Services:</b> The Scope of Services includes roadway and bridge design services to provide TxDOT with Final Plans, Specifications, and Estimates (PS&E). All interim and final design submittals shall meet current TxDOT standards and policies. The design section will be a 5-lane curb and gutter roadway as developed in the current design schematic. New bridges will be designed to span Farber Creek and Mustang Branch Creek. Support services will include geotechnical investigations, and right-of-way surveying and parcel descriptions to reflect required drainage easements. See attached detailed SCOPE OF SERVICES.			
<b>Compensation shall be as follows:</b> FNI shall be paid for the services described above at on a cost-plus basis (not-to exceed) fee of One Million, Three Hundred Twenty Thousand, Eight Hundred Fifty-One Dollars (\$1,320,851). Refer to the attached billing rate table and fee summary table and for a detailed breakdown.			
	<table border="1"> <tr> <td style="text-align: center;"><b>Amount of this Authorization</b></td> <td style="text-align: center;"><b>\$1,320,851</b></td> </tr> </table>	<b>Amount of this Authorization</b>	<b>\$1,320,851</b>
<b>Amount of this Authorization</b>	<b>\$1,320,851</b>		
<b>Schedule:</b> The project schedule shall be in accordance with the attached "FM 1570 Project Timeline". Schedule performance is contingent on timely reviews by TxDOT of interim design submittals.			

*The above described services shall proceed upon return of this Task Authorization. Services will be billed as they are done. All other provisions, terms, and conditions of the agreement for services which are not expressly amended shall remain in full force and effect.*

- A contract modification will be submitted.
- This Task Authorization will serve as notice to proceed.

**FREESE AND NICHOLS, INC.:**

**HUNT COUNTY:**

BY: \_\_\_\_\_

BY:  \_\_\_\_\_

Chris Bosco, P.E.  
Print or Type Name


Bobby W. Stovall  
Print or Type Name

TITLE: Principal

TITLE: Hunt County Judge

DATE: \_\_\_\_\_

DATE: 6/22/2021

FILED FOR RECORD  
 1:00 o'clock P  
 JUL 22 2021  
 JENNIFER LINDENZWEIG  
 County Clerk, Hunt County, TX  
 By: 

## **SCOPE OF SERVICES**

### **Hunt County - Work Authorization #3 Professional Engineering Design Services**

#### **Final Engineering Design for: FM 1570 (from IH 30 to SH 34)**

#### BACKGROUND AND OBJECTIVE

The scope of services set forth herein represents final engineering design services for proposed safety and capacity improvements along FM 1570 from IH 30 to SH 34 in Greenville, Texas. This work effort will advance preliminary engineering and environmental tasks executed under Work Authorization #2 that identified right-of-way and easement requirements, preliminary bridge lengths/locations, and environmental documentation as needed to comply with the National Environmental Policy Act (NEPA). In collaboration with TxDOT – Paris District, the preferred roadway section has been identified as featuring a 5-lane, curb and gutter roadway with a two-way left turn lane and sidewalks to generally fit within the existing 100' right-of-way.

The objective of this work authorization is to prepare final plans, specifications, and estimates (PS&E) for construction contract letting by TxDOT-Paris District. The final plans and specifications, in combination with the acquisition drainage easements (by TxDOT), and relocation of existing utilities will result in the project being ready for bidding and construction.

Final PS&E design deliverables will be developed in close coordination with Hunt County, TxDOT-Paris District, and TxDOT's consultant team currently designing IH 30 at FM 1570 interchange improvements. The final PS&E package and Right -of-Way Parcel deliverables will be developed in accordance with all TxDOT policies and procedures and shall be submitted directly to TxDOT-Paris District for review and approval.

#### SCOPE OF SERVICES

##### 1. Project Management

- a. Prepare and maintain milestone Project Work Schedule depicting various tasks, milestones, and deliverables. Prepare monthly progress reports and project status updates.
- b. Prepare and direct stakeholder coordination / design reviews and meetings with TxDOT, FNI subconsultants, TxDOT's IH 30 consultant team, Hunt County, affected property owners, City of Greenville, and franchise utility owners.
- c. Perform interdisciplinary design and progress meetings with consultant design team. Maintain and updated critical path design schedule and resource assignments.
- d. Provide on-going quality assurance and quality control to ensure completeness of product and compliance with TXDOT policies and procedures.

Hunt County Professional Services Agreement with and Freese and Nichols, Inc.  
W.A. No. 3 – Scope of Services for FM 1570 (S) Final Engineering Design

e. Utility Coordination.

- i. Utility kickoff meeting – Provide initial roadway and storm drain designs to all affected city and franchise utilities. Discuss any planned utility improvements and opportunities to avoid impact to existing facilities. Review all as-built or proposed utility plans.
- ii. Utility conflict meeting – Prepare a utility conflict matrix that identifies the apparent disposition of all existing underground utilities located within or immediately adjacent to the project right-of-way.
- iii. Follow up meetings and coordination – Continue the exchange of information and plans with utility owners to coordination final roadway and bridge design with utility relocation plans. Review preliminary and final utility relocation plans prior to each utility owner's formal Utility Installation Request (UIR) to TxDOT.

2. Geotechnical Investigation and Engineering.

Reference attached Scope of Services proposals from HVJ Associates for Geotechnical Study (Revised May 26, 2021) and Pavement Design Report (Dated May 25, 2021). The scope of services generally describes geotechnical field exploration, lab testing, and engineering recommendations for 2 bridges, 2 box culverts, 3,200 linear feet of retaining walls, traffic signal foundations, and pavement designs needed for the project.

3. Right-of-Way Mapping Services.

Reference attached Scope of Services proposal from Gorrondona & Associates, Inc. (dated June 1, 2021) to set new ROW monuments and prepare key map sheets and property descriptions for 5 drainage easement parcels needed for the project.

4. Roadway Design and Plans Production.

Develop roadway design and component plans and related deliverables in accordance with the TxDOT Roadway Design Manual (RDM) and PS&E Preparation Manual. The typical roadway section will be a 5-lane curb and gutter urban roadway with sidewalks and featuring a 2-way center turn lane. Coordinate design with TxDOT's consultant for on-going design activities for the IH 30 frontage road connections to FM 1570. Component plans sets to include Typical Sections, Paving Plan and Profile, Intersection Details, Special Details and Profiles, Cross Sections, Signalization, Signing and Markings and Erosion Control Plans.

5. Drainage Design and Plans Production

Develop Drainage Design and component plans and related deliverables in accordance with the TxDOT Hydraulic Design Manual and PS&E Preparation Manual. The proposed storm drain system will be a closed system consisting of curb inlets and reinforced concrete pipe conduits. Component plans sets to include Drainage Area Map, Drainage Calculations, Storm Drain Plan and Profile, Lateral Profiles, and Culvert Layout sheets.

6. Bridge and Miscellaneous Structures Design.

Develop bridge design and plans to replace existing bridges at Farber Creek and Mustang Branch Creek crossings. Design retaining walls deemed necessary to minimize impacts to the floodplain or adjacent properties. Prepare design and component plan sets in accordance with the TxDOT Bridge Design Manual and PS&E Preparation Manual. Component plans to include Bridge Layout, Typical Transverse Section, Abutment, Bent, and Girder Layouts, Retaining Wall Layouts, and Retaining Wall Alignment Data.

7. Bidding and Construction Phase Services.

- i) Participate in Pre-Bid Meetings and assist TxDOT in providing response to bidder questions. Prepare addenda to the bid documents, as necessary.
- ii) Attend Preconstruction Meeting with TxDOT, CEI team and contractor.
- iii) Review shop drawing and materials submittals as intended for approval of the engineer-of-record as referenced in the construction specifications.
- iv) Provide clarification as to the designer's intent and assist the TxDOT and Construction Engineering and Inspection CEI team responding to formal requests for information (RFI's).
- v) Attend up to 6 site visits during construction as needed to assist the CEI team as requested by TxDOT.

DELIVERABLES

Work products will include all required design plans, design reports/documentation, cost estimates, and special construction specifications described in the TxDOT PS&E Preparation Manual. Design submittals for TxDOT review will be made at the 60%, 90%, 95%, and Final (100%) Design Phases.

ADDITIONAL SERVICES

The following are excluded from this Scope of Services:

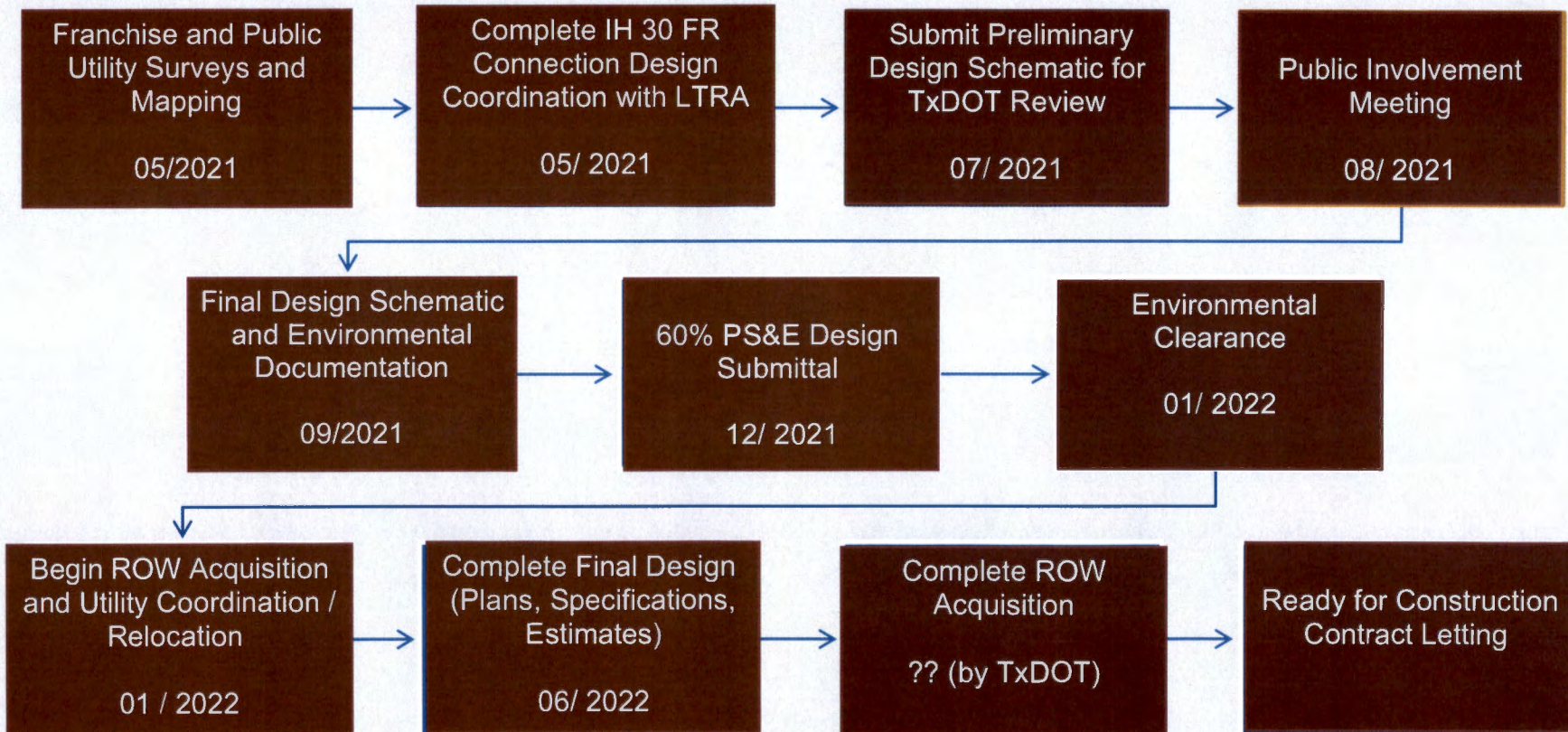
1. Right-of-Way Acquisition Services.

- a) Property Appraisals, Appraisal Reviews, and Cost-to-Cure Analysis.
- b) Expert Witness Testimony for Eminent Domain Legal Proceedings.

2. Construction Contract Administration Services.

- a) Review of contractor pay requests.
- b) Review of contractor change order requests.
- c) Review of contractor value engineering proposals.
- d) Material sampling and laboratory testing.

## FM 1570 N and FM 1570 S Design Development Time Line to Shovel Ready





## Gorrondona & Associates, Inc

Land Surveying • Aerial Mapping • Geotechnical Engineering • Construction Materials Testing

June 1, 2021

Freese & Nichols, Inc.  
2711 North Haskell Ave., Suite 3300  
Dallas, Texas 75204  
Attn: Mr. Wayne Hartt, PE

**Re: FM 1570 South**

Dear Mr. Hartt:

Gorrondona & Associates, Inc. (G&A) is pleased to submit this proposal for professional land surveying services for the above referenced projects. Property Descriptions, for acquiring a drainage easement for FM 1570 TxDOT Paris District. The Project is from intersection SH 34 and FM 1570 to the intersection IH30. The surveyor shall prepare up to five (5) drainage parcel documents, and Key Map. The following itemized surveying tasks are requested for the project:

**RIGHT OF WAY SERVICES**

- 1) **PROJECT CONTROL** - Establish 2 (two) project control throughout the project area using Global Positioning System (GPS) methodology. Horizontal values will be based on the Texas State Plane Coordinate System NAD 83 North Central Zone and scaled to surface by using the TxDOT Hunt County surface adjustment factor. Elevations will be GPS derived based on the NAVD88 datum. Prepare 8 ½" X 11" control sheets in TxDOT standards for the 2 (two) primary control monuments.
- 2) **RESEARCH AND RIGHT OF ENTRY LETTERS** – Research current ownership and create a Right-of Entry database. Prepare ROE letters and mail via certified mail. Maintain ROE database and update with responses from ROE letters.
- 3) **PROPERTY DESCRIPTIONS** - The Surveyor shall set new ROW Monuments at each break in the proposed and existing ROW (Not to be set on existing ROW if located within a take) (Pink Plastic ROW Marker) and verify that parent tract ownership is current. Create up to five (5) EXHIBIT "A" documents with the original signature and seal on each document. EXHIBIT "A" documentation count includes the creation of any Affidavit Parcels, Multi-Part Parcels and Easements. Create one (1) set of Parcel Calculation sheets (for each parcel) which includes: the parcel number, point of commencing, commencing calls, the point of beginning, and the coordinate of each point within the parcel.
- 4) **KEY MAP**- The Surveyor shall create a set of the key map sheets printed on Mylar at full size. The key maps shall show all utility and channel easements along with associated recording data for each easement and the proposed drainage easements and parcel number. The key will show the base line and outline of each proposed drainage easement.



**DELIVERABLES:**

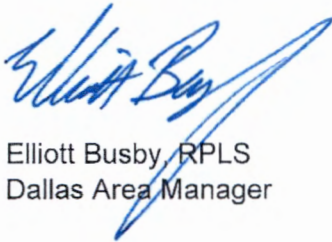
1. PDF of signed and sealed 8 ½" x 11" control sheets
2. PDF of signed and sealed 8 ½" x 11" Property Descriptions
3. PDF of 22"x34" Key Map

ROE Letters (5 @ \$150)	\$ 750.00
Research/Ownership Spreadsheet	\$ 500.00
Property Descriptions	\$ 14,000.00
Key Map	\$ 1,695.00

**Survey Subtotal** **\$16,945.00**

Gorronдона & Associates, Inc. can complete the above itemized surveying tasks for a fee of **\$16,945.00**. If you have any questions or need additional information, please contact me at (214)712-0600.

Sincerely,  
**GORRONDONA & ASSOCIATES, INC.**



Elliott Busby, RPLS  
Dallas Area Manager



8701 John Carpenter Freeway, Suite 250  
Dallas, Texas 75247-4640  
214.678.0227 Ph  
214.678.0228 Fax  
[www.hvj.com](http://www.hvj.com)

March 19, 2017 (Revised May 26, 2021)

Mr. Wayne P. Hartt, PE  
Freese and Nichols, Inc. (FNI)  
5805 Main St. Suite B  
Frisco, TX 75034

Re: Hunt County Transportation Bond Program  
Geotechnical Investigation FM 1570 Phase 2 from IH-30 to SH 34  
Hunt County, Texas  
Owner: Hunt County  
HVJ Proposal No. DG 17 10044.2-G – Revision 1

Dear Mr. Hartt:

HVJ Associates® is pleased to submit this proposal for providing a geotechnical study for the above referenced project. This proposal outlines our understanding of the scope of the project and presents our approach and our fees for providing the study. This is a revision of the proposal submitted on March 19, 2017.

We understand that the project involves approximately 2.6 miles of improvements along FM 1570 from IH-30 to SH 34 in Hunt County. Improvements include:

- Widening the roadway from a 2-lane to 5-lane roadway;
- One bridge widening about 210 feet long (3 70-foot spans) at Farber Creek;
- One bridge widening about 60 feet long (1 span) at Mustang Branch Creek;
- 1,600 total linear feet of MSE retaining wall at Farber Creek;
- 1,600 total linear feet of MSE retaining wall at Mustang Branch Creek;
- A new triple 10 ft x 10 ft box culvert at Mustang Branch Creek;
- A new quadruple 7 ft x 4 ft box culvert at Mustang Branch Tributary; and
- A traffic signal reconstruction at the SH 34 intersection

The project design and construction documents will be subject to review by Hunt County and TxDOT.

The purpose of this investigation is to perform a geotechnical field exploration and provide geotechnical recommendations in general accordance with the TxDOT geotechnical manual. This investigation does not include pavement design. We understand that pavement design will be under a separate contract with HVJ Associates, Inc.

Mr. Wayne Hartt, PE  
DG-17-10044.2-G  
May 26, 2021

## Scope of Work

The location of proposed soil borings for bridge design, embankment settlement analysis, retaining walls, pavement design, and slope stability and along storm drain alignment shall be determined in accordance with the latest edition of the State's Geotechnical Manual. Once we receive review from Freese and Nichols of the general locations and depths of proposed borings, we will perform soil borings (field work), soil testing and prepare the boring logs in accordance with the latest edition of the 2020 TxDOT Geotechnical Manual.

We propose drilling:

- Four (4) bridge borings, advanced to 80 feet below existing ground or 20 feet into bedrock. Spacing of bridge borings shall not exceed 300 feet.
- Eighteen (18) retaining wall borings, advanced to 35 feet below existing ground. Spacing of bridge borings shall not exceed 200 feet.
- Four (4) culvert borings, advanced to 30 feet below existing ground or 5 feet into bedrock. A minimum of one boring will be located at each proposed culvert location.
- Eleven (11) pavement borings, advanced to 15 feet below existing ground. Spacing of pavement borings shall not exceed 1,500 feet.
- One (1) traffic signal foundation boring, advanced to 50 feet below existing ground or 20 feet into bedrock.

Sampling will be performed continuously to depth of 10 feet and then at 5-foot intervals until termination. The borings will be used to determine site stratigraphy and to obtain samples for laboratory testing.

Selected laboratory testing will be conducted on samples that are representative of the materials obtained during the field exploration. The tests will be used to evaluate and classify the soils, identify subsurface site characteristics, and provide data for analysis.

All the field and laboratory tests will be performed according to ASTM or TxDOT standards, where applicable, or with other established procedures. Results of the field and laboratory data will be used to provide geotechnical recommendations for the proposed improvements.

A geotechnical report of our study will be prepared by an engineer specializing in soil mechanics and foundation engineering after reviewing available structural, geological, boring, and laboratory data. In general, the following items will be included in our report:

- Plan of borings,
- Table of laboratory results,
- Boring logs with geological formations,
- Generalized subsurface conditions,
- Groundwater level observations,
- Laboratory test results,
- Bridge foundation recommendations,
- MSE wall recommendations,
- Overhead sign structure foundation recommendations,
- Culvert foundation recommendations,

Mr. Wayne Hartt, PE  
DG-17-10044.2-G  
May 26, 2021

- Potential Vertical Rise (PVR) calculations (TxDOT procedure), and
- Construction considerations.

### Schedule

HVJ expects to complete this assignment in approximately ten to twelve weeks following receipt of a written notice to proceed and all the right of entries required to complete the field work. If weather conditions and site access permits our field activities the following is our estimated schedule:

- Field Work (Marking boring locations, clearing utilities, obtaining permits if necessary, coordinating and completing drilling): 3-5 weeks
- Laboratory Testing: 4 weeks
- Engineering & Report Preparation: 3 weeks

HVJ assumes that right of entry for all properties will be obtained by Freese and Nichols. If requested, verbal recommendations can be provided throughout the progress of the investigation as testing is completed.

A draft report will be submitted for review by Freese and Nichols. After approval of HVJ's draft report, a final report of the study will be submitted.

### Fee and Conditions

Based on the scope of work outlined, the fee for our services will be **\$209,147.00**. A breakdown for the cost estimate is included with this letter. Our accounting procedures call for the submittal of invoices on a month-end basis or at the conclusion of the project should its duration last less than a month. Our credit terms are net 30 days. Our invoicing schedule will follow as:

- Completion of Field Work: up to 60% Fees
- Completion of Lab Work: up to 80% Fees
- Submitted Draft Report up to 95% Fees
- Engineering & Report Preparation: up to 100% Fees

The following assumptions were made in preparing this proposal:

- Boring locations are accessible to truck mounted drilling equipment.
- Right of Entry to access boring locations by way or on residential properties will be obtained by Freese and Nichols.
- The exact boring locations will be located for approval in accordance with the proposal.
- Traffic control will be required for the street closure.
- HVJ will provide the traffic control for drilling and prepare a traffic control plan as required by the County/TxDOT for street occupancy and street cut permits. This level of effort assumes that standard TxDOT traffic control details are acceptable to Hunt County and the cities where the drilling will take place, and does not include the development of special traffic control plan drawings.
- We assume borings requiring traffic control will be drilled in the course of 7 consecutive daylight hours.
- Retaining walls are assumed to be MSE fill-type walls. The maximum fill height is assumed to be 10 feet (at the bridge crossings).

Mr. Wayne Hartt, PE  
DG-17-10044.2-G  
May 26, 2021

- Field survey of the boring locations and elevation will be performed by Freese and Nichols.
- Laboratory samples will be held for no more than a period of 60 days following completion of the final report or 120 days following completion of the draft report, whichever is less.

The scope of services described is appropriate for the project configuration presented to us. If anomalous conditions are encountered, or if the project configuration changes significantly, a change in work scope may be required. HVJ Associates® will recommend such changes when and if it is deemed necessary. No changes will be implemented without prior authorization from Freese and Nichols.

HVJ Associates® will use the Texas One Call System to locate buried utilities. We will take care to minimize damage to existing facilities; however, our activities may result in some damage to vegetation or unidentified existing utilities. This proposal specifically excludes any costs associated with restoration of vegetation or repair of utilities damaged by our operations that were not previously identified by Texas One Call and / or TxDOT.

If this letter meets with your approval, please sign and complete the indicated spaces below and forward a copy of the letter to us. HVJ Associates® is pleased to be of service on this project. Please call us if you have any questions or require additional information.

Sincerely,

**HVJ NORTH TEXAS - CHELLIAH CONSULTANT, INC.**



Robert H. Lawrence, PE  
Department Manager

Agreed to this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

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

Title: \_\_\_\_\_

Firm: \_\_\_\_\_

Phone No. \_\_\_\_\_

Date to Start Work: \_\_\_\_\_

**Estimate for Geotechnical Investigation**

FM 1570 Phase 2 - from IH-30 to SH 34

Hunt County, Texas

Freese and Nichols

HVJ Project No.: DG-17-10044.2-G

May 26, 2021 (Revision 1)

**Geotechnical Fee Estimate Breakdown****Geotechnical Field Work:**

- Four (4) Bridge borings (80 feet deep each, or 20 feet into bedrock)
- Eighteen (18) Retaining Wall borings (35 feet deep each)
- Four (4) CBC borings (30 feet deep each, or 5 feet into bedrock)
- Eleven (11) Pavement borings (15 feet deep)
- One (1) traffic signal foundation boring (50 feet deep, or 20 feet into bedrock)
- Three (3) bulk samples

Drill Rig Mobilization/Demobilization	1	@	\$750.00	LS	\$750.00
Drilling and Sampling Soil with Texas Cone Penetration (0' - 100')	1000	ft @	\$33.00	per ft	\$33,000.00
Coring Rock with Texas Cone Penetration (0' - 100')	120	ft @	\$40.00	per ft	\$4,800.00
Drilling and Sampling without Texas Cone Penetration (0' - 50')	165	ft @	\$30.00	per ft	\$4,950.00
Traffic Control	22	@	\$2,500.00	per day	\$55,000.00
Pavement Coring Mobilization, Equipment, Crew	3	@	\$500.00	per day	\$1,500.00
Pavement Coring (0" - 12")	11	@	\$120.00	per core	\$1,320.00
Pavement Patching	38	@	\$50.00	each	\$1,900.00
Lodging and Meals (3 person crew)	22	@	\$450.00	per day	\$9,900.00
Field Coordination, Staking and Logging - Staff Engineer/Geologist	240	@	\$105.00	per hour	\$25,200.00
Vehicle Trips (includes trips for support trucks)	23	@	\$100.00	per trip	\$2,300.00
				<b>Subtotal</b>	<b>\$140,620.00</b>

**Laboratory Testing**

Moisture Content	256	ea @	\$12.00	each	\$3,072.00
Atterberg Limits	146	ea @	\$65.00	each	\$9,490.00
Percent Passing No. 200 Sieve	146	ea @	\$45.00	each	\$6,570.00
Sieve Analysis	9	ea @	\$55.00	each	\$495.00
Hydrometer	9	ea @	\$125.00	each	\$1,125.00
One Dimensional Consolidation Properties of Soil	6	ea @	\$375.00	each	\$2,100.00
Determination of Sulfat Content	34	ea @	\$120.00	each	\$4,020.00
Unconfined Compressive Strength - Soil	85	ea @	\$55.00	each	\$4,675.00
Unconsolidated-Undrained (UU) Triaxial Testing - Soil	23	ea @	\$120.00	each	\$2,760.00
Consolidated-Undrained (CU) Triaxial Testing - Soil (multi-stage)	2	ea @	\$1,200.00	each	\$2,400.00
Unconfined Compressive Strength - Rock	32	ea @	\$80.00	each	\$2,560.00
California Bearing Ration - CBR (three-point)	2	ea @	\$550.00	each	\$1,100.00
Texas Triaxial Test	1	ea @	\$1,800.00	each	\$1,800.00
				<b>Subtotal</b>	<b>\$42,167.00</b>

**Geotechnical Engineering**

Senior Project Engineer, P.E.	14	hr @	\$195.00	per hour	\$2,730.00
Project Manager, P.E.	26	hr @	\$165.00	per hour	\$4,290.00
Project Engineer, P.E.	40	hr @	\$140.00	per hour	\$5,600.00
Staff Engineer, E.I.T.	124	hr @	\$105.00	per hour	\$13,020.00
Engineering Aide/Admin	12	hr @	\$60.00	per hour	\$720.00
				<b>Subtotal</b>	<b>\$26,360.00</b>

**Total** **\$209,147.00**



1701 Directors Boulevard  
Suite 910  
Austin, TX 78744  
737-222-5151  
[www.hvj.com](http://www.hvj.com)

May 25, 2021

Mr. Wayne P. Hartt, PE  
Freese and Nichols, Inc. (FNI)  
5805 Main St. Suite B  
Frisco, TX 75034

Re: Hunt County Transportation Bond Program  
Pavement Engineering Design FM 1570 Phase 2  
Hunt County, Texas  
Owner: Hunt County  
HVJ Proposal No. DG 17 10044.2-P

Dear Mr. Hartt:

HVJ Associates, Inc.(HVJ) is pleased to submit this scope and fee proposal for providing a pavement design report for the subject site. This letter outlines HVJ's approach for providing a pavement design for the proposed pavement reconstruction.

### **Project Description**

It is understood that the project will improve operations along FM 1570 from IH 30 to SH 34, approximately 2.6 miles. Currently a rural 2-lane roadway, improvements will include reconstruction and widening to a 5-lane roadway. Project will terminate 500 ft. south of IH 30 Frontage Road. The project design and construction documents will be subject to review by Hunt County and TxDOT under applicable regulatory authorities.

### **Pavement Design Scope**

HVJ North Texas will perform a geotechnical investigation as described in HVJ Proposal DG 17 10044.2. Utilizing the subsurface and laboratory information from that project, HVJ will design two flexible pavement section alternatives including subgrade stabilization if necessary to achieve a 20-year design life. Planned cross section design alternatives include: Hot Mix Asphalt Concrete (HMAC) over Flexible Base, and HMAC over HMAC Base. The pavement design will include consideration of traffic loads to be provided by FNI and/or Hunt County, in the form of TxDOT TP&P data. The traffic data required includes current and projected traffic counts and truck percentages. The TxDOT pavement design procedure using FPS21 analysis program will be used along with Texas Triaxial and Mechanistic design checks, as well as any available local pavement design guide.

HVJ proposes to utilize nondestructive deflection testing (NDT) with the Falling Weight Deflectometer (FWD) to calculate subgrade design parameters for input into the FPS21 software, as per TxDOT requirements. The data may also be used to finalize boring locations to ensure

Mr. Wayne Hartt, PE  
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geotechnical data is collected for any changes in subgrade conditions identified along the alignment in profiles of the NDT data.

HVJ will review the construction documents at the various submittal phases to confirm HVJ's pavement design recommendations are properly addressed.

### **Engineering Report Deliverable**

HVJ anticipates providing pavement design deliverables. In general, the following items will be included in HVJ's geotechnical report:

- Flexible pavement thickness design recommendations
- Subgrade stabilization, if determined necessary

HVJ will review the construction documents (plans and specifications) for the 60% and 90% submittals during the Design Phase to confirm HVJ's pavement design recommendations are properly addressed.

### **Schedule**

The estimated schedule for the geotechnical and pavement design work is as follows:

Field Investigations (NDT)	2 Weeks after NTP
Draft Pavement Design Report	3 Weeks after completion of laboratory testing
Final Pavement Design Report	2 Weeks after receipt of all comments from County and TxDOT

### **Fees**

Based on the scope of work and conditions as outlined below, the estimated fee for HVJ services will not exceed \$25,839. Attached is a breakdown of the proposed fees for the project area based on recently approved TxDOT rates.

### **Insurance**

Insurance certificates verifying HVJ's general liability, auto, worker compensation, and errors and omissions insurance coverage, listing FNI as a certificate holder, will be provided upon request.

### **Invoices**

Invoices will be submitted at the end of each month based on the time spent on the work and items completed. HVJ credit terms are 30 days net.

### **Conditions**

The following assumptions were made:

- No temporary pavement design alternatives are planned for design.



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- Only flexible pavement design is included in the scope. No concrete pavement design is included.
- HVJ will review up to two design submittals anticipated at 60% and 90%.
- FNI will request TxDOT TP&P Pavement Design Analysis format from the Paris District.
- No travel for site meetings or conferences are included and it is assumed that all communications can be via telephone conference calls or emails.

HVJ is pleased to be of service on this project. We look forward to working with you on this project.

Sincerely,

**HVJ ASSOCIATES, INC.**

A handwritten signature in blue ink that reads "R. F. Carmichael III". The signature is written in a cursive, flowing style.

R. F. (Frank) Carmichael III, PE  
Project Manager

FC/fc/rj

Mr. Wayne Hartt, PE  
 DG 17 10044.2-P  
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<b>PAVEMENT DESIGN &amp; NDT</b>				
<b>FM 1570 PH 2</b>				
<b>FREESE NICHOLS</b>				
<b>HVJ Project No. DG1710044.2-P</b>				
<b>Engineering &amp; Administrative Personnel</b>				
Project Manager, PE	16	\$241.80	per hour	\$3,868.80
Project Engineer, PE	41	\$169.91	per hour	\$6,966.31
Engineer-in-Training, EIT	55	\$114.36	per hour	\$6,289.80
Engineering Technician	22	\$98.03	per hour	\$2,156.66
Administrative/Clerical	2	\$75.15	per hour	\$150.30
<b>SubTotal Labor</b>				<b>\$19,431.87</b>
<b>Direct Costs</b>				
Non-Destructive Deflection Testing				
Mileage	500	\$0.56	per mile	\$280.00
Falling Weight Deflectometer (FWD) Testing	1	\$2,900.00	day	\$2,900.00
Traffic Control Services, Arrow Boards and Attenuator trucks - Medium Project (Includes labor, equipment and fuel)				
	1	\$2,800.00	day	\$2,800.00
Lodging/Hotel - Taxes and Fees	2	\$35.00	day/person	\$70.00
Lodging/Hotel (Taxes/fees not included)	2	\$96.00	day/person	\$192.00
Meals (Excluding alcohol & tips) (Overnight stay required)	3	\$55.00	day/person	\$165.00
<b>SubTotal Directs</b>				<b>\$6,407.00</b>
<b>Total Project</b>				<b>\$25,838.87</b>