GENERAL MEETING OF THE BOARD OF DIRECTORS
OF THE NORTH EAST TEXAS
REGIONAL MOBILITY AUTHORITY

RESOLUTION NO. 17-53

WHEREAS, the North East Texas Regional Mobility Authority ("NET RMA") was created pursuant to the request of Gregg and Smith Counties and in accordance with provisions of the Transportation Code and the petition and approval process established in 43 Tex. Admin. Code § 26.1, *et seq*. (the "RMA Rules"); and

WHEREAS, the Board of Directors of the NET RMA has been constituted in accordance with the Transportation Code and the RMA Rules; and

WHEREAS, subsequent to the initial formation of the NET RMA the Counties of Cherokee, Rusk, Harrison, Upshur, Bowie, Panola, Titus, Van Zandt, Wood, and Kaufman joined the Authority and are represented on the Board of Directors; and

WHEREAS, on December 15, 2016, in Resolution No. 16-106, the NET RMA Board of Directors authorized the issuance of a Request for Qualifications ("RFQ") to solicit responses from firms interested in providing environmental consulting services to the NET RMA for Segment 6 of Toll 49; and

WHEREAS, on May 9, 2017, in Resolution No. 17-25, the NET RMA Board of Directors selected CP&Y, Inc. ("CP&Y") to provide environmental consulting services and authorized the NET RMA Executive Director to negotiate an agreement for such services; and

WHEREAS, the NET RMA Executive Director negotiated an agreement for environmental consulting services with CP&Y, a copy of which is attached hereto as Attachment "A", for an amount not to exceed $4,323,998.31 (the "Agreement"); and

WHEREAS, the NET RMA Board of Directors must approve the Agreement before CP&Y may proceed to work thereunder.

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors of the NET RMA approves the Agreement with CP&Y for environmental consulting services in the form or substantially the same form attached hereto as Attachment "A", for an amount not to exceed $4,323,998.31; and

BE IT FURTHER RESOLVED, that the commencement of work by CP&Y under the Agreement is contingent on the receipt or commitment of adequate funding to pay for the work.

Adopted by the Board of Directors of the North East Texas Regional Mobility Authority on the 13th day of September, 2017.

Submitted and reviewed by:

C. Brian Cassidy
General Counsel for the North East
Texas Regional Mobility Authority

Approved:

Linda Ryan Thomas
Chair, Board of Directors
Date Passed 09/13/17
Resolution No. 17-53

ENVIRONMENTAL CONSULTING AGREEMENT

This Environmental Consulting Agreement (the "**Agreement**") is entered into as of *September 13*, 2017 (the "**Effective Date**") between the North East Texas Regional Mobility Authority ("**NET RMA**" or "**Authority**") and CP&Y, Inc. (the "**Consultant**") (collectively, the "**Parties**" and each individually a "**Party**").

RECITALS:

WHEREAS, pursuant to a Request for Qualifications issued on January 24, 2017 (the "**RFQ**"), the Authority sought to identify and obtain the services of one or more qualified firms to provide for Authority with professional engineering and environmental consulting services (the "**Services**") in connection with the preparation of an environmental impact statement under the National Environmental Policy Act, 42 U.S.C. 4321, et seq ("**NEPA**") for Segment 6 of Toll 49 (the "**Project**"); and

WHEREAS, five (5) responses to the RFQ were received by the Authority; and

WHEREAS, on May 9, 2017, in Resolution 17-25, the Board of Directors of the NET RMA authorized the Executive Director to negotiate an agreement for environmental consulting services with the Consultant; and

WHEREAS, the Authority and the Consultant agree that this Agreement shall govern the performance of the Services and that the Consultant is authorized to perform the Services included within the Scope of Work set forth in Attachment A to this Agreement.

NOW, THEREFORE, in consideration of the mutual promises in this Agreement and other valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties agree as follows:

AGREEMENT:

1. Services. The Authority retains the Consultant to provide the Services pursuant to the terms set forth in this Agreement. In performing the Services, the Consultant shall operate in coordination with the Authority's other consultants and staff, provided that nothing herein shall alter the Consultant's status as an independent contractor as set forth in Section 3(a) below. Consultant and the Authority agree that this Agreement is non-exclusive and that Consultant may perform professional engineering and environmental consulting services for others and that the Authority may engage others to perform identical or similar services during the term of this Agreement. Consultant shall be authorized to perform professional engineering and environmental consulting services for the Authority upon the execution of this Agreement.

2. Payments to Consultant.

a. Basis of Compensation. Consultant shall be compensated for its Services by the Authority as provided in Attachment B.

b. Total Compensation. The maximum amount payable to Consultant by the Authority for all Services rendered pursuant to this Agreement shall not exceed $4,323,998.31

(the "**Maximum Fee Amount**"). Consultant has represented that the Maximum Fee Amount will be sufficient to cover all work necessary to complete the Scope of Work.

c. Invoicing. On or before the tenth (10th) day of each month during the term of this Agreement, Consultant shall submit to the Authority (with copies to such others as the Authority may direct) an invoice (the "**Invoice**") for all Services completed and expenses incurred during the preceding month in a format acceptable to the Authority. In each Invoice, Consultant shall certify the following: (a) the Invoice represents Services performed and expenses incurred by the Consultant for the designated period; and (b) Services and expenses presented are within the Scope of Work and represent permissible fees as imposed by the Authority or the Texas Department of Transportation ("**TxDOT**").

d. Invoice payments are subject to the following provisions, provided the Consultant is not in default:

(1) for amounts invoiced by the Consultant for work which is reimbursable by TxDOT pursuant to any agreements for financial assistance, the Authority shall submit a payment request to TxDOT within fifteen (15) business days of receipt of a conforming invoice from the Consultant. Payment shall be due to the Consultant from the Authority within thirty (30) days of the Authority's receipt of payment from TxDOT.

(2) for amounts invoiced by the Consultant for work which is within the authorized Scope of Services but which is not subject to reimbursement by TxDOT, payment shall be due to the Consultant from the Authority within thirty (30) days of the Authority's receipt of a conforming invoice from the Consultant provided that the performance of the work was authorized by the Authority.

(3) For any amounts invoiced to the Authority by the Consultant and for which the Authority disputes payment, or for which reimbursable amounts are disputed by TxDOT, the period for payment as to such disputed amounts shall not commence until such dispute is resolved.

e. Notwithstanding the foregoing, Consultant acknowledges and agrees that if the source of any portion of the payments for Services is through financial assistance provided by TxDOT, and that if TxDOT declines to reimburse all or a portion of amounts requested, the Authority shall have no liability for the difference. To the extent that TxDOT rejects a request for payment, Consultant shall communicate directly with TxDOT to supply missing information or explain invoiced charges in order to secure all payment amounts.

3. Consultant's Status.

a. Relationship Between the Parties. The relationship between the Authority and the Consultant shall be one of an independent contractor. The Consultant acknowledges and agrees that neither it nor any of its employees, subconsultants, or subcontractors ("**Personnel**") shall be considered an employee of the Authority for any purpose. The Consultant shall have no authority to enter into any contract binding upon the Authority, or to create any obligation on behalf of the Authority. As an independent contractor, neither the Consultant nor its employees

shall be entitled to any insurance, pension, or other benefits customarily afforded to employees of the Authority. This Agreement shall not be deemed to create any form of business organization between the Parties, nor as giving Consultant any type of property interest (except as may be provided for by applicable law), nor is any Party granted any right or authority to assume or create any obligation or responsibility on behalf of any other Party, nor shall any Party be in any way liable for any debt of the other Party.

b. Taxes and Charges. Consultant shall be responsible for payment of all taxes, fees, contributions or other charges in any way applicable to Consultant, or to the performance of the Services.

4. Responsibilities of Consultant.

a. Coordination of Services. Consultant shall at all times exercise its best efforts to coordinate the Services with the Authority's duly designated representatives and with the consultants, engineers and contractors identified by the Authority as providing services in connection with the Project. The Authority may, from time to time, schedule and coordinate the performance of Consultant's Services in conjunction with the work of others, and Consultant agrees to exercise its best efforts to comply with the scheduling and coordination.

b. Representations and Warranties. Consultant represents and warrants that the following are true and correct as of the date of this Agreement:

(1) Consultant is a professional engineering and environmental consulting firm and is knowledgeable and experienced in providing technical consulting and engineering services comparable to the Services and the Services shall be performed in a manner consistent with the standards of care, diligence and skill ordinarily exercised by other professional consultants under similar circumstances in accordance with customarily accepted professional practices and procedures at the time the Services are performed.

(2) Consultant is financially solvent, is able to pay its debts as they mature, is possessed of sufficient working capital to complete the Services, and is able to furnish all of the tools, materials, supplies, equipment and labor required for the performance of the Services.

(3) There are no claims or actions pending against Consultant which would materially impair its abilities to perform any Services under this Agreement or disqualify it from performing the Services.

(4) There are no conflicts of interest or relationships that would impair the independence or objectivity of the Consultant or any of its Personnel, or which would create the appearance of potential bias or lack of impartiality in the performance by Consultant of the Services.

c. Covenants. Consultant covenants and agrees with the Authority as follows:

(1) Consultant shall, in the performance of the Services, comply with all applicable statutes, rules, regulations, ordinances, and orders of the United States and of any state or political subdivision including, without limit, licensing and certification requirements, environmental laws, health and safety laws, worker health and safety laws and laws pertaining to labor wages, hours and other conditions of employment and the policies of the Authority applicable to consultants working on the Authority's behalf.

(2) Consultant shall not knowingly perform, or enter into any agreement to perform, services for any other person, corporation or entity, except with the prior written consent of the Authority, if the performance of the services could knowingly result in a conflict with Consultant's obligations under this Agreement.

(3) All personnel of Consultant shall be required to abide by the terms and provisions of this Agreement, including, without limit, the requirement of confidentiality as provided in Section 8 below.

(4) Consultant shall be familiar with the laws, rules, regulations, and ordinances affecting Consultant's performance of the Services. Consultant shall not use any hazardous materials, or introduce or disturb any materials which are regulated by any local, state or federal agency or which require clean-up, removal, or remediation under any applicable law.

(5) In the performance of the Services, and subject to the standard of care described in Section 4.b.(1) above, Consultant shall take, and shall cause its Personnel to take, all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to, all persons and property. Without limiting the generality of the foregoing, Consultant shall require its Personnel to comply with any health and safety plans as prescribed by applicable federal, state and local laws, rules and regulations.

(6) The Authority shall have the right to review the qualifications of any Personnel assigned by Consultant and the right to request the removal of any Personnel so assigned. This right in no way relieves Consultant of the obligation to select and assign qualified Personnel or the responsibility of Consultant for the acts and omissions of its Personnel in performing Services hereunder. Any request for removal of Personnel shall be immediately honored by Consultant provided, however, that the Authority and the Consultant develop a mutual agreeable method for the evaluation of an individual's performance on the Project. If that performance is not corrected within thirty (30) days then the individual will be immediately removed from the Project. The Consultant shall have the right to substitute for any such removed Personnel, another qualified individual acceptable to the Authority with similar qualifications. Approval of each substitution shall not be unreasonably withheld.

(7) Consultant has the power and authority to enter into this Agreement. The execution and delivery of this Agreement and the performance of the Services hereunder has been duly authorized by all necessary corporate action. Upon execution, this Agreement will constitute the binding and valid obligations of Consultant enforceable in accordance with its terms. Consultant is in good standing in and qualified to do business in the State of Texas.

5. Termination.

a. Termination for Convenience. The Authority may terminate this Agreement without cause effective upon seven (7) days written notice to Consultant. Consultant shall be paid for that portion of Services performed, or Consultant's actual charges accrued for time and materials work, as of the date of termination and shall be compensated by the Authority for all reasonable and necessary termination costs and non-cancelable commitments entered into prior to the date of termination. In no event shall Consultant be entitled to compensation or lost profits for Services not performed due to termination.

b. Termination for Default. The Authority may terminate this Agreement for default in the event of Consultant's failure to make timely progress or non-performance or breach by Consultant of this Agreement, including violation of any representation, covenant or warranty, or in the event of insolvency, bankruptcy or receivership of Consultant. The Authority shall provide written notice of default to the Consultant. The Consultant shall have thirty (30) days to cure any default under the terms of this Agreement. If the default is not cured by the Consultant within thirty (30) days, then the Authority may terminate the Agreement as provided in this section. Termination shall be effective upon written notice to Consultant. If the Authority terminates this Agreement as provided in this section, no fees of any type, other than fees due and payable as of the termination date for work performed and acceptable to the Authority, shall thereafter be paid to the Consultant, and the Authority shall have a right to set off or otherwise recover any damages incurred by reason of the Consultant's breach. In the event the Authority contracts with others for performance or completion of the Services, Consultant shall reimburse the Authority for any and all reasonable costs incurred by the Authority in connection with such performance or completion which are due directly to Consultant's default. Payment of such costs shall not relieve Consultant of any other liability it may have in connection with the Services, and termination for default under this section shall not constitute a waiver or release by the Authority of any claims for damages, claims for additional costs incurred by the Authority to complete and/or correct the work described in this Agreement, or any other claims or actions arising under this Agreement or available at law or equity which it may have against the Consultant for its failure to perform satisfactorily any obligation hereunder.

c. Termination by Consultant. If Consultant has not been timely paid for Services rendered and which are not in dispute and after providing the Authority with notice of non-payment and at least thirty (30) days to provide payment after receipt of such notice, Consultant shall have the right to terminate this Agreement upon thirty (30) days prior written notice to the Authority.

d. Other Rights; Indemnification. The Authority's rights and options to terminate this Agreement shall be in addition to, and not in lieu of, any and all rights, actions, options, and privileges otherwise available under law or equity to the Authority by virtue of this Agreement or otherwise. Termination pursuant to this section does not abrogate or in any way affect the indemnification obligations of the Consultant set forth in Section 6 below.

e. Delivery of Materials. Upon termination of this Agreement for any reason, Consultant shall within five (5) business days deliver to the Authority all Materials as defined in Section 8.a.(1) below, held or used by Consultant in connection with the Services, except those

Materials, if any, owned by Consultant or supplied by Consultant at Consultant's own cost. If, at the time of termination further sums are due, Consultant shall not be entitled to the sums until all Materials required to be delivered to the Authority are delivered.

6. Indemnification and Insurance.

a. Indemnification. CONSULTANT SHALL INDEMNIFY, DEFEND, AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, EMPLOYEES, CONSULTANTS, CONTRACTORS, AND AGENTS FROM AND AGAINST ANY AND ALL LAWSUITS, CLAIMS, LIABILITIES, ACTIONS, CAUSES OF ACTION, DEMANDS, LOSSES, DAMAGES, FORFEITURES, PENALTIES, FINES, COSTS AND EXPENSES OF ANY TYPE, INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEYS' FEES AND EXPENSES, BY WHOMEVER ASSERTED, INCLUDING, BUT NOT LIMITED TO, ANY GOVERNMENTAL AGENCY OR BRANCH OR ANY THIRD PARTY TO THE EXTENT ARISING IN CONNECTION WITH (I) A BREACH BY THE CONSULTANT OF ANY TERM OR PROVISION OF THIS AGREEMENT; OR (II) ANY NEGLIGENT ACT, ERROR, OMISSION, OR WILLFUL MISCONDUCT OF THE CONSULTANT OR ITS OFFICERS, DIRECTORS, EMPLOYEES, CONSULTANTS, CONTRACTORS, OR AGENTS IN THE PERFORMANCE OF THE SERVICES. WITHOUT LIMITING THE FOREGOING, CONSULTANT SHALL FURTHER INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, EMPLOYEES, CONSULTANTS, CONTRACTORS, AND AGENTS FROM AND AGAINST ANY AND ALL LAWSUITS, CLAIMS, LIABILITIES, ACTIONS, CAUSES OF ACTION, DEMANDS, LOSSES, DAMAGES, FORFEITURES, PENALTIES, FINES, COSTS AND EXPENSES, INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEYS' FEES AND EXPENSES, ARISING FROM ANY INJURY OR DEATH OF AN EMPLOYEE, CONSULTANT, CONTRACTOR, OR AGENT EMPLOYED OR RETAINED BY CONSULTANT ARISING FROM ANY NEGLIGENT ACT, ERROR, OMISSION, OR WILLFUL MISCONDUCT OF THE CONSULTANT OR ITS OFFICERS, DIRECTORS, EMPLOYEES, CONSULTANTS, CONTRACTORS, OR AGENTS IN THE PERFORMANCE OF THE SERVICES. IN THE EVENT THE AUTHORITY IS FOUND TO BE PARTIALLY AT FAULT FOR ANY LAWSUIT, CLAIM, LIABILITY, ACTION, CAUSE OF ACTION, DEMAND, LOSS, DAMAGE, FORFEITURE, PENALTY, FINE, COST OR EXPENSES, THE CONSULTANT SHALL NEVERTHELESS INDEMNIFY THE AUTHORITY FROM AND AGAINST THE PERCENTAGE OF FAULT ATTRIBUTABLE TO THE CONSULTANT OR ITS OFFICERS, DIRECTORS, EMPLOYEES, AND AUTHORIZED AGENTS OR TO THEIR CONDUCT.

b. Insurance. The Consultant and all subconsultants shall furnish the Authority a properly completed Certificate of Insurance approved by the Authority prior to beginning work under this Agreement and shall maintain such insurance through the term of this Agreement, as set forth in Section 12.1. The Consultant shall provide proof of insurance (and the Professional Liability Insurance discussed herein) in a form reasonably acceptable by the Authority. The Consultant certifies that it has and will maintain insurance coverages as follows:

(1) **Workers Compensation Insurance**. In accordance with the laws of the State of Texas and employer's liability coverage with a limit of not less than $1,000,000. This policy shall be endorsed to include a waiver of subrogation in favor of the Authority.

(2) **Comprehensive General Liability Insurance**. With limits not less than $1,000,000 for bodily injury, including those resulting in death, and $1,000,000 for property damage on account of any one occurrence, with an aggregate limit of $1,000,000.

(3) **Comprehensive Automobile Liability Insurance**. Applying to owned, non-owned, and hired automobiles in an amount not less than $1,000,000 for bodily injury, including death, to any one person, and $1,000,000 on account on any one occurrence, and $1,000,000 for property damage on account of any one occurrence. This policy shall not contain any limitation with respect to a radius of operation for any vehicle covered and shall not exclude from the coverage of the policy any vehicle to be used in connection with the performance of the Consultant's obligations under this Agreement.

(4) **Excess Liability Insurance**. In an amount of $5,000,000 per occurrence and aggregate.

(5) **Valuable Papers Insurance**. In an amount sufficient to assure the full restoration of any plans, drawings, field notes, logs, test reports, diaries, or other similar data or materials relating to the services provided under this Agreement in the event of their loss or destruction, until such time as the work has been delivered to the Authority.

(6) **Architects and/or Engineers Professional Liability Insurance**. Engineer shall provide and maintain professional liability coverage, with limits not less than $5,000,000 per claim and $5,000,000 aggregate. The professional liability coverage shall protect against any negligent act, error or omission arising out of design or engineering activities, including environmental related activities, with respect to the Project, including coverage for negligent acts, errors or omissions by any member of the Consultant and its subconsultants (including, but not limited to design subconsultants and subconsultants) of any tier. The policy must provide that coverage extends a minimum of three (3) years beyond the Consultant's completion of the services. This policy shall be endorsed to include a waiver of subrogation in favor of the Authority.

(7) **General for All Insurance**. The Consultant shall promptly, upon execution of this Agreement, furnish certificates of insurance to the Authority indicating compliance with the above requirements. Certificates shall indicate the name of the insured, the name of the insurance company, the name of the agency/agent, the policy number, the term of coverage, and the limits of coverage.

All policies are to be written through companies (a) authorized to transact that class of insurance in the State of Texas; (b) rated (i), with respect to the companies providing the insurance under Sections 6.b.(1)-(4), above, by A. M. Best Company as "A-X" or better (or the equivalent rating by another nationally recognized rating service) and (ii) with respect to the company providing the insurance under Section 6.b.(5), a rating by A. M. Best Company or similar rating service satisfactory to the Authority; and (c) otherwise acceptable to the Authority.

All policies are to be written through companies authorized to transact that class of insurance in the State of Texas. Such insurance shall be maintained in full force and effect during the life of this Agreement or for a longer term as may be otherwise provided for hereunder. Insurance furnished under Sections 6.b.(2)-(4), above, shall name the Authority as additional insured and shall protect the Authority, its officers, employees, and directors, agents, and representatives from claims for damages for bodily injury and death and for damages to property arising in any manner from the negligent or willful acts or failures to act by the Consultant, its officers, employees, directors, agents, and representatives in the performance of the Services. Certificates shall also indicate that the contractual liability assumed in Section 6.a., above, is included.

The insurance carrier shall include in each of the insurance policies required under Sections 6.b.(1)-(6), the following statement: "This policy will not be canceled or materially changed during the period of coverage without at least thirty (30) days prior written notice addressed to the North East Texas Regional Mobility Authority, 1001 ESE Loop 323 Ste 420, Tyler, Texas 75701, Attn: Executive Director"

(8) **Subconsultant**. In the event a subconsultant selected by the Consultant to perform work associated with this Agreement is unable to secure insurance coverage in the amounts set forth in Sections 6.b.(2), (4), or (6) above, Consultant may provide to the Authority an explanation of coverages that a subconsultant does possess, why those coverages are adequate to cover the potential exposure for the work to be performed by the subconsultant, and an acknowledgement that the Consultant remains liable for the work performed under this Agreement, including that performed by the subconsultant. The Authority may decide, in its sole discretion, whether to accept the coverages available to the subconsultant.

7. Subcontracting and Assignment. This Agreement shall be binding upon and shall inure to the benefit of the successors and permitted assigns of the Parties to this Agreement; provided, however, that Consultant shall not subcontract or retain an independent contractor, subcontractor or consultant to perform under or assign this or any portion of this Agreement without the prior written consent of the Executive Director. Notwithstanding the foregoing, the Authority reserves the right to reasonably reject or approve any contracts or agreements entered into between Consultant and an independent contractor, subcontractor or consultant. To the same extent set forth herein for its own work, Consultant shall assume full responsibility for the work of any independent contractor, subcontractor or consultant.

8. Confidentiality and Materials.

a. Confidentiality. In order to protect confidentiality, but subject in all instances to Section 10 and disclosure to state and federal agencies involved in the review of Consultants work and compilation of an administrative record, the Services shall be performed, and all Materials, as defined in Section 8.a.(1), shall be handled in accordance with the following:

(1) All books, records, photographs, slides, materials, new data, boring logs, laboratory reports, calculations, estimates, documents, communications, notes, proposals, reports, scopes of work or related responses, whether in written or any other form (collectively, "**Materials**"), which are generated by Consultant as a direct result of this Agreement for the

Authority or furnished to Consultant by the Authority and expressly marked by the Authority or others as confidential shall be considered as confidential. Materials shall be marked "Confidential" by Consultant unless the Authority specifically directs otherwise. Except for information that is in the public domain, the Consultant will keep all information furnished to Consultant by the Authority and all Materials prepared by Consultant for the Authority confidential and not disclose to third parties without the consent of the Authority.

(2) All Materials shall be kept in controlled access files marked "Confidential" when requested by the Authority.

(3) Consultant agrees that only those Personnel directly engaged in the Services or administrative services in support of this Agreement shall have access to the Materials.

(4) All Materials prepared or developed by or for Consultant exclusively for the Authority pursuant to this Agreement shall become the property of the Authority upon the termination of the term of this Agreement. Upon the termination of the term of this Agreement or at an earlier time as the Authority requests and upon payment, Consultant agrees to deliver to the Authority all Materials. Consultant may retain a record copy (including portions of samples) of all Materials in a controlled access file accessible only to Consultant's employees, and will not display, reveal or disclose the contents of the Materials so retained to others without the Authority's prior written authorization.

(5) Consultant agrees to obtain the same assurances as to confidentiality and non-disclosure as required under this section from all persons or entities which may be called upon to assist Consultant in providing the Services specified under this Agreement, including, but not limited to, subcontractors working under Consultant's direction.

b. Communication of Information. At the conclusion of its investigation, Consultant shall furnish to the Authority written reports of the results of the investigation conducted pursuant to this Agreement, as more fully set forth in Section 8(d). The reports shall be in the number of copies and form and cover the subject matters requested by the Authority. Consistent with Section 8.a.(4) above, all Materials developed, supplied or submitted to the Authority in accordance with this Agreement are the sole and exclusive property of the Authority.

c. Public Information Act. Consultant acknowledges that the Authority is a governmental entity subject to state laws governing the disclosure of information, including without limitation Chapter 552 of the Texas Government Code (the "**Public Information Act**"). Consultant understands and agrees that the Public Information Act or other state law could result in the disclosure of information provided to the Authority by the Consultant. Notwithstanding any other provision of this Agreement to the contrary, the Authority shall not be deemed to be in violation of this Agreement, and the Consultant shall not make any claim against the Authority, as a result of the disclosure of any information pursuant to the Public Information Act or other applicable law.

d. Status Reports. Consultant shall provide the Authority weekly status reports, or more frequently as reasonably requested by the Authority, regarding progress of Services.

e. Draft Reports; Final Reports. Consultant shall submit all written reports in draft form to the Authority at the notice address provided below. Consultant shall correct all errors and deficiencies in accordance with the professional standard of care in the reports before submission in final form. All draft reports shall be marked prominently as "DRAFT - FOR DISCUSSION PURPOSES ONLY." All final reports shall be signed by a duly authorized officer of Consultant, the representative of Consultant that performed the specific activities, and a professional engineer authorized to act in the name and on behalf of Consultant.

f. Assignment of Report. The Authority may need for the final report to be issued to a party or parties other than the Authority. The Authority shall have the right to have a report issued to itself or the separate entity.

g. Regulatory Agencies. Except as provided in Section 11 below, Consultant will not meet or confer with any member of any federal, state or local regulatory agency concerning the Services or disclose any information, including without limitation the reporting of any environmental condition without first obtaining the written consent of the Authority; however, nothing contained in this Agreement shall prohibit Consultant's good faith compliance with a lawful order of a court or governmental authority with competent jurisdiction or with the requirements of law applicable to the reporting obligations of Consultant. If Consultant receives such an order or concludes that it is legally obligated to report an environmental condition to the appropriate governmental entity, Consultant will provide the Authority, along with its request to disclose the matter or respond to the order, with a legal opinion that states that reporting and a response is required and will give the Authority a reasonable time to reply before taking action. In addition, Consultant will not discuss any matters arising out of this Agreement with members of the press or public and will not issue any press release without the prior written consent of the Authority. This section applies during the term of this Agreement and for a period of five (5) years following the completion of the performance of the Services, unless at such time litigation is pending which challenges any environmental approval for the project for which the Services are rendered, in which case this section shall continue to apply until a judgment or order of a court with competent jurisdiction over the challenge becomes final and unappealable.

9. Inspection and Effect of Payment. The Services performed by Consultant shall be subject to the Authority's reasonable inspection and approval. Consultant shall control and be fully responsible for the details, manner and method of performing the Services. The Authority shall at all times have access to the areas where the Services are being performed. Neither inspection, nor lack of inspection, or payment of an invoice by the Authority shall be deemed approval or be construed to be a waiver of the Authority's rights under this Agreement.

10. Federal Contract provisions. Pursuant to 49 CFR Part 18, the Authority and Consultant acknowledge that the following provisions apply to this Agreement:

a. Compliance with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C.1857(h)), section 508 of the Clean Water Act

(33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15);

b. Compliance with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94163, 89 Stat. 871);

c. Compliance with Federal Highway Administration ("**FHWA**") requirements and regulations on reporting;

d. Compliance with FHWA requirements and regulations for patents;

e. Compliance with FHWA requirements and regulations for copyrights and rights in data;

f. The FHWA, TxDOT, the Comptroller General of the United States, or any of their duly authorized representatives, and the Authority shall have access to any books, documents, papers, and records of the Consultant which are directly pertinent to this Agreement for the purpose of making an audit, examination, excerpts, and transcriptions;

g. All required records will be retained for a minimum of three (3) years after the Authority has made all required payments to the Consultant under the terms of this Agreement and all other pending matters are closed;

h. Compliance with all applicable standards, order, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15).

11. Disadvantage Business Enterprise Requirements

a. The Disadvantage Business Enterprise ("**DBE**") participation goal with respect to all services performed pursuant to this Agreement is 6% of the maximum amount payable to Consultant by the Authority .

b. The Consultant shall include provisions to effectuate this section in every subcontract.

c. The Consultant shall not cancel or terminate any subcontract with a DBE firm without the prior written consent of the Authority which shall not be unreasonably withheld, conditioned or delayed.

12. Miscellaneous Provisions.

a. Entire Agreement. This Agreement contains the entire agreement regarding the subject matter of this Agreement and supersedes all prior understandings and agreements, whether oral or in writing, regarding the subject matter of this Agreement. Any purported modification of Consultant's professional responsibility through exculpatory and/or

limiting language contained in Consultant's report shall not be construed to modify Consultant's liability described in this Agreement, regardless of whether the Authority objects to the inclusion of the language.

b. Notice. All notices and demands required to be given in writing shall be delivered by personal delivery, express courier service, or certified mail, return receipt requested, to the address below for the respective Party. However, if either Party gives notice of a change of name or address, notices to that Party shall thereafter be given as demanded in that notice. All notices and demands given by personal delivery or by express courier service shall be effective upon receipt by the Party to whom notice or a demand is being given. All notices given by mail shall be effective on the third business day after mailing.

The address, telephone and fax numbers, and emails of the Authority and Consultant are:

The Authority:

North East Texas Regional Mobility Authority
1001 ESE Loop 323 Ste 420
Tyler, TX 75701

Phone: (903) 630-7447
Fax: (903) 630-9111
Email: chris.miller@netrma.org

Consultant:

CP&Y, Inc.
1820 Regal Row, Ste 200
Dallas, TX 75235-2393

Phone: *(512)241-2210*
Fax: *(512)349-0727*
Email: *aatlas@cpyi.com*

c. Attorneys' Fees. In the event of any litigation involving this Agreement to enforce any provision of this Agreement, to enforce any remedy available upon default under this Agreement or to obtain a declaration of rights under this Agreement, to the extent permitted by law the prevailing party shall be entitled to recover from the other attorneys' fees and costs as may be reasonably incurred, including the costs of reasonable investigation, preparation and professional or expert consultation incurred by reason of the litigation.

d. Choice of Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Texas. The Parties acknowledge that venue for all disputes related to this Agreement is proper in Smith County, Texas.

e. Severability. If any provision of this Agreement, or the application thereof to any person or circumstance, is rendered or declared illegal for any reason and shall be invalid or unenforceable, the remainder of this Agreement and the application of such provision to other persons or circumstances shall not be affected thereby but shall be enforced to the greatest extent permitted by applicable law.

f. Waiver of Covenants, Conditions or Remedies. Waiver by one Party of performance of any covenant or condition under this Agreement shall not invalidate this

Agreement nor shall it be considered a waiver of any other covenant or condition under this Agreement.

g. Limitations. Notwithstanding anything herein to the contrary, all covenants and obligations of the Authority under this Agreement shall be deemed to be valid covenants and obligations only to the extent authorized by Chapter 370 of the Texas Transportation Code and permitted by the laws and the Constitution of the State of Texas, and no officer, director, or employee of the Authority shall have any personal obligations or liability thereunder.

h. Attachments. All exhibits referred to in this Agreement are deemed incorporated in this Agreement, whether or not actually attached, including without limitation:

Attachment A — Scope of Work
Attachment B — Fee Schedule

i. Amendment. This Agreement may be amended at any time by the written agreement of the Authority and Consultant. All amendments, changes, revisions and discharges of this Agreement shall be binding upon the parties to this Agreement despite any lack of legal consideration, as long as it shall be in writing and executed by both parties. Consultant shall not perform a change in the Services without the Authority's prior written approval of the changes and their cost.

j. Further Acts. Each Party to this Agreement agrees to perform any further acts and to execute, acknowledge and deliver any documents which may be reasonably necessary to carry out the provisions of this Agreement.

k. Survival. All of the provisions of this Agreement, except for Section 1, shall survive the expiration or termination of the term of this Agreement.

l. Term. The term of this Agreement shall be for four (4) years, commencing on the Effective Date, or until terminated pursuant to Section 5 of this Agreement. At the sole discretion of the NET RMA, this Agreement may be renewed for up to two (2) additional one (1) year periods.

m. Future Work. The Consultant acknowledges that the Consultant is precluded from future design/build or construction-related work for the Authority on the project for which they provide Services.

n. Authorization. Each Party to this Agreement represents to the other that it is fully authorized to enter into this Agreement and to perform its obligations hereunder, and that no waiver, consent, approval, or authorization from any third party is required to be obtained or made in connection with the execution, delivery, or performance of this Agreement.

o. Time is of the Essence. Time is of the essence with respect to the performance and completion of the Services to be furnished by the Consultant. Without limiting the foregoing, the Consultant shall endeavor to furnish the Services in such a manner and at such

times as the schedule of the Project requires so that no delay in the progression of the Project will be caused by or are in any way attributable to the Consultant.

The Parties have caused this Agreement to be executed as of the date first above written.

AUTHORITY

BY: North East Texas Regional Mobility Authority

By: _____
Name: Chris Miller
Title: Executive Director

CONSULTANT

BY: CP&Y, Inc.

By: _____
Name: *James J. Roohms*
Title: *Chief Operating Officer*

Attachment A
Scope of Work

North East Texas Regional Mobility Authority

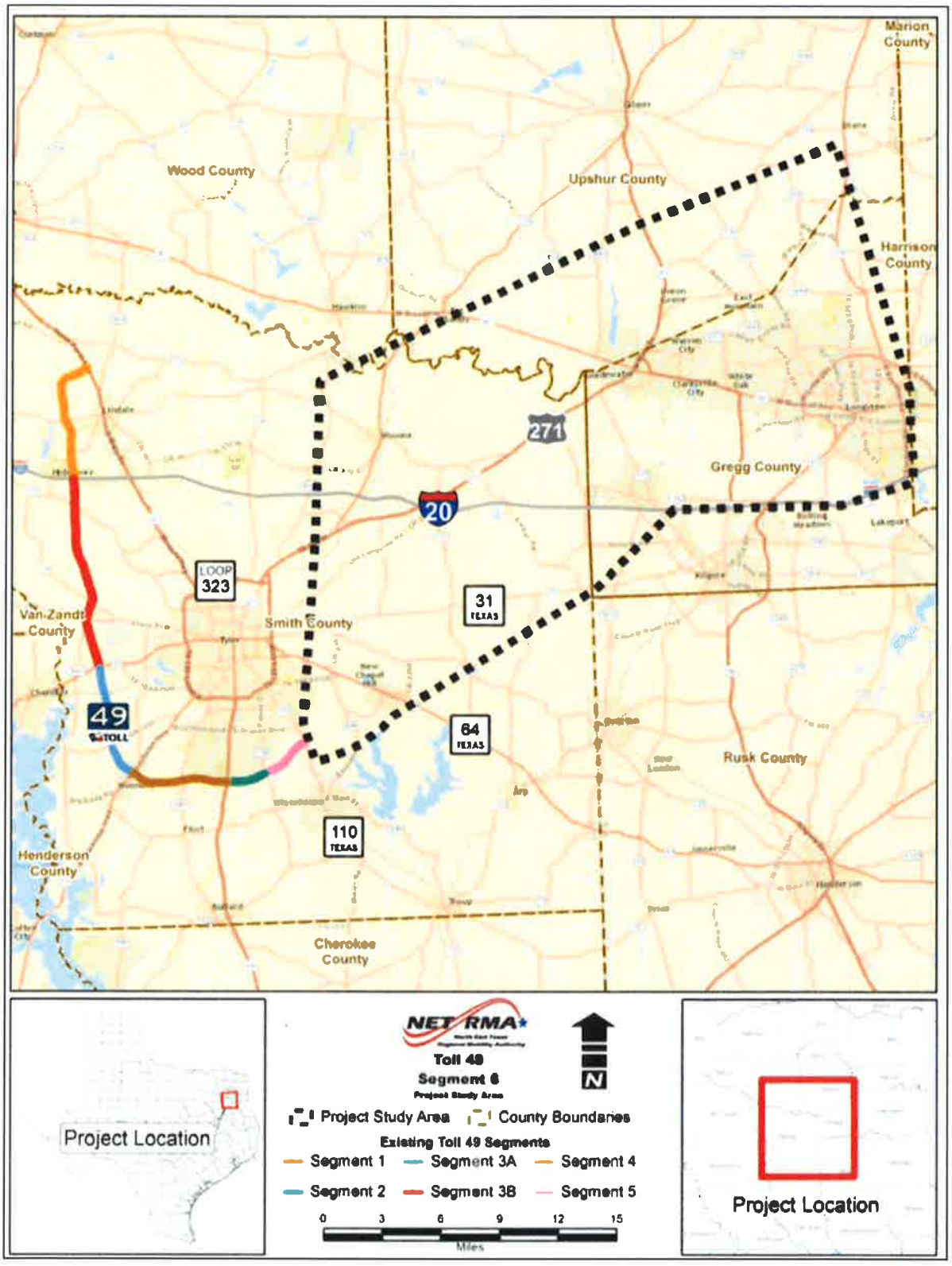
Toll 49 Corridor (East Texas Hourglass), Segment 6
State Highway (SH) 110 to Interstate Highway (IH) 20 and/or U.S. Highway (US) 271
in Smith, Gregg and Upshur counties, Texas

SCOPE OF SERVICES

Toll 49 Segment 6 currently does not exist and would serve as a portion of the overall Toll 49 Corridor that originates west of Tyler, circumnavigating Tyler, to SH 110. The Project is intended to improve mobility and connectivity, relieve congestion and improve safety in the communities of Tyler, Longview, and Marshall, Texas. The North East Texas Regional Mobility Authority (NET RMA) has prepared a preliminary feasibility study for Toll 49 Segments 6 and 7, connecting Segment 5 at SH 110 and extending north and east to IH 20 and/or US 271. See attached Project Location Map below.

The primary responsibility of the CP&Y Team (Engineer) is to prepare a corridor feasibility study for Toll 49 Segment 6, and a schematic design and Environmental Impact Statement (EIS) for Segment 6. As currently proposed, Segment 6 would be a controlled access two lane, two-way facility, with the capability to expand to a future four-lane divided facility when warranted. The Toll 49 Segment 6 Corridor Feasibility Study would consist of the development and evaluation of route options for the advancement of recommended corridors to IH 20 and/or to US 271 to be studied further in the EIS. The Engineer shall work closely, cooperatively and collaboratively with other consulting firms serving NET RMA for the project and with other governmental agencies and design consultant firms responsible for adjacent projects. The Engineer shall seek input from the City of Tyler, Tyler Chamber of Commerce, Tyler Area Metropolitan Planning Organization (MPO), Longview MPO, and Smith County, as well as the City of Longview, Gregg County, and other local entities, through public involvement activities so that local concerns and issues may be incorporated, addressed, and shared by the NET RMA with local citizens during project development. These concerns will be incorporated into recommendations to NET RMA and TxDOT on the development of the alternatives. The project shall be developed in compliance with applicable Federal and State regulations. The Engineer shall comply with TxDOT's current guidance for Local Government Projects to minimize the use of TxDOT resources.

Project Location Map



The tasks that will be performed and their associated deliverables are more fully described in the following TASK OUTLINE.

TASK OUTLINE

I. PROJECT MANAGEMENT (FUNCTION CODE 145)

A. PROJECT MANAGEMENT PLAN

The Engineer shall prepare a Project Management Plan which will outline project team organization, roles and responsibilities; project schedule; coordination and communication procedures; document and graphics formatting protocols; filing protocols, and project close-out procedures.

Deliverables:

- Electronic copy of the draft and final Project Management Plan

B. QUALITY ASSURANCE/QUALITY CONTROL PLAN

The Engineer shall prepare a Quality Assurance/Quality Control (QA/QC) Plan to document the quality control program to be implemented by the project team. It will outline review processes for work to assure that the work is in accordance with Federal and State requirements as identified under each task and that the work is completed in a timely and efficient manner.

Deliverables:

- Electronic copy of the draft and final QA/QC Plan

C. PROJECT SCHEDULE

The Engineer shall prepare a project schedule, using the latest version of Primavera, to focus on key milestones and critical path items. The schedule shall depict the order and interdependence of various tasks, subtasks, milestones and deliverables. The schedule will be updated monthly throughout the duration of the project to reflect substantial changes in progress that are found during review and coordination meetings. Any issues that need resolution or action items will be identified in the progress report.

Deliverables:

- Electronic copy of the schedule within two weeks of receiving NTP and update monthly

D. INVOICES AND PROGRESS REPORTS

The Engineer shall prepare and submit monthly invoices in accordance with the Master Agreement and in a format acceptable to NET RMA. The Engineer shall prepare and submit monthly progress reports with each monthly invoice.

Deliverables:

- Electronic copy of monthly Invoice and Progress Reports

E. COORDINATION MEETINGS

The Engineer shall facilitate and attend a kickoff meeting with the NET RMA and TxDOT within two weeks (10 working days) after NTP. Coordination meetings between the Engineer and NET RMA shall be held monthly in Austin throughout project development (estimate of 36 months). The Engineer shall conduct a total of ten (10) additional in-person meetings with the TxDOT Tyler District. Up to six (6) additional WebEx meetings may be held with the TxDOT Tyler District, for a total of up to sixteen (16) meetings.

The Engineer shall conduct regular conference calls, as needed, with the project consulting team to discuss work that has been completed prior to the meeting, issues that may have arisen since the previous coordination, tasks to be performed, and any obstacles to successfully completing tasks and meeting the schedule.

Deliverables:

- Electronic copy of draft and final Meeting Minutes following each meeting

II. FEASIBILITY STUDIES (FUNCTION CODE 102)

The Engineer shall conduct a feasibility study to identify future Toll 49 Segment 6 corridors recommended for further study and evaluation. The study will be conducted in accordance with the latest editions of the TxDOT Roadway Design Manual, American Association of State Highway and Transportation Officials (AASHTO) Policy on Geometric Design of Highways and Streets, TxDOT Standard Specifications for Construction of Highways, Streets, and Bridges, Highway Capacity Manual – Transportation Research Board, AASHTO – A Policy on Design Standards Interstate System, and other associated State Manuals, as applicable. The Feasibility Study, including public involvement and the alternatives analysis, shall be consistent with NEPA requirements. The Engineer shall perform the following activities as part of this task:

A. PRELIMINARY LOCATION STUDIES

The Engineer shall identify, develop and evaluate conceptual route options. This effort will include the following:

1. Preliminary Route Options

   Identify and develop up to ten (10) preliminary route options for Segment 6 in the study area. The preliminary route options shall be evaluated based on each option's ability to satisfy: the project's goals and objectives; its environmental and engineering costs and benefits relative to the other alternatives; and input from the NET RMA, the State, and the Working Group (WG), which will consist of key stakeholder group representatives, elected officials and other community leaders as agreed upon by NET RMA and TxDOT. The following will be conducted for the preliminary route options:

   (a) Meet with the NET RMA, TxDOT Tyler District and WG to identify route locations and configurations and the project goals and objectives
   (b) Identify design criteria, including design speeds and horizontal and vertical curves
   (c) Determine typical sections
   (d) Identify the location of interchanges and adjacent access control

2. Draft Primary Route Options

   Following coordination with the NET RMA, the State and the WG, the Engineer shall identify up to six (6) primary routes in the study area. The primary route options shall be evaluated based on each option's ability to satisfy the project's purpose and need; its environmental and engineering costs and benefits relative to the other primary alternatives; and input from the NET RMA, the State and the WG. The following will be conducted for the primary route options:

   (a) Meet with the NET RMA, TxDOT Tyler District and WG to identify the six (6) primary routes and the project purpose and need
   (b) Conduct a field survey of the six (6) primary route options limited to public rights-of-way
   (c) Present the six (6) primary routes to the public for input

Deliverables:

- Electronic copy of draft Preliminary Route Options Memo, which will identify the goals and objectives of the project, identify up to ten (10) preliminary route options, and summarize preliminary alternatives evaluation criteria. Two (2) revisions will be made to address NET RMA and TxDOT Tyler District comments.
- Electronic copy of the final Preliminary Route Options Memo
- Electronic copy of draft Primary Route Study Memo, which will identify the project purpose and need, identify up to six (6) primary alternative route options, and summarize the primary alternatives evaluation criteria. Two (2) revisions will be made to address NET RMA and TxDOT Tyler District comments.
- Electronic copy of final Primary Route Study Memo

B. PRELIMINARY DESIGN VALUES

The Engineer shall prepare project-specific design criteria, including typical sections, design speed, functional classification, and geometric criteria in accordance with the latest version of the TxDOT Roadway Design Manual, AASHTO – A Policy on Design Standards---Interstate System, and other associated State Manuals, as applicable. This information will be submitted in the form of a Design Summary Report (DSR) for approval by the NET RMA.

Deliverables:

- Electronic copy of draft DSR and Typical Sections. Two (2) revisions will be made to address NET RMA and TxDOT Tyler District comments.
- Electronic copy of final DSR and Typical Sections

C. PRELIMINARY COST ESTIMATE

The Engineer shall develop preliminary construction cost estimates based on per mile costs for the ten (10) preliminary route options. Estimates shall be developed in present day dollars. The estimates for up to ten (10) preliminary route options shall not include specific right-of-way (ROW) or utility relocation costs.

The Engineer shall develop the following quantities associated with the six (6) primary route options: potential environmental impacts (historic, archeological, potential residence and business displacements, waters of the U.S., community features, utilities and railroad [RR]), ROW needs (number of parcels impacted and number of acres required), and present day cost ranges (construction, ROW, environmental mitigation and utilities, project development and construction oversight, and total).

Deliverables:

- Electronic copy of draft Preliminary Cost Estimate Technical Memo for the ten (10) preliminary route options. Two (2) revisions will be made to address NET RMA and TxDOT Tyler District comments.
- Electronic copy of final Preliminary Cost Estimate Technical Memo
- Electronic copy of draft Cost Estimates for the six (6) primary route options. Two (2) revisions will be made to address NET RMA and TxDOT Tyler District comments.
- Electronic copy of final Cost Estimates

D. PRELIMINARY RIGHT-OF-WAY REQUIREMENTS

The Engineer shall identify ROW files from the State roadway inventory files for up to six (6) primary route options. For areas where State roadway inventory files are unavailable, ROW shall be identified through aerial photo interpretation. The Engineer shall review the information to determine typical ROW widths and to map the existing and proposed ROW width and costs for up to six (6) primary route options.

Deliverables:

- Electronic copy of draft Preliminary ROW Maps for the six (6) primary route options. Two (2) revisions will be made to address NET RMA and TxDOT Tyler District comments.
- Electronic copy of final Preliminary ROW Maps

E. PRELIMINARY DRAINAGE ANALYSIS

1. Data Collection and Review

   (a) Collect and review existing drainage studies and digital base mapping data for streams in the study area. These studies may consist of readily available floodplain information and studies from the Federal Emergency Management Agency (FEMA), the United States Army Corps of Engineers (USACE), counties, local municipalities and other governmental agencies in addition to those provided by the State. Digital base mapping data files include stream centerlines, FEMA FHA, and topography. Also reviewed would be "as-built plans", existing schematics, ROW maps, Subsurface Utility Engineering (SUE) mapping, existing cross sections, existing planimetric mapping, environmental documents, existing channel and drainage easement data, existing traffic counts *(provided by CDM Smith)*, accident data, Bridge Inventory, Inspection And Appraisal Program (BRINSAP) records, Pavement Management Information system (PMIS) data, identified endangered species, identified hazardous material sites, current unit bid price information, current special provisions, special specifications, and standard drawings.
   (b) Confirm local floodplain regulations for each jurisdiction in the project area.

2. Review Primary Alternatives

   (a) Perform a review of the six (6) primary alternatives for major constraints and drainage considerations. These include alternatives that may result in unnecessarily complex bridges, long term drainage issues, or potential for large drainage impacts.

Deliverables:

- Provide internal recommendations on primary route options. No formal deliverable as part of this task.

F. PRELIMINARY ENVIRONMENTAL ANALYSIS

The Engineer shall obtain and review existing available data to be presented on a constraints map. The Engineer shall conduct a windshield survey (field study) of the study area for the purpose of validating the information obtained from electronic sources. Field work for the windshield survey shall be limited to public rights-of-way. The Engineer shall use the data collected to identify environmental constraints associated with the ten (10) preliminary route options and subsequently to assist in the identification of the six (6) primary route options and, later, three (3) final route options. This effort shall include the following:

1. Environmental Constraints Map

   (a) Obtain environmental constraints information from existing sources, including land use, developed areas, property lines, floodplains, wetlands, utilities, oil and gas wells, and other features that could influence the development of route options.
   (b) Prepare a preliminary environmental constraints map.
   (c) Conduct a windshield survey of the study area.
   (d) Prepare updated environmental constraints map.

Deliverables:

- Electronic copy of draft Environmental Constraints Map. Two (2) revisions will be made to address NET RMA and TxDOT Tyler District comments.
- Electronic copy of final Environmental Constraints Map

G. FEASIBILITY STUDY REPORT

1. Feasibility Report

The Engineer shall prepare a Toll 49 Segment 6 Corridor Feasibility Study Report, which will include the following:

(a) The Engineer shall incorporate agency stakeholder and public input from the Open House to identify up to three (3) final route options from the primary alternative route options. These final route options will be presented in the Toll 49 Segment 6 Corridor Feasibility Study Report. Each of up to three (3) final route options shall be evaluated based on the following criteria to carry forward to NEPA analysis:

   (i) Ability to meet the project goals and objectives
   (ii) Environmental effects
   (iii) Construction cost
   (iv) Traffic/mobility impacts
   (v) Constructability
   (vi) Input from the NET RMA, TxDOT, agency stakeholders and the public

Deliverables:

- Electronic copy of draft Toll 49 Segment 6 Corridor Feasibility Study Report. Three (3) revisions will be made to address NET RMA, TxDOT Tyler District, and TxDOT ENV comments.
- Electronic copy of final Toll 49 Segment 6 Corridor Feasibility Study Report

H. PUBLIC INVOLVEMENT

The Engineer shall coordinate with the WG in presenting Toll 49 route options to the local public to learn about any concerns and issues that may need to be addressed. The Engineer shall evaluate the environmental effects of the various route options identified. The environmental analysis shall be based on the environmental constraints map, desktop review of available data, and limited field verification conducted from public rights-of-way. The Engineer will consider public input and make recommendations that will guide the NET RMA and the State on the development of the Segment 6 project.

The Engineer shall work with the NET RMA and the State to identify members of the WG and shall hold up to four (4) WG meetings during the Feasibility Study phase of the of the project. The Engineer shall meet with the NET RMA and the State to prepare for each WG Meeting (up to two meetings and one conference call for each WG meeting). The effort associated with each WG shall include the following:

1. WG and Website Maintenance

   The Engineer shall maintain the WG members' contact information and provide data to the NET RMA and the State for the NET RMA website for the project. This effort will include the following:

   (a) Maintain contact database of WG members, and update sign-in sheets, member name tents, name tags and notebooks for meeting materials, as needed.
   (b) Provide materials for website, which could include:

      (i) Project fact sheets
      (ii) Meeting summaries
      (iii) Presentations
      (iv) Project maps

2. WG Meeting #1 (Kick-off Meeting)

   The Engineer shall collaborate with the NET RMA and the State to achieve the following:

   (a) Prepare meeting agenda, presentation, handouts, and exhibits (e.g., Typical Section Board, Preliminary and Primary Route Options Maps, Cost/Benefit matrices for preliminary and primary route options, and draft public outreach materials).
   (b) Provide for meeting logistics and supplies.
   (c) Participate in WG Meeting #1. The WG shall:

      (i) Identify the goals and objectives for the project.
      (ii) Identify potential route options
      (iii) Identify criteria for evaluating the preliminary route options

   (d) Provide meeting facilitator.
   (e) Develop draft WG Meeting summaries and distribute to meeting attendees for review. The Engineer shall be responsible for note-taking at the meeting.
   (f) Finalize WG Meeting summary after review and comment by WG members.

3. WG Meeting #2 (Review Preliminary Route Options and ID Evaluation Criteria)

   The Engineer shall work with the NET RMA and the State to complete the following:

   (a) Prepare meeting agenda, presentation, handouts, and exhibits (e.g., Typical Section Board, Preliminary and Primary Route Options Maps, Cost/Benefit matrices for preliminary and primary route options, and draft public outreach materials).
   (b) Provide for meeting logistics and supplies.
   (c) Participate in WG Meeting #2. The WG shall:

      (i) Review up to ten (10) preliminary routes identified in collaboration with the WG during the kick-off meeting.
      (ii) Review the results of the evaluation of the preliminary route options.
      (iii) Provide input on the evaluation criteria used to evaluate the preliminary route options.

   (d) Provide a meeting facilitator.
   (e) Develop draft WG Meeting summaries and distribute to meeting attendees for review. The Engineer shall be responsible for note-taking at the meeting.
   (f) Finalize WG Meeting summary after review and comment by WG members.

4. WG Meeting #3 (Primary Route Option Recommendation Review)

   The Engineer shall meet with the WG to do the following:

   (a) Prepare meeting agenda, presentation, handouts, and exhibits (e.g., Typical Section Board, Preliminary and Primary Route Options Maps, Cost/Benefit matrices for preliminary and primary route options, and draft public outreach materials).
   (b) Provide for meeting logistics and supplies.
   (c) Participate in WG Meeting #3. The WG shall:

      (i) Review the detailed evaluation of up to ten (10) preliminary route options. This evaluation shall include:

         a) Results from previous project coordination

b) Horizontal geometry of each primary route option.
c) Proposed interchange locations.
d) Cost estimate, including ROW costs.
e) Preliminary environmental constraints associated with each route option.

(ii) Identify up to six (6) primary route options.

(d) Provide a meeting facilitator.
(e) Develop draft WG Meeting summaries and distribute to meeting attendees for review. The Engineer shall be responsible for note-taking at the meeting.
(f) Finalize WG Meeting summary after review and comment by WG members.

5. WG #4 (Final Route Option Recommendation Review)

(a) Prepare meeting agenda, presentation, handouts, and exhibits (e.g., Typical Section Board, Preliminary Route Options Maps, Cost/Benefit matrices for preliminary route options, and draft public outreach materials).
(b) Provide for meeting logistics and supplies.
(c) Participate in WG #4. The Task Force shall:

(i) Review the evaluation of up to six (6) refined route options. This evaluation shall include:

a) Results from the Open Houses
b) Horizontal geometry of each refined route option.
c) Proposed interchange locations.
d) Cost estimate, including ROW costs.
e) Preliminary environmental constraints associated with each route option.
f) Traffic projections *(provided by CDM Smith)*

(ii) Identify up to three (3) final route options.

(d) Provide a meeting facilitator.
(e) Develop draft WG Meeting summaries and distribute to meeting attendees for review. The Engineer shall be responsible for note-taking at the meeting.
(f) Finalize Task Force Meeting summary after review and comment by WG members and post on PW.

6. Open Houses

The Engineer shall host two (2) 3-hour Open Houses at one location to give members of the public an opportunity to provide input on the project. Each open house will be preceded by up to three (3) coordination meetings with the NET RMA, TxDOT and the Engineer. This effort shall include the following:

(a) Compile, maintain, and update a mailing list of potential community members (neighborhood associations, special interest groups, business associations, etc.), agencies and organizations interested in the project to contact prior to the Open House.
(b) Send hard copy (U.S. Mail) Open House invitations (full color direct mail pieces) to stakeholders
(c) Meet with the NET RMA, the project team and the State to prepare for the open house (up to four (4) meetings in Tyler and two (2) conference calls).
(d) Prepare meeting agenda, sign in sheets, handouts, comment forms, flyers and exhibits. Media packets.
(e) Provide for meeting logistics and supplies.
(f) Provide NET RMA with all meeting materials in advance of open house for the Virtual Open House
(g) Prepare public advertisements, including publication in up to two (2) English-language newspapers and one (1) Spanish-language newspaper.
(h) Send hard copy (U.S. Mail) invitations to members of the WG and members of the public that own property within 300 feet of any Preliminary Route.
(i) The Engineer shall provide a translator (if requested), audio/video equipment (project, screen, microphones, podium, etc.)
(j) Provide security
(k) The Engineer shall provide personnel to staff the open house to perform registration, make presentations, and answer questions.
(l) Provide court reporter to take verbal comments.
(m) Participate in Open House.
(n) Develop draft Open House summary, including responses to comments, and distribute for internal review.

(o) Finalize Open House summary after review and comment by project team and distribute to the NET RMA and the State for posting on the web.

Deliverables:

- Electronic copy of draft and final Meeting Minutes following each WG meeting
- Electronic copy of WG stakeholder database
- Electronic copy of draft and final Open House mailing list
- Electronic copy of draft Open House Summary Report, which will include the electronic transcript provided by the court reporter of verbal comments received. Three (3) revisions will be made to address NET RMA, TxDOT Tyler District, and TxDOT ENV comments.
- Electronic copy of final Open House Summary Report
- Hard copy of meeting invitation, up to 2,500 copies per meeting

III. ROUTE AND DESIGN STUDIES (FUNCTION CODE 110)

A. ROADWAY DESIGN

Conceptual and Geometric Schematic Design shall occur during the NEPA phase of project development. All designs shall be prepared in accordance with the latest version of: TxDOT Roadway Design Manual revised October 2014, TxDOT Project Development Process Manual, AASHTO Policy on Geometric Design of Highways and Streets, TxDOT Standard Specifications for Construction of Highways, Streets, and Bridges, TxDOT Traffic Operations Manual on Highway Operations, and Highway Capacity Manual - Transportation Research Board.

The schematic layout will adhere to a design scale of 1 in. = 100 ft. The schematic layout, exhibits, and attachments will be developed in English units. All Microsoft Office and MicroStation V8i - Geopak computer graphic files furnished to the NET RMA and the State must be submitted in electronic format that will be compatible to the NET RMA and the State. Schematics will follow the State and Federal Highway Administration (FHWA) standards, the schematic will also follow the CADD standards used by the NET RMA and shall be submitted as an original document, accompanied with an original MicroStation V8i formatted graphics file.

Schematic Design Work Outline:

1. Analyze Existing Conditions

   Using collected data and base maps, the Engineer shall develop an overall analysis of the existing conditions in order to develop the schematic design. The analysis shall include, but not be limited to the following:

   (a) ROW determination
   (b) Horizontal alignment
   (c) Profile grades
   (d) Pavement cross slopes and assumed pavement type
   (e) Intersection design and analysis
   (f) Sight distance
   (g) Roadside signing
   (h) Locations of critical constraints
   (i) Preliminary Drainage

2. Data Collection

   The Engineer shall conduct field reconnaissance and collect data as necessary to complete the schematic design. Data shall include the following information. Items "a" to "h" will be obtained from the NET RMA or the State, if available, while items "i" to "k" will be obtained from other agencies as required.

   (a) Available Corridor Feasibility Studies or Major Investment Studies
   (b) Design data from record drawings of existing and proposed facilities
   (c) Existing ROW maps
   (d) Existing and future design year traffic data *(provided by CDM Smith)*
   (e) Roadway inventory information, including the number of lanes, speed limits, pavement widths and rating, bridge widths and ratings, and ROW widths
   (f) Aerial photos and DTM (available from TNRIS) and planimetric mapping

(g) Environmental Data
(h) Previously prepared drainage studies
(i) Adopted land use maps and plans as available
(j) FEMA Flood Boundary Maps
(k) Public and private utility information

3. Preliminary Design Conference

The Engineer shall:

(a) Prepare and submit a preliminary Design Summary Report (DSR) to the State and NET RMA for review and approval to establish and agree on fundamental aspects and concepts and to establish the basic features and design criteria for the project prior to beginning work on the conceptual design schematic.
(b) Attend and lead a Design Concept Conference (DCC) to allow for review and comment of the conceptual design schematic and issues that need to be addressed. This meeting will be coordinated with any adjacent projects to ensure continuity.

4. Schematic Design – General Tasks

(a) Typical Sections

The Engineer shall develop both existing and proposed typical sections that depict the number and type of lanes, shoulders, median width, curb offsets, cross slope, border width, clear zone widths, and ROW limits.

(b) Environmental Constraints

The Engineer shall consider impacts to environmentally sensitive sites during the schematic design process. The environmentally sensitive sites may include historic structures, cemeteries, residential areas, historical landmarks, waterways, wetlands, riparian areas, and farmland.

(c) ROW Requirements

The Engineer shall determine the ROW requirements based on the proposed alignment, typical sections, access control, terrain, construction requirements, drainage, clear zone, maintenance, and environmental mitigation requirements.

(d) Design Exceptions

The Engineer shall identify design exceptions and waivers, if needed, and shall note the necessity for each design exception or waiver. The preparation of a Design Exception Questionnaire is not included in this scope of services.

(e) Traffic and Operational Analysis

Traffic projections and analysis shall be provided by CDM Smith. The Engineer shall review traffic data (including percent trucks, design hourly volume, and directional distribution) as provided by CDM Smith, existing roadway features (including ramp locations, weaving sections, number of lanes, offset to obstructions, lane widths, frontage road operations, and intersection operation and geometry) and traffic flow patterns. The operational analysis provided by CDM Smith shall be provided in memorandum format.

5. Conceptual Design Schematics (Reasonable Alternatives)

In the NEPA phase, the Engineer shall develop conceptual design schematics in MicroStation format to evaluate up to three (3) Reasonable Alternatives based upon the Primary Route Options as developed in the Feasibility Study. To be considered 'reasonable', an alternative has to meet the Purpose and Need, it has to be technically and economically feasible, and it needs to be consistent with local and regional land use plans. The conceptual schematics will be plan view only. Profile work will be done only to the extent necessary to lay out the proper horizontal geometry.

The preliminary alternative schematics shall contain the following design elements:

(a) Mainlane roadway alignment
(b) Pavement edges, face of curbs and shoulder lines
(c) Typical sections of existing and proposed roadways
(d) Proposed structure locations
(e) Preliminary ROW requirements

(f) Direction of traffic flow and the number of lanes on all roadways
(g) Existing and projected traffic volumes *(provided by CDM Smith)*
(h) Critical profiles

6. Geometric Design Schematic (Recommended Alternative)

A single design alternative (Recommended Alternative) that optimizes traffic flow and access shall be developed and refined from the Reasonable Alternatives. The Engineer shall develop the geometric design schematic based on the conceptual schematic after the basic layout, lane arrangement and ROW requirements depicted on the conceptual schematic are approved. It is assumed the Recommended Alternative identified during the EIS will include ten (10) grade separated crossings.

The geometric schematic plan view shall contain the following design elements by means of MicroStation's 3D modeling tools to generate corridor models for mainlanes, ramps, direct connectors, frontage roads and cross streets at grade separations:

(a) Geopak calculated roadway alignments for mainlanes, ramps, direct connectors, frontage roads and cross streets at grade separations and horizontal curve data shown in tabular format
(b) Pavement edges, curb lines, sidewalks for all roadway improvements
(c) Typical sections of existing and proposed roadways
(d) Proposed structure locations including abutment, bent and rail locations, assuming a total of 30 bridges (includes grade separations and stream crossings) and bridge-class culverts
(e) Existing major utilities
(f) Existing property lines and respective property ownership information
(g) ROW requirements adequate for preparation of ROW maps
(h) Control-of-access limits for the 10 grade separations only
(i) Existing and projected traffic volumes *(provided by CDM Smith)*
(j) Location and text of the proposed mainlane guide signs and the preliminary locations for changeable message signs
(k) Lane lines, shoulder lines, and direction of traffic flow arrows indicating the number of lanes on all roadways
(l) Preliminary retaining wall locations

The geometric schematic profile view shall contain the following design elements:

(a) Calculated profile grade and vertical curve data including "K" values for the mainlanes
(b) Existing ground line profiles along the mainlanes
(c) Bridges and bridge-class culverts
(d) Grade separations and overpasses, assume a total of 10 crossings
(e) Calculated vertical clearances for the 10 grade separations and overpasses
(f) Separate Supplemental Profile rolls for the calculated profile grade for frontage roads, connectors, ramps and cross streets

7. Cross-Sections

The Engineer shall use Geopak to generate preliminary cross-sections every 200 feet and at other key locations in conjunction with the Geometric Schematic for the Recommended Alternative. The Engineer shall determine earthwork volumes for use in the cost estimate and shall prepare and submit 11"x17" sheets of the cross-sections.

8. Preliminary Construction Sequence

The Engineer shall prepare a Preliminary Construction Sequence Layout for the Recommended Alternative in scroll format in conjunction with the Geometric Schematic depicting the phasing and traffic detours anticipated to construct the proposed design.

9. Preliminary Cost Estimate

The Engineer shall prepare a preliminary cost estimate for the Recommended Alternative, including the costs of construction and eligible utility adjustments at completion of each draft stage of the design schematic. Current State unit bid prices will be used in preparation of the estimate.

10. Engineering Summary Report

The Engineer shall prepare a report to summarize the design criteria, preliminary cost estimate and basis of estimate, construction sequence description and utility conflict issues.

11. Render assistance to the NET RMA and the State for agency meetings as necessary during the development of the schematic design as requested by the NET RMA and the State. The Engineer shall also render assistance to the NET RMA and the State for public meetings and a public hearing.

Deliverables:

- Electronic copy of draft Engineering Summary Report. Two (2) revisions will be made to address NET RMA and TxDOT Tyler District comments.
- Electronic copy of final Engineering Summary Report
- Electronic copy and hard copy (5 copies) of the draft Geometric Schematic layouts (1 inch = 100 feet) at the 30%, 60%, 90%. Two (2) revisions will be made to address NET RMA and TxDOT Tyler District comments.
- Electronic copy and hard copy (5 copies) of the final Geometric Schematic layouts (1 inch = 100 feet) at the 30%, 60%, 90%
- Electronic copy and hard copy (5 copies) of the draft Supplemental Profiles rolls at the 30%, 60%, 90%. Two (2) revisions will be made to address NET RMA and TxDOT Tyler District comments.
- Electronic copy and hard copy (5 copies) of the final Supplemental Profiles rolls at the 30%, 60%, 90%
- Electronic copy and hard copy (1 copy) of the draft Preliminary Cross-Sections in a roll plot format at the 60%, 90%. Two (2) revisions will be made to address NET RMA and TxDOT Tyler District comments.
- Electronic copy and hard copy (1 copy) of the final Preliminary Cross-Sections in a roll plot format at the 60%, 90%
- Electronic copy and hard copy (5 copies) of the draft Preliminary Construction Sequence Layouts to be provided with the 60%, 90% draft schematic submittals. Two (2) revisions will be made to address NET RMA and TxDOT Tyler District comments.
- Electronic copy and hard copy (5 copies) of the final Preliminary Construction Sequence Layouts to be provided with the 60%, 90% final schematic submittals
- Electronic copy of the draft preliminary cost estimate at the 30%, 60%, 90%draft schematic submittals. Two (2) revisions will be made to address NET RMA and TxDOT Tyler District comments.
- Electronic copy of the final preliminary cost estimate at the 30%, 60%, 90% final schematic submittals

B. DRAINAGE DESIGN

1. Roadway and Hydraulic Design Criteria

   The Engineer shall design the project according to the latest State's design criteria. The Engineer shall work with the NET RMA to supply project specific drainage design criteria and impact assessment criteria, in accordance with NET RMA and TxDOT's preferences to be inserted into the Design Elements form for discussion at the DCC.

2. Preliminary Drainage Analysis on Reasonable Alternatives

   Hydrologic studies shall be performed in accordance with requirements and guidelines of the latest version of the TxDOT Hydraulic Design Manual. Hydraulic investigations may also be required for ensuring compliance with USACE regulations. Each alternative is assumed to have no more than 20 crossings and it is assumed there will be up to three alternatives.

   (a) Preliminary Hydrologic Analysis

   Determine flow rates for locations of the reasonable alternative alignments that cross FEMA floodplains and for areas with U.S. Geological Survey (USGS) streamlines that have over 200 acres of contributing areas.

   (i) When available, existing hydrologic models from FEMA or other local sources shall be reviewed and utilized.
   (ii) For areas without best available models, new existing conditions HEC-HMS hydrologic models will be created using project topographic data.
   (iii) HEC-HMS with SCS Unit Hydrograph transformations shall be utilized to create runoff hydrographs and route flows. Computations for Time of Concentration paths, SCS Curve Number, and impervious cover by land use will be performed.
   (iv) Flows will be computed for the 5-year, 10-year, 25-year, 50-year and 100-year frequency storms.
   (v) Compare these flow results to FEMA flow information where available.
   (vi) No proposed conditions hydrologic impact analysis is included in the Alternatives Analysis.

(b) Preliminary Hydraulics Analysis

Determine water surface elevation and widths for all waterway crossings identified in the Preliminary Hydrology step.

(i) When available, existing hydraulic models from FEMA or other local sources (best available) shall be reviewed and utilized.
(ii) For areas without best available models, new existing conditions HEC-RAS hydraulic models will be created for each crossing using project topographic data and aerial imagery. Flows frequencies computed during Preliminary Hydrologic Analysis will be used in the Preliminary Hydraulic Analysis.
(iii) Map the 100-year inundation and provide GIS shape files to the project team.
(iv) Compare the 100-year inundation with the FEMA delineated Flood Hazard Areas.
(v) No proposed hydraulic bridge modeling will be included in the Alternatives Analysis.
(vi) No reports or technical memos are included in the Alternatives Analysis

3. Drainage Analysis of Recommended Alternative

(a) Data Collection

The Engineer shall review and evaluate drainage related data obtained as part of the Feasibility Study, as referenced in Section II.E. of this scope. The Engineer will also review documents for existing and proposed development along proposed route from local municipalities and local ordinances as related to drainage analysis.

(b) Field Reconnaissance

The Engineer shall conduct field reconnaissance and collect data as needed including a photographic record of notable existing drainage features.

(c) Recommended Alternative Drainage Report

The Engineer shall conduct a Preliminary Drainage Study of the Recommended Alternative to determine and evaluate the adequacy of the ROW needed, assess impacts of the proposed project, prepare mitigation alternatives, and document technical methodologies and calculations used. The report will include but is not limited to the following:

(i) Hydrologic Analysis

a) The Engineer shall identify project outfalls and delineate existing drainage area boundaries within the project area using project topographic data.
b) The existing drainage area boundaries will be copied and modified to delineate the proposed drainage area boundaries using the proposed road geometry.
c) The Engineer shall refine the existing hydrologic calculations and model completed during the Alternatives Analysis. Flows shall be calculated based on the practices in the TxDOT Hydraulic Design Manual.
d) The existing model will be copied and modified to calculate the proposed hydrology. Impervious cover percentage will be adjusted to reflect the ultimate improvements of the roadway.
e) Flows for proposed bridges and bridge class culverts will be validated against at least one other hydrologic method such as available FEMA flows, gauge analysis or regression equations.
f) The change in peak flows for each project outfall shall be documented in the report.
g) Hydrologic mitigation alternatives will be summarized to comply with the DSR. These alternatives may include approximate detention volumes if needed but no grading design, detailing or extensive modeling.

(ii) Hydraulic Analysis and Design

a) The Engineer shall refine the existing hydraulic calculations and models completed during the Alternatives Analysis.
b) Preliminary culvert and bridge locations shall be selected and coordinated with the project team. Drainage structures will be sized and located to accommodate ultimate conditions of the roadway. Two iterations are assumed.

c) Proposed conditions hydraulic models shall be created for crossing locations. All FEMA crossings and crossings that require bridge class culverts shall be modeled in HEC-RAS. Non-bridge class culverts will modeled using HY-8. Crossings shall be sized to comply with the DSR. For FEMA crossings with floodway a floodway analysis will be prepared if the project encroaches into the floodway.
d) The change in peak WSEL for each project outfall shall be documented in the report. This includes:
   1. Upstream changes as a result of hydraulic impacts
   2. Downstream changes as a result of hydrologic impacts.
e) An assessment of the risks associated with hydraulic impacts will be included in the report. The assessment will include but not be limited to impacts to existing channels, structures and natural features such as stock ponds.
f) The erosion potential of all outfalls will be assessed based on comparison of shear and/or velocity between pre- and post-project conditions. Erosion mitigation in the form of velocity dissipation will be preliminarily sized to determine if additional ROW is needed.

(iii) Drainage Exhibits

a) Drainage Analysis Maps will be produced for the entire project alignment. They will include:
   1. Project outfalls
   2. Existing and proposed drainage areas
   3. Proposed roadway elements
   4. Proposed drainage crossings
   5. Existing and proposed water inundation areas
b) Drainage Crossing Exhibits will be produced for all bridges and bridge class culverts. They will include:
   1. Proposed roadway elements
   2. Proposed drainage crossings
   3. HEC-RAS cross sections
   4. Hydraulic analysis summary

(iv) Scour Analyses and Stream Migration Studies

a) Preliminary qualitative scour evaluations will be performed at each bridge and bridge class culvert location in accordance with the TxDOT Hydraulic Design Manual, to provide general recommendations for future detailed analysis during structure design. Stream migration studies will be performed using historic aerial imagery.

(v) Transverse (Ditch) Drainage

a) Onsite areas for the outer ditches will be developed using the Rational Method.
b) Preliminary ditch sizing within proposed ROW will be performed using the Manning's Equation in a spreadsheet form and assumed typical sections provided by the roadway designers.
c) Ditches velocities and/or shear will be calculated and where possible ditch properties modified to limit erosive potential. Erosion mitigation measures such as drop structures and energy dissipation will not be designed but potential strategies identified.
d) This scope does not include final ditch design, or preliminary sizing or placement of driveway culverts, storm drain pipes and inlets.

Deliverables:

- Electronic copy of the draft Drainage Report. Two (2) revisions will be made to address NET RMA and TxDOT Tyler District comments.
- Electronic copy of the final Drainage Report

IV. ENVIRONMENTAL SERVICES (FUNCTION CODE 120)

The Engineer shall perform work consisting of environmental studies, public involvement, alternative evaluation and development, and field survey for the proposed project. The Engineer shall provide environmental and public involvement services to accommodate production of an EIS for Toll 49 Segment 6. The EIS will be prepared in accordance with applicable state and federal rules, regulations and guidance governing the development of transportation projects which are in effect at the time of execution of this Work Authorization (WA).

A. ENVIRONMENTAL PROCESS INITIATION

A Project Initiation Letter shall be prepared by the Engineer. The Project Initiation Letter will include a project description, description of the logical termini, project length, general location and anticipated federal permits and approvals, and the potential funding mechanism(s). The Project Initiation Letter will be submitted by NET RMA/TxDOT.

Deliverables:

- Electronic copy of the draft Project Initiation Letter. Three (3) revisions will be made to address NET RMA, TxDOT Tyler District, and TxDOT ENV comments.
- Electronic copy of the final Project Initiation Letter

B. NOTICE OF INTENT

A Notice of Intent (NOI) shall be prepared by the Engineer and published by TxDOT in accordance with the approved NOI template found on TxDOT's Environmental Compliance Toolkit . The NOI shall include a brief summary of the proposed project, summary of the scoping process (including public involvement), list of persons to contact for information, and identification of the expected significant impacts to the environment.

Deliverables:

- Electronic copy of the draft NOI. Three (3) revisions will be made to address NET RMA, TxDOT Tyler District, and TxDOT ENV comments.
- Electronic copy of the final NOI

C. RESOURCE AND REGULATORY AGENCY COORDINATION

The Engineer shall identify and create a database of potential participating and cooperating agencies, including but not limited to the following: Texas Parks and Wildlife Department (TPWD), United States Fish and Wildlife Service (USFWS), USACE, Texas Commission on Environmental Quality (TCEQ), Texas Historical Commission (THC), Cities of Tyler and Longview, and Smith, Gregg, and Upshur Counties. Participating agencies shall consist of Federal, State, Tribal, regional and local government agencies with an interest in the project. Cooperating agencies are Federal participating agencies that have jurisdiction by law and are invited to be cooperating agencies in the EIS review process.

A letter shall be sent prior to the scoping meeting to the agencies in the potential participating and cooperating agencies database inviting them to be part of the project. The letter shall contain project information, project area map, a description of the process, and a deadline for participating and coordinating agency responses. The Engineer shall track the responses received from the participating and cooperating agencies.

In addition to establishing the participating and cooperating agencies, the Engineer shall coordinate with the various agencies throughout the duration of this WA in order to obtain input, clarification and guidance and to facilitate timely reviews and approvals.

Deliverables:

- Electronic copy of the draft Agency Invitation Letter. Three (3) revisions will be made to address NET RMA, TxDOT Tyler District, and TxDOT ENV comments.
- Electronic copy of the final Agency Invitation Letter
- Electronic copy of the Participating and Cooperating Agency Database

D. PURPOSE AND NEED STATEMENT

Participating agencies and the public must be solicited and an "opportunity for involvement" must be afforded during the Purpose and Need statement development process. Backup documentation including recent articles explaining existing/future transportation problems within the study area and the need for this project shall be compiled to substantiate the Purpose and Need ultimately approved. The Draft Purpose and Need Statement, including backup documentation, shall be submitted to NET RMA and TxDOT Tyler District for review and subsequent submittal to and review by TxDOT Environmental Affairs Division (ENV) prior to the scoping meeting. The Draft Purpose and Need statement shall be presented during the scoping meeting to provide an "opportunity for involvement" by the public.

Deliverables:

- Electronic copy of the draft Purpose and Need Statement. Three (3) revisions will be made to address NET RMA, TxDOT Tyler District, and TxDOT ENV comments.
- Electronic copy of the final Purpose and Need Statement

E. COORDINATION PLAN

The purpose of the coordination plan is to facilitate and document the lead agencies' structured interaction with the public and other agencies and to inform them of how the coordination shall be accomplished. The Engineer shall prepare the Draft Coordination Plan to:

- Identify cooperating and participating agencies;
- Outline how the lead agencies have divided the responsibilities for compliance with the various aspects of the environmental review process, such as the issuance of invitations to participating agencies;
- Outline how the lead agencies shall provide the opportunities for input from the public and other agencies, in accordance with applicable laws, regulations, and policies. The plan also shall identify coordination points; such as:
    - Notice of intent publication and scoping activities
    - Development of purpose and need
    - Identification of the range of alternatives
    - Collaboration on methodologies
    - Completion of the Draft EIS (DEIS)
    - Identification of the Recommended Alternative and the level of design detail
    - Completion of the Final EIS (FEIS)
    - Completion of the Record of Decision (ROD)
    - Completion of permits, licenses, or approvals after the ROD
- Establish a process for ongoing coordination;
- Establish a schedule of milestones; and
- Identify which persons, organizations, or agencies should be included for each coordination point, as well as timeframes for input by those persons, organizations, and agencies.

The Engineer shall make the Draft Coordination Plan available for review and comment at the Initial Agency Briefing/Kickoff Meeting and Public Scoping Meeting. Comments received from the NET RMA, TxDOT (District and ENV), Initial Agency Briefing/Kickoff Meeting, and Public Scoping Meeting shall be incorporated into the Coordination Plan.

Deliverables:

- Electronic copy of the draft Coordination Plan. Three (3) revisions will be made to address NET RMA, TxDOT Tyler District, and TxDOT ENV comments.
- Electronic copy of the final Coordination Plan

F. AGENCY (RESOURCE/SPONSOR) COORDINATION

An agency briefing and kick-off meeting shall be conducted by the Engineer to review the draft Purpose and Need for action, including technical backup materials and the draft Agency Coordination Plan. The purpose of the meeting is to solicit input regarding participating agencies and proposed cooperating agencies. A letter shall be sent to the agencies in the potential coordinating and participating agencies databases inviting them to the Initial Agency Briefing and Kickoff Meeting.

The Engineer shall assist the NET RMA with mailing the invitation letters and shall track the responses received to the meeting invitations.

The Engineer shall prepare for, plan and conduct the meeting in cooperation with the NET RMA and TxDOT. A PowerPoint presentation shall be prepared for this meeting. Additionally, the Engineer shall provide project notebooks for the attendees that include project background information, study area map, draft schedule, Draft Purpose and Need, Draft Coordination Plan, or other project related material that has been previously prepared as part of other tasks. All information included as part of the project notebook shall be submitted to NET RMA and TxDOT and approved prior to including in the project notebook. The attendees are anticipated to be NET RMA, TxDOT District, TxDOT ENV,

and other resource agency staff. The Engineer's Project Manager and up to three (3) additional representatives shall attend the meeting at the NET RMA's Office. A meeting summary shall be prepared for the meeting.

Up to six () additional agency coordination meetings shall be held throughout the development of the EIS. Potential agencies could include the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and the Texas Historical Commission.

Deliverables:

- Electronic copy and hard copy of the Letters Announcing Initial Agency Briefing and Kickoff Meeting (Up to 50 letters)
- Electronic copy and hard copy of the Initial Agency Briefing / Kickoff Meeting Project Notebooks (1" Binders with Handouts) up to 50 hardcopies
- Electronic copy of the Initial Agency Briefing PowerPoint Presentation

G. ALTERNATIVES DEVELOPMENT AND ANALYSIS

In assessing various alternatives, the following topics of design and environmental considerations shall be documented, as appropriate:

- No-Build Alternative
- Conceptual Design
- Construction Costs
- Engineering Costs
- Right-of-way Costs
- Operations and Maintenance
- Level of Service
- Environmental Impacts

In the comparison of each alternative, the following items shall be addressed, as appropriate:

- Air/Noise Impacts
- Displacements/Relocations
- Biological Resource Impacts, including Threatened & Endangered Species
- Wetland/Waters of the U.S. Impacts
- Water Resource Impacts
- Floodplain Impacts
- Hazardous Materials Impacts
- Land Use Features (park and recreation areas, schools, hospitals, churches, etc.)
- Geology and Soils Impacts
- Indirect/Cumulative Impacts
- Socioeconomic/Environmental Justice Impacts
- Historical and Archeological Impacts

1. Reasonable Alternatives and Recommended Alternative Evaluation

The Engineer shall attend a workshop at the NET RMA's office with representatives of NET RMA and TxDOT to jointly develop methodologies and detailed evaluation criteria to ensure a consistent level of detail in evaluation of the Reasonable Alternatives that resulted from the Feasibility Study phase of the project and the No Build Alternative. To facilitate the establishment of criteria at the workshop, the Engineer shall develop a preliminary set of detailed environmental, engineering and traffic evaluation criteria and distribute to NET RMA and TxDOT prior to the workshop.

(a) The Engineer shall perform the associated environmental analyses of the Reasonable Alternatives and shall combine this data with the engineering and traffic assessments *(provided by CDM Smith)* into a draft Reasonable Alternatives Analysis Matrix.

(b) The Engineer shall attend a workshop at the NET RMA Office with representatives of NET RMA and TxDOT to review the draft Reasonable Alternatives Analysis Matrix. The Engineer shall present the results of their assessments and the group shall evaluate for consistency in level of detail, then jointly identify a Recommended Alternative. The Engineer shall update the Alternatives Analysis Matrix if necessary and submit the recommendation to NET RMA and TxDOT for review and approval.

(c) The Engineer shall prepare for, plan and conduct an Agency (Resource/Sponsor) Update Meeting to review the range of alternatives and Recommended Alternative prior to the public hearing. A letter shall be sent to the agencies inviting them to attend the Agency Update Meeting. A PowerPoint presentation shall be prepared for this meeting. Handouts shall be prepared and submitted to NET RMA and TxDOT for approval prior to the meeting. The Engineer's Project Manager and up to four (4) additional staff representatives shall attend this meeting at the NET RMA Office. A meeting summary shall be prepared for the meeting.

Deliverables:

- Electronic copy and hard copy (up to 3) and electronic copy of line diagrams and typical sections of the Reasonable Alternative Concepts
- Electronic copy of preliminary set of detailed environmental, engineering and traffic evaluation criteria
- Electronic copy of draft and final Reasonable Alternatives Analysis Matrix
- Hard copy of Handouts for Agency Update Meeting (up to 50 copies)

H. ENVIRONMENTAL STUDIES

The following tasks shall be conducted for the Reasonable Alternatives, except where otherwise noted.

1. Land Use and Socioeconomics

The Engineer shall:

(a) Use appropriate data sources, such as the U. S. Census, windshield surveys, maps, and aerial photographs to assess the existing conditions for socioeconomic conditions and land use in the study area. Potential social conditions to be documented include:

- Demographics (population, ethnic/racial distribution, income) based on the most recent census or estimates
- Other populations (disabled, elderly)
- Land uses in the project area (community services, schools, etc.)
- Mobility patterns
- Safety (data)
- Other potential resources identified during data collection studies

(b) Identify the property owners and tenants, as appropriate, adjacent to the roadway project and the availability of potential replacement housing or other replacement sites if necessary.

(c) Identify the racial, ethnic and income level of affected individuals and communities, as available, to be used in subsequent analysis of the potential for disproportionate impacts on any minority or low-income individuals or communities.

(d) Develop mitigation measures for social, economic and community impacts (Recommended Alternative only).

(e) Use public contact and public involvement to gather information from individuals and communities regarding social impacts.

(f) Estimate losses and gains to tax revenues due to the location of the project.

(g) Identify, by use of land use plans and windshield surveys, current land uses and any anticipated land uses.

(h) Evaluate travel modes and patterns in the study area, in order to determine any impacts the project may have on access to homes, businesses and community services.

(i) Identify and evaluate (through use the U. S. Census and public contact) the potential for impacts to disabled and elderly individuals and populations.

(j) Evaluate direct impacts related to tolling. The analysis shall involve using the latest regional transportation model and Regional Toll Analysis (*provided by CDM Smith*) to evaluate project-specific impacts on users of the facility. The analysis shall be conducted in accordance with the FHWA and the State *Joint Guidance for Project and Network Level Environmental Justice, Regional Network land Use, and Air Quality Analyses for Toll Roads*, dated April 23, 2009, or subsequent approved versions.

(k) Identify and evaluate the potential for impacts to Section 4(f) or Section 6(f) properties.

The results of these analyses will be documented in the Community Impact Assessment Technical Report Form and summarized in the DEIS.

2. Environmental Justice

   The Engineer shall:

   (a) Perform an environmental justice analysis. Studies shall fulfill the requirements of Executive Order 12898.
   (b) Identify Environmental Justice communities within the study area.
   (c) Determine if the project would have disproportionately high and adverse impacts on Environmental Justice communities. All impacts identified in the Community Impact Assessment and other relevant studies (i.e. noise analysis) should be considered to determine if the impacts disproportionately affect environmental justice communities.
   (d) Identify possible mitigation measures (Recommended Alternative only) to avoid or minimize any adverse impacts to the environmental justice population within the project area.

   The results of these analyses will be documented in the Community Impact Assessment Technical Report Form and summarized in the DEIS.

3. Limited English Proficiency

   The Engineer shall:

   (a) Demonstrate compliance with Executive Order 13166. Compliance is generally dependent on public involvement activities.
   (b) Identify populations with Limited English Proficiency, the language(s) spoken, and the specific commitments to provide access to Limited English Proficiency individuals.

   The results of these analyses will be documented in the Community Impact Assessment Technical Report Form and summarized in the DEIS.

4. Historic Resource Studies

   (a) Project Coordination Request for Historical Studies Form

   The Engineer shall complete the current (updated 2015), Project Coordination Request (PCR) for Historical Studies Form. The PCR shall be provided to the TxDOT Tyler District to initiate coordination with TxDOT ENV historian (HIST). The area of potential effects (APE) shall be identified in coordination with the HIST. The following shall be included in the PCR:

   (i) Project Information: Project description, actions subjected to federal permitting, targeted environmental clearance date, anticipated letting date, and 'historic-age date' (letting date minus 45 years).
   (ii) Additional ROW per parcel involved (estimated in acres per parcel) and involved parcel acreage. Any easements (estimated in acres per parcel involved) and involved parcel acreage.
   (iii) Aerial maps that include: existing and proposed ROW boundaries, APE, parcel boundaries for properties within the APE, known historic resources, and major street names.
   (iv) Preliminary plans showing: existing and proposed ROW boundaries, temporary or permanent easements, any American with Disabilities Act (ADA)/Safe Routes to School (SRTS) improvements, property parcel boundaries, and building footprints within the APE.
   (v) Existing and proposed typical roadway sections.
   (vi) Results of the Texas Historic Sites Atlas search, identifying National Historic Landmarks (NHL), National Register of Historic Places (NRHP), State Antiquities Landmarks (SAL), and Recorded Texas Historic Landmarks (RTHL), and Official Texas Historic Markers (OTHM) resources located within one-quarter mile of the Reasonable Alternatives ROW listed in a table format and identified on color aerial map(s) or equivalent.
   (vii) If applicable, clear identification of markers proposed to be relocated (as above) and copies of completed County Historical Commission (CHC) consultation letter(s).
   (viii) If historic-age bridges are present, include: the bridge inventory number, results of historic bridge inventory search, listed in table format, aerial map(s) or equivalent with bridge location(s) identified, and copies of CHC consultation letter and results (as appropriate for project and in consultation with HIST).

(ix) Locations of historic age rest area(s) if applicable and information about whether or not they have been evaluated for inclusion in the NRHP. Include a list of rest area(s) in table format and identify on an aerial map.
(x) When right-of-entry (ROE) is required (as determined in consultation with HIST), include dated ROE letter responses from affected land owners.
(xi) Identify consulting parties (as stipulated by federal and state historic preservation law).
(xii) Identify individuals, local governments and known historic preservation groups (listed with contact information).
(xiii) Representative and dated photographs, including buildings/structures in the APE and those adjacent, and road features (culverts, bridges, landscaping, etc.), and areas of proposed construction.

(b) Research Design

In consultation with the State, prepare a research design for a reconnaissance survey for non-archeological historic-age resources confirming with TxDot's current (update 2014) Documentation Standard for Historic Resources Research Design. The research design shall provide a succinct summary of the literature review results including known historic resources and results of public involvement tasks, clear descriptions of identification, evaluation and documentation tasks required, and projected production schedules. The Engineer shall submit an electronic format copy of the research design to the State. The State assumes responsibility for coordinating the research design with the THC.

(c) Reconnaissance Survey for Historic Resources

Conduct a reconnaissance survey conforming to the methodology outlined in the TxDOT ENV THC-approved research design conforming with TxDOT's current (updated 2014) Documentation Standard for Reconnaissance Survey Report. The reconnaissance survey shall not be implemented without prior approval of the research design by the State and THC. Each historic-age resource (defined in accordance with 36 CFR 60 and TxDOT methodology as a building, structure, object, historic district or non-archeological site at least 45 years old at the time of letting) in the APE of the Reasonable Alternatives shall be documented in the following manner:

(i) Provide photographic documentation for each historic-age resource sufficient in number and perspective to satisfy TxDOT ENV and THC documentation requirements, except under circumstances beyond the Engineer's control. At a minimum, this shall include an oblique view with the primary façade and the subject filling the frame. Properties listed or preliminarily determined eligible for the NRHP shall require additional photographs to be taken, including photographs that show the relationship between the historic resource and the proposed project area. Properties with more than one historic-age resource shall also require additional photographs.
(ii) Each surveyed historic-age resources shall be recorded on individual property survey sheets and contain: ID numbers, project location and name, CSJ number, latitude/longitude and addresses, direction the camera is facing,, architectural style and/or form, construction dates, physical description noting integrity issues, preliminary eligibility recommendations referencing the applicable NRHP criteria, and photographic limitations.
(iii) Produce an inventory of all resources, provided in a table form that details their project ID numbers, latitude/longitude and/or addresses,, property type and subtype classifications, stylistic influences or form, construction dates, integrity issues and preliminary eligibility recommendations referencing applicable NHRP criteria.

(iv) Provide a technical report detailing the results of the reconnaissance survey. In the report the Engineer shall describe the findings of the reconnaissance survey, including preliminary assessments of direct, indirect and cumulative effects on historic properties, and make recommendations to the State for the need, if any, to conduct intensive or further survey efforts. The technical report shall have sufficient detail and clarity to provide TxDOT ENV and THC with a basis for making determinations of NRHP eligibility without requiring submission of additional documentation or shall have sufficient detail and clarity to make recommendations concerning the scope of the intensive survey. The technical report should include an outline of the purpose and methodology of the project, a summary of the background history of project area, presenting historic contexts relevant to the time period associated with the historic-age resources in which to evaluate significance of resources for NRHP eligibility, and observations on patterns of settlement, development trends, resource distribution and analysis of survey data. All appropriate NEPA or federal regulatory language shall be included to provide sufficient clarity concerning eligibility determinations.

5. Archeological Studies

(a) Archeological Background Study

The Engineer shall prepare an Archeological Background Study in accordance with TxDOT's Review Standard for Archeological Background Studies (update 2011) as a stand-alone technical report deliverable.

(i) One Background Study shall be produced for Reasonable Alternatives by a professional archeologist as defined in 13 TAC §26.4(2).
(ii) The Archeological Background Study shall conform to the current (2011) Review Standard for Archeological Background Studies, available from the State.
(iii) Unless the Engineer has previously completed an Archeological Background Study for the project, the Archeological Background Study must define and consider all alternatives selected for detailed study, including all existing ROW, all proposed new ROW, easements (temporary and permanent), and any other project-specific location designated by the State. The Archeological Background study shall consider the likely depth of impacts resulting from the proposed project. The location of all alternatives selected for detailed study shall be presented on a map or maps as part of the Archeological Background Study.
(iv) To conduct the Archeological Background Study, the professional archeologist shall undertake a review of existing data, including, but not limited to, the Texas Archeological Sites Atlas, geologic maps, soil maps, Potential Archeological Liability Map (PALM) of the project area (if applicable), aerial photographs, and historic maps. Based on this review, the Archeological Background Study shall identify and plot on a map the areas that require field investigation to evaluate the project's effects on archeological resources and cemeteries and shall identify the areas in which the proposed project would have no effect on archeological resources and cemeteries.
(v) The Archeological Background Study shall identify any areas proposed for field investigation where impacts are deep, extending beyond three feet in depth.

(b) Archeological Surveys (this task will be performed on the Recommended Alternative only)

The Intensive Archeological Survey shall conform to the current TxDOT Review Standards for Archeological Survey Reports (update 2011) as presented in the "Archeological Sites and Cemeteries Toolkit" and is available from the State. The Engineer shall undertake the following activities and demonstrate that these activities occurred by providing supporting data to the State:

(i) Archeological surveys shall be performed under a Texas Antiquities Permit issued by THC and signed by a State professional archeologist (TAC, Title 13, Part 2, Chapter 26).
(ii) The Technical Expert shall submit a permit application for a Texas Antiquities Permit and a report on the work conducted under the permit. Permit applications for the conduct of an Archeological Intensive Survey shall follow the current TxDOT Review Standard for Antiquities Permit Application as presented in the "Archeological Sites and Cemeteries Toolkit" and is available from the State. The content for Archeological Intensive Survey reports shall follow the current review standard for Archeological Survey Reports as presented in the "Archeological Sites and Cemeteries Toolkit" and is available from the State. The draft and final report shall also fulfill the reporting requirements for the Texas Antiquities Permit.

(iii) Perform surveys, reporting, and documentation to satisfy the NHPA, Section 106 and Antiquities Code requirements for determining whether archeological sites are present in the project area, and whether test excavations or a higher level of archeological work is needed.
(iv) A physical inspection of the project area.
(v) Documentation of all conditions affecting the potential integrity of archeological deposits in accordance with regulations 36 CFR 60.4 governing eligibility for inclusion in the NRHP and regulations TAC, Title 13, Part 2, Chapter 26.8, governing evaluation of archeological sites for designation as SALs.
(vi) Photo-documentation of evidence supporting a recommendation that deposits in the project area do or do not have sufficient integrity for the preservation of eligible sites. Photo-documentation shall provide a representative record of all relevant impacts reducing the integrity of potential archeological deposits in the project area.
(vii) Surveys will be done in accordance with THC survey standards, unless a different level of effort can be explicitly justified. Eligibility test excavations and data recovery excavations will be authorized at the sole discretion of the State and performed only under a permit specifically issued for that purpose.
(viii) The State encourages the use of mechanically excavated trenches as a reliable site prospection tool during intensive surveys. All trenches excavated for prospection shall be documented in sufficient detail to assure satisfaction of the NHPA, Section 106 and Antiquities Code information needs. For this project, backhoe trenching is assumed.
(ix) Items for curation must be prepared in accordance with the most current standards published. The Technical Expert will contact ENV's Archeological Studies Section for a request for housing before sending items to the certified curation facility.
(x) General Specifications for Archeological Intensive Survey Reports. The Engineer shall adhere to the following:

- All documentation not submitted for curation shall be submitted to the State. Final survey reports shall be reproduced on archival quality paper. One printed copy of each site form shall be submitted on archival quality paper.
- Surveys shall fully record all archeological sites present in the project area, to the extent feasible within the scope of a survey. For this project, it is assumed that up to 30 sites may be delineated and documented.
- All tables, figures, and maps shall have a number, title, appropriate explanatory note, and a source reference. In addition, where applicable, a north arrow, a scale, and a key shall be displayed. All sections of USGS 7.5' quad sheets shall indicate the name of the sheet.
- All bibliographic references in reports shall conform to the American Antiquity style guide.
- Maps and figures for all reports and attachments shall be produced to minimize generation loss and shall be suitable for clear reproduction. Unless necessary, maps and figures shall be 8.5" x 11" pages. Continuation sheets for maps and figures should be used where reduction results in loss of legibility.

(c) Archeological Testing (this task will be performed, if needed, on the Recommended Alternative only)

This scope includes NRHP-eligibility testing for up to **three (3) archeological sites**. Data recovery, if required, is not included in this WA. Testing will include sufficient level of effort to assess each site for eligibility to the NRHP and will result in clear recommendation of eligibility of each site. Testing for up to three sites would be conducted under a single Texas Antiquities Permit by a qualified Principal Investigator as defined in 13 TAC §26.4(2) and will include the following:

(i) Hand excavation of test units in 1x1, 2x1, 2x2, or equivalent increments to assess artifact content and density vertically and horizontally.
(ii) Backhoe trenching or gradall scraping to identify features and assess geomorphology and depth of archeological deposits.
(iii) Collection of artifacts and samples for further analysis
(iv) Mapping of all test units, trenches and features with TDS or sub-meter accuracy GPS.
(v) Sufficient archival or comparative research to assess site significance
(vi) Specialized studies such a radiocarbon dating, macrobotanical analysis, faunal analysis.
(vii) Reporting to conform with TxDOT Review Standards, SOUs and general specifications for archeological reports.

6. Air Quality Studies

The Engineer shall perform an air quality analysis in accordance with the current approved version of the TxDOT Air Quality Guidelines and Toolkits. Based on the project location and current attainment status, the air quality analysis would be limited to evaluating CO TAQA, MSAT (qualitative), and Construction Emissions. Transportation Conformity, CMP and Hot-Spot detailed analyses are not anticipated.

Air quality background information shall include:

(i) A paragraph discussing the attainment status of county or counties where project is located.
(ii) A paragraph discussing the National Ambient Air Quality Standards.
(iii) A statement indicating the project has been included in the current conforming metropolitan transportation plan (MTP) and transportation improvement plan (TIP).
(iv) The Engineer shall prepare a qualitative MSAT analysis in accordance with TxDOT's most recent guidance on this subject.

The results of this analysis will be documented in the Air Quality Technical Report and summarized in the DEIS.

7. Traffic Noise Studies

The Engineer shall perform a traffic noise analysis in accordance with TxDOT's Traffic Noise Guidelines and Toolkits. *Existing and projected traffic volumes, included percent trucks, vehicle classes, directional distributions, and k factors shall be provided by CDM Smith and approved by the TxDOT Transportation Planning and Programming Division.*

(a) The Engineer shall identify representative receivers adjacent to the Reasonable Alternatives that might be impacted by highway traffic noise and may benefit from feasible and reasonable noise abatement.
(b) The Engineer shall determine existing and predicted noise levels for representative receivers, as follows:

(i) The Engineer shall take field measurements of existing noise levels at up to **thirty (30) locations** of proposed new location construction adjacent to the Reasonable Alternatives. Field measurements shall be accomplished with sound meters that meet or exceed ANSI S1.4-1983, Type 2.
(ii) The Engineer shall perform computer modeling of existing noise levels and predicted (future) noise levels. Computer modeling shall be accomplished with the FHWA Traffic Noise Model (TNM), Version 2.5 (or most current version), in areas where there is an existing roadway/traffic. TNM models will be developed for up to three (3) Reasonable Alternatives using zero elevation in order to compare relative noise impacts. The Recommended Alternative will be modeled using the proposed roadway profile.
(iii) The Engineer shall identify impacted receivers adjacent to the Reasonable Alternatives in accordance with TxDOT's absolute and relative impact criteria.
(iv) The Engineer shall consider and evaluate required noise abatement measures for receivers impacted only by the Recommended Alternative in accordance with the feasible and reasonable criteria.
(v) The Engineer shall propose noise abatement measures only for the Recommended Alternative that are both feasible and reasonable.

The results of this analysis will be documented in the Traffic Noise Technical Report and summarized in the DEIS.

8. Water Resources Evaluation

(a) Water Resources Technical Report

The Engineer will prepare a Water Resources Evaluation Report that includes a summary of areas of environmental concerns, including a determination of potentially jurisdictional areas in compliance with the 1987 Wetland Delineation Manual and the appropriate regional supplement, maps illustrating constraints and resources, a summary of potential impacts to waters of the U.S. for the various alternatives, regulatory floodplains, a summary of relevant regulations (including regulatory floodplains and groundwater), and a summary of permits and regulatory commitments anticipated for the project. Relevant best management practices would also be summarized.

The results of this work will also be used to complete the Tier I Site Assessment (April 2017) and Biological Evaluation Form (January 2017). The Engineer will also provide a brief summary for potential consideration in the NEPA document's affected environment and environmental consequences chapters. The ecological team will also summarize indirect and cumulative effects on water resources.

Assumptions:

- Reports will follow TxDOT standards including cover sheets.
- Wetland delineation forms and TXRAM Stream Data sheets will be provided as appendices.
- All evaluated alternatives shall address the same level of detail in the water resources evaluation.
- ROE will be provided by the Engineer. Where ROE is not available, existing data shall be used to provide the best estimate of potentially jurisdictional waters for these areas. These areas shall be clearly defined in the report.

9. Ecological Resources

(a) Vegetation and Habitat Analysis

The Engineer shall perform an analysis/characterization of actual and previously-mapped habitat including remnant native vegetation and other special habitats. This effort will also identify Species of Greatest Conservation Need (SGCN) as defined by the Texas Parks and Wildlife Department's (TPWD) Texas Conservation Action Plan. The habitat analysis shall be based on the most current TxDOT-TPWD Memorandum of Understanding, effective September 1, 2013 (2013 MOU).

The Engineer shall provide the following:

- Mapped habitats within the proposed and existing Right-of-Way (ROW) identified in the Ecological Mapping Systems of Texas (EMST).
- Descriptions of actual vegetation types (e.g., forested, prairie, riparian, floodplain, rangeland, agricultural) in the study area in compliance with the 2013 MOU based upon field visits by qualified biologists. This will include representative description and photographs of existing vegetation within the study area. The Engineer shall provide aerial photographs (with dates) when available. If the vegetation within the study area does not match the description as per the 2013 MOU or if there is an unusual difference between the vegetation in the ROW and outside of the ROW, the narrative will clearly explain the differences in vegetative content between the existing vegetation and the 2013 MOU.
- If special habitat features are present, the narrative will include clear description and identification of the location of the feature(s) present and why the feature(s) are identified as special.
- The habitat analysis shall contain a description of anticipated temporary and permanent impacts to vegetation. The description of anticipated impacts shall be based on impacts that can be predicted as a result of construction activities and the kind(s) of facilities proposed for the transportation activity.
- A summary table of the recorded and observed vegetative types per the EMST, any discrepancies, and impacts in comparison to the MOU's thresholds will be provided.
- Identify any programmatic best management practices (BMPs) that might be utilized for this project.

The Engineer will document the results in the Tier I Site Assessment (April 2017), Biological Evaluation Form (January 2017), and a Biological Resources Technical Report. All relevant attachments suggested by TxDOT will be included. The Engineer will also identify potential conservation and recovery measures in the forms and reports. The Engineer will also provide the EMST Output File as a Microsoft Excel file (.xls format).

The Engineer will also provide a brief summary for potential consideration in the NEPA document's affected environment and environmental consequences chapters. The ecological team will also summarize indirect and cumulative effects on ecological resources.

Assumptions:

- All evaluated alternatives shall address the same level of detail in the habitat evaluation.
- The level of required NEPA documentation will be confirmed by submittal of an environmental classification letter to TxDOT. NET RMA will coordinate with TxDOT. For planning purposes, the Engineer assumes that documentation will be an Environmental Assessment (EA) or Environmental Impact Statement (EIS).
- The study area/action area will be defined based upon resources and impacts. For planning purposes, the project study corridor and potential and existing ROW of conceptual alignments established in January 23, 2017 will be study area/action area.
- Right-of-entry will be provided/obtained by _____. Where ROE is not available, existing data shall be used to provide the best estimate for these areas. These areas should be clearly defined in the any reports.

- Reports will follow TxDOT standards including cover sheets.

10. Floodplain Impacts

The Engineer shall determine whether the proposed project has the potential to affect floodplains. Studies for floodplain impacts shall follow the requirements of Executive Order 11988 and 23 CFR 650, Subpart A.

(a) The hydraulics report discussed under FC 110 will summarize floodplain impacts which briefly describes for the study area the watershed characteristics, streams, FEMA mapped floodplains, existence of significant development, encroachment on the 100-year floodplain by proposed facilities, jurisdictions having control over floodplains, and other pertinent information as needed.
(b) Where an encroachment or support of incompatible floodplain development results in impacts, the report shall provide more detailed information on the location, impacts and appropriate mitigation measures.
(c) For each reasonable alternative encroaching on a designated or proposed regulatory floodplain, the report shall provide a preliminary indication of whether the encroachment is consistent with or will require a revision to the regulatory floodplain. If the Recommended Alternative encroaches on a regulatory floodplain, the report shall discuss the consistency of the action with the regulatory floodplain.
(d) If the Recommended Alternative includes a floodplain encroachment having significant impacts, the report shall include a discussion on practicable alternatives, as required by 23 CFR 650, Subpart A. The finding shall refer to Executive Order 11988 and 23 CFR 650, Subpart A. In such cases the report shall document compliance with the Executive Order 11988 requirements and shall be supported by the following information:

(i) The reasons why the proposed action must be located in the floodplain;
(ii) The alternatives considered and why they were not practicable; and
(iii) A statement indicating whether the action conforms to applicable state or local floodplain protection standards.

The results of this analysis will be documented in the Water Resources Technical Report and summarized in the DEIS.

11. Farmland Impacts

(a) Farmland Protection Policy Act

The Engineer shall determine farmland impacts in accord with the Farmland Protection Policy Act (FPPA) (7 USC 4201 et. seq.) and Environmental Handbook: Farmland Protection Policy Act (August 2015), which includes determining whether the project is exempt or completion of U.S. Department of Agriculture Farmland Conversion Impact Rating (AD-1006) or Farmland Conversion Impact Rating for Corridor Type Projects (NRCS-CPA-106), as appropriate.

If the project is not subject to FPPA protection, the results of this assessment will only be documented in the Biological Evaluation Form and summarized in the NEPA document and additional documentation will not be necessary.

If the project area contains protected farmland, the Engineer will complete the relevant form (AD-1006 or NRCS-CPA-106) for each alternative. Based upon the resulting score (greater than 60 points), the Engineer will provide the relevant coordination documents to NET RMA for potential coordination with the Natural Resources Conservation Service (NRCS).

If protected farmland might be impacted, a summary of impacts and documentation of correspondence will be provided for the NEPA document. This would include justification for the selected alternative if a determination of adverse impact is made by the NRCS and relevant correspondence between TxDOT and the NRCS.

The Engineer will also provide a brief summary for potential consideration in the NEPA document's affected environment and environmental consequences chapters. The ecological team will also summarize indirect and cumulative effects on water resources.

Assumptions:

- The analysis will include a determination if the project is within an "urbanized area" as defined by the U.S. Census Bureau Maps.
- All evaluated alternatives shall address the same level of detail.

12. Invasive Species and Beneficial Landscaping

The Engineer shall perform invasive species studies in accordance with the requirements of Executive Order 13112 (February 3, 1999) and outlined in the Environmental Handbook: Ecological Resources (July 2015). The Engineer shall discuss beneficial landscaping in accordance with the requirements of Executive Memorandum of April 26, 1994 and Federal Register Volume 60, Number 154 (August 1995). The Engineer will document the results in the Biological Evaluation Form and Biological Resources Technical Report.

The Engineer will also provide a brief summary for potential consideration in the NEPA document's affected environment and environmental consequences chapters. The ecological team will also summarize indirect and cumulative effects on ecological resources.

Assumptions:

- Best management practices to comply with these regulations will be defined in the report.

13. Threatened or Endangered Species

For the purposes of this scope, protected species shall include:

- All species listed by the USFWS as threatened or endangered or proposed for listing as threatened or endangered 16 USC §1531-1544);
- All species that are candidates for review for listing by USFWS as threatened or endangered (per most recently updated list in Federal Register);
- Species listed as threatened or endangered species by TPWD (State of Texas Threatened and Endangered Species Listings, TPWD) and Species of Greatest Conservation Need (SGCN);
- Species protected by the Migratory Bird Treaty Act (16 USC 703-71) and Bald and Golden Eagle Protection Act (50 CFR 22.3).

Concurrent with the conceptual design refinement, the Engineer shall examine all available existing commercial and scientific data to determine the likelihood that protected species, their habitat, or designated critical habitat (per 50 CFR 17.94-95) could be impacted by the proposed project. Work efforts will comply with the Environmental Handbook Ecological Services (July 2015) and the Environmental Handbook: Endangered Species Act (April 2017). The Engineer will define the action area for the project and collect background data. Data includes the records of the TPWD's Natural Diversity Database (NDD), USFWS records or files and any other records available to the public. Historical and recent aerial photography will be reviewed to identify areas within the action area with the higher potential for potentially suitable habitat for protected species.

The Engineer's qualified biologist will then conduct a reconnaissance-level field visit to identify potential habitat for protected species within the action area and observe identified critical habitat.

The Engineer will document the results in the Tier I Site Assesment (April 2017), - Biological Evaluation Form (January 2017), and a, Biological Resources Technical Report. The Engineer will also identify potential conservation and recovery measures in the forms and reports.

The resulting information will also be briefly summarized in the NEPA document's affected environment and environmental consequences chapters. The ecological team will also summarize indirect and cumulative effects on ecological resources.

Assumptions:

- Significant changes in TxDOT-required forms or guidance will occur following scoping. If significant changes are made, the Engineer will evaluate the effort of those changes on level of effort (LOE) which may require a change order.
- An official species list is required, and only one update to the official species list will be necessary.
- Absence and presence surveys would require a change of services and may have seasonal requirements.
- For this phase, a Section 7 consultation under the Endangered Species Act of 1973 will not be required. Preparation of a Biological Assessment and formal consultations with USFWS would require a change of services.

- If USFWS has identified critical habitat in the study area/action or the Engineer's qualified biologists observes protected species or identifies potentially suitable habitat for protected species, the Engineer shall notify NET RMA immediately.

14. Initial Assessment of Hazardous Materials

The Engineer shall perform an initial assessment for potential hazardous materials impacts. The initial assessment shall determine the potential for encountering hazardous materials in the study area. The initial hazardous materials assessment shall also be in accordance with the American Society for Testing and Materials (ASTM) Environmental Site Assessment standard practices (ASTM E 1527 and ASTM E 1528) or equivalent (i.e., satisfies "due diligence" and "appropriate inquiry" requirements under the Comprehensive Environmental Response and Compensation Liability Act (42 USC 9601(35)(B)). The following components of the initial hazardous materials assessment shall be reviewed, assessed, and/or documented to an appropriate project-specific level:

(a) Existing and previous land use information from readily available resources (topographic maps, available aerial photos, ROW maps, files and other information;
(b) Initial site/corridor field surveys by the hazardous materials expert;
(c) A regulatory agency database search (list search) and/or review of regulatory agency files.

The Engineer shall produce and submit to NET RMA and TxDOT a report on the initial assessment for hazardous materials. The report shall include, when applicable, full list search reports, copies of agency file information, recommendations, and any other supporting information gathered by the Engineer. The report also shall include a discussion of hazardous materials impacts suitable for inclusion in the DEIS. The discussion of hazardous materials impacts shall include, when applicable:

(a) A concise summary of relevant information gathered during the initial site assessment, including sufficient information to show that the study area was adequately investigated for known or potential hazardous material contamination;
(b) A concise description of the scope of the hazardous materials initial site assessment, disclosure of any limitations of the assessment, and a statement indicating who performed the assessment;
(c) A concise summary of the findings of the assessment for each alternative considered;
(d) A discussion of commitments to perform further investigation for suspect areas, and/or justification for postponement of further investigation;
(e) A summary of efforts to avoid or minimize involvement with known or suspected hazardous material contamination sites during construction, and/or justification for not avoiding contaminated sites within the Recommended Alternative or corridor alignment;
(f) Disclosure of known or suspected hazardous material contamination that is anticipated to be encountered during construction;
(g) A discussion of any required special considerations, contingencies or provisions to handle known or suspected hazardous material contamination during right-of-way negotiation and acquisition, property management, design and/or construction;
(h) A summary of early coordination or consultation with the regulatory agencies, local entities or property owners;
(i) A discussion of further hazardous materials related coordination with, and approvals or permits required from, the regulatory agencies or other entities.

The results of this assessment will be documented in the Hazardous Materials Initial Site Assessment Form and summarized in the DEIS.

15. Visual Impacts

The Engineer shall identify visual impacts in accordance with the requirements of Guidelines for the Visual Impact Assessment of Highway Projects (2015). The results of this assessment will be documented in the Visual Resources Technical Report and summarized in the DEIS.

16. Indirect Impacts

The Council on Environmental Quality (CEQ) regulations requires that all federal agencies consider the indirect effects of their proposed actions. The Engineer shall identify indirect impacts in accordance with the requirements of TxDOT's July 2016 *Indirect Impacts Analysis Guidance*. Indirect induced growth-related effects will be evaluated in accordance with the six-step process identified in the TxDOT guidance:

(a) Step 1 – Define the methodology;
(b) Step 2 – Define the area of influence (AOI) and study timeline;
(c) Step 3 – Identify areas within the AOI subject to induced growth;
(d) Step 4 – Determine if growth is likely to occur in areas identified in Step 3;
(e) Step 5 – Identify resources subject to indirect growth impacts; and.
(f) Step 6 – Identify mitigation, if applicable, that would be required to address impacts identified during **Step 5**.

The results of the six-step process will be documented in the Induced Growth Technical Report and summarized in the DEIS.

Per the July 2016 TxDOT guidance, (indirect) encroachment alteration effects will be addressed separately as a subheading under direct effects for each resource examined in the direct effects chapter of the DEIS.

17. Cumulative Impacts

The CEQ regulations requires that all federal agencies consider the cumulative effects of their proposed actions. The Engineer shall assess cumulative impacts in accordance with the requirements of TxDOT's July 2016 *Cumulative Impacts Analysis Guidelines*. Cumulative impacts will be evaluated in accordance with the five-step process identified in the TxDOT guidance:

(a) Step 1 – Identify resource-specific study areas, current conditions and trends, and timelines for analysis;
(b) Step 2 – Consider the direct and indirect effects on each resource impacted by the proposed project;
(c) Step 3 – Consider the effects of other past, present and reasonably-foreseeable future actions (in table format);
(d) Step 4 – Consider the (cumulative) effects of the proposed action when combined with actions identified in Step 3; and
(e) Step 5 – Identify relevant and reasonable mitigation (even if such mitigation is outside the purview of the project sponsor or is unlikely to be implemented)

The results of the cumulative impacts assessment will be documented in the Cumulative Impacts Technical Report and summarized in the DEIS.

18. Construction Impacts

The Engineer shall prepare a general discussion of construction impacts for each reasonable alternative. The Engineer shall identify construction impacts for the Recommended Alternative in accordance with guidance found on TxDOT's Environmental Compliance Toolkit.

The results of this assessment will be documented in the DEIS.

I. ENVIRONMENTAL DOCUMENT PREPARATION

1. Technical Reports

The Engineer shall prepare a technical report for each environmental subject area described in Section H., consistent with TxDOT Environmental Toolkits and guidelines. The technical reports shall incorporate guidance provided during technical work group meetings with TxDOT, NET RMA and resource agencies, as applicable. Technical reports shall document existing conditions, methods used, study areas evaluated, and direct impacts assessed for each subject area. The technical reports shall be subject to two rounds of review by the TxDOT Districts, TxDOT ENV, and NET RMA.

Deliverables:

Electronic copy of the draft and final version of each technical report/form listed below. Each draft technical report shall be revised three (3) times to address NET RMA, TxDOT Tyler District, and TxDOT ENV comments.

- Project Description Report (includes Purpose and Need Statement, Project Background, Funding Source, and a detailed description of the Proposed Project)
- Alternatives Analysis Technical Report
- Community Impact Analysis Technical Report (includes Project-Level Toll Analysis)
- Historic Resources Project Coordination Request Form
- Historic Resources Survey Report
- Archeological Background Study
- Archeological Resources Survey Report (Recommended Alternative only)

- Air Quality Technical Report
- Traffic Noise Analysis Technical Report
- Waters Resources Technical Report
- Biological Evaluation Form and Tier I Site Assessment Form
- Biological Resources Technical Report
- Hazardous Materials Initial Site Assessment Form
- Indirect Impacts Technical Report
- Cumulative Impacts Technical Report
- Visual Resources Technical Report

2. Draft Environmental Impact Statement

   (a) The Engineer shall prepare a DEIS which shall include discussions of purpose and need, existing and proposed design, alternative descriptions, alternatives analysis, air/noise computer modeling, historical/archeological assessment, wildlife and endangered species review, right-of-way, displacements, socioeconomic analysis and environmental justice impacts, water quality, wetlands, floodplains, aesthetics/visual effects, and construction impacts as well as indirect and cumulative impacts.
   (b) The Engineer shall prepare exhibits including, but not limited to, the following: vicinity map, existing and proposed typical sections, line diagrammatic schematic, noise and air receiver location map, wetlands and floodplain map, USGS map, site photographs and hazardous sites map, as appropriate.
   (c) The Engineer shall provide twenty (20) copies of the pre-draft DEIS and all revisions thereto. Exhibits in the document shall be limited in size to 8 1/2" x 11" or 11" x 17" for ease of reproduction. Illustrations shall be developed using GIS (ArcView) or Computer Aided Drafting and Design (CADD) (Microstation) software.
   (d) The Engineer shall attend a review meeting to be held by NET RMA and TxDOT for the project. The purpose of the review is for the Engineer to receive comments from NET RMA and TxDOT regarding the format and content of the Pre-Draft EIS.
   (e) The Engineer shall revise the Pre-Draft EIS, reflecting those comments obtained from the State, and Agency review. Twenty (20) copies of the DEIS shall be submitted to NET RMA and TxDOT for review and approval. The Engineer should anticipate comments only on new material, on previous comments that might not have been addressed fully, or on text changes necessitated by a change in a part of the text previously un-addressed. The Engineer shall prepare and submit thirty (30) hard copies and fifteen (15) CDs of the completed DEIS to NET RMA for distribution. This assumes six revisions to the DEIS prior to submitting the completed DEIS to NET RMA.
   (f) The Engineer shall prepare a Notice of Availability of the DEIS to be published by the State prior to the Public Hearing.

3. Final Environmental Impact Statement/Record of Decision

   (a) Once the Recommended Alternative is selected and approved by TxDOT, in consultation with NET RMA, the Engineer shall prepare the combined FEIS/ROD. The Engineer shall address the engineering and environmental issues raised at the public hearing and effect disposition of same. This action is an important part of the study process and shall involve evaluating suggestions received as a result of the hearing. This shall be done in coordination with the NET RMA and TxDOT.
   (b) The Engineer shall revise the draft environmental document to discuss changes to the selected alternative in response to agency and public hearing comments, as required.
   (c) The Engineer shall review the draft impacts section and revise this section to reflect selected alternate and pertinent comments received during the hearing. As appropriate, the Engineer shall include a summary of further agency comments and a discussion of results of agency coordination.
   (d) The Engineer shall prepare and list public hearing comments and responses. This summary shall be included as an appendix to the environmental document, as appropriate.
   (e) The Engineer shall submit twenty (20) copies of the Toll 49 Segment 6 Pre-Final EIS for NET RMA and TxDOT review. This assumes two revisions to the Pre-Final EIS.
   (f) The Engineer shall initiate a final Project Team Review prior to distribution of the FEIS document.
   (g) The Engineer shall revise the FEIS document to respond to TxDOT and Agency comments and submit twenty (20) copies of the Revised FEIS document to NET RMA and TxDOT. Following final approval, the Engineer shall print and deliver to the NET RMA thirty (30) hard copies and fifteen (15) CDs of the FEIS.
   (h) The Engineer shall prepare a Notice of Availability of the FEIS, which shall be published by the State prior to a Record of Decision.

4. Record of Decision/Final Approval

If necessary, the Engineer shall prepare and submit to NET RMA ten (10) hard copies of a separate Draft ROD, as appropriate, for their use in obtaining final clearance of the project. The Draft ROD shall be submitted to TxDOT following the submission and review of the FEIS if a separate FEIS and ROD are prepared. A final ROD shall then be prepared and submitted to TxDOT. The Engineer shall also prepare and submit the Section 139(l) Notice using the template provided in the TxDOT Public Involvement Toolkit.

Deliverables:

- Hard copies (20 total) of the pre-draft DEIS, revised three (3) times to address NET RMA, TxDOT Tyler District, and TxDOT ENV comments
- Hard copies (20 total) of the DEIS
- Hard copies (30 total) and 15 CDs of the completed DEIS
- Hard copies (20 total) of the Pre-Final EIS, revised three (3) times to address NET RMA, TxDOT Tyler District, and TxDOT ENV comments
- Hard copies (20 total) of the Revised Final EIS/ROD
- Hard copies (30 total) and 15 CDs of the Final EIS/ROD
- Hard copies (10 total) of a Draft ROD, revised three (3) times to address NET RMA, TxDOT Tyler District, and TxDOT ENV comments
- Hard copies (30 total) and 15 CDs of the Final ROD
- Digital copies of the Draft and Final Section 139(l) notice

5. Administrative Record (AR)

The Engineer shall establish, track, organize and manage the project's administrative record, which is the written record supporting the agency's decisions. The documents and materials shall be organized in chronological order by date. The administrative record shall be maintained by the Engineer throughout the duration of this WA. Documentation and materials to be compiled as part of the AR include:

(a) Privileged and non-privileged documents and materials (once the AR is compiled, protected documents and materials shall be retracted or removed from the record. The index shall identify the documents or materials, reflect that they are being withheld, and state on what basis they are being withheld.)
(b) Draft and final documents and materials
(c) Technical information, sampling results, survey information, engineering reports or studies
(d) E-Mail messages and attachments
(e) Correspondence and attachments
(f) Documented communications among organizations involved in the project
(g) Policies, guidelines, directives, and manuals relevant to the development of project NEPA documentation
(h) Modeling results and factual data
(i) Public involvement materials, communications, comments, and other information that documents public participation in the project
(j) Meeting minutes or transcripts
(k) Maps, drawings, and displays
(l) Photographs
(m) Field and personal notes (under special circumstances)
(n) Primary Sources

Once project documents are compiled or concurrent with compiling the documentation, an index and database of documents contained within the AR shall be created. The index shall have a cover page that shall include the title of the project, date that the AR was originally compiled, date(s) AR was updated. In addition, the index shall have a brief introduction and preface that explains the contents of the index, how it was organized, how to use the index, as well as a brief project description. The majority of the index shall comprise a matrix that contains the following information for each item within the AR:

(a) Temporary number that corresponds to a number placed on the item
(b) Date of document or material development
(c) Author of document or material
(d) Recipient of document or material
(e) Title or Description of document or material

(f) Number of Pages
(g) A permanent number may be placed on the documents when the AR is complete or is reviewed by appropriate personnel

Each information item (see above bullets) with regards to each AR item shall be designated as a separate field within the database. The database can be used to prepare a variety of reports with regards to the AR sorted by any of the fields.

Deliverables:

- CD and Flash Drive (up to 5 copies) of the Administrative Record

J. PUBLIC INVOLVEMENT

During the NEPA phase of the project, the Engineer shall conduct ongoing public involvement activities (website, meetings, public information, media)—in accordance with TAC, Title 43, Part 1, Chapter 2 and 36 CFR 800.2. -- in addition to the following specific activities:

1. Public Involvement Plan

The Engineer shall prepare a Public Involvement Plan to facilitate meaningful participation in the environmental decision-making process. The Public Involvement Plan will be tailored to address the identified needs within the project area.

2. Mailing List

A mailing list will be compiled that includes the adjacent property owners, residents, agencies and organizations. The list will be maintained and updated throughout the life of the project. This mailing list will be utilized when planning public meetings, workshops and hearings.

3. One-to-One Stakeholder Meetings

The Engineer will work with the NET RMA and TxDOT to determine key issue areas, and major stakeholders and organizations that may require additional one-to-one meetings.

(a) Meetings

Up to 20 one-to-one meetings may be held among smaller groups in an effort to receive tailored and specific feedback on certain issue areas. These meetings will be held throughout the duration of the DEIS.

(b) Coordination

(i) Location, dates and times
(ii) Meeting items

a) Presentation
b) Handouts
c) Agendas
d) Sign-in sheets
e) Displays

(c) One-to-One Meeting Summaries

The Engineer will attend each meeting and take detailed notes in order to produce summaries for each meeting.

4. Working Group

The Engineer will conduct up to four (4) Working Group meetings over the course of the preparation of the EIS. These meetings shall generally be held prior to the Open Houses and Public Hearing.

5. Public Meetings

The Engineer will conduct two (2) public meetings in Open House format to educate and inform the public on the preparation of the DEIS. A court reporter shall be available at each public meeting to transcribe oral comments.

(a) Notification

In preparation for the public meeting, the public will be notified in English and Spanish-language through various platforms outlined below.

(i) Media outreach (press release, follow up calls, media interviews)
(ii) Digital (website, social media, e-blast)
(iii) Mailings to the stakeholder database
(iv) Newspaper advertisement
(v) Electronic newsletter

(b) Public Meeting Coordination

The Engineer, working with NET RMA and TxDOT, will determine locations and dates. The meeting will include various displays and graphics, as determined by the project team, and time for public comment. The Engineer will provide NET RMA with all meeting materials in advance of the open house for the Virtual Open House. Each public meeting will be preceded by up to two (2) coordination meetings with the NET RMA, TxDOT and the Engineer. The Engineer shall:

(i) Confirm location, date, and time
(ii) Determine AV needs, room layout, and other open house needs (tables, chairs, etc.)
(iii) Participate in internal coordination meetings
(iv) Produce needed items for the meeting

- Nametags
- Sign-in sheets
- Handouts
- Displays
- Signage (outdoor, indoor, station)
- Comment cards/community surveys
- Media packets
- Court Reporter
- Translator if requested
- Security

(c) Meeting Summary

The Engineer will attend the public meeting and prepare a detailed summary for approval. The summary will include:

(i) List of study representatives
(ii) Overview of presentation
(iii) Detailed question and answer recap
(iv) Appendices
(v) Presentation slides
(vi) Sign-in sheets
(vii) Comment cards/community surveys
(viii) Photos
(ix) Displays

6. Public Hearing and Public Comment Period

Publication of the DEIS will initiate a comment period, which, in accordance with NEPA, will last at least 45 days. The public hearing will introduce the public comment period, and will allow stakeholders to make comments directly to the team. Comments will be accepted via email, mail, online, and at the public hearing.

(a) Notification

In preparation for the public hearing and public comment period, the public will be notified in English and Spanish-language through various platforms outlined below.

(i) Newspaper Advertisement

Notification of the public comment period and the date of the public hearing will be published in area newspapers at least 30 days prior to the public hearing. The team will carefully determine which papers the notice should appear, and will include English and Spanish outlets.

(ii) Mailings

Mailings will be prepared and sent to local officials and stakeholders within the project area 30 days prior to the public hearing.

(iii) Website
(iv) Social Media (Facebook, Twitter)
(v) Media Outreach (press release, follow up calls, media interviews)

(b) Hearing Coordination

The Engineer shall conduct one (1) public hearing, working with NET RMA and TxDOT to determine the location and date. The hearing will include various displays and graphics as determined by the project team, a formal presentation and time for public comment. The hearing will be preceded by three (3) coordination meetings and one (1) dry run with the NET RMA, TxDOT and the Engineer. The Engineer shall coordinate the following:

(i) AV needs
(ii) Auditorium style layout
(iii) Section for open house-style viewing area
(iv) Sign-in table
(v) Area for court reporter
(vi) Verbal comment area
(vii) ADA Accessibility
(viii) Accessible restrooms

a) Ample parking area for attendees

(ix) Internal coordination meetings
(x) Produce meeting materials

a) Media packets

(xi) Sign-in sheets
(xii) Handouts
(xiii) Displays
(xiv) Signage (outdoor, indoor, station)
(xv) Comment cards
(xvi) Court reporter
(xvii) Translator if requested
(xviii) Security

(c) Hearing Summary

The Engineer will attend the public hearing and prepare a detailed summary for approval. The summary will include the following items, and once finalized will be inserted into the FEIS.

(i) List of study representatives
(ii) Overview of presentation
(iii) Detailed question and answer recap
(iv) Appendices
(v) Presentation slides
(vi) Sign-in sheets
(vii) Transcript from court reporter
(viii) Comment cards
(ix) Photos
(x) Displays

Deliverables:

- Electronic copy of draft and final Workshop and One-to-One Meeting Minutes
- Electronic copy of draft Public Meeting Summary Report (2 meetings). Three (3) revisions will be made to address NET RMA, TxDOT Tyler District, and TxDOT ENV comments.
- Electronic copy of final Public Meeting Summary Report (2 meetings)
- Electronic copy of draft Public Hearing Summary Report. Three (3) revisions will be made to address NET RMA, TxDOT Tyler District, and TxDOT ENV comments.
- Electronic copy of final Public Hearing Summary Report

V. RIGHT-OF-WAY DATA (FUNCTION CODE 130)

The following tasks shall be conducted for the Recommended Alternative only.

A. CREATE BASEMAP

1. Parcel Abstract Map

   The Engineer shall review the corridor basemap and update the property information for affected parcels. This will be used to prepare an Abstract (Deed) Map that will indicate any and all interests of public record held in the land to be acquired and show the total record holdings to be acquired from contiguous land owners. This map will also show any and all interests in land held in common to be acquired (shopping mall parking lots, subdivision reserves, etc.). This does not constitute a completed boundary resolution of the area.

Deliverables:

- Abstract (Deed) Map – A drawing to scale prepared from record documents depicting existing right-of-way lines, existing right-of-way lines, easement lines, and private property lines with relevant grantee names, recording data, and recording dates.

2. GIS Base Map

   The Engineer shall convert Working Sketch into GIS Database which will link each relative parcel by using a tracking spreadsheet & include the following tracking data: parcel number, property owner name, date of ROE letter mailed & received, owner comments, field work start date & completed, date of QA/QC on plat & certification date. This does not constitute a completed boundary resolution of the area.

Deliverables:

- The GIS database will be geo-referenced parcel data (features) must be submitted in ArcGIS 10 format or the current version in use by the State and in the format of the current ROW Geo-Database Template, which shall be provided by the Texas Department of Transportation (TxDOT) template that is available for download from the ROW Division's webpage on the State's internet site (txdot.gov), along with more detailed requirements.
  - The Coordinate System is Geographic coordinates (longitude and latitude), North American Datum of 1983 in Decimal Degrees (8 or more place after the decimal point).
  - The data will be geospatially correct and submitted to The Client in the exact format of the template

B. RIGHT-OF-ENTRY

The Engineer shall provide and periodically maintain GIS data used to inventory the status of right-of-entry (ROE) on affected tracts. Approved format ROE letters will be generated for each affected property and mailed "Certified-Return Receipt Requested". Each ROE will contain information relative to the project, including overall project data, our project number & company information, project surveyor contact information, explanation of work to be performed, area for owner to write specific instructions/comments regarding access, etc., & a self-addressed-stamped return envelope.

The Engineer shall produce a color-coded ownership map, linked to a spreadsheet, which will immediately update the status of researching/abstracting the affected properties. Access to this database will be provided for daily use. A current map will be displayed in our office & provided to field crews. All letters will be scanned & saved in the project folder & provided to field crews.

Deliverables:

- GIS data files and EXCEL spreadsheet of all properties within the project limits for use in tracking the project.

Periodically produce PDF versions of ownership map tracking progress. This does not constitute a completed boundary resolution of the area.

VI. DESIGN SURVEYS (FUNCTION CODE 150)

The following tasks shall be conducted for the Recommended Alternative only.

A. HORIZONTAL AND VERTICAL CONTROL

1. Primary Control Points

The Engineer shall set primary control points in locations unlikely to be disturbed by construction, within the existing Rights-of-Way, similar in construction to a TxDOT Standard Type II ROW monument. Texas811 will be contacted prior to construction of the control points to mark any existing underground utilities. Control points will be established using the State's VRS network with 180 epochs of data observed a minimum of 3 times and meaned to +/- 0.04 foot. All points shall be tied directly to TxDOT's VRS network and adjusted to Smith County surface data by the scale factor of 1.00012, without any local site calibration. Point numbers shall be stamped as follows; (insert Monument labels here)

Deliverables:

- 11"x17" survey horizontal & vertical control standard plan sheets, signed and sealed by the Surveyor, containing each of the primary control points. In addition, a standard 8 ½"x11" primary control sheet is required. Submit a plot and computer graphics of an 11"x17" index map showing an overall view of the project and the relationship of primary monumentation and vertical control used in the preparation of the project, signed and sealed by a RPLS. Submit a written statement describing the datum used along with copies of all relevant NGS and data sheets if applicable.

2. Aerial Panel Points/ Secondary Control Points

The Engineer shall establish aerial ground control Panel Points within public Rights-of-Way (when possible) to aide in the acquisition of LiDAR mapping data. Targets shall be maintained until confirmation of Aerial Data Collection ("Successful Flight") is complete and removed as soon as practicable thereafter (unless painted on the roadway surface). All control points and aerial targets shall be tied directly to the TxDOT's VRS network on State Plane Coordinate NAD 83 and adjusted to Smith County surface data by the scale factor of 1.00012, without any local site calibration.

Deliverables:

- Point file of ground targets with values in surface and grid; copies of all field notes and sketches; and any digital photos. Submit a final aerial control point layout showing the location of the points and labeled with their respective alpha-numeric designations. Submit a written tabulation of all aerial control points with their respective alpha-numeric designations, surface coordinates (for center panel points only), and elevations.

3. Conventional Ground Truthing

The Engineer shall complete a ground truthing survey by using conventional field survey methods to collect data. Ground truthing shots shall be taken on 35% of improved surfaces, 25% on gravel or dirt surfaces, 20% on grasses short and tall, and 20% in drainage areas and creeks to verify the LiDAR surface data. The Surveyor shall also complete ground truthing survey work on Drainage Structures and Bridges to help to verify the adjustment of the aerial DTM.

Deliverables:

- ASCII point file of the ground truthing points to the State prior to the submission of the aerial LiDAR data.

B. AERIAL MAPPING (*provided by Dallas Aerial Surveys-DAS*)

1. Aerial LiDAR

The Engineer shall acquire aerial LiDAR data, using the full waveform laser scanner. The LiDAR mapping file shall include the ground features and all visible improvements within the project limits, and break line data of the

roadway and edges. All aerial mapping work shall conform to the State Standards and Specifications of the National Map Accuracy Standards (NMAS) for a one (1) foot contour. The Surveyor will maintain one (1) operational GPS base stations continually recording data during the LiDAR acquisition portion of the project.

Deliverables:

- Flight Logs for the aerial data, LiDAR calibrated and classified point file in LAS format, planimetric mapping in 2D MicroStation V8I format, 3D DTM and contour data in MicroStation V8I format, TIN data in GeoPak format file.

2. Aerial Photography

The Engineer shall obtain Ortho Rectified Aerial Photography per the project layout provided by the Surveyor. The Ortho Photography shall be obtained for a 1,500-foot corridor (centered on the Recommended Alternative centerline) at an altitude of 1,500 feet above mean sea level and with a flight tracking system capable of producing 0.25 foot pixel resolution stereo pair imagery suitable for 50 scale mapping (1:600). All Ortho Rectified Aerial Photography shall be obtained under clear skies with the absence of any environmental factors which may obscure conditions such as haze, smoke, dust, snow, floodwaters etc. Photos shall be obtained at a sun angle no less than 30 degrees sun up.

Deliverables:

- Enhanced Compression Wavelet (ECW) format that can be displayed as a single image within the current Microstation software without any further manipulation. The Surveyor shall also electronically cut and mosaic the ortho photos – Orthophotography (created using the DTM) - into a uniform rectangular tile grid and produce a tile grid index sheet to identify the location of each mosaicked ortho photo.
- Orthophotography ECW format (3 banded) with world files. If digital, depending on intended use, deliverable formats must include:
  - Raw tiff image – rectified – 3 Band Tiff (for archive only).
  - Color photography – rectified – 3 Band Tiff and Mr. Sid.
  - Infrared Photography – rectified – 3 Band Tiff and Mr. Sid.
  - The State's Photogrammetry Mapping Legend and supplements

C. UTILITY BASE MAP

1. Utility Base Map

The Engineer shall obtain information on existing utilities from utility owners and shall identify and evaluate all known existing and proposed public and private utilities. We will collect existing utility record information (as-built) from utility purveyors, municipalities, counties and other agency suppliers within the area of investigation. The Engineer shall utilize this data to identify potential conflicts and attempt to minimize the potential adverse utility impacts in the preparation of the schematic design.

Deliverables:

- Quality Service Level D (QL-D) Utility Base Map to be referenced into the GIS Database depicting the utility locations.

D. DESIGN SURVEY

1. Augmentation of LiDAR

The Engineer shall collect Conventional Ground Survey data on Areas that are obscured from the airborne LiDAR and Orthophotography by foliage.

2. Hydraulic Cross Sections

The Engineer shall collect Conventional Ground Survey cross sections data (both up & downstream) in any rivers, creeks, or major drainage channels (assume 4 cross sections for up to 20 crossings) to be utilized by The Engineer to produce accurate hydraulics models.

3. Surface General Features

The Engineer shall collect Conventional Ground Survey data on all existing roadway bridge class structures to

include: drainage structures, bridge slope apex, headwalls, wingwalls, safety end treatments, columns and bent caps on all roadway overpasses and underpasses within the limits of the project. Assume up to 20 features.

Deliverables:

- The Engineer shall submit all data previously delivered in an electronic format compatible with the NET RMA's system. All LAS data and raw ECW images from the Aerial LiDAR acquisition and the aerial mission shall be delivered on an external hard drive. All data delivered shall be compatible with the current version of MicroStation GeoPak input files. The vertical datum for the project shall be the North American Vertical Datum (NAVD 88). The horizontal datum for this project shall be the Texas State Plane Coordinate System (NAD 83), Texas North Central Zone FIPS 4202, 2012 epoch data, tied to the TxDOT's Virtual Reference Station (VRS) network, in U.S. Survey Feet and adjusted to Smith County surface data by 1.00012.
  (i) Microstation 2-D Map file showing the collection data of each Design Survey Task
  (ii) Microstation 3-D Map file showing the collected data for each Design Survey Task requiring a vertical component
  (iii) ASCII file (comma delimited) with point #, (x, y & z) coordinates, elevation and point code.
  (iv) (DTM) file in Geopak format
  (v) (TIN) file in Geopak format
  (vi) Edited one (1) foot contour file in Microstation format.

Attachment B
Fee Schedule

Fee Schedule
Summary

Toll 49 Segment 6

Prime Provider: CP&Y, Inc.

Labor Summary by Task

TASK	Description	CP&Y, Inc.		HDR		K Strategies		K Friese		AmaTerra		DAS		Total	
		Hours	Total Labor	Hours	Total Labor	Hours	Total Labor	Hours	Total Labor	Hours	Total Labor	Hours	Total Labor	Hours	Total Labor
FC 145	Project Management	1282	$250,986.44	606	$134,269.30	476	$50,278.72	252	$37,185.92	70	$7,299.60	4	$436.63	2690	$480,456.61
FC 102	Feasibility Studies	3655	$517,035.89	570	$97,008.18	1063	$97,083.88	201	$26,887.81	38	$3,027.44	0	$0.00	5527	$741,043.20
FC 110	Route and Design Studies	2632	$330,115.33	3542	$448,159.20	0	$0.00	2240	$258,929.14	0	$0.00	0	$0.00	8414	$1,037,203.67
FC 120	Environmental Services	5736	$779,083.47	432	$85,102.00	1389	$129,775.92	0	$0.00	3826	$265,307.04	0	$0.00	11383	$1,259,268.43
FC 130	Right-of-Way Data	928	$94,696.45	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00	928	$94,696.45
FC 150	Design Surveys	2018	$264,289.24	0	$0.00	0	$0.00	0	$0.00	0	$0.00	1019	$83,705.91	3037	$347,995.15
	Total	**16251**	**$ 2,236,206.82**	**5150**	**$ 764,536.68**	**2928**	**$ 277,138.52**	**2693**	**$ 323,002.87**	**3934**	**$ 275,634.08**	**1023**	**$ 84,142.54**	**31979**	**$ 3,960,663.51**

Project Summary

	Total Labor	ODEs	Total Fee
CP&Y, Inc.	$2,236,206.82	$108,191.50	$2,344,398.32
HDR	$764,538.68	$68,890.00	$833,428.68
K Strategies	$277,138.52	$91,938.80	$369,077.32
K Friese	$323,002.87	$3,430.00	$326,432.87
AmaTerra	$275,634.08	$60,647.00	$336,281.08
DAS	$84,142.54	$30,237.50	$114,380.04
TOTALS	$3,960,663.51	$363,334.80	$4,323,998.31

Fee Schedule
Cost Plus Fixed Fee
Manhours

Prime Provider: CP&Y, Inc. [illegible]
Toll 44 Segment 6

	Senior Project Manager	Quality Manager	Senior Engineer	Project Engineer	Design Engineer	Engineer-in-Training	Senior Engineer Tech	Engineer Tech	Senior CADD Operator	CADD Operator	Junior CADD Operator	Environmental Manager	Senior Environmental Planner	Environmental Planner IV	Environmental Planner III	Senior Environmental Scientist	Environmental Scientist IV	Environmental Scientist III	Environmental Scientist II	Senior Architectural Historian	Architectural Historian	GIS Specialist	GIS Technician	RPLS Project Manager	RPLS Task Lead	Surveyor-In-Training	Two-Person Field Crew	Admin/Clerical	TOTAL HRS	TOTAL LABOR HRS. & COSTS
PE 140 - Project Management																														
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HOURS SUB-TOTALS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
CONTRACT RATE PER HOUR	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
TOTAL LABOR COSTS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
SUBTOTAL (PE 140)																														[illegible]
PE 141 - Feasibility Studies																														
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HOURS SUB-TOTALS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
CONTRACT RATE PER HOUR	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
TOTAL LABOR COSTS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
SUBTOTAL (PE 141)																														[illegible]
PE 110 - Route and Design Studies																														
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HOURS SUB-TOTALS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
CONTRACT RATE PER HOUR	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
TOTAL LABOR COSTS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
SUBTOTAL (PE 110)																														[illegible]
PE 120 - Environmental Services																														
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Fee Schedule
Cost Plus Fixed Fee
Manhours

Prime Provider: [illegible]
[illegible]

	Senior Project Manager	Quality Manager	Senior Engineer	Project Engineer	Design Engineer	Engineer-in-Training	Senior Engineer Tech	Engineer Tech	Senior CADD Operator	CADD Operator	Junior CADD Operator	Environmental Manager	Senior Environmental Planner	Environmental Planner III	Environmental Planner II	Senior Environmental Scientist	Environmental Scientist III	Environmental Scientist II	Environmental Scientist I	Senior Architectural Historian	Architectural Historian	GIS Operator	GIS Technician	RPLS Project Manager	RPLS Task Lead	Surveyor-in-Training	Two-Person Field Crew	Admin/ Clerical	TOTAL HRS.	TOTAL LABOR HRS. & COSTS
2. Prepare Agency Briefing and Kick-off Meeting Materials	2											[illegible]	[illegible]	[illegible]	[illegible]														[illegible]	[illegible]
3. Plan and Conduct Kick-off Meeting with Agencies and Prepare Summary	12											[illegible]	[illegible]			[illegible]													[illegible]	[illegible]
4. Attend Meetings (up to 5) with Resource Agencies	28											[illegible]				[illegible]													[illegible]	[illegible]
TSL B Alternatives Development and Analysis																														
1. Attend Workshop w/ NET RMA/TxDOT to Develop Reasonable Alts Eval Criteria	12		12									[illegible]										[illegible]							[illegible]	[illegible]
2. Prepare Reasonable Alternatives Analysis Matrix	2	2										[illegible]	[illegible]	[illegible]								[illegible]	[illegible]						[illegible]	[illegible]
3. Prepare Agency Update Meeting Materials												[illegible]	[illegible]	[illegible]															[illegible]	[illegible]
4. Attend Agency Update Meeting to Review Reasonable Alts & Recommended Alt	12		12									[illegible]										[illegible]							[illegible]	[illegible]
TSL H Environmental Studies																														
[illegible]																														

PC 132 - Right-of-Way Data

[illegible]

PC 134 - Design Surveys

[illegible]

TOTAL HOURS [illegible]

Fee Schedule
Cost Plus Fixed Fee
Manhours

[illegible]
[illegible]

	Senior Project Manager	Quality Manager	Senior Engineer	Project Engineer	Design Engineer	Engineer-in-Training	Senior Engineer Tech	Engineer Tech	Senior CADD Operator	CADD Operator	Junior CADD Operator	Environmental Manager	Senior Environmental Planner	Environmental Planner IV	Environmental Planner III
CONTRACT RATE PER HOUR	$ 225.00	$ 200.00	$ 180.00	$ 158.39	$ 125.00	$ 95.00	$ 116.84	$ 111.84	$ 94.78	$ 91.20	$ 64.70	$ 218.00	$ 171.12	$ 125.21	$ 95.53
SUBTOTAL LABOR COST	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ -	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]

	Senior Environmental Scientist	Environmental Scientist IV	Environmental Scientist III	Environmental Scientist III	Senior Architectural Historian	Architectural Historian	GIS Operator	GIS Technician	RPLS Project Manager	RPLS Tech Lead	Surveyor-in-Training	Two-Person Field Crew	Admin/Clerical	TOTAL HRS.	TOTAL LABOR HRS. & COSTS
CONTRACT RATE PER HOUR	$ 143.04	$ 109.81	$ 104.22	$ 87.63	$ 118.[illegible]	$ 96.23	$ 96.05	$ 73.40	$ 185.00	$ 141.62	$ 81.60	$ 159.06	$ 107.72		
SUBTOTAL LABOR COST	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]		$ [illegible]

Fee Schedule
Cost Plus Fixed Fee
Manhours

Sub Provider: HDR Engineering, Inc.
Toll 49 Segment 6

Task	Principal	Senior Project Manager	Quality Manager	Senior Engineer	Project Engineer	Design Engineer	Engineer-in-Training	Senior Engineer Tech	Engineer Tech	Senior CADD Operator	CADD Operator	Junior CADD Operator	Environmental Manager	Senior Environmental Planner	Environmental Planner IV	Environmental Planner III	Senior Environmental Scientist	Environmental Scientist IV	Environmental Scientist III	Environmental Scientist VII	Senior Architectural Historian	Architectural Historian	Senior GIS Operator	GIS Operator	GIS Technician	Admin/Clerical	TOTAL HRS	TOTAL LABOR HRS & COSTS
FC 145 - Project Management																												
145. Project Management																												
145. A. Project Management Plan																												
1. Prepare Project Management Plan		4		4																							8	$ 1,798.56
145. B. Quality Assurance/Quality Control Plan																												
1. Prepare QA/QC Plan		4	2																								6	$ 1,444.42
145. C. Project Schedule																												
1. Prepare Initial Project Schedule		2		4																							6	$ 1,245.50
2. Prepare Monthly Schedule Update		4		8																							12	$ 2,491.32
145. D. Invoices and Progress Reports																												
1. Prepare Monthly Invoice		18																								72	90	$ 11,425.94
2. Prepare Monthly Progress Report		36																									36	$ 9,743.40
145. E. Coordination meetings																												
1. Attend Kickoff Meeting		8																									8	$ 2,165.20
2. Hold Weekly Team Conference Call (up to 140)		70																									70	$ 18,945.50
3. Attend Monthly Coordination Meeting (up to 30) with NET RMA/TxDOT		144		160																							304	$ 67,148.00
4. Attend Meetings (up to 10) with TxDOT		60																									60	$ 16,239.00
5. Hold Status Meetings (up to 6) with TxDOT		6																									6	$ 1,623.90
HOURS SUB-TOTALS	0	356	2	176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72	606	
CONTRACT RATE PER HOUR	$ 302.72	$ 270.65	$ 190.81	$ 175.46	$ 142.22	$ 128.42	$ 96.86	$ 169.81	$ 96.96	$ 108.34	$ 96.59	$ 83.56	$ 281.22	$ 234.88	$ 128.22	$ 90.27	$ 163.04	$ 120.34	$ 105.19	$ 90.27	$ 163.04	$ 90.27	$ 221.42	$ 90.82	$ 65.50	$ 81.17		
TOTAL LABOR COSTS	$ -	$ 96,351.40	$ 381.62	$ 30,881.84	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,844.24		
SUBTOTAL (FC 145)																												$ 134,266.36
FC 160 - Feasibility Studies																												
160. Feasibility Studies																												
160. A. Preliminary Location Studies																												
1. Develop Preliminary Route Options (up to 10)		20		40																							60	$ 12,456.80
2. Prepare Preliminary Route Options Memo																											0	$ -
3. Identify Draft Primary Route Options (up to 6)		20		40																							60	$ 12,456.80
4. Prepare Primary Route Study Memo																											0	$ -
160. B. Preliminary Design Values																												
1. Develop Design Criteria and Typical Sections		4		10																							14	$ 2,843.10
2. Prepare Design Summary Report																											0	$ -
160. C. Preliminary Cost Estimate																												
1. Develop Preliminary Route Options Construction Cost Estimate																											0	$ -
2. Prepare Preliminary Route Options Cost Estimate Technical Memo																											0	$ -
3. Develop Primary Route Options Construction Cost Estimate																											0	$ -
4. Prepare Primary Route Options Cost Estimate Technical Memo																											0	$ -
160. D. Preliminary Right-of-Way Requirements																												
1. Collect Available Electronic ROW Files																											0	$ -
2. Conduct Aerial Photo Interpretation where Electronic Files are Unavailable																											0	$ -
3. Develop Preliminary ROW Maps for Primary Route Options																											0	$ -
160. E. Preliminary Drainage Analysis																												
1. Collect and Review Existing Studies and Digital Base Mapping Data																											0	$ -
2. Review Preliminary Route Options Constraints and Drainage Considerations																											0	$ -
3. Provide Recommendations on Preliminary Route Options																											0	$ -
160. F. Preliminary Environmental Analysis																												
1. Collect and Review Existing Available Data																	8										8	$ 1,304.32
2. Conduct Windshield Survey in Study Area																											0	$ -
3. Prepare Environmental Constraints Map																											0	$ -
160. G. Feasibility Study Report																												
1. Identify Final Route Options (up to 3) from the Primary Route Options				40	40																						80	$ 12,734.40
2. Prepare Feasibility Study Report																											0	$ -
160. H. Public Involvement																												
1. Maintain Workgroup Contact Information and Provide Website Content																											0	$ -
2. Prepare Workgroup Meeting Materials				16	32		40	40																			128	$ 17,672.88
3. Plan & Conduct Workgroup Meetings (up to 4) & Prepare Meeting Summaries		24		40																							84	$ 13,539.20
4. Prepare Open House Materials				16	24		40	40																			120	$ 18,536.72
5. Plan and Conduct Open Houses (up to 2) and Prepare Summary Reports		12		24																							36	$ 7,473.84
HOURS SUB-TOTALS	0	80	0	226	96	0	80	80	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	570	
CONTRACT RATE PER HOUR	$ 302.72	$ 270.65	$ 190.81	$ 176.05	$ 142.22	$ 128.42	$ 96.86	$ 169.81	$ 96.96	$ 108.34	$ 96.59	$ 83.56	$ 281.22	$ 234.88	$ 128.22	$ 90.27	$ 163.04	$ 120.34	$ 105.19	$ 90.27	$ 163.04	$ 90.27	$ 221.42	$ 90.82	$ 65.50	$ 81.17		
TOTAL LABOR COSTS	$ -	$ 21,652.00	$ -	$ 39,796.34	$ 13,653.12	$ -	$ 7,748.80	$ 13,584.80	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,304.32	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
SUBTOTAL (FC 160)																												$ 97,005.59
FC 110 - Route and Design Studies																												
110. Route and Design Studies																												
110. A. Roadway Design																												
1. Analyze Existing Conditions		8		16	24	24	40	16		24	40												8	16			216	$ 27,453.58
2. Collect Existing Available Data and Conduct Field Reconnaissance				8	16	24	40																8	24			120	$ 14,448.76
3. Plan and Conduct Preliminary Design Conference		8	4	16	36																						64	$ 10,618.00
4. Determine Typical Sections, ROW Requirements, and Design Exceptions				8	16		24				24																72	$ 8,322.88
5. Develop Conceptual Design Schematic for Reasonable Alts (up to 3)		8	16	60	120	140	230	160		160	120												8	20			1012	$ 129,373.62
6. Develop Geometric Design Schematic for Recommended Alt (30%, 60%, 90%)		24	24	80	160	200	200	120		80	200												8	16		8	1200	$ 151,065.84
7. Develop Cross Sections for Recommended Alternative (60% and 90%)			8	16	40		80				120																264	$ 29,288.32
8. Prepare Prelim Construction Sequence Layout for Recommended Alt (60%, 90%)		4	16	24	32	80	80																				236	$ 30,135.36
9. Prepare Prelim Cost Estimate for Recommended Alt (30%, 60%, 90%)		2	4	24	24		40				40																134	$ 16,825.88
10. Prepare Engineering Summary Report		16	16	40	40		80																	8		24	224	$ 28,638.40
110. B. Drainage Design																												
1. Determine Road & Hydraulic Design Criteria & Impact Assessment Criteria																											0	$ -
2. Perform Prelim Hydrologic & Hydraulic Analyses for Reasonable Alts																											0	$ -
3. Perform Hydrologic & Hydraulic Analysis for Recommended Alt																											0	$ -
4. Prepare Drainage Report																											0	$ -
HOURS SUB-TOTALS	0	70	88	312	528	468	864	316	0	204	444	0	0	0	0	0	0	0	0	0	0	0	32	84	0	32	3542	
CONTRACT RATE PER HOUR	$ 302.72	$ 270.65	$ 190.81	$ 176.05	$ 142.22	$ 128.42	$ 96.86	$ 169.81	$ 96.96	$ 108.34	$ 96.59	$ 83.56	$ 281.22	$ 234.88	$ 128.22	$ 90.27	$ 163.04	$ 120.34	$ 105.19	$ 90.27	$ 163.04	$ 90.27	$ 221.42	$ 90.82	$ 65.50	$ 81.17		
TOTAL LABOR COSTS	$ -	$ 18,945.50	$ 16,820.08	$ 54,943.36	$ 74,998.16	$ 56,330.56	$ 83,771.04	$ 53,647.96	$ -	$ 22,101.36	$ 42,886.20	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 7,085.44	$ 7,086.72	$ -	$ 2,735.18		
SUBTOTAL (FC 110)																												$ 448,158.20
FC 120 - Environmental Services																												
120. Environmental Services																												
120. A. Environmental Process Initiation																												
1. Prepare Project Initiation Letter																											0	$ -
120. B. Notice of Intent																												
1. Prepare Notice of Intent																											0	$ -
120. C. Resource and Regulatory Agency Coordination																												
1. Coordinate and Maintain Database of Participating and Cooperating Agencies																											0	$ -
2. Prepare Agency Invitation Letter																											0	$ -
120. D. Purpose and Need Statement																												

Fee Schedule
Cost Plus Fixed Fee
Manhours

Sub Provider: HDR Engineering, Inc.
Toll 49 Segment 6

	Principal	Senior Project Manager	Quality Manager	Senior Engineer	Project Engineer	Design Engineer	Engineer-in-Training	Senior Engineer Tech	Engineer Tech	Senior CADD Operator	CADD Operator	Junior CADD Operator	Environmental Manager	Senior Environmental Planner	Environmental Planner IV	Environmental Planner III	Senior Environmental Scientist	Environmental Scientist IV	Environmental Scientist III	Environmental Scientist II	Senior Architectural Historian	Architectural Historian	Senior GIS Operator	GIS Operator	GIS Technician	Admin/ Clerical	TOTAL HRS.	TOTAL LABOR HRS. & COSTS
1. Collect and Analyze Data for Purpose and Need																											0	$ -
2. Prepare Purpose and Need Statement																											0	$ -
120. E Coordination Plan																												
1. Prepare Coordination Plan																											0	$ -
120. F Agency (Resource/Sponsor) Coordination																												
1. Prepare and Mail Initial Agency Briefing and Kickoff Meeting Letters																											0	$ -
2. Prepare Agency Briefing and Kickoff Meeting Materials																											0	$ -
3. Plan and Conduct Kickoff Meeting with Agencies and Prepare Summary																											0	$ -
4. Attend Meetings (up to 12) with Resource Agencies																											0	$ -
120. G Alternatives Development and Analysis																												
1. Attend Workshop w/ NET RMA/TxDOT to Develop Reasonable Alts Eval Criteria																											0	$ -
2. Prepare Reasonable Alternatives Analysis Matrix																											0	$ -
3. Prepare Agency Update Meeting Materials																											0	$ -
4. Attend Agency Update Meeting to Review Reasonable Alts & Recommended Alt																											0	$ -
120. H Environmental Studies																												
1. Land Use and Socioeconomics																											0	$ -
2. Environmental Justice																											0	$ -
3. Limited English Proficiency																											0	$ -
4. Historic Resources																											0	$ -
a. Historic Resource Research Design																											0	$ -
b. Historic Resource Reconnaissance Survey																											0	$ -
5. Archeological Resources																											0	$ -
a. Archeological Survey																											0	$ -
b. Archeological Testing																											0	$ -
6. Air Quality																											0	$ -
7. Traffic Noise																											0	$ -
8. Water Resources																	80										80	$ 13,043.20
9. Ecological Resources																											0	$ -
10. Floodplains																											0	$ -
11. Farmlands																											0	$ -
12. Invasive Species and Beneficial Landscaping																											0	$ -
13. Threatened and Endangered Species																											0	$ -
14. Hazardous Materials																											0	$ -
15. Visual and Aesthetics																											0	$ -
16. Indirect Impacts																											0	$ -
17. Cumulative Impacts																											0	$ -
18. Construction Impacts																											0	$ -
120. I Environmental Document Preparation																												
1. Technical Reports																											0	$ -
a. Project Description Report																											0	$ -
b. Alternatives Analysis Technical Report																											0	$ -
c. Community Impact Analysis Technical Report																											0	$ -
d. Historic Resources Project Coordination Request																											0	$ -
e. Historic Resources Survey Report																											0	$ -
f. Archeological Background Study																											0	$ -
g. Archeological Resources Survey Report																	40										40	$ 6,521.60
h. Air Quality Technical Report																											0	$ -
i. Traffic Noise Technical Report																											0	$ -
j. Water Resources Technical Report																	40										40	$ 6,521.60
k. Biological Evaluation Form and Tier I Site Assessment Form																											0	$ -
l. Biological Resources Technical Report																											0	$ -
m. Hazardous Materials Initial Site Assessment Form																											0	$ -
n. Indirect Impacts Technical Report																											0	$ -
o. Cumulative Impacts Technical Report																											0	$ -
p. Visual Resources Technical Report																											0	$ -
2. Draft Environmental Impact Statement																											0	$ -
3. Final Environmental Impact Statement																											0	$ -
4. Record of Decision/Final Approval																											0	$ -
5. Administrative Record																											0	$ -
120. J Public Involvement																												
1. Prepare Public Involvement Plan																											0	$ -
2. Compile and Maintain Mailing List																											0	$ -
3. Plan and Conduct One-to-One Meetings (up to 8) and Summaries		48		60																							108	$ 23,558.60
4. Prepare One-to-One Meeting Materials				16	16																						32	$ 5,096.70
5. Attend Working Group Meetings (up to 6)		48																									48	$ 12,961.20
6. Plan and Conduct Public Meetings (up to 2) and Summary Reports		56																									56	$ 9,742.60
7. Prepare Public Meeting Materials				24	24																						48	$ 7,834.04
8. Plan and Conduct Public Hearing and Summary Report																											0	$ -
9. Prepare Public Hearing Materials																											0	$ -
HOURS SUB-TOTALS	0	152	0	100	40	0	0	0	0	0	0	0	0	0	0	0	160	0	0	0	0	0	0	0	0	0	452	
CONTRACT RATE PER HOUR	$ 303.79	$ 270.85	$ 180.81	$ 176.29	$ 142.22	$ 109.42	$ 86.86	$ 102.97	$ 86.89	$ 108.34	$ 98.35	$ 63.50	$ 281.22	$ 224.86	$ 139.23	$ 80.27	$ 163.04	$ 132.54	$ 105.18	$ 80.37	$ 163.04	$ 80.37	$ 221.42	$ 89.82	$ 86.56	$ 81.17		
TOTAL LABOR COSTS	$ -	$ 35,729.20	$ -	$ 17,630.00	$ 5,688.80	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 26,086.40	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
SUBTOTAL (PC 120)																												$ 85,134.40
PC 130 - Right-of-Way Data																												
130. Right-of-Way Data																												
130. A Right-of-Way Easements																												
1. Prepare Parcel/Abstract Map																											0	$ -
2. Create Parcel/Working Sketch																											0	$ -
3. Prepare GIS Base Map																											0	$ -
130. B Right-of-Entry																												
1. Prepare and Maintain Right-of-Entry GIS Map and Spreadsheet																											0	$ -
2. Prepare and Mail Right-of-Entry Letters																											0	$ -
HOURS SUB-TOTALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CONTRACT RATE PER HOUR	$ 303.79	$ 270.85	$ 180.81	$ 176.29	$ 142.22	$ 109.42	$ 86.86	$ 102.97	$ 86.89	$ 108.34	$ 98.35	$ 63.50	$ 281.22	$ 224.86	$ 139.23	$ 80.27	$ 163.04	$ 132.54	$ 105.18	$ 80.37	$ 163.04	$ 80.37	$ 221.42	$ 89.82	$ 86.56	$ 81.17		
TOTAL LABOR COSTS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
SUBTOTAL (PC 130)																												$ -
PC 150 - Design Surveys																												
150. Design Surveys																												
150. A Horizontal and Vertical Control																												
1. Set Primary Control Points and Prepare Plan Sheets																											0	$ -
2. Establish Aerial GW Ctrl Panel Points & Prepare Layout & Tab Sheets (70 AGC)																											0	$ -
3. Conduct Ground Truthing Survey and Prepare ACCS Point File																											0	$ -
150. B Aerial Mapping																												
1. Acquire Aerial LiDAR and Compile Associated Data Files																											0	$ -
2. Obtain Aerial Photography and Compile Associated Data Files																											0	$ -

Fee Schedule
Cost Plus Fixed Fee
Manhours

Sub Provider: HDR Engineering, Inc.
Toll 49 Segment 6

			Principal	Senior Project Manager	Quality Manager	Senior Engineer	Project Engineer	Design Engineer	Engineer-in-Training	Senior Engineer Tech	Engineer Tech	Senior CADD Operator	CADD Operator	Junior CADD Operator	Environmental Manager	Senior Environmental Planner	Environmental Planner IV	Environmental Planner III	Senior Environmental Scientist	Environmental Scientist IV	Environmental Scientist III	Environmental Scientist VII	Senior Architectural Historian	Architectural Historian	Senior GIS Operator	GIS Operator	GIS Technician	Admin/ Clerical	TOTAL HRS.	TOTAL LABOR HRS. & COSTS
TSK. C		Utility Base Map																												
	1.	Identify and Evaluate Existing and Proposed Utilities																											0	$ -
	2.	Prepare CL-C-Utility Base Map																											0	$ -
TSK. D		Design Survey																												
	1.	Collect Conventional Ground Survey Data																											0	$ -
	2.	Collect Conventional Ground Survey Hydraulic Cross Sections																											0	$ -
	3.	Collect Conventional Ground Survey Surface Utility Appurtenances																											0	$ -
	4.	Collect Conventional Ground Survey Surface General Features																											0	$ -
HOURS SUB-TOTALS			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CONTRACT RATE PER HOUR			$ 302.70	$ 270.85	$ 160.91	$ 176.89	$ 142.02	$ 120.42	$ 98.86	$ 160.91	$ 88.86	$ 109.34	$ 86.55	$ 63.56	$ 281.22	$ 234.86	$ 139.23	$ 80.37	$ 183.04	$ 120.54	$ 105.10	$ 86.37	$ 183.04	$ 90.37	$ 221.42	$ 83.02	$ 65.50	$ 91.17		
TOTAL LABOR COSTS			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
SUBTOTAL IPC 15(i)																														$ -
TOTAL HOURS			0	636	96	814	664	466	1844	396	0	204	444	0	0	0	0	0	144	0	0	0	0	0	32	88	0	102	[illegible]	
CONTRACT RATE PER HOUR			$ 302.70	$ 270.85	$ 160.91	$ 176.89	$ 142.02	$ 120.42	$ 98.86	$ 160.91	$ 88.86	$ 109.34	$ 86.55	$ 63.56	$ 281.22	$ 234.86	$ 139.23	$ 80.37	$ 183.04	$ 120.54	$ 105.10	$ 86.37	$ 183.04	$ 90.37	$ 221.42	$ 83.02	$ 65.50	$ 91.17		
SUBTOTAL LABOR COST			$ -	$ 172,674.76	$ 16,281.60	$ 143,307.26	$ 94,301.28	$ 58,356.56	$ 181,101.84	$ 63,720.36	$ -	$ 22,161.36	$ 43,888.20	$ -	$ -	$ -	$ -	$ -	$ 27,386.72	$ -	$ -	$ -	$ -	$ -	$ 7,085.44	$ 7,000.72	$ -	$ 9,299.34		$ 764,534.69

Fee Schedule
Cost Plus Fixed Fee
Manhours

Sub Provider: K Strategies Group, LLC
Toll 49 Segment 6

			Public Involvement Manager	Public Involvement Advisor	Public Involvement Coordinator	Graphic Designer	Admin/ Clerical	TOTAL HRS.	TOTAL LABOR HRS. & COSTS
FC145 - Project Management									
145	**A.**	**Invoices and Progress Reports**							
	1.	Prepare Monthly Invoice					72	72	$ 6,131.52
	2.	Prepare Monthly Progress Report					36	36	$ 3,065.76
145	**B.**	**Coordination meetings**							
	1.	Attend Kick-off Meeting	8		8			16	$ 1,460.32
	2.	Hold Weekly Team Conference Call (Up to 140)	70					70	$ 7,679.20
	3.	Attend Monthly Coordination Meeting (up to 36) with NET RMA/TxDOT	216					216	$ 24,312.96
	4.	Attend Meetings (up to 10) with TxDOT	60					60	$ 6,753.60
	5.	Hold Webex Meetings (up to 6) with TxDOT	6					6	$ 675.36
HOURS SUB-TOTALS			360	0	8	0	108	476	
CONTRACT RATE PER HOUR			$ 112.56	$ 197.72	$ 69.98	$ 69.98	$ 85.16		
TOTAL LABOR COSTS			$ 40,521.60	$ -	$ 559.84	$ -	$ 9,197.28		
SUBTOTAL (FC 145)									**$ 50,278.72**
FC 102 - Feasibility Studies									
102.		**Feasibility Studies**							
102.	**H**	**Public Involvement**							
	1.	Maintain Workgroup Contact information	20		46			66	$ 5,470.26
	2.	Provide Website Content	40	8	96			144	$ 12,802.24
	3.	Plan and Conduct Workgroup Meetings (up to 4) and Prepare Meeting Summaries	120	15	120			255	$ 24,870.60
	4.	Prepare Workgroup Meeting Materials	60	4	80	64		208	$ 17,621.60
	5.	Plan and Conduct Open Houses (up to 2) and Prepare Summary Reports	124	10	124			258	$ 24,612.16
	6.	Prepare Open House Materials	46	4	46	36		132	$ 11,707.00
HOURS SUB-TOTALS			410	41	512	100	0	1063	
CONTRACT RATE PER HOUR			$ 112.56	$ 197.72	$ 69.98	$ 65.68	$ 85.16		
TOTAL LABOR COSTS			$ 46,149.60	$ 8,106.52	$ 35,829.76	$ 6,568.00	$ -		
SUBTOTAL (FC 102)									**$ 97,083.88**
FC 120 - Environmental Services									
120.		**Environmental Services**							
120.	**J.**	**Public Involvement**							
	1.	Prepare Public Involvement Plan	35	8	52			95	$ 9,160.32
	2.	Compile and Maintain Mailing List	15		60			75	$ 5,887.20
	3.	Plan and Conduct One-to-One Meetings (up to 20) and Summaries	120	15	40			175	$ 19,272.20
	4.	Prepare One-to-One Meeting Materials	20	4	60	32		116	$ 9,480.24
	5.	Attend Working Group Meetings (up to 4)	156	4	156			316	$ 29,267.12
	6.	Plan and Conduct Public Meetings (up to 2) and Summary Reports	124	8	124			256	$ 24,216.72
	7.	Prepare Public Meeting Materials	36	4	36	24		100	$ 9,041.84
	8.	Plan and Conduct Public Hearing and Summary Report	60	4	80			144	$ 13,142.88
	9.	Prepare Public Hearing Materials	46	4	46	16		112	$ 10,307.40
HOURS SUB-TOTALS			612	51	654	72	0	1389	
CONTRACT RATE PER HOUR			$ 112.56	$ 197.72	$ 69.98	$ 65.68	$ 85.16		
TOTAL LABOR COSTS			$ 68,886.72	$ 10,083.72	$ 45,766.92	$ 4,728.96	$ -		
SUBTOTAL (FC 120)									**$ 129,775.92**
TOTAL HOURS			1382	92	1174	172	108	2926	
CONTRACT RATE PER HOUR			$ 112.56	$ 197.72	$ 69.98	$ 65.68	$ 85.16		
SUBTOTAL LABOR COST			$ 155,557.92	$ 18,190.24	$ 82,156.52	$ 11,296.96	$ 9,197.28		**$277,138.52**

Fee Schedule
Cost Plus Fixed Fee
Manhours

Sub Provider: K Friese + Associates
Toll 49 Segment 6

			Principal	Senior Project Manager	Quality Manager	Senior Engineer	Project Engineer	Design Engineer	Engineer-In-Training	CADD Operator	Admin/ Clerical	TOTAL HRS.	TOTAL LABOR HRS, & COSTS
FC145 - Project Management													
145	**D**	**Invoices and Progress Reports**											
	1.	Prepare Monthly Invoice		9			9				36	54	$ 6,371.64
	2.	Prepare Monthly Progress Report					18				36	54	$ 5,351.46
145	**E**	**Coordination meetings**											
	1.	Attend Kick-off Meeting		4			4					8	$ 1,427.20
	2.	Hold Weekly Team Conference Call (Up to 140)					70					70	$ 8,520.40
	3.	Attend Monthly Coordination Meeting (up to 6) with NET RMA/TxDOT		42								42	$ 9,873.36
	4.	Attend Meetings (up to 2) with TxDOT		20								20	$ 4,701.60
	5.	Hold Webex Meetings (up to 2) with TxDOT		4								4	$ 940.32
HOURS SUB-TOTALS			0	79	0	0	101	0	0	0	72	252	
CONTRACT RATE PER HOUR			346.61	235.08	182.41	190.2	121.72	108.79	93.05	73.03	87.79		
TOTAL LABOR COSTS			$ -	$ 18,571.32	$ -	$ -	$ 12,293.72	$ -	$ -	$ -	$ 6,320.88		
SUBTOTAL (FC 145)													$ 37,186.92
FC 102 - Feasibility Studies													
102.		**Feasibility Studies**											
102.	**E**	**Preliminary Drainage Analysis**											
	1.	Collect and Review Existing Studies and Digital Base Mapping Data		8		8	24	24	24	24		112	$ 12,920.40
	2.	Review Primary Route Options Constraints and Drainage Considerations		8		8	32					48	$ 7,297.28
	3.	Provide Recommendations on Primary Route Options	1	8		8	24					41	$ 6,670.13
HOURS SUB-TOTALS			1	24	0	24	80	24	24	24	0	201	
CONTRACT RATE PER HOUR			$ 346.61	$ 235.08	$ 182.41	$ 190.20	$ 121.72	$ 108.79	$ 93.05	$ 73.03	$ 87.79		
TOTAL LABOR COSTS			$ 346.61	$ 5,641.92	$ -	$ 4,564.80	$ 9,737.60	$ 2,610.96	$ 2,233.20	$ 1,752.72	$ -		
SUBTOTAL (FC 102)													$ 26,897.81
FC 110 - Route and Design Studies													
110.		**Route and Design Studies**											
110.	**B**	**Drainage Design**											
	1.	Determine Roadway and Hydraulic Design Criteria and Impact Assessment Criteria	1	4		4	12					21	$ 3,508.37
	2.	Perform Preliminary Hydrologic and Hydraulic Analyses for Reasonable Alternatives	1									1	$ 346.61
	a	Preliminary Hydrologic Analysis		12	8	20	56	80	80			255	$ 30,926.04
	b	Preliminary Hydraulics Analysis		12	8	12	44	64	80			220	$ 26,324.88
	3.	Perform Hydrologic and Hydraulic Analyses for Recommended Alternative	1									1	$ 346.61
	a	Data Collection		1		4	4		8			17	$ 2,227.18
	b	Field Reconnaissance		8			8		8			24	$ 3,598.80
	c	Recommended Alternative Drainage Report										0	$ -
		(i) Hydrologic Analysis		12	8	24	130	140	120	20		454	$ 52,525.64
		(ii) Hydraulic Analysis and Design		16	8	24	160	160	180			548	$ 63,415.96
		(iii) Drainage Exhibits		2	2	0	34	34	55	70		177	$ 16,597.07
		(iv) Scour Analyses and Stream Migration Studies		4	4	10	44	60	40			162	$ 19,177.04
		(v) Transverse (Ditch) Drainage		12	4	8	64	112	160			360	$ 39,934.76
HOURS SUB-TOTALS			3	83	42	106	545	640	731	90	0	2240	
CONTRACT RATE PER HOUR			$ 346.61	$ 235.08	$ 182.41	$ 190.20	$ 121.72	$ 108.79	$ 93.05	$ 73.03	$ 87.79		
TOTAL LABOR COSTS			$ 1,039.83	$ 19,511.64	$ 7,661.22	$ 20,161.20	$ 66,337.40	$ 69,625.60	$ 68,019.55	$ 6,572.70	$ -		
SUBTOTAL (FC 110)													$ 258,929.14
TOTAL HOURS			4	186	42	130	726	864	755	114	72	2693	
CONTRACT RATE PER HOUR			$ 346.61	$ 235.08	$ 182.41	$ 190.20	$ 121.72	$ 108.79	$ 93.05	$ 73.03	$ 87.79		
SUBTOTAL LABOR COST			$ 1,386.44	$ 43,724.88	$ 7,661.22	$ 24,726.00	$ 88,368.72	$ 72,236.56	$ 70,252.75	$ 8,325.42	$ 6,320.88		$ 323,002.87

Fee Schedule
Cost Plus Fixed Fee
Manhours

Sub Provider: AmaTerra Environmental
Toll 49 Segment 6

			Principal	Senior Project Manager	Quality Manager	Archeologist V	Archeologist IV	Archeologist III	Archeologist II	Archeologist I	GIS Operator	GIS Technician	Admin/ Document Production	TOTAL HRS.	TOTAL LABOR HRS. & COSTS
FC145 - Project Management															
145		**Project Management**													
145	**E**	**Coordination meetings**													
	1.	Attend Kick-off Meeting												0	$ -
	2.	Hold Weekly Team Conference Calls (Up to 140)				40	30							70	$ 7,299.60
	3.	Attend Monthly Coordination Meeting (up to 36) with NET RMA/TxDOT												0	$ -
	4.	Attend Meetings (up to 10) with TxDOT												0	$ -
	5.	Hold Weber Meetings (up to 6) with TxDOT												0	$ -
HOURS SUB-TOTALS			0	0	0	40	30	0	0	0	0	0	0	70	
CONTRACT RATE PER HOUR					$ 135.89	$ 119.37	$ 84.16	$ 72.85	$ 65.79	$ 53.66	$ 83.49	$ 56.55	$ 69.01		
TOTAL LABOR COSTS			$ -	$ -	$ -	$ 4,774.80	$ 2,524.80	$ -	$ -	$ -	$ -	$ -	$ -		
SUBTOTAL (FC 145)															**$ 7,299.60**
FC 102 - Feasibility Studies															
102.		**Feasibility Studies**													
102.	**F**	**Preliminary Environmental Analysis**													
	1.	Collect and Review Existing Available Data						8			2	4		12	$ 830.28
	2.	Conduct Windshield Survey in Study Area												0	$ -
	3.	Prepare Environmental Constraints Map				4	4	8			2	4		22	$ 1,790.10
102.	**G**	**Feasibility Study Report**													
	1.	Identify Final Route Options (up to 3) from the Primary Route Options												0	$ -
	2.	Prepare Feasibility Study Report				2	2							4	$ 407.06
102.	**H**	**Public Involvement**													
	1.	Maintain Workgroup Contact Information and Provide Website Content												0	$ -
	3.	Plan and Conduct Workgroup Meetings (up to 4) and Prepare Meeting Summaries												0	$ -
	2.	Prepare Workgroup Meeting Materials												0	$ -
	5.	Plan and Conduct Open Houses (up to 2) and Prepare Summary Reports												0	$ -
	4.	Prepare Open House Materials												0	$ -
HOURS SUB-TOTALS			0	0	0	6	6	16	0	0	4	8	0	38	
CONTRACT RATE PER HOUR			$ -	$ -	$ 135.89	$ 119.37	$ 84.16	$ 72.85	$ 65.79	$ 53.66	$ 83.49	$ 56.55	$ 69.01		
TOTAL LABOR COSTS			$ -	$ -	$ -	$ 716.22	$ 504.96	$ 1,019.90	$ -	$ -	$ 333.96	$ 452.40	$ -		
SUBTOTAL (FC 102)															**$ 3,027.44**
FC 120 - Environmental Services															
120.		**Environmental Services**													
120.	**A**	**Environmental Process Initiation**													
	1.	Prepare Project Initiation Letter												0	$ -
120.	**B**	**Notice of Intent**													
	1.	Prepare Notice of Intent												0	$ -
120.	**C**	**Resource and Regulatory Agency Coordination**													
	1.	Coordinate and Maintain Database of Participating and Cooperating Agencies												0	$ -
	2.	Prepare Agency Invitation Letter												0	$ -
120.	**D**	**Purpose and Need Statement**													
	1.	Collect and Analyze Data for Purpose and Need												0	$ -
	2.	Prepare Purpose and Need Statement												0	$ -
120.	**E**	**Coordination Plan**													
	1.	Prepare Coordination Plan												0	$ -
120.	**F**	**Agency (Resource/Sponsor) Coordination**													
	1.	Prepare and Mail Initial Agency Briefing and Kick-off Meeting Letters												0	$ -
	2.	Prepare Agency Briefing and Kick-off Meeting Materials												0	$ -
	3.	Plan and Conduct Kick-off Meeting with Agencies and Prepare Summary												0	$ -
	4.	Attend Meetings (up to 6) with Resource Agencies				8	8							16	$ 1,628.24
120.	**G**	**Alternatives Development and Analysis**													
	1.	Attend Workshop with NET RMA/TxDOT to Develop Reasonable Alternatives Evaluation Criteria												0	$ -
	2.	Prepare Reasonable Alternatives Analysis Matrix												0	$ -
	3.	Prepare Agency Update Meeting Materials												0	$ -
	4.	Attend Agency Update Meeting to Review Reasonable Alternatives and Recommended Alternative												0	$ -
120.	**H**	**Environmental Studies**													
	1.	Land Use and Socioeconomics												0	$ -
	2.	Environmental Justice												0	$ -
	3.	Limited English Proficiency												0	$ -
	4.	Historic Resources												0	$ -
	a.	Historic Resources Project Coordination Request												0	$ -
	b.	Historic Resource Research Design												0	$ -
	c.	Historic Resource Reconnaissance Survey												0	$ -
	5.	Archeological Resources												0	$ -
	a.	Archeological Background Study				6	8	8			4	6		32	$ 2,645.56
	b	Archeological Survey			6	56	20	248	148	488	22	24	28	1040	$ 66,299.32
	c	Archeological Testing			6	168	460	500	400	1040	24	32	32	2662	$ 164,152.16

Fee Schedule
Cost Plus Fixed Fee
Manhours

Sub Provider: AmaTerra Environmental
Toll 49 Segment 6

		Principal	Senior Project Manager	Quality Manager	Archeologist V	Archeologist IV	Archeologist III	Archeologist II	Archeologist I	GIS Operator	GIS Technician	Admin/ Document Production	TOTAL HRS.	TOTAL LABOR HRS. & COSTS
120. I	**Environmental Document Preparation**													
1.	Technical Reports												0	$ -
a	Project Description Report												0	$ -
b	Alternatives Analysis Technical Report												0	$ -
c	Community Impact Analysis Technical Report												0	$ -
e	Historic Resources												0	$ -
f	Archeological Resources					6	6						12	$ 942.06
120. J	**Public Involvement**													
7.	Attend Working Group Meetings (up to 4)				40								40	$ 4,774.80
8.	Plan and Conduct Public Meetings (up to 1) and Summary Reports				24								24	$ 2,864.88
9.	Prepare Public Meeting Materials												0	$ -
10.	Plan and Conduct Public Hearing and Summary Report												0	$ -
11.	Prepare Public Hearing Materials												0	$ -
HOURS SUB-TOTALS		0	0	12	302	502	782	548	1526	50	62	60	3826	
CONTRACT RATE PER HOUR		$ -	$ -	$ 135.89	$ 119.37	$ 84.16	$ 72.85	$ 65.79	$ 53.68	$ 83.49	$ 56.55	$ 68.01		
TOTAL LABOR COSTS		$ -	$ -	$ 1,630.68	$ 36,048.74	$ 42,248.32	$ 56,511.70	$ 36,052.92	$ 81,992.48	$ 4,174.50	$ 3,506.10	$ 4,140.60		
SUBTOTAL (FC 120)														**$ 286,307.04**
TOTAL HOURS		0	0	12	348	538	776	548	1526	54	70	60	3934	
CONTRACT RATE PER HOUR		$ -	$ -	$ 135.89	$ 119.37	$ 84.16	$ 72.85	$ 65.79	$ 53.68	$ 83.49	$ 56.55	$ 68.01		
SUBTOTAL LABOR COST		$ -	$ -	$ 1,630.68	$ 41,540.76	$ 45,278.08	$ 56,531.60	$ 36,052.92	$ 81,992.48	$ 4,508.46	$ 3,958.50	$ 4,140.60		**$275,634.08**

Fee Schedule
Cost Plus Fixed Fee
Manhours

Sub Provider: DAS
Toll 49 Segment 6

	Project Coordinator AM	Certified Photogrammetrist	Analytical Aerotriangulation	Aerial Map Tech	Orthophoto Specialist	Map Editor	Project Coordinator MM	LiDAR Processing Technician	Flight Crew	Admin/Clerical	TOTAL HRS	TOTAL LABOR HRS, & COSTS
Project Management												
FC 145 - Project Management Plan												
Project Management and Coordination	3									1	4	$ 436.63
HOURS SUB-TOTALS	3	0	0	0	0	0	0	0	0	1	4	
CONTRACT RATE PER HOUR	$ 126.32	$107.09	$83.77	$78.25	$82.39	$82.39	$120.83	$83.77	$200.00	$ 57.67		
TOTAL LABOR COSTS	$ 378.96	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 57.67		
SUBTOTAL (FC 145)												$ 436.63
FC 150 - Design Surveys												
Aerial Mapping												
Acquire Aerial LiDAR and Compile Associated Data Files	3	4		696		119	4	38	8		872	$ 70,340.31
Obtain Aerial Photography and Compile Associated Data Files	3	4	60		72				8		147	$ 13,365.60
HOURS SUB-TOTALS	6	8	60	696	72	119	4	38	16	0	1019	
CONTRACT RATE PER HOUR	$ 126.32	$ 107.09	$ 83.77	$ 78.25	$ 82.39	$ 82.39	$ 120.83	$ 83.77	$ 200.00	$ 57.67		
TOTAL LABOR COSTS	$ 757.92	$ 856.72	$ 5,026.20	$ 54,462.00	$ 5,932.08	$ 9,804.41	$ 483.32	$ 3,183.26	$ 3,200.00	$ -		
SUBTOTAL (FC 150)												$ 82,705.91
TOTAL HOURS	9	8	60	696	72	119	4	38	16	1	1023	
CONTRACT RATE PER HOUR	$ 126.32	$ 107.09	$ 83.77	$ 78.25	$ 82.39	$ 82.39	$ 120.83	$ 83.77	$ 200.00	$ 57.67		
SUBTOTAL LABOR COST	$ 1,136.88	$ 856.72	$ 5,026.20	$ 54,462.00	$ 5,932.08	$ 9,804.41	$ 483.32	$ 3,183.26	$ 3,200.00	$ 57.67		$ 84,142.54

Fee Schedule
Other Direct Expenses

Prime Provider: CP&Y, Inc.
Toll 49 Segment 6

Other Direct Expenses	QUANTITY	Unit	Fixed Cost	Maximum Cost	TOTAL
Lodging/Hotel (Taxes / fees not included)	275	day/person	$126.00	Current State Rate	$34,650.00
Lodging/Hotel - Taxes and fees	275	day/person		$20.00	$5,500.00
Meals (Excluding alcohol & tips) (Overnight stay required)	320	day/person	$48.00	Current State Rate	$15,360.00
Mileage	30,000	mile	$0.575	Current State Rate	$17,250.00
Rental Car (Includes taxes and fees; Insurance costs will not be reimbursed)	30	day		$70.00	$2,100.00
Toll Charges	50	each		$5.00	$250.00
Air Travel	2	Rd Trip/person	$300.00	Coach Fare	$600.00
Oversize, special handling or extra baggage airline fees (with advance coordination with TxDOT)	4	each	$50.00	Current Airline Rate	$200.00
Parking	12	day		$20.00	$240.00
Rental Car Fuel	175	gallon		$3.00	$525.00
Taxi/Cab Fare	2	each / person		$35.00	$70.00
Shipping/Postage					
Materials and Shipping	4	per package		$35.00	$140.00
Standard Postage	500	letter	$0.49	Current Postal	$245.00
Overnight Mail - letter size	10	each	$22.95	Current Postal	$229.50
Overnight Mail - oversized box	5	each		$40.00	$200.00
Courier Services	5	each		$40.00	$200.00
Certified Letter Return Receipt	10	each	$4.20	Current Postal	$42.00
Copying / Printing / Reproduction / Photo					
Photocopies B/W (8 1/2" X 11")	5,000	each	$0.10		$500.00
Photocopies B/W (11" X 17")	1,000	each	$0.20		$200.00
Photocopies Color (8 1/2" X 11")	3,000	each	$0.75		$2,250.00
Photocopies Color (11" X 17")	3,000	each	$1.25		$3,750.00
Digital Ortho Plotting	100	sheet	$2.50		$250.00
Plots (B/W on Bond)	400	square foot	$1.00		$400.00
Plots (Color on Bond)	200	square foot	$2.00		$400.00
Plots (Color on Photographic Paper)	500	square foot	$5.50		$2,750.00
Presentation Boards up to 48" X 60" Color Mounted	12	each	$75.00		$900.00
Outside Printing - Reports (Includes labor and supplies)	30	each report		$50.00	$1,500.00
Report Binding and Tabbing (Includes labor and supplies)	30	each		$10.00	$300.00
Reproduction of CD/DVD	20	each		$3.00	$60.00
CDs/DVDs	20	each	$2.00		$40.00
Notebooks	48	each	$5.00		$240.00
4" X 6" Digital Color Print	200	picture	$0.50		$100.00
Planning / Environmental					
Historical Aerial Images (Photographs, Negatives, Maps)	10	each		$100.00	$1,000.00
Aerial Photographs (1" = 500' scale)	20	each		$50.00	$1,000.00
Tx Parks & Wildlife Data Request Fees	1	each		$45.00	$45.00
Environmental Database search	14	per mile		$150.00	$2,100.00
Environmental Field Supplies (lathes, stakes, flagging, spray paint, etc.)	5	day		$51.00	$255.00
Property Record Fees (Courthouse and Courthouse Direct Record Fees)	200	Per Parcel		$24.00	$4,800.00
Noise Meter Rental	5	per day		$80.00	$400.00
Surveying					
Type II ROW Monument (Poured)	20	each	$225.00		$4,500.00
Ground Targets	70	each	$20.00		$1,400.00
GPS Receiver (rates applied to actual time GPS units are in use)	50	hour		$25.00	$1,250.00
Other Direct Expense Total					$108,191.50

Fee Schedule
Other Direct Expenses

Sub Provider: HDR Engineering, Inc.
Toll 49 Segment 6

Other Direct Expenses	QUANTITY	Unit	Fixed Cost	Maximum Cost	TOTAL
Lodging/Hotel (Taxes / fees not included)	15	day/person	$126.00	Current State Rate	$1,890.00
Lodging/Hotel - Taxes and fees	15	day/person		$20.00	$300.00
Meals (Excluding alcohol & tips) (Overnight stay required)	100	day/person	$48.00	Current State Rate	$4,800.00
Mileage	24000	mile	$0.575	Current State Rate	$13,800.00
Rental Car (Includes taxes and fees; Insurance costs will not be reimbursed)		day		$70.00	$0.00
Toll Charges	100	each		$5.00	$500.00
Air Travel		Rd Trip/person	$300.00	Coach Fare	$0.00
Oversize, special handling or extra baggage airline fees (with advance coordination with TxDOT)		each	$50.00	Current Airline Rate	$0.00
Parking		day		$20.00	$0.00
Rental Car Fuel		gallon		$3.00	$0.00
Taxi/Cab Fare		each / person		$35.00	$0.00
Shipping/Postage					
Postage & shipping (metered/bulk)		month		$150.00	$0.00
Materials and Shipping		per package		$35.00	$0.00
Standard Postage		letter	$0.49	Current Postal	$0.00
Overnight Mail - letter size		each	$22.95	Current Postal	$0.00
Overnight Mail - oversized box	10	each		$40.00	$400.00
Courier Services		each		$40.00	$0.00
Certified Letter Return Receipt		each	$4.20	Current Postal	$0.00
Copying / Printing / Reproduction / Photo					
Photocopies B/W (8 1/2" X 11")	1000	each	$0.10		$100.00
Photocopies B/W (11" X 17")	500	each	$0.20		$100.00
Photocopies Color (8 1/2" X 11")	1000	each	$0.75		$750.00
Photocopies Color (11" X 17")	5000	each	$1.25		$6,250.00
Digital Ortho Plotting		sheet	$2.50		$0.00
Plots (B/W on Bond)		square foot	$1.00		$0.00
Plots (Color on Bond)	20000	square foot	$2.00		$40,000.00
Plots (Color on Photographic Paper)		square foot	$5.50		$0.00
Color Graphics on Foam Board		square foot	$5.50		$0.00
Presentation Boards up to 48" X 60" Color Mounted		each	$75.00		$0.00
Outside Printing - Reports (Includes labor and supplies)		each report		$50.00	$0.00
Report Binding and Tabbing (Includes labor and supplies)		each		$10.00	$0.00
Reproduction of CD/DVD		each		$3.00	$0.00
CDs/DVDs		each	$2.00		$0.00
Cardstock Color (8 1/2" x 11")		each	$2.00		$0.00
Notebooks		each	$5.00		$0.00
4" X 6" Digital Color Print		picture	$0.50		$0.00
Planning / Environmental					
Historical Aerial Images (Photographs, Negatives, Maps)		each		$100.00	$0.00
Aerial Photographs (1" = 500' scale)		each		$50.00	$0.00
Tx Parks & Wildlife Data Request Fees		each		$45.00	$0.00
FEMA FIS Backup Data Request		each		$300.00	$0.00
Maps and Map Records		each		$2.00	$0.00
Environmental Database search		per project		$500.00	$0.00
Environmental Field Supplies (lathes, stakes, flagging, spray paint, etc.)		day		$51.00	$0.00
TARL Curation Fee		site		$64.00	$0.00
Property Record Fees (Courthouse and Courthouse Direct Record Fees)		Per Parcel		$24.00	$0.00
Noise Meter Rental		per day		$80.00	$0.00
Other Direct Expense Total					$68,890.00

Fee Schedule
Other Direct Expenses

Sub Provider: K Strategies Group, LLC

Toll 49 Segment 6

Other Direct Expenses	QUANTITY	Unit	Fixed Cost	Maximum Cost	TOTAL
Lodging/Hotel (Taxes / fees not included)	24	day/person	$126.00	Current State Rate	$3,024.00
Lodging/Hotel - Taxes and fees	24	day/person		$20.00	$480.00
Meals (Excluding alcohol & tips) (Overnight stay required)	24	day/person	$48.00	Current State Rate	$1,152.00
Mileage	1800	mile	$0.575	Current State Rate	$1,035.00
Rental Car (Includes taxes and fees; Insurance costs will not be reimbursed)	36	day		$70.00	$2,520.00
Toll Charges	36	each		$5.00	$180.00
Air Travel	24	Rd Trip/person	$300.00	Coach Fare	$7,200.00
Oversize, special handling or extra baggage airline fees (with advance coordination with TxDOT)	24	each	$50.00	Current Airline Rate	$1,200.00
Parking	24	day		$20.00	$480.00
Rental Car Fuel	120	gallon		$3.00	$360.00
Taxi/Cab Fare	24	each / person		$35.00	$840.00
Facilty Rental	12	each		$300.00	$3,600.00
Translation	150	per page		$75.00	$11,250.00
Newspaper Advertisements/meeting notices	7	per publication		$5,000.00	$35,000.00
Court Reporter	2	day		$600.00	$1,200.00
Custodian fees for meetings	7	day		$500.00	$3,500.00
Security	28	hour		$125.00	$3,500.00
Shipping/Postage					
Postage & shipping (metered/bulk)	36	month		$150.00	$5,400.00
Materials and Shipping	12	per package		$35.00	$420.00
Standard Postage	2400	letter	$0.49	Current Postal	$1,176.00
Overnight Mail - letter size	12	each	$22.95	Current Postal	$275.40
Overnight Mail - oversized box	12	each		$40.00	$480.00
Courier Services	12	each		$40.00	$480.00
Certified Letter Return Receipt	12	each	$4.20	Current Postal	$50.40
Copying / Printing / Reproduction / Photo					
Photocopies B/W (8 1/2" X 11")	2400	each	$0.10		$240.00
Photocopies B/W (11" X 17")	800	each	$0.20		$160.00
Photocopies Color (8 1/2" X 11")	2400	each	$0.75		$1,800.00
Photocopies Color (11" X 17")	800	each	$1.25		$1,000.00
Color Graphics on Foam Board	36	square foot	$5.50		$198.00
Presentation Boards up to 48" X 60" Color Mounted	36	each	$75.00		$2,700.00
Outside Printing - Reports (Includes labor and supplies)	12	each report		$50.00	$600.00
Report Binding and Tabbing (Includes labor and supplies)	12	each		$10.00	$120.00
Cardstock Color (8 1/2" x 11")	150	each	$2.00		$300.00
4" X 6" Digital Color Print	36	picture	$0.50		$18.00
Other Direct Expense Total					$91,938.80

Fee Schedule
Other Direct Expenses

Sub Provider: K Friese + Associates
Toll 49 Segment 6

Other Direct Expenses	QUANTITY	Unit	Fixed Cost	Maximum Cost	TOTAL
Lodging/Hotel (Taxes / fees not included)	5	day/person	$126.00	Current State Rate	$630.00
Lodging/Hotel - Taxes and fees	5	day/person		$20.00	$100.00
Meals (Excluding alcohol & tips) (Overnight stay required)	5	day/person	$48.00	Current State Rate	$240.00
Mileage	2600	mile	$0.575	Current State Rate	$1,495.00
Rental Car (Includes taxes and fees; Insurance costs will not be reimbursed)		day		$70.00	$0.00
Toll Charges		each		$5.00	$0.00
Air Travel		Rd Trip/person	$300.00	Coach Fare	$0.00
Oversize, special handling or extra baggage airline fees (with advance coordination with TxDOT)		each	$50.00	Current Airline Rate	$0.00
Parking		day		$20.00	$0.00
Rental Car Fuel		gallon		$3.00	$0.00
Taxi/Cab Fare		each / person		$35.00	$0.00
Shipping/Postage					
Postage & shipping (metered/bulk)		month		$150.00	$0.00
Materials and Shipping		per package		$35.00	$0.00
Standard Postage		letter	$0.49	Current Postal	$0.00
Overnight Mail - letter size		each	$22.95	Current Postal	$0.00
Overnight Mail - oversized box		each		$40.00	$0.00
Courier Services		each		$40.00	$0.00
Certified Letter Return Receipt		each	$4.20	Current Postal	$0.00
Copying / Printing / Reproduction / Photo					
Photocopies B/W (8 1/2" X 11")	500	each	$0.10	$500.00	$50.00
Photocopies B/W (11" X 17")	200	each	$0.20	$500.00	$40.00
Photocopies Color (8 1/2" X 11")	200	each	$0.75	$50.00	$150.00
Photocopies Color (11" X 17")	100	each	$1.25	$50.00	$125.00
Digital Ortho Plotting		sheet	$2.50		$0.00
Plots (B/W on Bond)		square foot	$1.00		$0.00
Plots (Color on Bond)		square foot	$2.00		$0.00
Plots (Color on Photographic Paper)		square foot	$5.50		$0.00
Color Graphics on Foam Board		square foot	$5.50		$0.00
Presentation Boards up to 48" X 60" Color Mounted		each	$75.00		$0.00
Outside Printing - Reports (Includes labor and supplies)		each report		$50.00	$0.00
Report Binding and Tabbing (Includes labor and supplies)		each		$10.00	$0.00
Reproduction of CD/DVD		each		$3.00	$0.00
CDs/DVDs		each	$2.00		$0.00
Cardstock Color (8 1/2" x 11")		each	$2.00		$0.00
Notebooks		each	$5.00		$0.00
4" X 6" Digital Color Print		picture	$0.50		$0.00
Planning / Environmental					
Historical Aerial Images (Photographs, Negatives, Maps)		each		$100.00	$0.00
Aerial Photographs (1" = 500' scale)		each		$50.00	$0.00
Tx Parks & Wildlife Data Request Fees		each		$45.00	$0.00
FEMA FIS Backup Data Request	2	each		$300.00	$600.00
Maps and Map Records		each		$2.00	$0.00
Environmental Database search		per project		$500.00	$0.00
Environmental Field Supplies (lathes, stakes, flagging, spray paint, etc.)		day		$51.00	$0.00
TARL Curation Fee		site		$64.00	$0.00
Property Record Fees (Courthouse and Courthouse Direct Record Fees)		Per Parcel		$24.00	$0.00
Noise Meter Rental		per day		$80.00	$0.00
Other Direct Expense Total					$3,430.00

Fee Schedule
Other Direct Expenses

Sub Provider: AmaTerra Environmental
Toll 49 Segment 6

Other Direct Expenses	QUANTITY	Unit	Fixed Cost	Maximum Cost	TOTAL
Lodging/Hotel (Taxes / fees not included)	156	day/person	$126.00	Current State Rate	$19,656.00
Lodging/Hotel - Taxes and fees	156	day/person		$20.00	$3,120.00
Meals (Excluding alcohol & tips) (Overnight stay required)	156	day/person	$48.00	Current State Rate	$7,488.00
Mileage	5000	mile	$0.58	Current State Rate	$2,875.00
Rental Car (Includes taxes and fees; Insurance costs will not be reimbursed)	6	day		$70.00	$420.00
Toll Charges		each		$5.00	$0.00
Air Travel		Rd Trip/person	$300.00	Coach Fare	$0.00
Oversize, special handling or extra baggage airline fees (with advance coordination with TxDOT)		each	$50.00	Current Airline Rate	$0.00
Parking		day		$20.00	$0.00
Rental Car Fuel	40	gallon		$3.00	$120.00
Taxi/Cab Fare		each / person		$35.00	$0.00
Shipping/Postage					
Postage & shipping (metered/bulk)		month		$150.00	$0.00
Materials and Shipping	1	per package		$35.00	$35.00
Standard Postage		letter	$0.49	Current Postal	$0.00
Overnight Mail - letter size		each	$22.95	Current Postal	$0.00
Overnight Mail - oversized box		each		$40.00	$0.00
Courier Services	2	each		$40.00	$80.00
Certified Letter Return Receipt		each	$4.20	Current Postal	$0.00
Copying / Printing / Reproduction / Photo					
Photocopies B/W (8 1/2" X 11")	1500	each	$0.10		$150.00
Photocopies B/W (11" X 17")		each	$0.20		$0.00
Photocopies Color (8 1/2" X 11")	1500	each	$0.75		$1,125.00
Photocopies Color (11" X 17")		each	$1.25		$0.00
Digital Ortho Plotting		sheet	$2.50		$0.00
Plots (B/W on Bond)		square foot	$1.00		$0.00
Plots (Color on Bond)		square foot	$2.00		$0.00
Plots (Color on Photographic Paper)		square foot	$5.50		$0.00
Color Graphics on Foam Board		square foot	$5.50		$0.00
Presentation Boards up to 48" X 60" Color Mounted		each	$75.00		$0.00
Outside Printing - Reports (Includes labor and supplies)		each report		$50.00	$0.00
Report Binding and Tabbing (Includes labor and supplies)		each		$10.00	$0.00
Planning / Environmental					
Historical Aerial Images (Photographs, Negatives, Maps)	1	each		$100.00	$100.00
Aerial Photographs (1" = 500' scale)		each		$50.00	$0.00
Tx Parks & Wildlife Data Request Fees		each		$45.00	$0.00
FEMA FIS Backup Data Request		each		$300.00	$0.00
FEMA Maps		each		$5.00	$0.00
Backhoe and Operator	8	day		$1,000.00	$8,000.00
Total Data Station	1	month		$1,200.00	$1,200.00
Special Studies for Archeological Testign	1	(up to)		$8,000.00	$8,000.00
Hazardous Materials Database Search		per mile		$400.00	$0.00
Curator (Drawer & TX Archaeological Research Lab for artifacts & report	5	per project		$1,400.00	$7,000.00
Maps and Map Records		each		$2.00	$0.00
Environmental Database search		per project		$500.00	$0.00
Environmental Field Supplies (lathes, stakes, flagging, spray paint, etc.)	10	day		$51.00	$510.00
TARL Curation Fee	12	site		$64.00	$768.00
Property Record Fees (Courthouse and Courthouse Direct Record Fees)		Per Parcel		$24.00	$0.00
Noise Meter Rental		per day		$80.00	$0.00
Surveying					
GPS Receiver (rates applied to actual time GPS units are in use)		hour		$25.00	$0.00
Other Direct Expense Total					$60,647.00

Fee Schedule
Other Direct Expenses

Sub Provider: DAS
Toll 49 Segment 6

TASK	UNIT	TYPE	COST	FEE
Mobilization for Aerial Photography/LiDAR Fixed Wing Aircraft (Includes aircraft, Pilot, Camera/LiDAR Operator, fuel and transportation cost)	1	Per Project	$22,000.00	$22,000.00
Fixed Wing Airborne LiDAR - Project Flight Miles (On project flight miles)	28	Miles	$30.50	$854.00
Fixed Wing Airborne LiDAR - Transit Miles (including turn, maneuver miles and local airport to project)	26	Miles	$9.00	$234.00
Aerial Photography - Airborne GPS/IMU Data collection/Processing	1	Per Project	$2,350.00	$2,350.00
Aerial Photography - Project Flight Miles (On project flight miles)	15	Miles	$30.50	$457.50
Aerial Photography - Transit miles (including turn, maneuver miles and local airport to project)	26	Miles	$9.00	$234.00
Digital Image Processing	158	Images	$26.00	$4,108.00
Total				$30,237.50