

WORK ORDER

WORK ORDER NO. 20-208.5

COUNTY Project No.: _____ COUNTY Project Name: _____

In accordance with the terms and conditions of the Professional Services Agreement ("AGREEMENT") between Burnet County ("COUNTY") and K.C. Engineering, Inc. ("ENGINEER"), dated March 10, 2020, ENGINEER is hereby authorized to perform the following services:

Scope of Basic Services

See Attachment A Scope of Services.

This Work Order is issued to provide redesign services for attaching Pedernales Electric Co-Op, Inc. (PEC), conduits beneath the bridge. The conduits were designed previously, but PEC changed the conduit configurations requiring bridge reanalysis and redesign. Detailed work to be performed is in Attachment A.

Subconsultants: 1) Texas Transportation Solutions, Inc.

Authorization

In signing this Work Order, the COUNTY grants ENGINEER specific authorization to proceed under the AGREEMENT.

Fee

ENGINEER shall be paid the lump sum fee of \$182,550.00 payable incrementally based upon the estimated percentage of work completed at the date of the invoice in general accordance with Attachment A.

AGREED AND EXECUTED this _____ day of _____, 20____.

ATTEST:

K.C. ENGINEERING, INC.
(ENGINEER)

BURNET COUNTY
(COUNTY)

By:  P.E.

By: _____

Title: President

Title: _____

ATTACHMENT A SCOPE OF SERVICES

ENGINEER shall provide the following services:

1. Structural Engineering redesign and plan sheets revision
2. Structural Engineering coordination with the Pedernales Electric Co-Op, Inc. (PEC) and its engineering consultant, M&S Engineering, Inc.

3. Structural

Provide structural engineering services for structural bridge design

Structural Engineering Services included:

1. Coordinate electrical conduit configuration, materials, and locations with PEC and PEC engineering consultant
2. Update electrical conduit loads from 3 – 10" conduits in one bridge bay to 12 – 4" conduits in two bridge bays
3. Redesign conduits using galvanized rigid metal conduit
4. Redesign conduit support attachments
5. Reanalyze and revise the design of the bridge girders with updated loads
6. Update bridge stresses
7. Update prestressed concrete beam post-tensioning strands
8. Update concrete strength requirements
9. Update the number of girders required for the revised conduit load
10. Update bridge tensile and compressive strengths
11. Update the rotational forces and stresses of the revised conduit load
12. Update lateral forces and stresses for the revised conduit load
13. Update interior bent cap design
14. Revise bent cap details and summaries
15. Update the bridge column design for the revised conduit load
16. Update bridge column details
17. Bridge column and bridge cap summary tables
18. QC / QA
19. Coordination with Engineer
20. Revise plan sheets for structural items
21. Revise specifications for structural items
22. Revise estimates for structural items

Structural Engineering Services excluded:

1. Aesthetic treatment or pedestrian design
2. Retaining wall design
3. Construction phase services

6. Engineering: Plans, Specifications, and Estimate (PS&E)

Using the Engineering Design Services above, update the Plans, Specifications, and Estimates in TxDOT format

Engineering: Update Plans, Specifications, and Estimate (PS&E) services included:

1. Update Plans, Specifications, and Estimate (PS&E) (TxDOT format)

Project Management

Perform Project Management

1. Project Records
2. Project Correspondence
3. Coordination with Burnet County
4. Coordination with TxDOT
5. Coordination with PEC
6. Coordination with Texas Transportation Solutions, LLC
7. Coordination with Others
8. Periodic Progress Meetings
9. QC / QA