City of Grain Valley, Missouri

Pedestrian Bridge over Blue Branch Creek Project

ADDENDUM NUMBER 1

ISSUE DATE: **09-21-2020**

Information to Bidders The following is provided to Bidders for information only:

1. Attachments to this Addendum:
- Missouri Annual Wage Order 27
- Bid Form (Addendum 1)

2. Revisions to Specifications below include updated State Wage Rate Order and additional JSP covering the Prefabricated Steel Truss Bridge.
3. Updated Bid Form to correct calendar day reference.

Bid Documents

Itemized Bid Sheets and Bid Proposal

Replace Bid Form with attached Bid Form (Addendum 1).

Specifications

Applicable State Wage Rates

Replace Annual Wage Order 26 with attached Annual Wage Order 27.

Job Special Provisions

Add the following Section 12.0 Prefabricated Steel Truss Bridge

12.0 PREFABRICATED STEEL TRUSS BRIDGE

1. Scope

The work included under this item shall consist of furnishing, fully engineering, fabricating, transporting, and erecting steel truss bridge superstructure(s) including bearings, as shown in the plans and described herein. The intended usage is of the structure is for pedestrian, bicycle and small maintenance vehicular use.

These specifications shall be regarded as minimum standards for design and construction. Substructures are not included in this item.

2. Definitions

Owner - The actual owner, or the engineer, person, or firm designated by the owner to represent the owner.
Plans - Any drawings included in the bid documents related to the specified work.
Contractor - The firm contracting and responsible for the specified work.
Bridge Manufacturer - The firm acting on behalf of the Contractor to manufacture the prefabricated steel truss bridge superstructure.

3. Qualified Suppliers

Each bidder is required to identify their intended bridge supplier as part of the bid submittal. Qualified suppliers must have at least 5 years experience fabricating these types of structures.

Pre-approved Manufacturers:

Contech Engineered Solutions LLC	**Wheeler Bridge**
9025 Centre Pointe Drive	9531 W. 75th St.
West Chester, OH	Eden Prairie, MN

Suppliers other than those listed above may be used provided the engineer or owner's agent evaluates the proposed supplier and approves the supplier 5 days prior to bid.

The contractor must provide the following documentation, for any proposed supplier who is not pre-approved, at least 10 days prior to bid:

- Representative design calculations
- Representative drawings
- Splicing and erection procedures
- Warranty information
- Inspection and Maintenance procedures
- AISC Shop Certification
- Welder Qualifications

Proposed suppliers must have at least five (5) years' experience designing and fabricating these type structures and a minimum of five (5) successful bridge projects, of similar construction, each of which has been in service at least three (3) years. List the location, bridge size, owner, and a contact for reference for each project.

The engineer will evaluate and verify the accuracy of the submittal prior to bid. If the engineer determines that the qualifying criteria have not been met, the contractor's proposed supplier shall be rejected. The engineer's ruling shall be final.

4. Product Description

a. Plans and Calculations Certification

The Bridge Manufacturer shall design the prefabricated bridges and prepare shop drawings in accordance with these minimum requirements. All calculations and shop drawings shall be sealed by a Professional Engineer licensed in the State of Missouri.

b. Applicable Codes and Design

Design shall be governed by the LRFD design specifications of the American Association of State Highway and Transportation Officials (AASHTO), supplemented with the American Institute of Steel Construction (AISC) Steel Construction Manual, further supplemented with the American Welding Society (AWS) D1.1 Structural Welding Code, as modified and further supplemented herein. Structural members shall be designed in accordance with recognized engineering practices and principles.

Welded tubular truss connections shall meet the provisions of AISC Chapter K2: HSS-to-HSS Truss Connections.

If non-tubular floor beams are used, the floor beam to vertical connections shall be analyzed by treating the floor beam flanges as a pair of transverse plates and ignoring the floor beam web. The connections shall meet the applicable provisions of AISC Chapter K1: Concentrated Forces on HSS.

All welded tubular moment connections shall meet the provisions of AISC Chapter K3: HSS-to-HSS Moment Connections.

Unique connection types that are not directly addressed by the governing codes, such as unreinforced connections to the side of a beam web, shall be proven by finite element analysis or other rational design methods.

Field splices shall be fully bolted slip critical connections, utilizing tension indicating washers. Tack welding of high strength hardware is prohibited.

Splices not immediately at or adjacent to panel points shall be designed for 100% of the member bending moment capacity for primary compression members, and 75% for bracing members or tension members subject to load reversal, including slip resistance, and slip resistance shall further meet the same AASHTO required strength as with other failure modes.

c. Truss Style

The truss type shall be of **Pratt/H style** (or equal), that has one (1) diagonal per panel and plumb end vertical members. Interior vertical members may be either plumb or perpendicular to the chord faces. Overhead bracing is prohibited. The bridge manufacturer shall determine the distance from the top of the deck to the top and bottom truss members.

d. Span

Bridge span shall be 96'-0" (straight line dimension) and shall be as measured from each end of the bridge structure.

e. Width

Bridge width shall be 10'-0" and shall be as measured from the inside face of structural elements at deck level.

f. Railings

The minimum rail height shall be 54”. The safety system shall utilize horizontal safety rail or vertical pickets placed on the inside of the truss and designed to carry a vertical 200 lb point load on each horizontal component. Vertical pickets shall have a continuous cap angle or some other means to prevent users from cutting or scraping their hands. Safety system shall prevent a sphere with a diameter of 4 inches from passing through.

Rub rails shall be provided and designed per AASHTO as horizontal rails. Rub rails shall be Ipe hardwood.

4. Materials

a. Decking

The bridge deck shall be transverse treated timber planks. Planks shall be nominal 3” (minimum). The species and grade are to be determined by the designer. Decking shall be treated in accordance with American Wood Preservers Association (AWPA) UC3B & U1. Planks shall be placed tight together with no gaps. To resist warping forces, deck tie-down systems shall be designed to resist an uplift force of 500 lbs per plank per tie-down location, assuming wet service conditions. Deck tie-downs shall be provided at plank ends and intermediate points as required such that tie-down spacing does not exceed 48”. Edge tie-downs shall be made with a continuous steel angle member above the planks.

b. Unpainted Weathering Steel

All members of the truss and deck system shall be fabricated from square/rectangular hollow structural sections (HSS), with the exception that floor beams may be wide flange (W) shapes. Open ends of end posts and floor beams shall be capped. Open shaped (non-tubular) stringers will be allowed only if adequate lateral or torsional bracing is provided. The timber deck and its attachments shall not be considered to brace the stringers.

Bridges which are not to be painted shall be fabricated from high strength, low alloy, atmospheric corrosion resistant ASTM A847 cold-formed welded square and rectangular tubing and/or ASTM A588, or ASTM A242, ASTM A606 plate and structural steel shapes (Fy = 50,000 psi). The minimum corrosion

index of atmospheric corrosion resistant steel, as determined in accordance with ASTM G101, shall be 5.8.

Where water collection inside of structural tubing is possible during construction or service, weep holes shall be provided at low points.

All exposed surfaces, defined as those surfaces seen from the deck and from along side the structure, shall be blast cleaned in accordance with Steel Structures Painting Council Surface Preparation Specifications No. 7, latest edition, (SSPC-SP7) Brush Off Blast Cleaning.

Splices for truss members, bracing, and floor beams, when used, shall be made with ASTM A325 or A490 high strength bolts. Type 3 bolts shall be used when the truss is required to be of weathering steel. Other splices shall be made with the above mentioned material or ASTM A307.

5. Welding

Welding and weld qualification tests shall conform to the provisions of AWS D1.1. The flux core arc welding (FCAW) process, utilizing E80 electrodes with similar weathering characteristics as the base material, shall be used. Welding operators shall be properly accredited experienced operators. Each shall have certification of satisfactorily passing AWS standard qualification test(s) for the 3G and/or 4F position(s), evidence of experience and skill in welding structural steel, and have demonstrated the ability to make acceptable welds of the type required.

Nondestructive weld testing is required. Testing will be performed by a qualified ASNT Level II Technician or greater and paid for by the Bridge Manufacturer. All welds are to be 100% visually inspected. Ten percent (10%) of all fillet and partial penetration welds shall be magnetic particle tested. For arch type bridges, 100% of end of top chord to bottom chord connections shall be tested. Full penetration shop welds shall be Ultrasonic tested in accordance with AWS D1.1; Section 6. Base material certifications are to be supplied by the material suppliers. Inspection test results shall be available on request.

6. Other Requirements

Cover plates shall be provided to cover expansion gaps when pedestrian usage is specified. Cover plates shall fit tight to the top of the abutment backwall without any bridge weight bearing on the backwall. Consider joint size and weight of vehicles regarding plate thickness.

Anchors shall be of the drilled type, installed with a chemical adhesive system, except that when design forces exceed the strength of typical chemical systems, cast-in-place anchors may be used. Anchor systems shall be designed and supplied by the Bridge Manufacturer. Anchor bolts shall conform to ASTM A307, A193, or F1554.

All hardware (other than type 3 high strength) shall be hot-dip galvanized in accordance with ASTM A153.

Expansion bearings shall include teflon or stainless steel sliding surfaces per AASHTO or elastomeric pads. Consideration of dead load rotation is required in all cases.

Design the bridge for expansion and contraction with a temperature range of -40º F to 110º F.

Cementitious non-shrink grout, when applicable, shall meet ASTM C-1107, 7000 psi minimum.

Materials not specified shall conform to applicable ASTM or AASHTO specifications.

3. Submittals

The Bridge Manufacturer shall prepare and submit shop drawings and structural calculations for approval prior to beginning fabrication. Shop drawings shall be unique drawings prepared to illustrate the specific portion of the work to be done. All relative design information including but not limited to governing codes, design parameters, member sizes, bridge reactions, shop and field connection details,

deck details, paint system, dimensions related to substructures and general notes shall be clearly specified on the drawings. Shop drawings shall be accurately prepared by skilled drafters to be complete in every respect. Drawings shall have cross-referenced details and sheet numbers.

4. Delivery

The Contractor shall coordinate with the Bridge Manufacturer in the delivery and erection schedule.

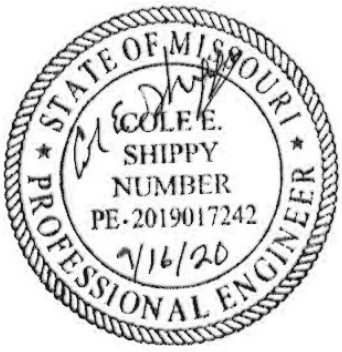
Delivery to the job site will be by trucks by means of good haul roads unless specified otherwise.

The Bridge Manufacturer shall provide detailed, written instruction procedures for proper lifting and splicing of bridge components.

Drawings(Revised Drawings Attached):

No Revisions.

NOTE: Bidders must acknowledge receipt of this Addendum by listing the number and date, where provided, on the Bid Proposal.



Missouri
Division of Labor Standards
WAGE AND HOUR SECTION

MICHAEL L. PARSON, Governor

Annual Wage Order No. 27

Section 048
JACKSON COUNTY

In accordance with Section 290.262 RSMo 2000, within thirty (30) days after a certified copy of this Annual Wage Order has been filed with the Secretary of State as indicated below, any person who may be affected by this Annual Wage Order may object by filing an objection in triplicate with the Labor and Industrial Relations Commission, P.O. Box 599, Jefferson City, MO 65102-0599. Such objections must set forth in writing the specific grounds of objection. Each objection shall certify that a copy has been furnished to the Division of Labor Standards, P.O. Box 449, Jefferson City, MO 65102-0449 pursuant to 8 CSR 20-5.010(1). A certified copy of the Annual Wage Order has been filed with the Secretary of State of Missouri.

Original Signed by
Taylor Burks, Director
Division of Labor Standards

Filed With Secretary of State: **March 10, 2020**

Last Date Objections May Be Filed: **April 9, 2020**

Prepared by Missouri Department of Labor and Industrial Relations

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Asbestos Worker	$63.92
Boilermaker	*$33.53
Bricklayer	**$56.71**
Carpenter	**$57.23**
Lather	
Linoleum Layer	
Millwright	
Pile Driver	
Cement Mason	**$51.50**
Plasterer	
Communications Technician	$57.83
Electrician (Inside Wireman)	**$63.56**
Electrician Outside Lineman	**$65.49**
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Elevator Constructor	*$33.53
Glazier	$54.70
Ironworker	**$63.98**
Laborer	**$45.82**
General Laborer	
First Semi-Skilled	
Second Semi-Skilled	
Mason	**$51.48**
Marble Mason	
Marble Finisher	
Terrazzo Worker	
Terrazzo Finisher	
Tile Setter	
Tile Finisher	
Operating Engineer	**$57.14**
Group I	
Group II	
Group III	
Group III-A	
Group IV	
Group V	
Painter	$49.72
Plumber	$69.71
Pipe Fitter	
Roofer	**$53.67**
Sheet Metal Worker	**$67.20**
Sprinkler Fitter	$59.86
Truck Driver	**$49.82**
Truck Control Service Driver	
Group I	
Group II	
Group III	
Group IV	

*The Division of Labor Standards received less than 1,000 reportable hours for this occupational title.
Public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center.
**The Prevailing Hourly Rate includes any applicable fringe benefit amounts for each occupational title.

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Carpenter	**$65.11**
Millwright	
Pile Driver	
Electrician (Outside Lineman)	**$65.49**
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Laborer	**$48.45**
General Laborer	
Skilled Laborer	
Operating Engineer	**$63.12**
Group I	
Group II	
Group III	
Group IV	
Truck Driver	**$46.50**
Truck Control Service Driver	
Group I	
Group II	
Group III	
Group IV	

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

If a worker is performing work on a heavy construction project within an occupational title that is not listed on the Heavy Construction Rate Sheet, use the rate for that occupational title as shown on the Building Construction Rate Sheet.

*The Division of Labor Standards received less than 1,000 reportable hours for this occupational title. Public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center.

**The Prevailing Hourly Rate includes any applicable fringe benefit amounts for each occupational title.

OVERTIME
and
HOLIDAYS

OVERTIME

For all work performed on a Sunday or a holiday, not less than twice (2x) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work.

For all overtime work performed, not less than one and one-half (1½) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work or contractual obligation. For purposes of this subdivision, **"overtime work"** shall include work that exceeds ten hours in one day and work in excess of forty hours in one calendar week; and

A thirty-minute lunch period on each calendar day shall be allowed for each worker on a public works project, provided that such time shall not be considered as time worked.

HOLIDAYS

January First;
The last Monday in May;
July Fourth;
The first Monday in September;
November Eleventh;
The fourth Thursday in November; and
December Twenty-Fifth;

If any holiday falls on a Sunday, the following Monday shall be considered a holiday.

Bid Proposal (Addendum 1)

TO: City of Grain Valley
Jackson County, Missouri

The undersigned Bidder hereby proposes to furnish all materials, supplies, transportation, tools, equipment, facilities and to perform all necessary labor and construct, install and complete all work stipulated in, required by, and in conformity with the Proposed Contract Documents (including all documents referred to therein) and any and all addenda thereto, for and in consideration of unit prices as follows (***Approx. Quantities*** and ***Total*** are for Bid Comparison Only):

ITEM	QTY.	UNIT	PRICE	COST
ROADWAY				
Clearing & Grubbing	0.6	ACRE		
Removal of Improvements	1	LS		
Embankment in Place	385	CY		
Furnishing Type 2 Rock Blanket	301	CY		
Placing Type 2 Rock Blanket	301	CY		
Mobilization	1	LS		
Permanent Erosion Control Geotextile	670	SY		
Contractor Furnished Surveying and Staking	1	LS		
Seeding – Cool Season Mixtures	0.5	ACRE		
Silt Fence	210	LF		
Type C Berm	156	LF		
Restoration of Access Road	1	LS		
BRIDGE				
Class 1 Excavation	17	CY		
Structural Steel Pile (10”)	228	LF		
Pile Point Reinforcement	6	EACH		
Class B Concrete Substructure	26.8	CY		
Reinforcing Steel	2800	LB		
Structural Steel Truss	1	LS		
			Total Base Bid	

The undersigned hereby agrees to furnish the required bond and to enter into a contract within ten (10) days from and after the acceptance of this proposal and further agrees to complete all work covered by this proposal within NINETY (130) calendar days from and including the date

stipulated in a written Notice to Proceed from the Owner to commence work thereon.

Enclosed is a (Certified Check) (Cashier's Check) (Bid Bond) in the amount of

_____ Dollars ($_____)
which the undersigned agrees to be forfeited to and become the property of the City of Grain Valley, Missouri as liquidated damages should this proposal be accepted and the contract be awarded to him/her and he/she fail to enter into a contract in the form prescribed, and to furnish the required bonds within ten (10) days as stipulated above, but otherwise, the proposal guarantee shall be returned to the undersigned upon the signing of the contract and delivery of the approved bonds to said City of Grain Valley, Missouri.

ANTICIPATED LIST OF SUBCONTRACTORS

1.

2.

3.

4.

5.

We acknowledge receipt of the following addenda:

Addendum No.	Date Received by Bidder	SIGNATURE

Dated in _____, this _____ day of _____, 20___.

Signature of Bidder: (If an Individual) _____ doing business as

_____

By _____
Signature

(If a Partnership) _____
Name of Partnership

By _____
Signature

(If a Corporation) _____
Name of Corporation

By _____
Signature

_____
Print Name

_____
Title

_____
Business Address

_____
Telephone