REVISIONS		
REV. NO.	DESCRIPTION	DATE

GENERAL NOTES:

SPECIFICATIONS:

Comply with the requirements of the 2009 Oklahoma Standard Specifications for Highway Construction, except as modified by the Plans and Special Provisions.

VERIFICATION OF EXISTING CONDITIONS:

Bidders shall fully inform themselves of the nature of the work and conditions under which it will be performed. The Contractor shall adopt methods consistent with good construction practice. Construction plans for the existing bridge structure may be obtained from the Reproduction Branch of the Oklahoma Department of Transportation.
Ask for Project No. W.P.G.H.-159-D; Creek County, US 75A over 'SL-S.F.RY.'.

REMOVAL OF EXISTING BRIDGE STRUCTURE:

Item "REMOVAL OF EXISTING BRIDGE STRUCTURE" consists of removal and disposal of 10-40', 2-60'-6", and 1-62' I-Beam spans x 24' Clear Roadway) at Centerline Sta. 496+14.70 of the existing alignment. The Contractor shall fully inform himself of the nature of this removal to allow for an accurate estimate.

The existing structural steel is painted with lead-based paint.

For the safety of the workers the Contractor must take all necessary precautions and follow all necessary regulations in handling and transporting any structural steel containing lead-based paint.

The existing structure and concrete rubble materials shall become the property of the Contractor and shall be disposed of in a manner approved by the Engineer. The removal of the existing structure shall be in accordance with Section 619 of the Standard Specification and in a manner approved by the Engineer.

All costs associated with the removal, transit, and disposal of the existing bridge structure as described above and as directed by the Engineer, including labor, equipment, and incidentals, shall be included in the price bid per Lump Sum of "REMOVAL OF EXISTING BRIDGE STRUCTURE".

SEALED EXPANSION JOINT:

A sealed expansion joint shall be constructed at Abutment No. 1 and Abutment No. 2 as shown in the plans.

All costs of the sealed expansion joint including labor, equipment, material, and incidentals shall be included in the price bid per Linear Foot of "SEALED EXPANSION JOINT".

SEALING BRIDGE DECK AND APPROACH SLAB JOINTS:

The longitudinal and transverse construction joints on the Approach Slabs shall be sealed using the LECS-4 Standard. The construction joints shall be a sawed and sealed joint using backer rod and rapid cure joint sealant in accordance with Section 701.08 of the 2009 Oklahoma Standard Specifications for Highway Construction.

All costs associated with sealing the transverse and longitudinal construction joint on the Approach Slab shall be included in the unit price bid per Square Yard of "APPROACH SLAB".

All costs associated with sealing the transverse construction joints in the deck slab shall be included in the price bid per liner foot of "SEALER CRACK PREPARATION" and the unit price bid per gallon of "SEALER RESIN'.

DECK HAUNCHES:

Plan quantity for Class AA Concrete includes 53.10 C.Y. for the haunches over the beams. The contractor shall take survey shots and measurements as necessary to calculate the actual haunch thicknesses at tenth points along the length of the haunch and submit those results to the Engineer for approval.

DRAINS AT END OF BRIDGE:

The Asphalt Widening for the bridge guardrailing shall be in accordance with Standards THRI-1, GHW1-1 and GHW2-1 except as shown on sheet "DRAINS AT END OF BRIDGE" for Bridge 'A'. Class C Concrete shall be used in the construction of the drains at the ends of the bridges. All costs of the Slope Drains and Splash Basins including material, labor, equipment, and incidentals necessary to complete the work as shown in the plans shall be included in the price bid per Cubic Yard of "CLASS C CONCRETE".

STAY-IN-PLACE FORMS:

Stay-In-Place Forms will be prohibited on this project.

APPROACH SLAB:

Class AA Concrete shall be used in the Approach Slabs. The quantity given is based on the actual square yards of the Approach Slabs. All costs of concrete, reinforcing steel, backer rod, polystyrene, rapid cure joint sealant, excavation, labor, equipment, and other incidentals necessary to complete the work as specified shall be included in the price bid per Square Yard of "APPROACH SLAB".

PILE DRIVING EQUIPMENT:

Use a pile driving hammer of the size and type capable of consistently delivering the effective dynamic energy sufficient to drive the piles to the required tip elevation and to achieve the required ultimate pile capacity without exceeding the limitations set on the allowable driving stresses in accordance with Section 514.03(a)2.

ABUTMENT PILING CAPACITY:

The factored reaction for each HP 12 x 53 pile at abutment #1 is 76.00 Tons.

The factored reaction for each HP 12 x 53 pile at abutment #2 is 76.00 Tons.

The following formula (Gates Equation) shall be used to determine the axial load resistance of the driven foundation piles:

Axial Load Resistance = $\phi[(0.875\sqrt{E\ LOG\ (10N)})-50](TONS)$

Where:

- ϕ = Resistance Factor of 0.4
- E = Energy produced by the hammer per blow in foot-pounds. For gravity and single acting diesel hammers, the value is based on the actual ram stroke observed in the field and measured in feet multiplied by the ram weight in pounds.
- N = Average number of hammer blows per inch of pile penetration for the last 10 to 20 blows delivered to the pile head

The above formula is only applicable when:

- The pile driving hammer has a free fall (Gravity & Single Acting Hammers only).
- The head of the pile is not broomed, crushed or otherwise damaged.
- The penetration is quick and uniform.
- There is no appreciable rebound of the hammer, and
- A follower is not used.

The number of blows per inch of pile penetration may be measured either during initial driving or by re-driving with a warm hammer operated at full energy after a pile set period, as determined by the Engineer.

If water jets are used in connection with the driving, determine the axial load resistance by the formula shown only after the jets have been withdrawn.

STEEL PILE ENCASEMENT:

Provide and install structural steel for Piling and Steel Plate Reinforcing Tips in accordance with Standard HP1-2. Forms for Encasements may be omitted when soil conditions permit. There is an estimated total of 420 pounds of reinforcing steel and an estimated total of 10.4 cubic yards of class A concrete for each Abutment.

All costs associated with providing and installing the Steel Pile Encasements as shown in the plans including Excavation, Forms, Class A Concrete, Welded Wire Fabric Reinforcing Steel for Steel Pile Encasements, labor, materials, equipment and incidentals shall be included in the price bid per L.F. of "PILES, DRIVEN (HP12X53)".

PENETRATING WATER REPELLENT SURFACE TREATMENT:

A penetrating water repellent surface treatment shall be applied to the following concrete surfaces of the bridge:

(a) Edges and underside cantilever portion of the bridge deck
(b) The roadway face, top, and inside of the post openings of the concrete Traffic Rails
(c) Top, sides, ends of Pier Caps and all sides of all pedestals
(d) The exposed front face, sides, and top of Bridge Seat, pedestals and front face and side of back wall

STRUCTURAL STEEL:

All Structural Steel shall conform to AASHTO M270 Grade 50W (Weathering Steel). High Strength bolts shall be used at connection locations. All bolts, nuts, anchor plate assemblies, and welding shall have weathering characteristics.

PERFORATED PIPE UNDERDRAIN:

Item "6" Perforated Pipe Underdrain Round" includes perforated pipes and pipe Underdrain Cover Material, both fine and course.

The installation of the Perforated Pipe and Pipe Underdrain Cover Material shall be as shown in the plans and on Standard PUD-3. All costs of the Perforated Pipe Underdrain installation including material, labor, equipment and incidentals shall be included in the price bid per linear foot of "6" PERFORATED PIPE UNDERDRAIN ROUND".

NON-PERFORATED PIPE UNDERDRAIN:

Item "6" NON-Perforated Pipe Underdrain Round" includes non-perforated pipes, trench excavation and standard bedding material.

The installation of the Non-Perforated Pipe, Trench Excavaton and Standard Bedding Material shall be as shown in the plans and on Standard PUD-3. All costs of the Non-Perforated Pipe Underdrain installation including material, labor, equipment and incidentals shall be included in the price bid per linear foot of "6" NON-PERF. PIPE UNDERDRAIN ROUND".

STAINLESS STEEL FIXED BEARING ASSEMBLY:

Provide and install fixed bearing assemblies of the size, shape, and location detailed in the plans. There is an estimated total for Pier No. 2 of 268.00 lbs. Avg. of structural steel for each fixed bearing assembly.

All costs associated with providing and installing the fixed bearing assemblies as shown in the plans including elastomeric pads, anchor plates, anchor bolts, nuts, washers, labor, materials, equipment, and incidentals shall be included in the price bid per unit Each of "STAINLESS STEEL FIXED BEARING ASSEMBLY".

STAINLESS STEEL EXPANSION BEARING ASSEMBLY:

Provide and install expansion bearing assemblies of the size, shape, and location as detailed in the plans. There is an estimated total for Abutments and Pier No. 1 of 268.00 lbs. Avg. of structural steel for each expansion bearing assembly.

All costs associated with providing and installing the expansion bearing assemblies as shown in the plans including elastomeric pads, anchor plates, anchor bolts, nuts, washers, labor, materials, equipment, and incidentals shall be included in the price bid per unit Each of "STAINLESS STEEL EXPANSION BEARING ASSEMBLY".

FENCE BARRIER: (RAILROAD THROW FENCE)

Provide standard fence and posts connecting to the top of the barrier to the limits shown. The minimum height of the combined fence and concrete barrier shall be 10'-0" above the surface of the nearest inside edge of the adjacent driving lane. The fence, posts and connections to the barrier shall conform to the typical BNSF bridge standards for overhead structure barriers and fences noted on BNSF plan No. 711100 sheet 4 dated 1/24/07. The contractor is required to submit shop drawings which comply with the aforementioned criteria. See General Plan and Elevation Sheets for limits of fencing. The fence, attachments and all materials and labor to construct the fence will not be paid for directly but shall be included in the price bid for parapets to which the fence is attached.

SUGGESTED SEQUENCE OF CONSTRUCTION:

A suggested sequence of construction has been included in the plans. The Contractor must submit any change in this sequence to the Engineer for approval. No work shall begin until approval from the Engineer has been received.

US 75A OVER BNSF RR — CREEK COUNTY
BRIDGE 'A'

GENERAL NOTES (BRIDGE) (SHEET 1 OF 2)

Design	N/A	N/A
Detail	KMS	2/16
Check	KRM	3/16
Squad:	MAYFIELD	
Engr.	ELYAZGI	

STATE OF OKLAHOMA — DEPARTMENT OF TRANSPORTATION
STATE JOB NO. 27075(04) — SHEET NO. 06

BRCAD0 - BDS4L7