

PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
472-84118	2005	34	79

Item Location	Excavation		Concrete Grade 4.0(AE) Cu. Yds.	Concrete Grade 4.0(AE)(SA) Cu. Yds.	Reinf. Steel (Grade 60) Lbs.	Reinf. Steel (Grade 60) (Epoxy Coated) Lbs.	Steel Piles Lin. Ft.	Test Pile Lin. Ft.	Bridge Backwall Prot. System Sq. Yds.	Abutment Strip Drain Sq. Yds.	Bridge Handrail (Steel)(Pedestrian) Lin. Ft.	Riprap (Light Stone) Cu. Yds.	Bridge Drain Each	Removal of Existing Structures L.S.	Bridge Plaque Each
	Class I	Class II													
	Cu. Yds.	Cu. Yds.													
Abutment No. 1	90						234	49	37	30		372			
Pier No. 1		81	60.9		4440	1710	560								
Pier No. 2		81	60.9		4440	1710	520	50							
Abutment No. 2	91						273		37	30		379			
Substr. Total							1587	99	74	60					
Superstr. Total				523.2		109300					267.4		8		
Total	181	162	121.8	523.2	8880	112720	1587	99	74	60	267.4	751	8	L.S.	2

\* Only HPI0x42 Steel Piles shall be used.

GENERAL NOTES

**REMOVAL OF EXISTING STRUCTURE:** Removal of existing structure is included in the bid item, "Removal of Existing Structure", Lump Sum. All materials removed from the existing structure shall become the property of the Contractor. Remove this material from the site.

**EMBANKMENT:** Complete the embankment at the abutments as shown on the Bridge Excavation sheet prior to driving the abutment piling or commencing with the abutment footing excavation.

**BACKFILL COMPACTION:** Compact backfill at the abutments.

**BRIDGE EXCAVATION:** Elevation 1256.00 shall designate the Excavation Boundary Plane of Class I and Class II Excavation; Class I above the plane, Class II below the plane. See the Bridge Excavation sheet for the limits of pay excavation.

**ABUTMENT STRIP DRAIN:** See the General Notes on the "Abutment Strip Drain" sheet.

**BRIDGE BACKWALL PROTECTION SYSTEM:** See the General Notes on the "Abutment Strip Drain" sheet.

**PILING:** All piling shall be driven to penetrate the Wellington Shale. Driving shall stop when, in the opinion of the Engineer, additional driving may damage the piling. Drive all piling to the minimum computed bearing value equal to the Allowable Pile Load:

Abutment No. 1	55	Tons
Pier No. 1	55	Tons
Pier No. 2	55	Tons
Abutment No. 2	55	Tons

When using the pile driving formula in the KDOT Specifications, drive the pile to the Allowable Load and penetration, but in no case shall the pile be driven to more than 75 Tons. At any location where problems are experienced, pile damage is suspected, or apparent refusal occurs significantly above the design pile tip elevation, the Engineer may request that the Pile Driving Analyzer (PDA) equipment be used.

**TEST PILING:** Drive test pile at the locations shown on the plans or as directed by the engineer. The test piling shall remain in place as permanent piling.

**CONCRETE:** Superstructure concrete shall be bid as Concrete (Grade 4.0)(AE)(SA). Substructure concrete is bid as Concrete (Grade 4.0)(AE). The Contractor may use Concrete (Grade 4.0) in the footings. Bevel all exposed edges of all concrete with a 3/4" triangular molding, except as otherwise noted on the plans. Construction joints are optional with the Contractor, but if used, place only at locations shown, or at locations approved by the Engineer.

**CONCRETE PLACING SEQUENCE:** The sequence of placing concrete in the slab and curbs shall be as shown, or the Contractor may submit an alternate placing sequence for review. Submit the alternate placing sequence to the Engineer at the Preconstruction Conference. Include the proposed rate of concrete placement in cubic yards per hour, the plant capacity, placement direction, construction joint location, a description of the equipment used in placing the concrete, proposed admixtures, and the quantity of concrete in each placing segment. Any additional cost for the Contractor's alternate plan of placing concrete, including admixtures, shall be at the Contractor's expense and shall be considered subsidiary to the bid item, "Concrete (Grade 4.0)(AE)(SA)". Approval of the Contractor's placing sequence is required prior to the placement of concrete in the deck.

The Contractor will be required to pump the Abutments and the Deck (Bucketing will not be allowed) in a continuous manner from E.W.S. to E.W.S..

The Superstructure Deck Concrete shall cure a minimum of ten (10) days before any of the Contractor's personnel or equipment can perform any work on the deck.

**SLAB CURING PERIOD:** No traffic shall be permitted on the curing membrane of the deck, subdeck, or wearing surface until the ten day curing period is complete. Operations necessary to complete placement of the deck, subdeck or wearing surface may be permitted for a minimum of practical time as noted in the Standard Specifications. No work to place reinforcing steel or forms for the bridge rail or barrier will be allowed during this curing period.

**CORRAL RAIL:** Build the corral rail after the falsework is struck.

**REINFORCING STEEL:** All reinforcing steel dimensions are to the centerline of bars unless otherwise noted. All reinforcing steel, except spirals bars, shall conform to the requirements of ASTM A615-96, Grade 60. Spiral bars may meet the requirements of either ASTM A615-96 (Gr. 40 or 60) or A82, and are included in the bid item "Reinforcing Steel (Gr. 60)".

**CAMBER:** Provide camber as shown on the Camber Diagram unless the Contractor uses either long span steel beam falsework (concrete dead load deflection greater than 1/4") or timber falsework with greater than 12'-0" clear span. If either case exists, submit falsework plans that show the additional required camber.

**FALSEWORK PLANS:** A licensed Professional Engineer shall design the falsework details. Details shall bear the seal of a licensed Professional Engineer. See the Bridge Design Manual, Section 5.1 "Review and Approval of Falsework Plans", for a listing of items to be included on the falsework plan. Submit three sets of details in compliance with KDOT Specifications to the Field Engineer for review.

DESIGN DATA

DESIGN SPECIFICATIONS:

AASHTO Specifications, 2002 Edition and latest Interim Specifications. Load Factor Design

DESIGN LOADING:


HS20-44

Design Dead Load includes an allowance of 25 psf for a future wearing surface.

UNIT STRESSES:

Concrete (Grade 4.0)(AE)(SA)  $f'c = 4,000 \text{ psi}$   $fc = 1,600 \text{ psi}$   
Reinforcing Steel (Grade 60)  $fy = 60,000 \text{ psi}$   $fs = 24,000 \text{ psi}$

drawn by : will  
plotted by : ras 9-9-2005  
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No.	Revisions	By	Date
CITY OF WICHITA STRUCTURE NO. 5304008700LBS05 STA. 46+45.00			
GENERAL NOTES AND SUMMARY OF QUANTITIES			
PROJECT NO. 472-84118		SEDGWICK COUNTY	
 <b>Professional Engineering Consultants, P.A.</b> 303 S. TOPEKA • WICHITA, KANSAS 67202 316-262-2691 • FAX 316-262-3003			
Designed by	M.S.N.	Checked by	R.A.S.
Drawn by	W.L.L.	Date	July 2005 Job No. 99764