STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	87 TE-0451-01	2018	69	222

SUMMARY OF QUANTITIES

Item / Location	Excavation		Concrete		Reinforcing Steel		Granular Backfill (Wingwalls)	Pre-fab. Bridge (Steel) (30 ft)	Steel Piles HP 10x42	Contractor Furnished PDA	Bridge Backwall Prot. System	Handrail Aluminum	Abutment Strip Drain	Slope Protection (Shot Rock)	Bridge Deck Grooving
	Class || Cu. Yds.	Class ||| Cu. Yds.	(Grade 4.0)(AE)(SW) Cu. Yds.	(Grade 4.0)(AE) Cu. Yds.	Epoxy Coated (Grade 60) Lbs.	(Grade 60) Lbs.	Cu. Yds.	Each	Lin. Ft.	Each	Sq. Yds.	Lin. Ft.	Sq. Yds.	Cu. Yds.	Sq. Yds.
Abutment No. 1	----	*	----	67.7	----	4,619	142.0	----	185.0	1	21.3	36.0	20.6	55.0	----
Abutment No. 2	----	*	----	67.7	----	4,619	142.0	----	185.0	1	21.3	36.0	20.6	55.0	----
Substr. Total	----	*	----	135.4	----	9,238	284.0	----	370.0	2	42.6	72.0	41.2	110.0	----
Superstr. Total	----	----	**	----	**	----	----	1	----	----	----	----	----	----	**
Total	----	*	**	136	**	9,238	284	1	† 370	2	43	72	42	110	**

*Quantities for Excavation at Bridge are included in "Common Excavation" Bid Item.

**Quantities for "Pre-fabricated Bridge (Steel) (30 ft)" Bid Item are per Manufacturer Submittal and are all subsidiary to "Pre-fabricated Bridge (Steel) (30 ft)" Bid Item.

† Summary of Piling
Abutment No. 1 — 6 @ 25 ft.
(PDA Pile) — 1 @ 35 ft.
Abutment No. 2 — 6 @ 25 ft.
(PDA Pile) — 1 @ 35 ft.

INDEX OF BRIDGE DRAWINGS

Sheet No.	Drawing
69	General Notes and Quantities
70	Contour Map
71	Construction Layout
72	Engineering Geology
73	Abutments Details
74	Abutments Strip Drain
75	Bill of Reinforcing
	Standards
88-89	Handrail Details
85	Bridge Excavation
86	Standard Pile Details
87	Supports and Spacers for Reinforcing Steel
84	Slope Protection

GENERAL NOTES

REMOVAL OF EXISTING STRUCTURE: All labor and work for the removal of the existing structure is included in the bid item, "Removal of Existing Structures", Lump Sum. All materials removed from the existing structure except the abutment stones shall become the property of the Contractor. The abutment stones shall be removed in good condition and placed in the road right-of-way for City forces to remove from the site. The clean concrete rubble from the existing structure may be used for slope protection.

DEMOLITION PLANS: This is a Category A Demolition. Submit detailed Demolition Plans to the Field Engineer per KDOT Specifications. No Demolition work will begin without approved Demolition Plans. A Licensed Professional Engineer is not required. This work is subsidiary to the bid item, "Removal of Existing Structures".

EMBANKMENT: Complete the embankment at the abutments as shown on the Bridge Excavation sheet prior to driving the abutment piling.

BRIDGE EXCAVATION: All Excavation shall be Common Excavation. See the Bridge Excavation sheet for the limits of excavation.

BACKFILL COMPACTION: Granular Backfill shall be required at abutment wingwalls.

PILING: Drive all piling to at or below the required the elevation shown. Driving shall stop when in the opinion of the Engineer additional driving may damage the piling. Drive all piling to the Pile Driving Formula Load of:

Abutment No. 1 & 2 — 46.2 — Tons/Pile (Strength I)

As a minimum drive each pile to the load and penetration, but in no case shall the pile be driven to more than 110% of Pile Driving Formula Driving Load. At any location where problems are experienced, pile damage is suspected, or the Pile Driving Formula Load occurs significantly above the design pile tip elevation, the Engineer may request that the Pile Driving Analyzer (PDA) equipment be used.

CONTRACTOR FURNISHED PDA: Use Pile Driving Analyzer equipment at the locations shown on the Construction Layout. Use Pile Driving Analyzer equipment and methods compliant with KDOT Special Provisions. The piling shall remain in place as permanent piling. Drive the piling to the resistance value of 130.2 kips/pile. At any location where problems are experienced, pile damage is suspected, or the Pile Driving Formula Load occurs significantly above the design tip elevation, the Engineer may request that the Pile Driving Analyzer (PDA) equipment be used

PILING SPLICE LOCATION: Integral pile splice locations and weld testing criteria for, Abutments 1 & 2 will follow the "Standard Pile Details" Sheet (BR110).

CONCRETE: Superstructure concrete is Concrete (Grade 4.0)(AE)(SW) and shall be subsidiary to the "Pre-fabricated Bridge (Steel) (70 ft)" Bid Item. Substructure concrete is bid as Concrete (Grade 4.0)(AE). Bevel all exposed edges of all concrete with a ¾" triangular molding, except where noted on the plans. Construction joints are optional, but if used, place only at locations shown, or at locations approved by the Engineer.

REINFORCING STEEL: All reinforcing steel dimensions are to the centerline of bars unless otherwise noted. All reinforcing steel, except the spiral bars, shall conform to the requirements of ASTM A615, Grade 60.

Where non-coated bars come in contact with epoxy coated bars, they need not be coated.

CONTRACTOR CONSTRUCTION STAKING: Contractor Construction Staking for clear span bridges requires two independent surveys. See KDOT Specifications.

ERECTION ELEVATION CHECKS: After the abutment concrete has cured and before setting the Truss, present verification to the Engineer that the elevations at the bearings match plan elevation (± ¼").

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.

SLOPE PROTECTION (Shot Rock): Place Slope Protection (Shot Rock) to the limits and thickness shown on the plans or as directed by the Engineer.

DIMENSIONS: All dimensions shown on the design plans are horizontal dimensions unless otherwise noted. Make necessary allowances for roadway grade and cross slope.

CONCRETE PLACING SEQUENCE: The Contractor will adhere to the placing direction/sequence shown on the plans. Changes will be accepted only if the Contractors Engineer adjusts the deflection diagram so that the Contractor can adjust the fillet depth [and Headed Stud Anchor heights] accordingly. This revised diagram will be approved by the design Engineer prior to deck forming. If profile grinding decreases the clearance to the top mat of reinforcement to less than 2½" of, a polymer overlay will be placed at no cost to the County.

Place and hand vibrate all concrete for the pier diaphragms and the abutments above the construction joints to the bottom of the deck just prior to the normal paving train operations. Do this work in a manner to avoid a cold joint in either the abutments or in the diaphragms.

CONSTRUCTION LOADS: Limited traffic is permitted on the new sub-deck, one-course deck or any concrete overlay during the curing period, keep any exposed deck wet during the curing period. See KDOT Specifications Section 710 Tables 710-1 & 710-2 for additional information.

TEMPERATURE: The design temperature for all dimensions is 60°F.

HANDRAIL: Handrails to be anodized bronze finish aluminum with City of Wichita approved corrosion resistant coating.

PRE-FABRICATED BRIDGE DESIGN DATA:

Design drawings and calculations shall be prepared by an engineer licensed in the State of Kansas. These shall be submitted to the Engineer for approval prior to fabrication. Use fully bolted field splices designed as slip critical connections. Field welding of truss members is not allowed.

The bridge shall have a minimum fundamental frequency of 3 Hz.

Main members of the bridge truss shall be fabricated of structural tubing of rolled sections. All structural members shall be fabricated from unpainted weathering steel.

The pedestrian bridge is available through:

BIG R Bridge, Greeley, Colorado, 1-800-234-0734

EXCEL Bridge Manufacturing Company, Santa Fe Springs, California, 1-800-548-0054

Contech Engineered Solutions,

1-913-216-3818 or Approved Equal

Usable treadway width = 12 feet

Out-to-out width = 14 feet maximum

Span = 30 feet (end to end of deck)

Finished deck = cast-in-place concrete (Grade 4.0)(AE)(SW) on galvanized stay-in-place deck forms. Deck design, including camber and sizing of epoxy coated reinforcing steel, shall be accomplished by the bridge manufacturer.

Items above are included in the Bid Item: "Pre-Fabricated Bridge (Steel)(30 ft)"

DESIGN DATA

DESIGN SPECIFICATIONS:

AASHTO Standard Specifications (LRFD), Latest Edition and the LRFD Guide Specification for Design of Pedestrian Bridges, Latest Edition.

DESIGN LOADING:

HL-93

Pedestrian Loading = 90 psf

UNIT STRESSES:

Concrete (Grade 4.0)	f'c = 4	ksi
Concrete (Grade 4.0)(AE)	f'c = 4	ksi
Concrete (Grade 4.0)(AE)(SW)	f'c = 4	ksi
Reinforcing Steel (Grade 60)	fy = 60	ksi

LRFD DESIGN PILE LOAD:

Design Loading (Tons/Pile)	Strength I	Service I	Phi
Abutment 1 & 2	46.2	33.2	0.65

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

Sta. 154+12.00

GENERAL NOTES AND QUANTITIES

Proj. No. 472-85360 Sedgwick Co.

SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED	QUANTITIES	CADD
DESIGN CK.	DETAIL CK.	QUAN. CK.	CADD CK.