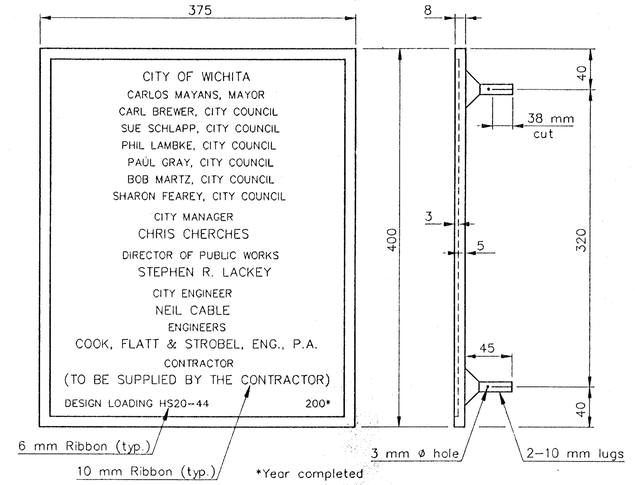
F.H.W.A. REGION NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS	87 N-0230-01	2003	23	73

SUMMARY OF QUANTITIES

ITEM / LOCATION	EXCAVATION CLASS I (cu m)	EXCAVATION CLASS II (cu m)	CONCRETE (GRADE 30)(AE) (cu m)	CONCRETE (GRADE 30)(AE)(SW) (cu m)	REINFORCING STEEL (GR. 420) EPOXY COATED (kg)	REINFORCING STEEL (GR. 420) NON-EPOXY COATED (kg)	STEEL PILE (m)	ABUTMENT STRIP DRAIN (sq m)	BRIDGE BACKWALL PROTECTION SYSTEM (sq m)	BRIDGE DRAIN (each)	HANDRAIL (METAL) (935 mm) (m)	CONCRETE MASONRY COATING (Lump Sum)
ABUTMENT NO. 1	76						190.8	33	28.5			
PIER NO. 1	6	52	43.3			1 050	402.8					
PIER NO. 2	6	76	51.9			1 255	402.8					
PIER NO. 3		83	54.8			1 320	402.8					
PIER NO. 4	6	53	46.1			1 115	402.8					
ABUTMENT NO. 2	76						196.2	33	28.5			
TOTAL SUBSTRUCTURE	170	264	196.1			4 740	1 998.2	66	57			
TOTAL SUPERSTRUCTURE				949.0	147 830					60	135.53	
GRAND TOTAL	170	264	196.1	949.0	147 830	4 740	▲1 998.2	66	57	60	135.53	1

NOTE: Only steel pile HP250 X 62 shall be used on this structure.

▲ Includes : 85 @ 21.2 m & 9 @ 21.8 m



BRIDGE PLAQUE DETAILS

One bronze plaque shall be furnished and placed in the handrail post at the N.E. corner of the bridge as shown on the Construction Layout. Plaque shall conform to applicable requirements of sub-section 1625 of the KDOT Standard Specifications. Recess plaque flush with face of concrete. The Contractor shall furnish a "rendering" for proof reading and approval before casting. The furnishing and installation of the plaque shall be paid for as Bridge Plaque (non-participating) Lump Sum.

GENERAL NOTES

DESIGN: MSI8-44 AASHTO SPECIFICATIONS 1996 EDITION WITH APPROPRIATE INTERIM SPECIFICATIONS AND A 1.20 kPa FUTURE WEARING SURFACE. DESIGN METHOD: LOAD FACTOR DESIGN.

UNIT STRESSES:

CONCRETE (GRADE 30)(AE)	f'c = 30 MPa
CONCRETE (GRADE 30)(AE)(SW)	f'c = 30 MPa
REINFORCING STEEL (GRADE 420)	fy = 420 MPa

EMBANKMENT: THE CONTRACTOR SHALL COMPLETE THE EMBANKMENT AT THE ABUTMENTS AS SHOWN ON THE BRIDGE EXCAVATION SHEET PRIOR TO DRIVING ABUTMENT PILING. THE EMBANKMENT SHALL BE COMPLETED AS DIRECTED BY THE ENGINEER.

BRIDGE EXCAVATION ELEV. 404.300 SHALL DESIGNATE THE EXCAVATION BOUNDARY PLANE OF CLASS I AND CLASS II EXCAVATION; CLASS I ABOVE THE PLANE AND CLASS II BELOW THE PLANE. SEE THE BRIDGE EXCAVATION SHEET FOR THE LIMITS OF PAY EXCAVATION.

BACKFILL COMPACTION: BACKFILL COMPACTION IS REQUIRED AT THE ABUTMENTS.

PIER BACKFILL: THE BACKFILL AT PIERS SHALL BE PLACED IN SUCH A MANNER AS TO PREVENT MOVEMENT OF THE WEBWALLS.

PILING: ALL PILING SHALL BE DRIVEN TO FRICTION BEARING IN CLAY. DRIVING SHALL STOP WHEN IN THE OPINION OF THE ENGINEER, ADDITIONAL DRIVING MAY DAMAGE THE PILING. ALL PILING SHALL BE DRIVEN TO THE MINIMUM COMPUTED BEARING VALUE EQUAL TO THE ALLOWABLE PILE DRIVING LOAD.

DESIGN PILE LOAD:

LOADING	DESIGN LOAD (kN PER PILE)	ALLOWABLE LOAD (kN PER PILE)
ABUTMENTS	415	445
PIERS	430	445

WHEN USING THE PILE DRIVING FORMULA IN THE KDOT SPECIFICATIONS, THE CONTRACTOR SHALL DRIVE THE PILE TO THE ALLOWABLE LOAD AND PENETRATION, BUT IN NO CASE SHALL THE PILE BE DRIVEN TO MORE THAN 150% OF THE ALLOWABLE LOAD (667 kN PER PILE).

DECK PROTECTIVE SYSTEM: ALL REINFORCING SHALL BE EPOXY COATED. MINIMUM CONCRETE COVER TO TOP OF REINFORCING STEEL IN THE DECK SHALL BE 65 mm.

CONCRETE: SUPERSTRUCTURE CONCRETE SHALL BE BID AS CONCRETE (GRADE 30)(AE)(SW). SUBSTRUCTURE CONCRETE SHALL BE BID AS CONCRETE (GRADE 30)(AE). BEVEL ALL EXPOSED EDGES WITH A 20 mm TRIANGULAR MOLDING, EXCEPT AS OTHERWISE NOTED ON THE PLANS. USE DOUBLE 20 mm BEVELS AT CERTAIN CONSTRUCTION JOINTS AS NOTED ON THE PLANS.

REINFORCING STEEL: ALL DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING STEEL ARE TO THE CENTERLINE OF BARS UNLESS OTHERWISE NOTED. BAR BENDING DIMENSIONS SHALL BE AS SHOWN AND NOTED IN THE BENDING DIAGRAMS. ALL REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615M-96, GRADE 420.

EPOXY COATED REINFORCING: ALL REINFORCING BARS DESIGNATED "EPOXY COATED" SHALL BE COATED WITH EPOXY AS SET FORTH IN THE KDOT STANDARD SPECIFICATIONS, 1990 EDITION. ALL BAR SUPPORTS SHALL BE COATED.

CONSTRUCTION JOINTS: CONSTRUCTION JOINTS SHOWN ARE OPTIONAL WITH THE CONTRACTOR BUT IF USED, SHALL BE MADE ONLY AT THE LOCATIONS SHOWN OR AS APPROVED BY THE ENGINEER. HANDRAILS AND POSTS SHALL BE BUILT AFTER THE REMOVAL OF FALSEWORK.

DIMENSIONS: UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE HORIZONTAL.

CONCRETE CORRAL RAILS: THE CONCRETE CORRAL RAILS SHALL BE BUILT AFTER THE FALSEWORK IS STRUCK. CONSTRUCTION JOINTS IN THE CONCRETE CORRAL RAIL WILL NOT BE PERMITTED EXCEPT AS SHOWN ON THE PLANS.

BRIDGE BACKWALL PROTECTION SYSTEM: SEE THE GENERAL NOTES ON THE "ABUTMENT STRIP DRAIN" SHEET.

ABUTMENT STRIP DRAIN: SEE THE GENERAL NOTES ON THE "ABUTMENT STRIP DRAIN" SHEET.

SLOPE PROTECTION: SLOPE PROTECTION (RIPRAP STONE)(LIGHT 600 mm) SHALL BE PLACED TO THE LIMITS AND THICKNESS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. EXCAVATION AND GRADING FOR PLACEMENT OF SLOPE PROTECTION AND ALL WORK AND MATERIAL TO INSTALL THE GEOTEXTILE FABRIC SHALL BE SUBSIDIARY TO SLOPE PROTECTION.

REMOVAL OF EXISTING STRUCTURE: REMOVAL OF THE EXISTING STRUCTURE IS INCLUDED IN THE BID ITEM "REMOVAL OF EXISTING STRUCTURE", LUMP SUM.

SLAB CURING PERIOD: NO TRAFFIC IS PERMITTED ON THE CURING MEMBRANE OF THE DECK UNTIL THE SEVEN DAY CURING PERIOD IS COMPLETE. OPERATIONS NECESSARY TO COMPLETE THE PLACEMENT OF THE DECK ARE PERMITTED, FOR A MINIMUM PRACTICAL TIME, AS NOTED IN THE STANDARD SPECIFICATIONS. NO WORK TO PLACE REINFORCING STEEL OR FORMS FOR THE CORRAL RAIL OR HANDRAIL IS ALLOWED DURING THIS CURING PERIOD.

FALSEWORK PLANS: A LICENSED PROFESSIONAL ENGINEER SHALL DESIGN THE FALSEWORK DETAILS. DETAILS SHALL BEAR THE SEAL OF A LICENSED PROFESSIONAL ENGINEER. SUBMIT THREE SETS OF DETAILS IN COMPLIANCE WITH THE KDOT SPECIFICATIONS TO THE FIELD ENGINEER FOR REVIEW.

FALSEWORK: LEAVE THE FALSEWORK IN PLACE FOR THE ENTIRE UNIT UNTIL 15 DAYS AFTER THE LAST CONCRETE POUR FOR THE UNIT OR LONGER AS DIRECTED BY THE ENGINEER. NOTIFY THE ENGINEER A MINIMUM OF TWO DAYS PRIOR TO REMOVAL OF THE FALSEWORK.

CONSTRUCTION LOADS: ONLY FOOT TRAFFIC IS PERMITTED ON THE DECK DURING THE SEVEN DAY CURING PERIOD. WORK TO PLACE REINFORCING STEEL OR FORMS FOR THE BRIDGE RAIL IS NOT ALLOWED DURING THIS CURING PERIOD. LIGHT TRUCK TRAFFIC (GROSS VEHICLE WEIGHT LESS THAN 4.5 METRIC TONS) IS ALLOWED ON THE DECK 15 DAYS AFTER THE POUR IS COMPLETED. LEGAL LOADS ARE PERMITTED 21 DAYS AFTER THE CONCRETE IS PLACED. WITH ENGINEER APPROVAL, HEAVY STATIONARY LOADS MAY BE ALLOWED ON THE BRIDGE DECK 21 DAYS AFTER THE DECK POUR IS COMPLETED. WITH ENGINEER APPROVAL, VEHICLE LOADS GREATER THAN LEGAL LOADS MAY BE ALLOWED ON THE BRIDGE DECK 28 DAYS AFTER THE DECK POUR IS COMPLETED. SEE KDOT SPECIFICATIONS.

CONSTRUCTION STAKING: CONSTRUCTION STAKING FOR CLEAR SPAN BRIDGES REQUIRES TWO INDEPENDENT SURVEYS. SEE KDOT SPECIFICATIONS.

CONCRETE MASONRY COATING: CONCRETE MASONRY COATING SHALL BE APPLIED TO ALL THE FOLLOWING EXTERIOR CONCRETE SURFACES OF THE BRIDGE. BOTH SIDES AND TOP OF OF CORRAL RAILS, BOTH SIDES AND TOP OF APPROACH SLAB TRANSITION RAILS, AND BOTH SIDES AND TOP OF CONCRETE SLABS FOR HANDRAIL, AND THE OUTER EDGE OF THE BRIDGE SLAB ITSELF. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A SPECIFICATION/CERTIFICATION FOR PROPOSED MATERIAL TO BE USED, INCLUDING PROPOSED PLACEMENT METHOD, PRIOR TO THE WORK BEING DONE. THE COATING SHALL BE TINTED TO MATCH COLOR NO. 30318 (LIMESTONE TAN) OF FEDERAL STANDARD NO. 595B. CLEAN THE SURFACES TO BE COATED BY SAND BLASTING TO REMOVE ALL FOREIGN MATERIALS AND LOOSE MOTAR.

J:\02517\DWGS\GL 1:200 (1:2)

PROJECT NO. 87 N-0230-01

GENERAL NOTES & QUANTITIES

13TH STREET NORTH OVER COWSKIN CREEK

STA. 1+883 CITY OF WICHITA

Cook, Flatt & Strobel ENGINEERS, P.A.

DESIGNED	KMB	SCALE	
DETAILED	DEG	DATE	
QUANTITIES	DEG	SHEET	OF