

DATE	BY

SUMMARY OF BRIDGE QUANTITIES

ITEM	BASE BID ITEM QUANTITY	UNIT	ALTERNATE NO. 8 ITEM QUANTITY	UNIT
Excavation (Class III)	240	CY	-	-
Concrete Grade 4.0 (Concrete Grade 5.0 (AE))	30	CY	-	-
Concrete Grade 5.0 (AE)	158	CY	-	-
Concrete Sadtler	0	SY	910	SY
Concrete Masonry Coating	0	SY	1440	SY
Graffiti Control System	0	SY	910	SY
Structural Steel (ASTM A709 Gr 50T2) (Bridges)	11,500	LBS	-	-
Headed Stud Anchors	10,978	EA	-	-
Reinforcing Steel (Gr. 60)	5,690	LBS	-	-
Reinforcing Steel (Gr. 60) (Epoxy-Coated)	26,870	LBS	-	-
Waterproofing (Deck)	933	SY	-	-
Bridge Painting	1	LS	***	LS
Bridge Mounted Sign Attachment	8	EA	-	-
Repair (Concrete Surface) (Abutment)	569	SY	-	-
Area Prepared For Patching (Full Depth)	540	SY	-	-
Repair (Column)	2	EA	-	-
Repair (Crack) (Epoxy Resin)	100	LF	-	-

*** Bridge painting shall include existing steel, new steel components, bottom of deck, etc.

***NOTES:**
 Negative quantities are denoted by the number surrounded by parentheses (xx). Negative quantities are subtractions from the base bid quantities, all other quantities are additions. The extension of the negative quantities on the official bid tab will reduce the overall cost of the Alternate. This probed will be awarded to the Contractor with the lowest and best total base bid amount plus alternates selected by the City, the total of which is within the Owner's approved budget.

This sheet designed by:



ARCHITECTS ENGINEERS PLANNERS

BRIDGE GENERAL NOTES

RAILROAD BRIDGE DESIGN SPECIFICATIONS:
 AREMA Manual for Railway Engineering, 2002.
CONSTRUCTION SPECIFICATIONS
 Wichita Central Corridor Railroad Grade Separation Project, 25th Street to Waterman, Wichita, Kansas-Project Specifications, HNTB Corporation, 2004.
MATERIAL and TESTING SPECIFICATIONS:
 The material and test specifications, current as of the publication of the project specifications, will be used. In cases of discontinuance or material changes to the specification, the engineer will be contacted for guidance.
REFERENCES:
 Wichita Central Corridor Railroad Grade Separation Project, Douglas Avenue to 21st Street, Wichita, Kansas-Final Geotechnical Investigation Report, HNTB Corporation, September 2003.
 Wichita Central Corridor Railroad Grade Separation Project, Douglas Avenue to 21st Street, Wichita, Kansas-Hazardous Materials Screening Report, HNTB Corporation, September 2000.
 BNSF Railway Guidelines*, 2002.
 BNSF Railway / Union Pacific Railroad Standard Drawings
 *Engineering and Shop Drawings for Existing Bridges at 2nd Street, 1st Street and Douglas Avenue.
HORIZONTAL & VERTICAL GEOMETRY CONTROL:
 Refer to Railroad and Street plans for horizontal and vertical geometry control.
 The track profile grade is at the top of rail.
 All elevations shown are U.S.G.S. Datum (NAD 29) (City Datum - U.S.G.S. Datum - 1187.4).
STRUCTURAL EXCAVATION:
 Structural excavation shall be in accordance with the plans and specifications.
STRUCTURAL BACKFILL:
 Structural backfill shall be located within the limits identified in the plans and specifications. Structural backfill shall meet or exceed the requirements of Embankment.
CONSTRUCTION PHASING:
 Prior to construction, the contractor shall submit a proposed schedule/phasing of scope of work items shown on sheet DAI.1.

REINFORCING:
 All bar bending dimensions and tolerances are in accordance with CRSI's Manual of Standard Practices.
 Reinforcing bars will be designated as follows: SSCONW
 SS = Bar Size (No. 3 to No. 18)

CC = Component Designator, as follows:
 A-Abutment F-Footing D-Dowel
 P-Pier PB-Pier Beam PC-Pier Column
 FW-FW Wall S-Slab/Deck R-Railing
 C-Curb

NW = Bar Mark Sequence (00-99)
 Reinforcing Bar Annotation Example:
 11A12
 A #11 Bar, located in the abutment, 12th bar in bar size/location sequence

EMBANKMENT:
 Fill material located within the volume bounded by the back face of the abutment, back face of the wingwalls, ends of the wingwalls) and above the limits of structural backfill shall be classified as embankment.

Embankment shall consist of a compacted granular fill with a minimum effective internal friction angle of 32 degrees. The material should be free of organic matter and debris and less than 10% by weight should pass the No. 200 sieve. The fill should be placed in loose lifts of 8 inches or less and compacted. At the time of placement and compaction, the moisture content of the fill should be within the range of 3% below to 3% above the optimum moisture content value (MR-3-3) determined by the standard Proctor Test (ASTM D-698). The fill should be compacted to at least 100% of the material's maximum standard Proctor dry density (ASTM D-698).

PROTECTIVE SHORING:
 Provide protective shoring as required by federal, state and local regulations. Additional shoring may be required.

Protective shoring plans & calculations shall be designed and sealed by a licensed professional engineer in the State of Kansas.
 Protective shoring calculations, plans and details shall be submitted eight (8) weeks prior to commencing shoring construction.

Protective shoring calculations, plans and details shall be submitted to the Engineer and distributed to the BNSF for approval. Protective shoring construction shall not begin until approved by the Engineer and the railroad.

QUANTITIES:
 Items not listed separately in the Summary of Bridge Quantities are subsidiary to other items.

QUALITY CONTROL:
 Prior to placing structural steel, verify that the bridge seat elevations are equal to the plan elevation +/- 1/8" and submit the documentation of the elevations to the Engineer.

BRIDGE PAINTING:
 Surface preparation & painting for concrete & metal surfaces is subsidiary to bridge painting.

COLORS:
 Colored concrete masonry coating is integral to and subsidiary to concrete masonry coating.

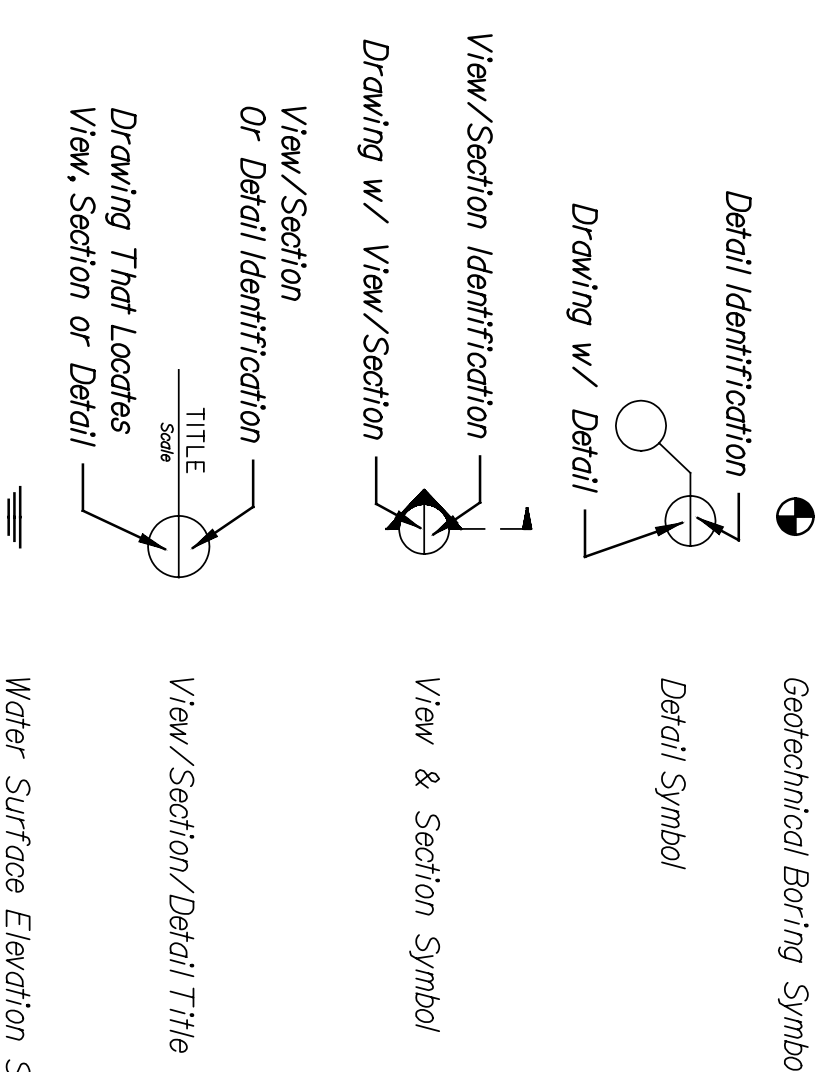
The color of the concrete masonry coating shall be consistent for each color throughout the project.

Submit a mockup of the concrete masonry coat for each color for approval by the engineer at least eight weeks prior to execution of the work.

STATE	PROJECT NO.	YEAR	TOTAL SHEETS
KANSAS	472-84071	2005	DA17

ABBREVIATIONS:			
AASHTO	American Association of State Highway & Transportation Officials	IN.	Inches
ACI	American Concrete Institute	KIP	1000 Pounds
AISC	American Institute of Steel Construction	KSF	Kips per Square Foot
ANSI	American National Standards Institute	L.F.	Linear Feet
AREMA	American Railway Engineering and Maintenance-of-Way Association	Lbs.	Pounds
ASME	American Society of Mechanical Engineers	min.	0.001 Inches
ASTM	American Society of Testing & Materials	Mix.	Minimum
AMS	American Welding Society	N/A	Not Applicable
B/	Bottom of Burlington Northern and Santa Fe Railway Company Bottom	N.F.	Near Face
BNSF	Bottom of Burlington Northern and Santa Fe Railway Company Bottom	PCF	Pounds per Cubic Foot
Bim	Bottom	PLF	Pounds per Linear Foot
CRSI	Concrete Reinforcing Steel Institute (www.crsi.org)	P.L.	Point of Intersection (Horizontal Curves)
C.F.	Cubic Feet	P.V.C.	Point of Vertical Curvature
C.S.	Curve to Spiral Point	P.V.I.	Point of Vertical Intersection
C.Y.	Cubic Yards	P.V.T.	Point of Vertical Tangency
dft	dry film thickness	R	Radius
E.F.	Each Face	S.C.	Spiral to Curve Point
E.S.	Equal Spacing	S.S.	Similar
E.W.	Each Way	Spiral to Tangent Point	Spiral to Tangent Point
Fc	Minimum 28-day Concrete Compressive Strength	SSPC	SSPC: The Society for Protective Coatings
F	Far Face	SY	Square Yards
F.F.	Far Face	T/	Top of
FT.	Feet	T.S.	Tangent to Spiral Point
Golv.	Galvanized	Typ.	Typical
		U.N.O.	Unless Noted Otherwise
		USACE	U.S. Army Corps of Engineers
		UPRR	Union Pacific Railroad
		WJTA	Wichita Union Terminal Association

SYMBOLS



SHEET NO.	OF	SCALE	AS NOTED	APPD.	DESIGNED	DMH	SCALE	AS NOTED	APPD.	TRACED	DMH
1		DETAILED	DMH		DESIGNED	DMH	SCALE	AS NOTED	APPD.	TRACED	DMH
2		DETAILED	DMH		DESIGNED	DMH	SCALE	AS NOTED	APPD.	TRACED	DMH
3		DETAILED	DMH		DESIGNED	DMH	SCALE	AS NOTED	APPD.	TRACED	DMH

NO.	DATE	REVISIONS	BY	APPD.

CITY OF WICHITA
 WICHITA CENTRAL CORRIDOR
 ALTERNATE 8
 DOUGLAS AVENUE
 SUMMARY OF GENERAL NOTES AND QUANTITIES