

SUMMARY OF BRIDGE QUANTITIES

ITEM	ITEM QUANTITY	UNIT
Excavation (Class III)	240	CY
Concrete Grade 4.0	30	CY
Concrete Grade 5.0 (AE)	158	CY
Concrete Sadder-Coating	-910	-SY
Concrete Masonry-Coating	+440	-SY
Graffiti Control-System	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
Bridge Mounted Sign Attachment	8	EA
Repair (Concrete Surface) (Abutment)	569	SY
Area Repaired For Patching (Full Depth)	540	SY
Repair (Column)	2	EA
Repair (Crack) (Epoxy Resin)	100	LF

** Bridge painting shall include new steel component only (pier repairs).

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-Initial 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 (NGVD 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 B8.1.

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

EMBAKMENT:

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.

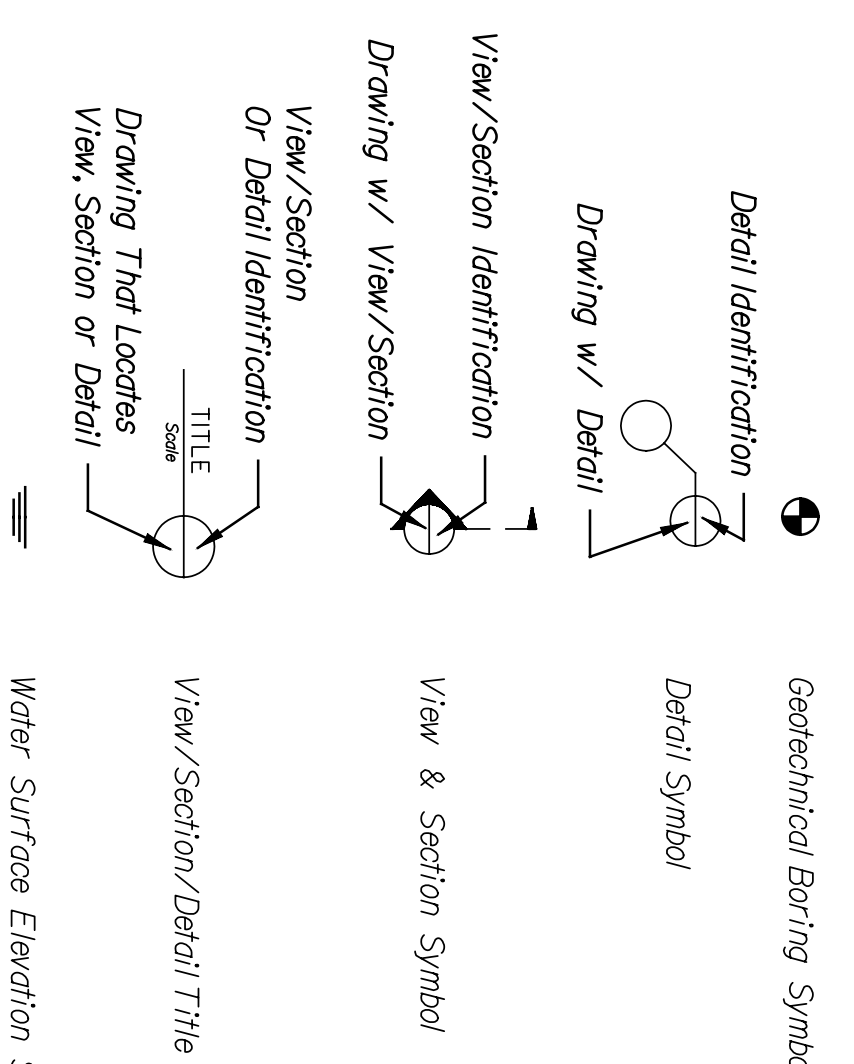
COLORS: Color of concrete masonry coating is integral to and subsidiary to concrete masonry coating. The color of the concrete masonry coating shall be consistent for each color throughout the project.

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	B8.7

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	lbs	0.001 Inches
ASTM	American Society of Testing & Materials	Min.	Minimum
AMS	American Welding Society	Mx.	Maximum
B/	Bottom of Burlington Northern and Santa Fe Railway Company Bottom	N/A	Not Applicable
BNSF	Bottom of Burlington Northern and Santa Fe Railway Company Bottom	N.F.	Near Face
Bim	Bottom	N/A	Not Applicable
CRSI	Concrete Reinforcing Steel Institute (www.crsi.org)	PCF	Pounds per Cubic Foot
C.F.	Cubic Feet	PLF	Pounds per Linear Foot
C.S.	Curve to Spiral Point	PL	Point of Intersection (Horizontal Curves)
C.Y.	Cubic Yards	P.V.C.	Point of Vertical Curvature
dft	dry film thickness	P.V.I.	Point of Vertical Intersection
E.F.	Each Face	P.V.T.	Point of Vertical Tangency
E.S.	Equal Spaced	R	Radius
E.W.	Each Way	S.C.	Spiral to Curve Point
Fc	Minimum 28-day Concrete Compressive Strength	S.S.	Similar
F	Far Face	S.S.P.	Spiral to Tangent Point
F.F.	Far Face	SSPC	SSPC: The Society for Protective Coatings
FT.	Feet	SY	Square Yards
Golv.	Galvanized	T/	Top of
		T.S.	Tangent to Spiral Point
		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



HNTEB
 ARCHITECTS ENGINEERS PLANNERS

This sheet designed by:

SHEET NO.	OF	SCALE	AS NOTED	APP'D.	DESIGNED	DATE	TRACED	DATE
3					DMH		DMH	
2					DMH		DMH	
1					DMH		DMH	

LOCATION: BNSF BR. 201A WICHITA, KS
 LINE SEGMENT: 1400
 CITY OF WICHITA
 DOUGLAS AVENUE
 SUMMARY OF GENERAL NOTES AND QUANTITIES