

ESTIMATED QUANTITIES

ITEM		SUBSTR.	SUPERSTR.	TOTAL
Class 1 Excavation	cu. yard	852	-	852
Bridge Approach Slab (Bridge)	sq. yard	-	287	287
Bridge Fence Railing	lin. foot	-	840	840
Parapet Railing	lin. foot	-	840	840
Structural Steel Piles (12 in.)	lin. foot	4,262	-	4,262
Pre-Bore for Piling	lin. foot	700	-	700
Pile Point Reinforcement	each	116	-	116
Class B Concrete (Substr.)	cu. yard	671.2	-	671.2
Slab on Concrete I-Girder	sq. yard	-	2,341	2,341
* Safety Barrier Curb	lin. foot	-	860	860
Sidewalk (Bridges)	sq. foot	-	4,876	4,876
Laminated Neoprene Bearing Pad	each	-	12	12
Laminated Neoprene Bearing Pad (Tapered)	each	-	48	48
Prestressed Concrete I-Girder (78'-11")	each	-	12	12
Prestressed Concrete I-Girder (79'-5")	each	-	18	18
Reinforcing Steel (Bridges)	pound	87,355	-	87,355
Vertical Drain at End Bents	each	-	2	2
Slab Drains	each	-	18	18

Note:
 All Slab and Diaphragm concrete above the construction joint in the end bents is included in the Estimated Quantities for Slab on Concrete I-Girder.
 All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete I-Girder.
 All reinforcement in the intermediate bent concrete diaphragms except reinforcement embedded in the beam cap is included in the Estimated Quantities for Slab on Concrete I-Girder.
 All Slab and Diaphragm concrete above the intermediate beam cap is included in the Estimated Quantities for Slab on Concrete I-Girder.
 All concrete and reinforcing steel in sidewalk is included in the contract unit price for Sidewalk (Bridges).
 The cost of furnishing, fabricating and installing Neoprene Bearing Pads complete-in-place, will be paid for at the contract unit price for Laminated Neoprene Bearing Pad or Laminated Neoprene Bearing Pad (Tapered) per each.
 * Safety barrier curb shall be cast-in-place option or slip-form option.

Based upon the boring data, the pile lengths are expected to vary by a considerable amount from one end to the other, or each bent. The quantity of piles shown in the Estimated Quantities table is based upon the average estimated tip for piles in each bent. The Approximate Length of piles, shown in the Pile Data table is for the longest estimated pile for each bent.

ESTIMATED QUANTITIES FOR SLAB ON CONCRETE I-GIRDER

ITEM		TOTAL
Reinforcing Steel (Plain)	pound	13,056
Reinforcing Steel (Epoxy Coated)	pound	171,405
Concrete **	cu. yard	598.2

Note:
 The table of Estimated Quantities for Slab on Concrete I-Girder represents the quantities used by the City in preparing the cost estimate for concrete slabs. Variations may be encountered in these estimated quantities but these variations cannot be used for an adjustment in the contract unit price per square yard of Slab on Concrete I-Girder.
 See Special Provisions for method of forming slabs.
 The prestressed panel quantities are not included in the table of Estimated Quantities for Slab on Concrete I-Girder.
 ** Based on minimum top flange thickness and minimum joint filler thickness.

PILE DATA

BENT NO.	1	2	3	4	5	6
Pile Type and Size	HP12x53	HP12x53	HP12x53	HP12x53	HP12x53	HP12x53
Number	10	24	24	24	24	10
Approximate Length Ft.	64	35	41	16	26	79
Design Bearing Tons	66	61	61	68	68	66
Hammer Energy Required Ft.-Lbs.	14,900	13,800	13,800	15,300	15,300	14,900

Note:
 Minimum energy requirement of hammer is based on plan length and design bearing, value of piles.
 All piles shall be driven to practical refusal.
 Prebore to natural ground line for piles at Bents 1 & 6.
 Manufactured pile point reinforcement shall be used on all piles in this structure.
 See Special Provisions.

GENERAL NOTES:

Design Specifications:
 A.A.S.H.T.O. - 1996 and Current Interims thru 1998
 Load Factor Design - Seismic Performance Category A
 Acceleration Coefficient = 0.08

Design Loading:
 HS20 Modified
 35#/Sq. Ft. Future Wearing Surface
 Earth 120#/Cu. Ft., Equivalent Fluid Pressure 45#/Cu. Ft.
 Superstructure: Simply-Supported, non-composite for dead load.
 Continuous composite for live load.

Design Unit Stresses:
 Class B Concrete (Substructure) f'c = 3,000 psi
 Class B1 Concrete (Safety Barrier Curb) f'c = 4,000 psi
 Class B2 Concrete (Superstructure, except Prestressed Girders & Safety Barrier Curb) f'c = 4,000 psi
 Reinforcing Steel (Grade 60) fy = 60,000 psi
 Steel Pile (ASTM A709 Grade 36) fb = 9,000 psi
 For Prestressed Girder stresses, see Sheet No. 18
 For Precast Prestressed Panel stresses, see Sheet No. 23

Reinforcing Steel
 Minimum Clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

Joint Filler:
 All joint filler shall meet the requirements of Section 1057.2.4 of the Missouri Standard Specifications, except as noted.

Neoprene Pads:
 Bearings shall be 60 Durometer Elastomeric bearing Pads. Laminated bearings (Consisting of layers of elastomer restrained at their interface by bonded laminates) shall be used on all bents. Cost of furnishing, fabricating and installing Bearing Pads complete in place, shall be paid for per each for each type of bearing pad used. The neoprene pads shall be bonded to the bearing seat with an epoxy adhesive as approved by the bearing manufacturer for bonding neoprene to concrete.

Miscellaneous:
 Drawings are not to scale. Follow dimensions.
 A minimum vertical clearance of 22'-0" from top of rails and a minimum lateral clearance of 13'-0" from the centerline of track to the nearest temporary construction falsework shall be maintained during construction.

NO.	DATE	REVISIONS	BY	APP'D
6				
5				
4	8/05/03	Updated Class 1 Excavation Qun.		
3	8/05/03	Updated Approximate Pile Lengths		
2	5/20/03	Updated Approximate Pile Lengths		
1	5/20/03	Updated Class B Concrete		

Designed By: SJH
 Drawn By: JDC
 Checked By: LEL
 Issue Date: _____

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SKW

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T.R. HUGHES BLVD.
 CITY OF O'FALLON
 NOTES AND QUANT.

SHEET NO. 3 OF 35
 200846



ENGINEER'S AUTHENTICATION: The responsibility for professional engineering liability on this project is hereby limited to the set of plans authenticated by the seal, signature and date hereto attached. Responsibility is disclaimed for all other engineering plans involved in this project and specifically excludes revisions after this date, unless reauthenticated.

AUTOCAD INFORMATION BLOCK
 DRAWING: 20846011
 PLOT SCALE: 10
 BY: JDC
 DATE: 5/6/03
 XREF DWG: N/A