

ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUT.		PIER		SUPER.		GENERAL		REFERENCE SHEET NO.
					EB	WB	EB	WB	EB	WB	EB	WB	
					202		7655	Sq.Yd.	Wearing course removed, As Per Plan				
202		Lump		Portions of structure removed, as per plan									
404		319	Cu.Yd.	Asphalt concrete (AC-20) with Verglimit additive, as per plan					160	159			6/19
407		575	Gallon	Tack coat					288	287			
509		59126	Lbs.	Epoxy coated reinforcing steel, Grade 60	1086	1086			28,377	28,377	100	100	
510		7232	Each	Dowel holes, as per plan	120	120			3496	3496			4/19
511		440	Cu.Yd.	Class S concrete, superstructure railing	9	9			212	210			
511		8	Cu.Yd.	Class S concrete, deck repair					4	4			
513		76,400	Lbs.	Galvanized A-36 structural steel (AISC Certification not required)					38,200	38,200			
513		1230	Sq.Ft.	1" welded galvanized steel grating, catwalks					615	615			
513		250	Each	Replace existing rivet or bolt with new high strength bolt, as per plan							125	125	4/19
516		512	Lin.Ft.	5" Strip seal joints, as per plan					256	256			13/19
518		2196	Lin.Ft.	8" φ Standard pipe downspout, galvanized steel 707.08, including specials and supports							1094	1102	
519	**	104	Sq.Ft.	Patching concrete structures ** ▲			4				50	50	
601		1625	Sq.Yd.	Crushed aggregate slope protection							701	924	
850		Lump		Test Slab									
850		7655	Sq.Yd.	Superplasticized dense concrete overlay (1 3/4" THICK) AS PER PLAN							3839	3816	
850		192	Cu.Yd.	Superplasticized dense concrete overlay (VARIABLE THICKNESS) AS PER PLAN							96	96	
850		4	CU. YD.	FULL-DEPTH REPAIR ▲							2	2	
Special		7655	Sq.Yd.	Concrete Bridge Deck Surface Preparation Using Hydrodemolition (See Proposal Note)							3839	3816	
Special		Lump		Field painting existing steel, surface preparation, System OZEU - (See Proposal Note)									
Special		Lump		Field painting existing steel, prime coat, System OZEU - (See Proposal Note)									
Special		Lump		Field painting existing steel, intermediate coat, System OZEU - (See Proposal Note)									
Special		Lump		Field painting existing steel, finish coat, System OZEU - (See Proposal Note)									
Special		19000	Lin.Ft.	Caulking (See OZEU Proposal Note)					6430	3034	4769	4769	
Special		LUMP		CONTAIN, COLLECT, STORE AND EVALUATE ABRASIVES AND PAINT CHIPS (SEE PROP. NOTE)									
Special		LUMP		SHIPMENT AND DISPOSAL OF NON-HAZARDOUS WASTE. (SEE PROPOSAL NOTE)									
SPECIAL		LUMP		SHIPMENT AND DISPOSAL OF HAZARDOUS WASTE. (SEE PROPOSAL NOTE)									
Special		6436	Sq.Yd.	Sealing of concrete surface, (See Proposal Note) EPOXY	172	172	730	730	2323	2309			
									3839	3816			
* Special		438	Lin.Ft.	Safety climbing system					219	219			
SPECIAL		8	EACH	ACCESS MANHOLES					4	4			
SPECIAL		36	EACH	SCUPPERS ABANDONED					18	18			
* SPECIAL		LUMP		PREPARATION AND SHIPMENT OF STORED ALUMINUM BRIDGE RAILING									
SPECIAL		13	LIN. FT.	EPOXY INJECTION (SEE PROPOSAL NOTE)					6.5	6.5			8A/19
SPECIAL		13	LIN. FT.	SURFACE PREPARATION FOR EPOXY INJECTION AND FINISHING (SEE PROPOSAL NOTE)					6.5	6.5			
SPECIAL		192	EACH	PENCIL ABRASIVE BLASTING, GRINDING, AND NDT OF STRINGER - FLOORBEAM CONNECTION					96	96			8A, 8B/19
SPECIAL		75	EACH	STRINGER FLANGE END RETROFIT ▲					34	41			8A, 8B/19
SPECIAL		10	EACH	BOLTED STRINGER ANGLE CONNECTION ▲					4	6			8A, 8B/19
SPECIAL		31	EACH	PENCIL ABRASIVE BLASTING, GRINDING AND NDT OF DIAPHRAGM CONNECTIONS					24	7			8A, 8C/19
SPECIAL		612	EACH	DRAIN HOLE ▲					306	306			8C/19
SPECIAL		20	EACH	PENCIL ABRASIVE BLASTING, GRINDING AND NDT ▲					10	10			
SPECIAL		3	EACH	REPLACEMENT OF COTTER PIN						3			19/19
SPECIAL		50	EACH	TIGHTENING LOOSE BOLT ▲					29	21			8A, 19/19
SPECIAL		50	EACH	DRILLING STRUCTURAL STEEL (1-INCH DIA. HOLE, GRINDING AND NDT) ▲					25	25			
SPECIAL		4	EACH	DRILLING STRUCTURAL STEEL (1 1/2 -INCH DIA. HOLE, GRINDING AND NDT) ▲					2	2			
SPECIAL		30	EACH	DRILLING STRUCTURAL STEEL (2-INCH DIA. HOLE, GRINDING AND NDT) ▲					15	15			
SPECIAL		50	EACH	BOLT FOR DRILLED HOLE ▲					25	25			

QUANTITIES		
CALCULATED	DT	1/89
CHECKED	JS	1/89

FHWA REGION	STATE	PROJECT
5	OHIO	

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38

LAKE COUNTY
LAK-90-23.42 (L&R)



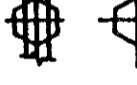
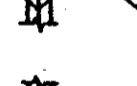


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Notation: EB - Eastbound Bridge
LAK-90-2342R
WB - Westbound Bridge
LAK-90-2342L

BOLT LEGEND

-  + Field bolt, nut and full head. New material to new material.
-  ♦ Indicates new material to existing rivet or bolt hole, when added to field bolt symbol above.
-  ♦ + Indicates new material to field drilled new or existing steel, when added to field bolt symbol above.
-  ♦ Remove existing rivet, or bolt where noted, for new bolted connection.
-  + Remove existing rivet.
-  + ♦ Existing rivet to remain.

See "Bolted Connection to Existing Steel" note sheet 4/19 and "Existing Rivet and Structural Steel Removal" note sheet 4/19 for hole preparation.

(SPN) = SEE PROPOSAL NOTE

* = 100% STATE FUNDS

** 50% Federal Participation

▲ - ALL OR A PORTION OF THIS QUANTITY IS SUBJECT TO NON-PERFORMANCE WITHOUT PENALTY TO THE STATE OF OHIO.

REVISED 1-3-91
REVISED 11-19-90

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RE		RICHLAND ENGINEERING LIMITED MANSFIELD, OHIO	
ESTIMATED QUANTITIES AND INDEX OF SHEETS SUPERSTRUCTURE BRIDGE NO. LAK-90-2342 (L&R) OVER THE GRAND RIVER			
LAKE COUNTY			I.R. 90
DESIGNED	DRAWN	TRACED	CHECKED
DHT	JPS	JPS	DT
			REVIEWED
			DAP
			9/13/89
			DATE REVISED
			9/13/90

Revised 4/17/90, Revised 4/27/90