

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB		TOTAL
			ABUT.	PIER	
Removal & Disposal of Unsuitable Material	Cu. Yd.		579.6		579.6
Porous Granular Embankment	Cu. Yd.		579.6		579.6
Concrete Removal	Cu. Yd.	37.7	4.9		42.6
Slopedwall Removal	Sq. Yd.		768		768
Protective Shield	Sq. Yd.	164			164
Structure Excavation	Cu. Yd.		9.1		9.1
Concrete Structures	Cu. Yd.		26.5	13.3	39.8
Rubbed Finish	Sq. Ft.		34	171	205
Concrete Superstructure	Cu. Yd.	74.4	5.0		79.4
Bridge Deck Grooving	Sq. Yd.	71			71
Protective Coat	Sq. Yd.	192.1			192.1
Furnishing & Erecting Structural Steel	Pound	9720			9720
Reinforcement Bars, Epoxy Coated	Pound	14,140	2270	1800	18,210
Bar Splicers	Each		35		35
Slopedwall, 4"	Sq. Yd.		863.8		863.8
Prefomed Joint Strip Seal	Foot	188.5			188.5
Elastomeric Bearing Assembly, Type I	Each		8		8
Anchor Bolts, 5/8"	Each		16		16
Anchor Bolts, 1/4"	Each			32	32
Concrete Sealer	Sq. Ft.		754	550	1304
Seismic Restrainer	Each			16	16
Jack & Remove Existing Bearings	Each		8		8
Structural Repair of Concrete (Depth equal to or less than 5")	Sq. Ft.		34	171	205
Drainage System	L. Sum	0.25			0.25
Concrete Removal (Special)	Sq. Yd.		3.9		3.9

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 7/8" ϕ , holes 15/16" ϕ , unless otherwise noted.

All structural steel associated with the bumpers, cable and bracket shall be AASHTO M 270 Grade 50. All other structural steel shall be AASHTO M 270 Grade 36.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that can not be removed by grinding 1/4" in deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Concrete Sealer shall be applied to the designated areas of the abutments and piers. No field welding is permitted except as specified in the contract documents.

The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat for all interior Bumpers and Brackets shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior Bumpers and Brackets attached to the fascia beams shall be Blue, Munsell No. 10B 3/6.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with approved bar splicers or an anchorage system. Reinforcement bars shall be cleaned according to Article 501.05 of the Standard Specifications and to the satisfaction of the Engineer. Cost included with Concrete Removal.

Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.

Costs associated with the removal, cleaning and reinstallation of the existing name plate shall be included with Concrete Removal.

Contact surfaces between Existing and New Structural steel shall be prepared as specified by the special provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

Cleaning and Painting of Existing Structural Steel not in contact with New Structural Steel shall be done under a separate contract.

Cost for removal of the existing Bridge Drainage System is included with the cost of Drainage System.

Shop drawings for the Seismic Restrainers shall follow the guidelines as set forth in the General Special Provision "Seismic Restrainers."

Shop drawings for the bumpers and brackets shall be submitted and reviewed for approval according to Section 505.03 of the Standard Specifications.

The Contractor shall remove the expansion joints and provide access for inspection of the pier and abutment cap extensions. New expansion joints shall not be formed until cap extension work has been completed.

SCOPE OF WORK

1. Install jacking & cribbing system to support bridge dead & construction live loads. Jacking and cribbing required at North & South Abutments. (see sheet 16 of 35)
2. Remove the existing bearings and bearing extensions at each abutment.
3. Extend the abutment cap heights and seat widths, and perform concrete repair.
4. Install new elastomeric bearings at abutments.
5. Construct new elevated pier cap at Pier 1. The pier cap extension should encase the existing bolster supporting spans 1 and 2.
6. Construct new elevated pier cap at Pier 4. The pier cap extension should encase the existing bolster supporting span 4 at Pier 5.
7. Install Bumper & Cable assemblies at all piers.
8. Install new Side Retainers at Abutments and Piers 1 & 4.
9. Complete Structural Repair of Concrete on the piers, Rubbed Finish & construct crashwalls.
10. Remove and Replace the existing expansion joints.
11. Remove and Replace Drainage System.
12. Remove existing pavement at South Abutment and construct South Bridge Approach Slab.
13. Remove and Replace existing slopedwalls.