

B.M. Chiseled Square on top of Southwest Wingwall of Structure 041-0038, Elev. 496.38

Existing Structure: SN 041-0038, built in 1930 as SBI-142 Section 110B at Station 836+70. The existing structure is a single span concrete slab bridge on closed abutments with timber piles, 30'-10" bk.-to-bk. of abutts, 42'-2" o.-o. of deck with a clear roadway width of 40'-0". Wearing surface consists of a 3" bituminous overlay on top of the original 4" concrete overlay. The existing structure will be removed and replaced with a new single-span bridge.

Traffic to be detoured during construction.

No Salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

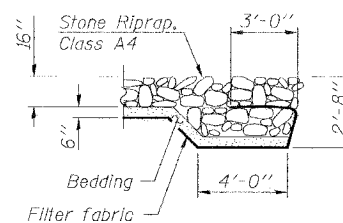
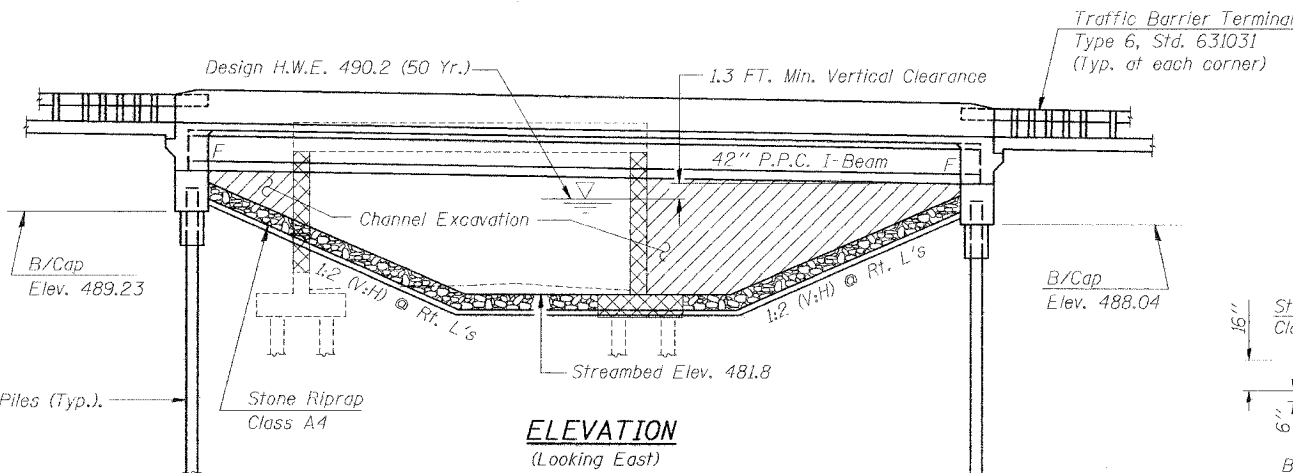
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
F.A.S. 2826	110B-1	JEFFERSON	11	12	16 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract 78013

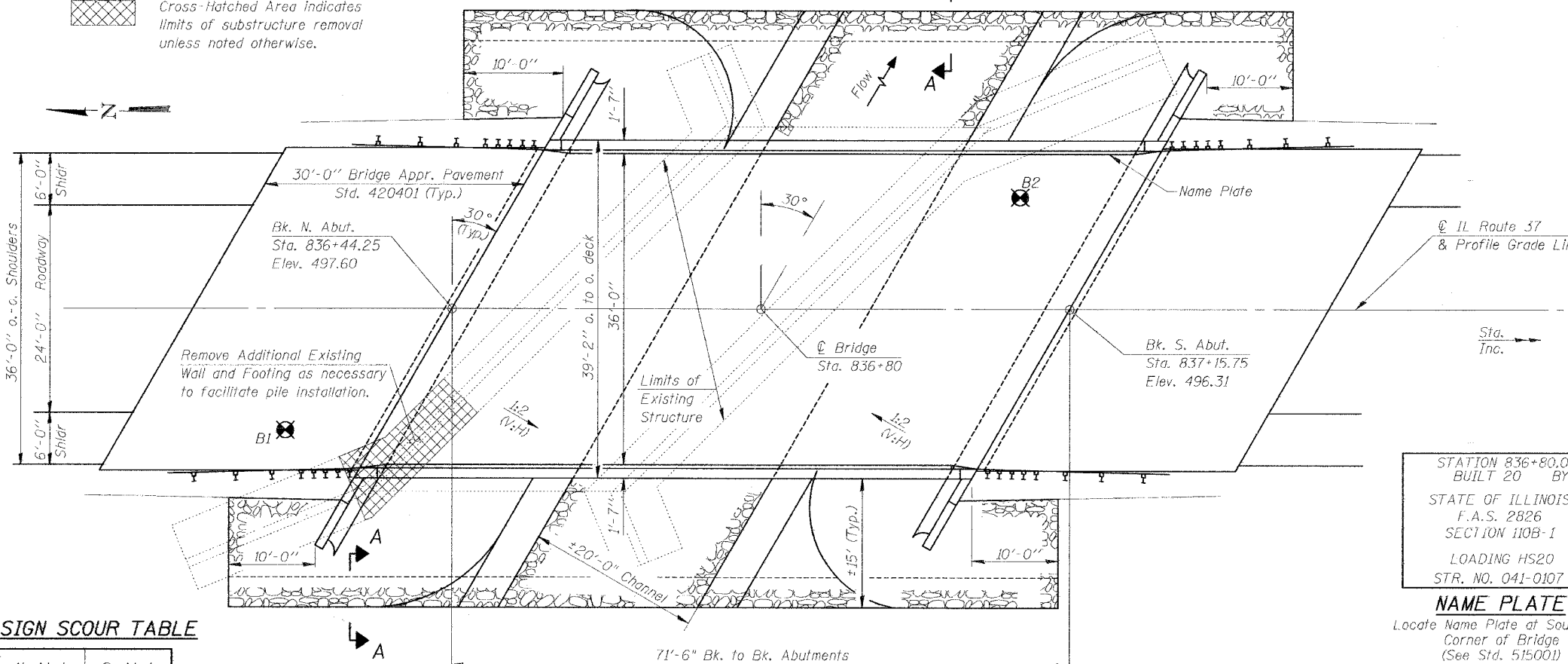
TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.		Total
			Piers	Abutts.	
Removal of Existing Structures	Each	--	--	--	1
Concrete Structures	Cu. Yd.	--	--	42.3	42.3
Concrete Superstructure	Cu. Yd.	116.6	--	--	116.6
Bridge Deck Grooving	Sq. Yd.	270	--	--	270
Protective Coat	Sq. Yd.	352	--	--	352
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42 In.	Foot	418	--	--	418
Reinforcement Bars, Epoxy Coated	Pound	20,930	--	5,540	26,470
Bar Splicers	Each	72	--	--	72
Furnishing Steel Piles HP12x63	Foot	--	--	240	240
Driving Piles	Foot	--	--	240	240
Test Pile Steel HP12x63	Each	--	--	2	2
Name Plates	Each	1	--	--	1
Concrete Encasement	Cu. Yd.	--	--	4.2	4.2
Stone Riprap, Class A4	Sq. Yd.	--	--	--	638
Filter Fabric	Sq. Yd.	--	--	--	638
Structure Excavation	Cu. Yd.	--	--	318	318
Porous Granular Embankment (Special)	Cu. Yd.	--	--	170	170
Geocomposite Wall Drain	Sq. Yd.	--	--	94	94
Pipe Underdrains for Structures 4"	Foot	--	--	164	164



Hatched Area Indicates limits of Channel Excavation.
Cross-Hatched Area Indicates limits of substructure removal unless noted otherwise.

SECTION A-A



GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
4. The Contractor shall drive 2 HP 12 test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.
5. Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.
6. Slipforming of the parapets is not allowed.

DESIGN SPECIFICATIONS
2002 AASHTO

DESIGN STRESSES
FIELD UNITS

LOADING HS20-44
Allow 50#/Sq. Ft.
for future wearing surface

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Robert Anderson
ENGINEER OF BRIDGES AND STRUCTURES

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f'_s = 270,000$ psi
(1/2" ϕ low lax. strands)
 $f_{si} = 201,960$ psi
(1/2" ϕ low lax. strands)

SEISMIC DATA

Seismic Performance Category (SPC) = B
Bedrock Acceleration Coefficient (A) = 0.098g
Site Coefficient (S) = 1.5

DESIGN SCOUR TABLE

N. Abut.	S. Abut.
489.2	488.0

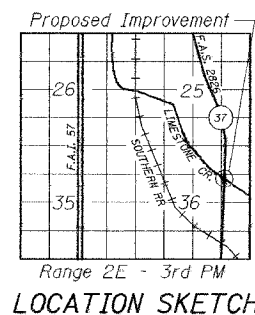
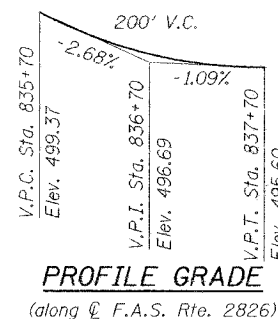
WATERWAY INFORMATION

Existing Low Grade Elevation: 495.2 ft. @ Sta. 838+70
Proposed Low Grade Elevation: 495.2 ft. @ Sta. 838+70

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	1262	151	310	490.2	1.7	0.7	491.9	490.9
Base	100	1437	155	320	490.4	2.1	0.8	492.5	491.2
Max. Calc.	500	1849	161	340	490.7	3.2	1.1	493.9	491.8



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Date 3-6-08



GENERAL PLAN & ELEVATION
IL ROUTE 37 OVER LIMESTONE CREEK
F.A.S. ROUTE 2826 SECTION 110B-1
JEFFERSON COUNTY
STA. 836+80
S.N. 041-0107

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