

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

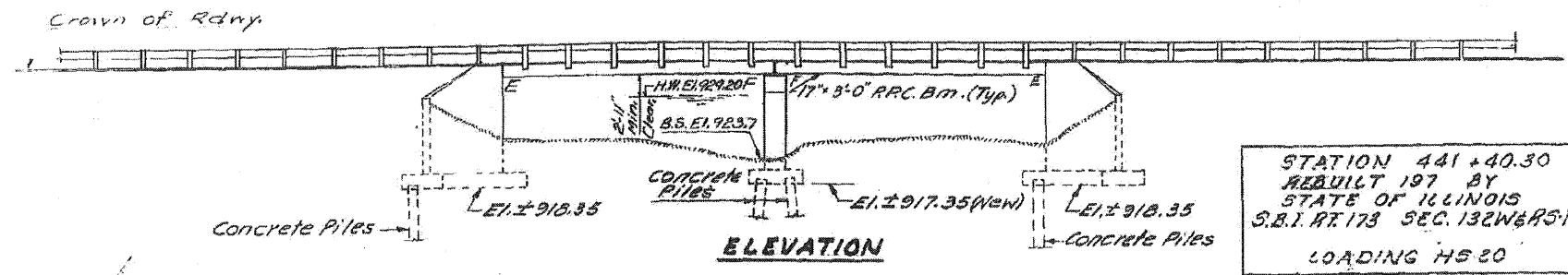
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. RT. 173	132	McHENRY	217	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

B.M. #37 - chiselled "u" on SW wing wall Sta. 441+00, El. 934.60.
Existing Structure: built in 1930 @ Sta. 441+40.3 as S.B.I. Rte. 173, Sec. 132B-1 Structure consists of R.C. deck girders on R.C. closed abutments & solid pier. Existing R.C.D.G. 2 spans to be removed and replaced a portion at a time by contractor utilizing stage construction. Existing closed abuts. & exist. solid pier to be widened to accommodate the new superstructure.
No salvage.

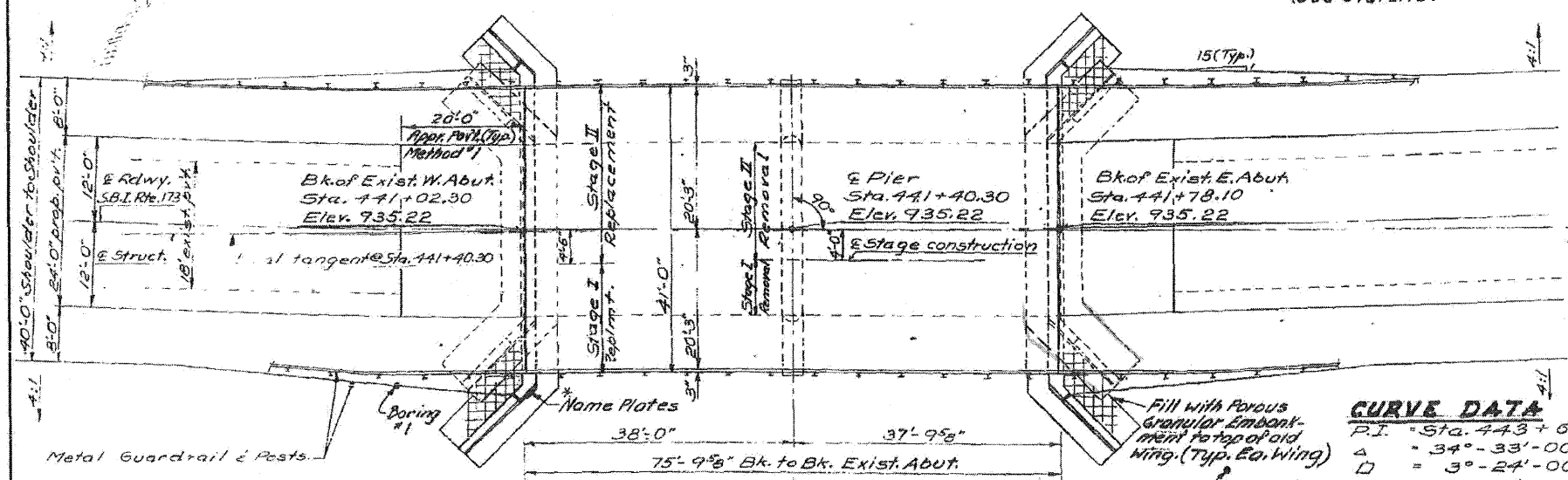
The top surface of the beams shall be finished in accordance with Article 505.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners.

GENERAL NOTES

All reinforcement bars shall be lapped 4 diameters unless otherwise shown.
It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.
Expansion bolts shall consist of self drilling expansion anchors and 3/4" hooked bolts. Hooked bolts shall extend a minimum of 12" into new concrete unless otherwise shown.
Back surfaces of new abutment walls and wing walls shall be waterproofed above the tops of the footings.
Limits of Waterproofing Membrane System shall be end to end of Deck Beams and out to out of deck.
Two coats of basic lead silico chromate shop primer shall be used for painting of structural steel.
Expansion guards which are not cast in the precast unit shall be fabricated and erected in accordance with Article 503.07 (c) of the Standard Specifications and are included in quantity of structural steel.
The Contractor shall drive two concrete test piles in a permanent location one each at west abutment and pier as directed by the Engineer before ordering the remainder of piles.



STATION 441+40.30
REBUILD 197 BY
STATE OF ILLINOIS
S.B.I. RT. 173 SEC. 132W&RS-1
LOADING HS 20
NAME PLATE
(See Std. 2113)

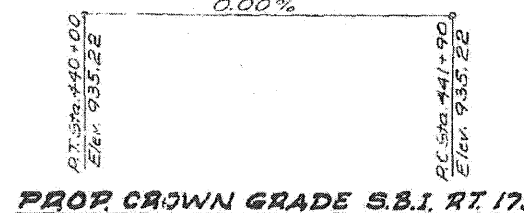


CURVE DATA
P.I. = Sta. 443+65.32
A = 34'-33'-00"
D = 3'-24'-00"
T = 624.13'
R = 1685.42'
L = 1016.18'
E = 79.6'
S.E. = 0.072%
S.E.A. = 437+10 - 439+05 ; 447+90 - 449+85

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Concrete Removal	Cu. Yds		6	6
Expansion Bolts 3/4"	Each		185	185
Class X Concrete	Cu. Yds	1.9	194.5	196.4
Precast Prestressed Concrete Deck Beams (17")	Sq. Ft.		3073	3073
Steel Railing Type 5	Lin. Ft.	150		150
Reinforcement Bars	Lbs	260	15660	15920
Name Plates	Each		1	1
Porous Granular Embankment	Cu. Yds.		78	78
Removal of Existing Superstructures	Each			1
Waterproofing Membrane System	Sq. Yds	342		342
Temporary Guardrail	Lin. Ft.	75		75
Air Conc. Surface Course Class I	Tons	94		94
Structure Excavation	Cu. Yds		560	560
Structural Steel	Lbs	5750		5750
Concrete Piles	Lin. Ft.		670	670
Test Piles - Concrete	Ft.		2	2
Preformed Joint Sealer (2")	Lin. Ft.	82		82

Elevations are on top of C.I. Surfacing
*Existing Name Plate shall be salvaged, cleaned, & placed below New Name Plate. Cost incidental.



WATERWAY INFORMATION

Drainage Area 20.2 sq. miles
Character: rolling
Required Opening (50 ym fl. freq.) 312 Sq. Ft.
Present Opening 423 Sq. Ft.
Proposed Opening 312 Sq. Ft.
Low Water El. 924.0
H.W. El. 929.20
Q(50) = 1434 cfs.

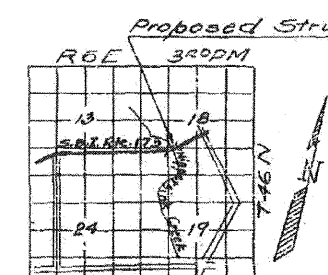
PREC. PRESTR. UNITS

f'c = 5,000 psi
f'ci = 4,000 psi
f's = 270,000 psi (7/8" strands)
f'si = 188,700 psi

FIELD UNITS

f'c = 1,400 psi Super & Pier
f'c = 1,000 psi Abut.
f'c = 75 psi Footing
f's = 20,000 psi Reinf.
n = 10

OFFSET SKETCH



LOCATION SKETCH

GENERAL PLAN & ELEVATION
S.B.I. RT. 173 OVER NIPPERSSING CREEK
S.B.I. RT. 173 SEC. 132W&RS-1
McHENRY COUNTY
STATION 661180.30

DESIGNED	Patrick S. W.	EXAMINED	September 10, 1973
CHECKED	D. J. K.	PASSED	
DRAWN	JL	APPROVED	
CHECKED	D.A. P.S.L.		

Design Specifications AASHTO, 1969 as applicable.
Allow 25 #/sq. ft. for future W.S.
Loading HS 20 - 44

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EXISTING STRUCTURE PLANS - FOR REFERENCE ONLY