

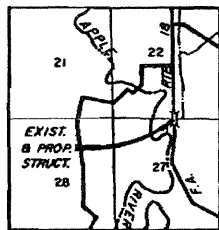
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
E.A. 18	104-BR	JO DAVIESS	19	7

SHEET 1 OF 7
Sheet 85 of 126

BENCHMARK: STAINLESS STEEL CYLINDER CAST IN N.W. CORNER OF NEW STRUCTURE ELEVATION: 608.64

EXISTING STRUCTURE:

Structure No. 043-0029; built as S.B.I. Rte. 80, Section 104 B in 1928 at Station 125+71.1, consists of a one span reinforced concrete slab bridge on closed reinforced concrete abutments. Existing bridge length 28'-10 3/4" Bk. to Bk. of Abuts. and existing bridge width 40'-0" Face to Face of rail. Contractor shall remove and dispose of the Existing Structure after construction of the temporary runaround is completed. No Salvage.



LOCATION SKETCH

ROADWAY DATA

FA. Rte. 18 (Ill. Rte. 84)
Class: Major Highway
D.V.: 465 (2000)
A.D.T.: 2100 (1980), 3100 (2000)
Design Speed: 70 M.P.H.

PROFILE GRADE
(Top of Class I)

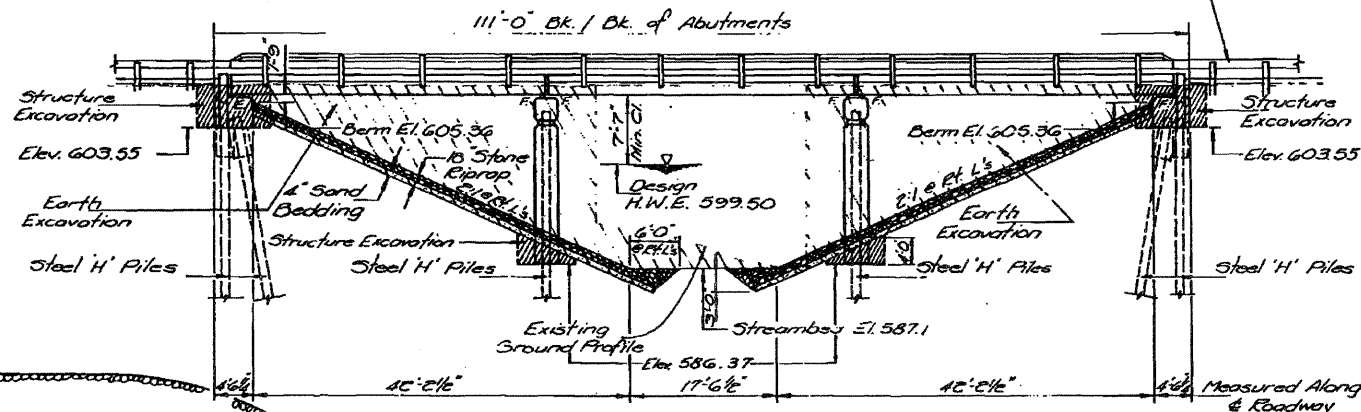
DESIGNED:	V.S.N.
CHECKED:	K.L.F.
DRAWN:	R.A.W.
CHECKED:	K.L.F.

WATERWAY INFORMATION

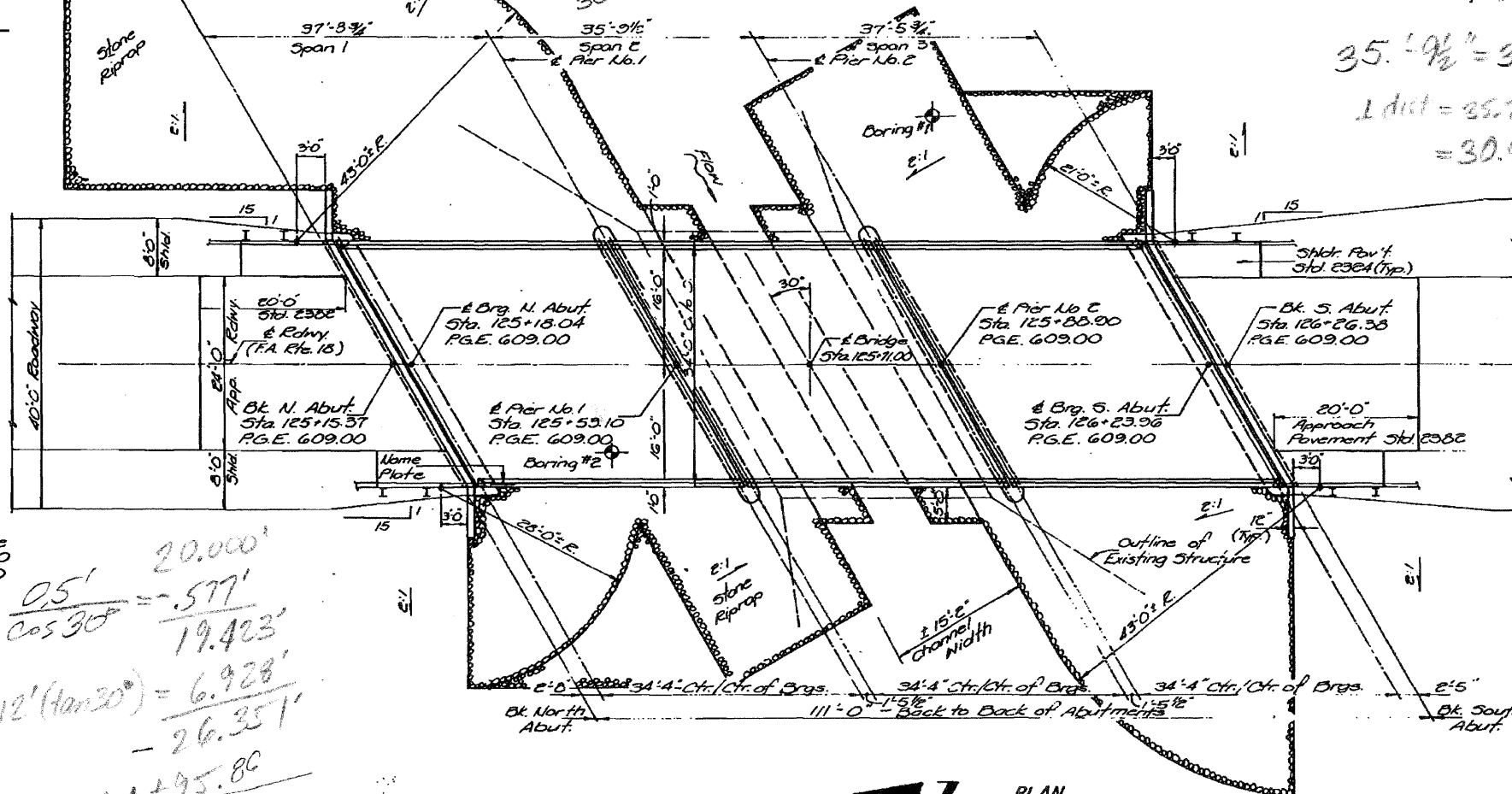
Drainage Area = 4.0 Sq. Mi. Low Grade El. 609.00 @ Sta. 125+71.00									
Flood	Freq. Yr.	Q CFS	Opening Sq. Ft.		Nat. H.W.E.		Head-Ft.		Headwater El.
Design	50	1938	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.
Base	100	2239	217	532	600.20	1.28	.17	601.48	600.37
Max. Calc.	500	2957	251	634	601.80	1.70	.19	603.58	601.99

GENERAL NOTES:

- See Proposal for Boring Data.
- Layout of Stone Riprap Slope Wall may be varied in the field to suit ground conditions as directed by the Engineer.
- The Contractor shall drive one (1) Steel HP 12x53 test pile in a permanent location at the North Abutment and one (1) Steel HP 12x53 test pile in a permanent location at Pier No. 1 as directed by the Engineer before ordering the remainder of piles.
- 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 and the top edge of keys shall be rounded or chamfered a minimum of 1/4".
- Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.
- Reinforcement Bars shall conform to the requirements of A.A.S.H.T.O. M-31 or M-53, Grade 60, unless noted otherwise.
- Expansion Guards shall be fabricated and erected in accordance with Article 503.07 (c) of the Standard Specifications. Cost Incidental.



ELEVATION



PLAN

DESIGN STRESSES

PRECAST PRESTRESSED UNITS CAST IN PLACE CONCRETE
 P_c = 5,000 p.s.i. P_c = 3,500 p.s.i.
 P_{ci} = 4,000 p.s.i. P_y = 60,000 p.s.i. (Reinf.)
 P_s = 270,000 p.s.i. (1/2" Strands) n = 9
 P_{si} = 189,000 p.s.i. (1/2" Strands)

LOADING HS 20-44

Design Specifications: 1977 A.A.S.H.T.O.; 1978, 1979; 1980 Interim Specifications (Allow 25 p.s.f. for future wearing surface)

STATION 125+71
BUILT 198 BY
STATE OF ILLINOIS
E.A. 18 SEG 104-BR
PROJECT 64-B(117)
LOADING HS 20
STR. NO.

NAME PLATE
(See Std. 2113)

FOR INFORMATION ONLY

TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
Structure Excavation	C.Y.	—	—	209
Bit. Conc. Surf. Crse. Mix. D Class I	Ton	34	—	34
Removal of Exist. Structure	Each	—	—	1
Stone Riprap	S.Y.	—	1058	1058
Class X Concrete	C.Y.	13.2	211.1	224.3
Prec. Press. Conc. Dk. Bms. 17" Depth	S.F.	3638	—	3638
Steel Railing, Type T1	L.F.	215	—	215
Reinforcement Bars	Lbs.	470	12930	13400
Steel Piles HP 12x53	L.F.	—	457	457
Test Piles, Steel HP 12x53	Each	—	2	2
Name Plate	Each	—	—	1
Portland Cem. Mortar For Crse.	L.F.	304.3	—	304.3
Waterproofing Membrane System	S.Y.	386	—	386
Protective Coat	S.Y.	96	—	96
Preformed Joint Seal (4")	L.F.	40	—	40

Note: Quantity of Earth Excavation within structure limits included with Roadway Quantities.

GENERAL PLAN & ELEVATION

E.A. 18 OVER TRIBUTARY TO APPLE RIVER
SECTION 104-BR
JO DAVIESS COUNTY
STATION 125+71.00

Handwritten calculations:
 $20.000' - \frac{0.5'}{\cos 30^\circ} = 19.423'$
 $12' (\tan 30^\circ) = 6.928'$
 $164 + 95.80 - 26.351 = 164 + 69.509$

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NO. 2992