

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

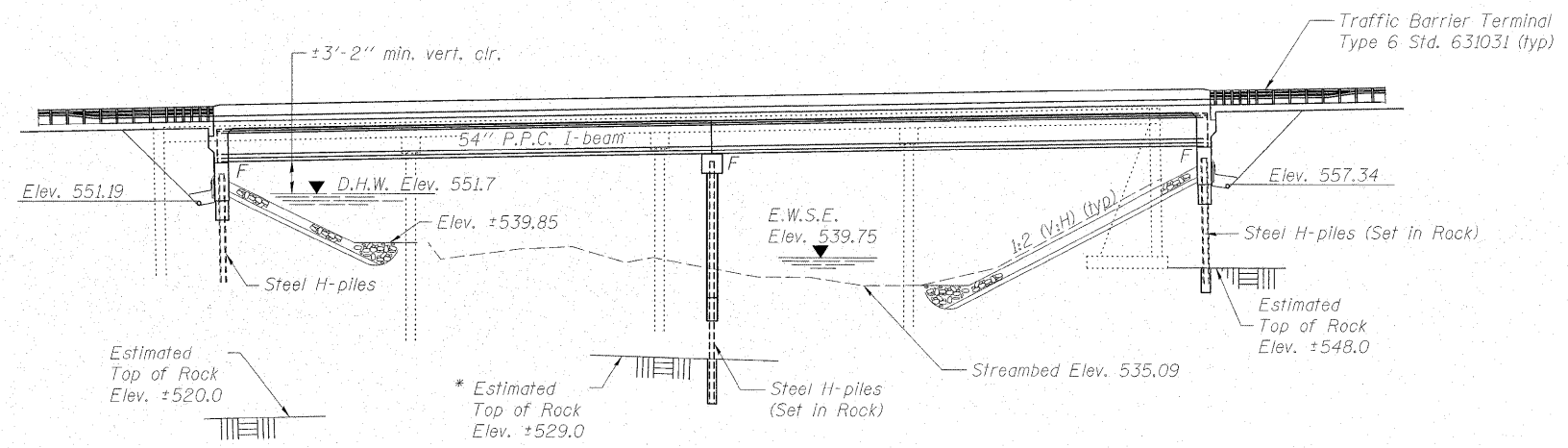
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 2801 IL 128	(102B) B-1	EFFINGHAM	51	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract # 74232

Bench Mark #529- Chiseled square on top of SE wingwall of bridge over Wolf Creek (S.N. 025-0046) Station 975+61.9, 18.0' Lt. of  $\bar{C}$  IL 128; Elev. 565.077.

Existing Structure- S.N. 025-0046; Built in 1931 as S.B.I. 128 Section 102B at Station 974+66. Original structure is a 4-span, 7" reinforced concrete over a steel I-beam superstructure supported by a pile bent north abutment and piers, and an open south abutment on a spread footings. The structure was reconstructed in 1979 as S.B.I. 128, Section 102BR. The substructure was partially removed and widened and the superstructure was replaced and widened using PPC deck beams, 191'-10" bk. to bk. abutments, 33'-0" out to out of deck. Structure is to be removed and replaced with a 2-span 54" PPC I beam bridge on integral abutments. One lane traffic is to be maintained using stage construction.

No Salvage-



ELEVATION

\* 1974 Soil Borings at each existing substructure are available upon request

STATION 974+76.00  
BUILT 200 BY  
STATE OF ILLINOIS  
F.A.S. RTE. 2801 SEC. (102B)B-1  
LOADING HL93  
STRUCTURE NO. 025-0105

NAME PLATE  
See Std. 515001

INDEX OF SHEETS

- 1 General Plan & Elevation
- 2 General Notes, Total Bill of Material
- 3 Staging Details
- 4 Temporary Concrete Barrier
- 5-7 Top of Slab Elevations
- 8-9 Top of Approach Slab Elevations
- 10 Superstructure
- 11 Superstructure Details
- 12-13 Diaphragm Details
- 14 Framing Plan
- 15 54" PPC I-Beam
- 16 54" PPC I-Beam Details
- 17 North Abutment
- 18 South Abutment
- 19 Pier
- 20 Steel H-Pile Details
- 21 Bar Splicer Assembly Details
- 22-23 Soil Borings

DESIGN SCOUR ELEVATION TABLE

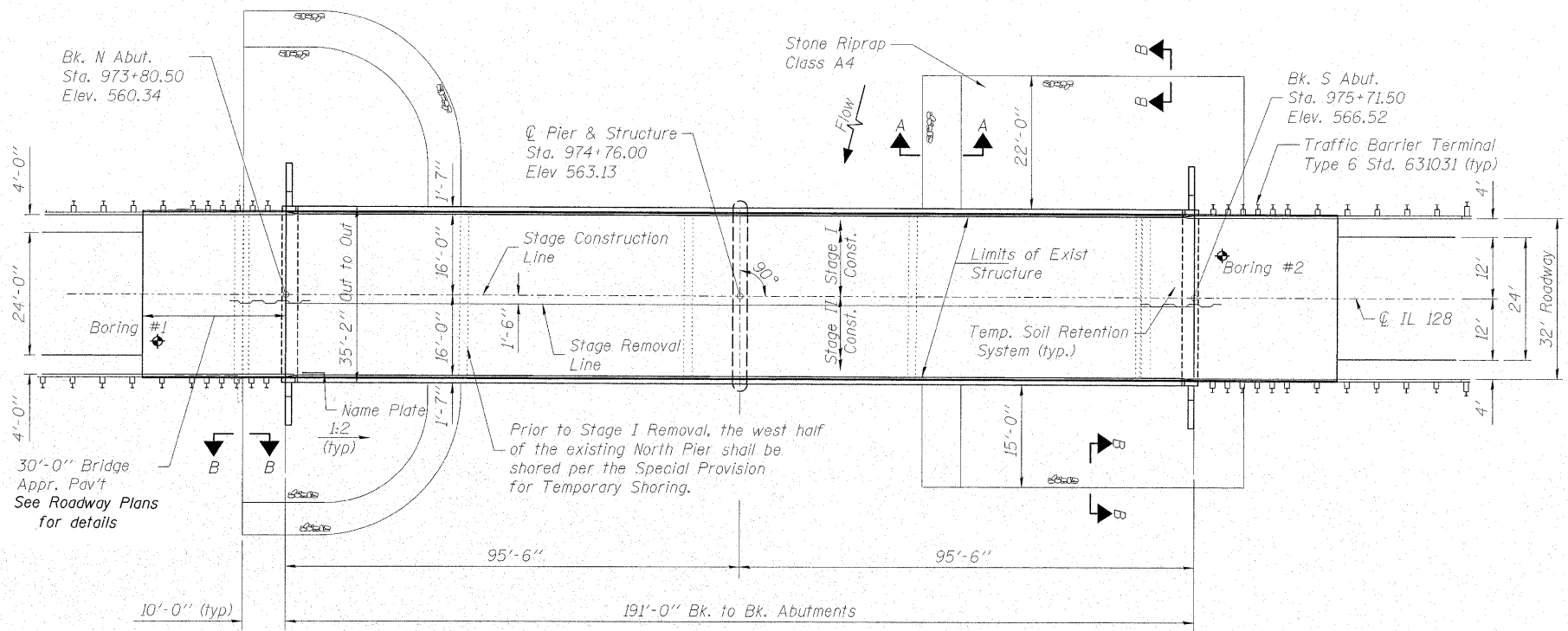
Design Scour Elevation (ft.)	S. Abut.	Pier	N. Abut.
	548.4	529.0	554.5

WATERWAY INFORMATION

Existing Low Grade Elev. = 554.93 @ Sta. 969+24.12  
Proposed Low Grade Elev. = 554.95 @ Sta. 968+50.00  
Drainage Area = 48.7 mi.<sup>2</sup>

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E. Exist.	H.W.E. Prop.	Exist.	Prop.	
Design	10	6220	1477	1484	549.8	1.3	1.3	551.1	551.1
Base	100	11300	1901	1916	552.5	2.1	2.1	554.6	554.6
Overlapping	150	12300	2033	2050	553.0	2.2	2.2	555.2	555.2
Max. Calc.	500	15200	2184	2204	554.2	1.1	1.1	555.3	555.3

10-Year Velocity through Existing Bridge = 4.21 fps  
10-Year Velocity through Proposed Bridge = 4.19 fps



PLAN

APPROVED  
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson  
ENGINEER OF BRIDGES AND STRUCTURES

DESIGN STRESSES

FIELD UNITS  
f<sub>c</sub> = 3,500 psi  
f<sub>y</sub> = 60,000 psi (reinforcement)

PRECAST PRESTRESSED UNITS  
f<sub>c</sub> = 7,000 psi  
f<sub>ci</sub> = 6,000 psi  
f<sub>s</sub> = 270,000 psi (1/2"  $\phi$  low lax strands)  
f<sub>si</sub> = 201,960 psi (1/2"  $\phi$  low lax strands)

SEISMIC DATA

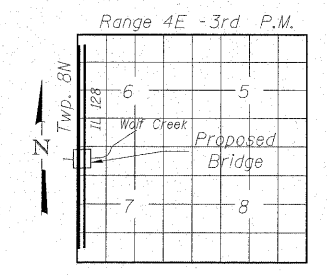
Seismic Performance Zone (SPZ) = 1  
Bedrock Acceleration Coefficient (A) = 0.069 g  
Site Coefficient (S) = 1.5

DESIGN SPECIFICATIONS

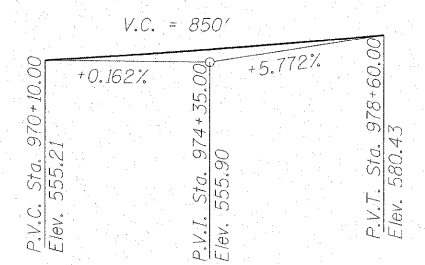
2007 AASHTO LRFD Bridge Design Specifications - 4th ed.

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.



LOCATION SKETCH



PROFILE GRADE  
(along  $\bar{C}$  roadway)

GENERAL PLAN & ELEVATION  
IL ROUTE 128 OVER WOLF CREEK  
F.A.S. RTE. 2801 - SECTION (102B)B-1  
EFFINGHAM COUNTY  
STATION 974+76.00  
STRUCTURE NO. 025-0105

DESIGNED - BAS
CHECKED - KEF
DRAWN - LAD
CHECKED - RJA



Kristen Fields 12-10-08  
Date Signed:  
Exp. Date: 11-30-10