

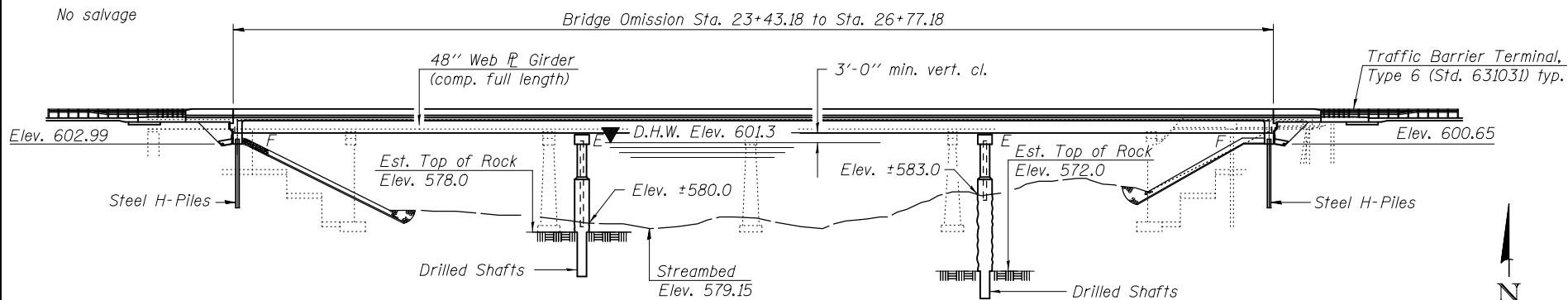
Bench Mark: RR spike in powerpole 64 ft. right of Station±20+88. Elevation 615.94.

Existing Structure: S.N. 053-0071, originally built in 1929 and reconstructed in 1959 as S.B.I. Route 118, Section 102-BR. The existing structure consists of 7 spans- 2 span continuous steel, 3 span continuous steel, and 2 spans continuous reinforced concrete slab. 367'-0" Bk. to Bk. abutments and 33'-8" Out to Out of deck. Structure to be removed and replaced. Traffic to be maintained utilizing stage construction.

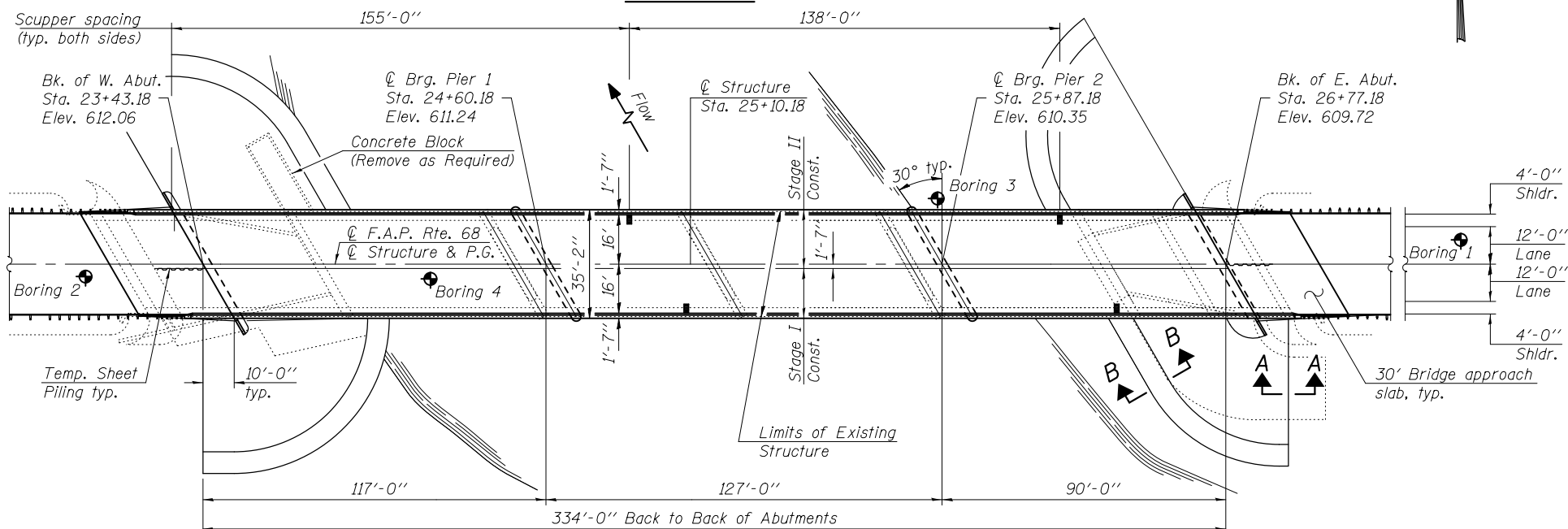
No salvage

DESIGN SCOUR ELEVATION TABLE

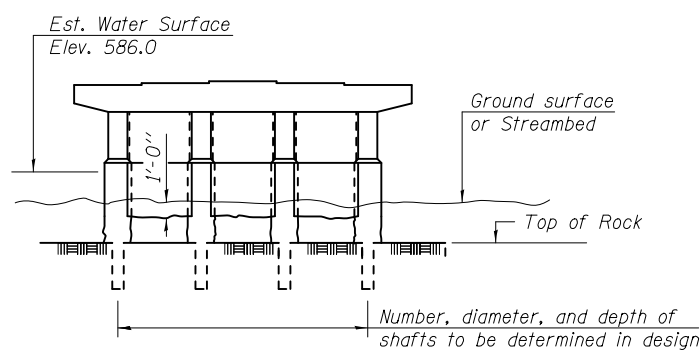
Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	602.99	577.0	571.0	600.65



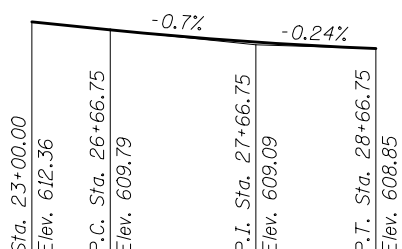
ELEVATION



PLAN



PIER SKETCH



PROFILE GRADE (along Q roadway)

HIGHWAY CLASSIFICATION

F.A.P. Rte. 68 - Il. Rte. 23
 Functional Class: Minor Arterial (Rural)
 ADT: 2050 (1998); 3000 (2018)
 ADTT: 234 (1998) 342 (2018)
 DHV = 210
 Speed: 65 m.p.h (posted); 65 m.p.h. (design)
 Two-way traffic Directional Dist. 50:50

LOADING HL 93

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

DESIGN SPECIFICATIONS

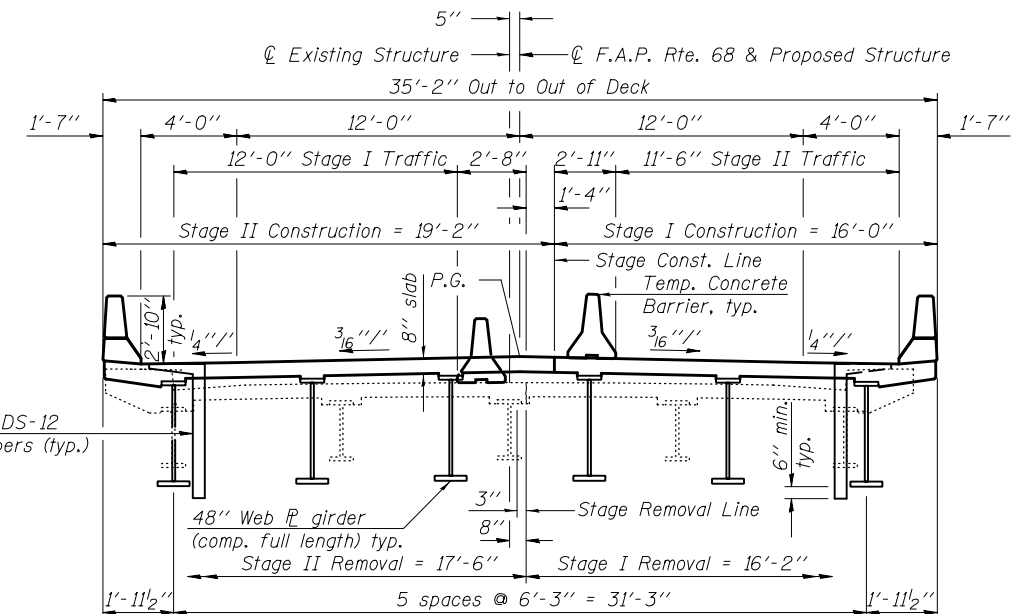
2010 AASHTO LRFD Bridge Design Specifications

DESIGN STRESSES

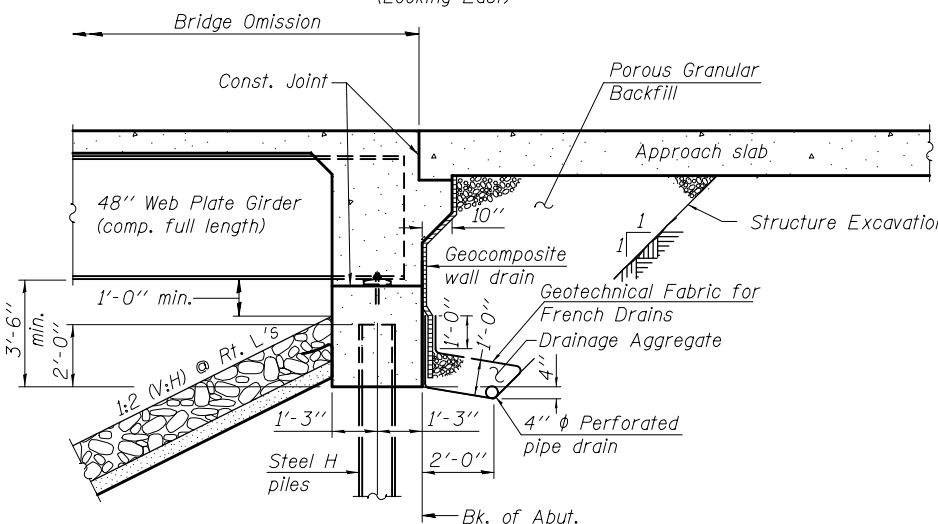
FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50W)

SEISMIC DATA

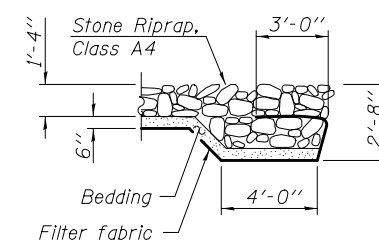
Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.045g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.11g
 Soil Site Class = B



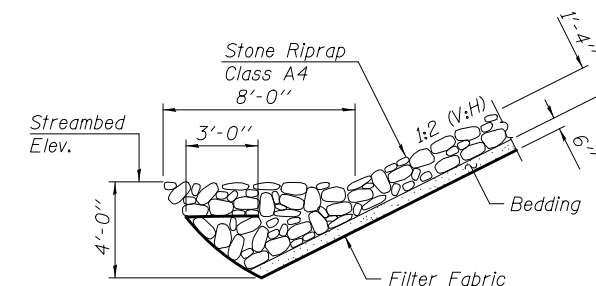
CROSS SECTION (Looking East)



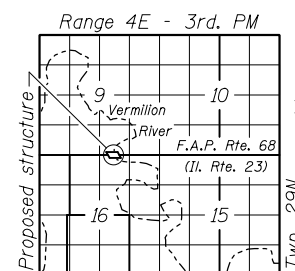
SECTION THRU ABUTMENT (dimensions @ right angles)



SECTION A-A



SECTION B-B



LOCATION SKETCH

GENERAL PLAN & ELEVATION
 ILLINOIS ROUTE 23 OVER VERMILION RIVER
 F.A.P. RTE. 68 - SEC. 102-BR
 LIVINGSTON COUNTY
 STATION 25+10.18
 STRUCTURE NO. 053-0177

WATERWAY INFORMATION

Drainage Area = 832.0 sq. mi. Low Grade Elev. 608.8 ft. @ Sta. 29+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Exist. Prop.	Exist. Prop.
			Exist.	Prop.		Exist.	Prop.		
Design	50	15397	3781	4084	601.3	0.0	0.0	601.3	601.3
Base	100	17127	3941	4443	602.0	0.1	0.0	602.1	602.0
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	21047	4146	4722	603.1	0.1	0.1	603.2	603.2

FILE NAME =	USER NAME =	DESIGNED -	REVISD -
		CHECKED -	REVISD -
	PLOT SCALE =	DRAWN -	REVISD -
	PLOT DATE =	CHECKED -	REVISD -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 1 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	102-BR	LIVINGSTON		
CONTRACT NO. 66104				

ILLINOIS FED. AID PROJECT

D-93-049-01