

BENCHMARK: BM 601 - Chiseled square on top of southwest corner of northwest wingwall SN 026-0018 (WB), station 538+10, 20.3' LT of WBL, elev. 498.425 (NAVD 88)

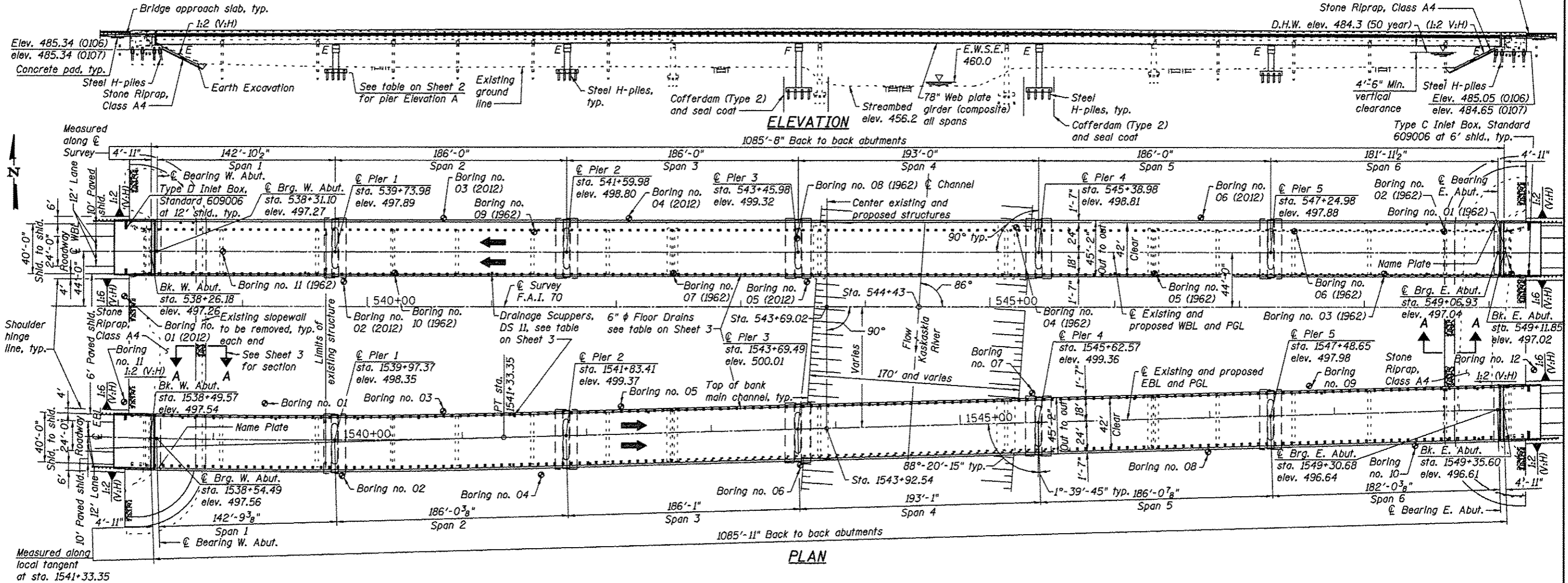
EXISTING STRUCTURE: SNO26-0018 (WB) was originally built in 1965 as F.A.I. Route 70, Section 26-3B-1(2). It was rehabilitated in 1988 to remove safety walks and to construct concrete parapets as part of Section [(26-3B)-1(2),-2(2)]I-2. The structure is 1097'-0" long back-to-back of abutments, and the deck is 36'-10" wide. The structure is 15 spans. The three main spans over the river are 64" web plate girders, and the other spans are rolled steel beams. The bridge has open abutments on metal shell piles and four solid shaft piers on timber piles. The other piers are pile bents on metal shell piles. There is no skew.

EXISTING STRUCTURE: SNO26-0085 (EB) was originally built in 1974 as FAI Route 70, Section 115BR. The structure is 1097'-5 3/8" long back-to-back of abutments, and the deck is 42'-0" wide. The structure is 15 spans. The three main spans over the river are 64" web plate girders, and the other spans are rolled steel beams. The bridge has open abutments on concrete piles and four solid shaft piers on timber piles. The other piers are pile bents on metal shell piles. A horizontal curve is incorporated into the west end of the bridge. The structure is skewed 01°-39'-45".

Traffic shall be maintained utilizing temporary crossovers.

No salvage.

Traffic Barrier Terminal, Type 6 (std. 631031) at approach ends and at outside exit ends



WATERWAY INFORMATION

Drainage Area = 1940 Sq. Mi.		Exist. Low Grade Elev. = 493.60 Ft. @ Sta. 556+00		Prop. Low Grade Elev. = 493.60 Ft. @ Sta. 556+00		
Flood	Freq. Yr.	Q CFS	Opening-Sq. Ft.	Nat. HWE	Head-Ft.	Headwater El.
			Exist. Prop.	Exist. Prop.	Exist. Prop.	Exist. Prop.
10	28800	13140	13420	483.0	0.4	483.4
Design	50	43800	14460	14760	484.3	0.5
Base	100	50500	14860	15180	484.7	0.6
Overtop						
Max. Calc.	500	68400	15780	16110	485.6	0.8

10 Year velocity through existing structures = 2.2 FPS
10 Year velocity through proposed structures = 2.1 FPS

SN 026-0106 DESIGN SCOUR ELEVATIONS (ft.)

	W. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	E. Abut.
Q100	485.3	465.0	465.1	440.2	440.2	462.2	485.0
Q500	485.3	461.0	461.1	440.2	440.2	458.2	485.0

SN 026-0107 DESIGN SCOUR ELEVATIONS (ft.)

	W. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	E. Abut.
Q100	485.3	464.6	465.8	440.2	440.2	464.0	484.6
Q500	485.3	460.6	461.8	440.2	440.2	460.0	484.6

EBL CURVE DATA

PI sta. 1530+45.15
Δ = 22°-14'-33" (LT)
D = 1°-00'-32"
R = 5,678.71'
T = 1,116.30'
L = 2,204.50'
E = 108.68'
S.E. = 0.041'
S.E. transition = sta. 1540+93.35
to sta. 1542+60.23
PC sta. 1519+28.85
PT sta. 1541+33.35

APPROVED
For Structural Adequacy Only

A. Carl Ruyter
Engineer of Bridges & Structures

DESIGN SPECIFICATIONS

2012 AASHTO LRFD
Bridge Design Specifications
6th Edition

LOADING HL-93

Allow 50 psf for future wearing surface

DESIGN STRESSES

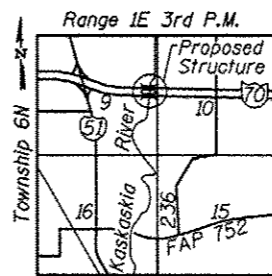
FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (reinf.)
fy = 50,000 psi (M270 Grade 50)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec (SD1) = 0.229g
Design Spectral Acceleration at 0.2 sec (SD2) = 0.509g
Soil Site Class = D

This seal applies only to sheets 81-193



LOCATION SKETCH



EXPIRES 11-30-14

A. Carl Ruyter
SIGNATURE

01-28-14
DATE

GENERAL PLAN & ELEVATION
I-70 OVER KASKASKIA RIVER

PUBLIC WATER

F.A.I. RTE. 70 SEC. (26-3B-1, 3B-1(3))BR

FAYETTE COUNTY

STA. 543+69.02 SN 026-0106 (WB)

STA. 1543+92.54 SN 026-0107 (EB)



USER NAME = has	DESIGNED - ELH 08/13	REVISED -
ESCA PROJECT NO. 1878.89	CHECKED - RDP 08/13	REVISED -
PLOT SCALE = 1/2" = 1' IN.	DRAWN - HAS/DWH 08/13	REVISED -
PLOT DATE = 1/27/2014	CHECKED - ELH 08/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	(26-3B-1, 3B-1(3))BR	FAYETTE	277	81
CONTRACT NO. 74175				