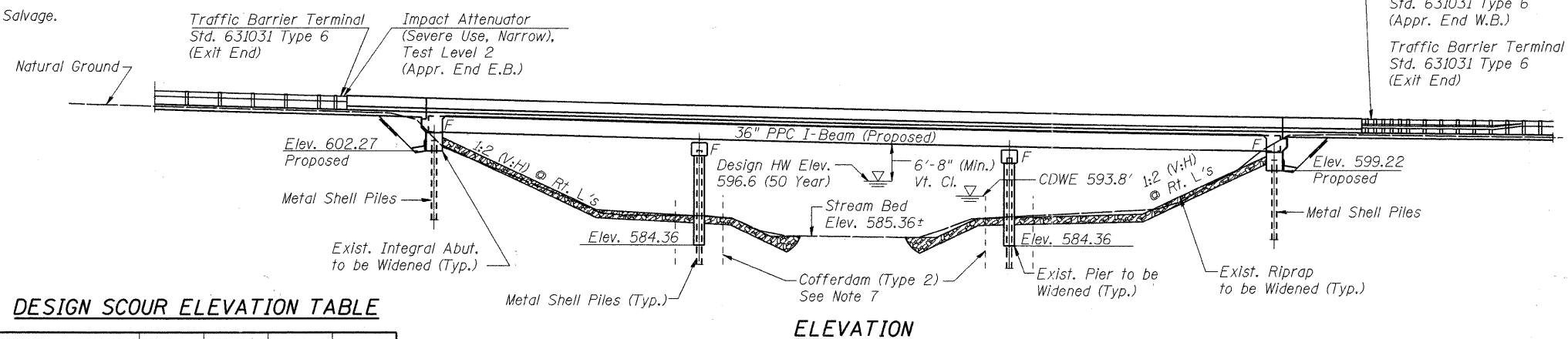


Bench Mark (BM#299): Railroad spike in power pole, North side of center line US 34
Sta. 59+72.36, Offset 49.27' Lt., Elev. 646.929

Bench Mark 2 (#511): Found chiseled "□" on Southeasterly wing wall
of US Route 34 Bridge over Big Rock Creek.
Northing 1819849.8740; Easting 932197.7414;
Elev. 606.99. Sta. 21+36.9 Offset 22.5' RT.

Existing Structure: The existing bridge S.N. 047-0051 was built in 1990 under Section 14BR-1, Contract 86105, Fed. Aid #EF-591(7) by IDOT. The bridge has three spans with 36" PPC I-Beams on integral abutments and pile bent piers. It has a roadway width of 40'-0" (43'-2" Out to Out) and a total length of 162'-1 5/8". The existing bridge is to be widened in kind. Traffic is to be maintained by utilizing stage construction.

No Salvage.



DESIGN SCOUR ELEVATION TABLE

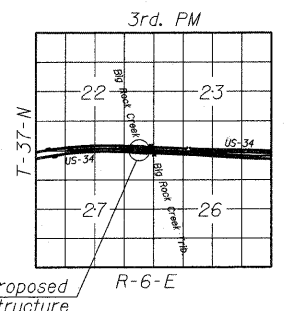
Design Scour Elevation (ft)	W. Abut.	Pier 1	Pier 2	E. Abut.
	602.27	577.52	577.52	599.22

STATION 20+48.83
RE-BUILT 201 BY
STATE OF ILLINOIS
F.A.P. RT. 591 SEC 14BR-1
LOADING HS-20
STRUCTURE NO. 047-0051

NAME PLATE

See Std. 515001

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.



LOADING HS20-44

Allow 25#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS (Prop. & Exist.)

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

PRECAST PRESTRESSED UNITS (Prop.)

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f'_s = 270,000$ psi ($1/2$ " low lax. strands)
 $f_{si} = 201,960$ psi ($1/2$ " low lax. strands)

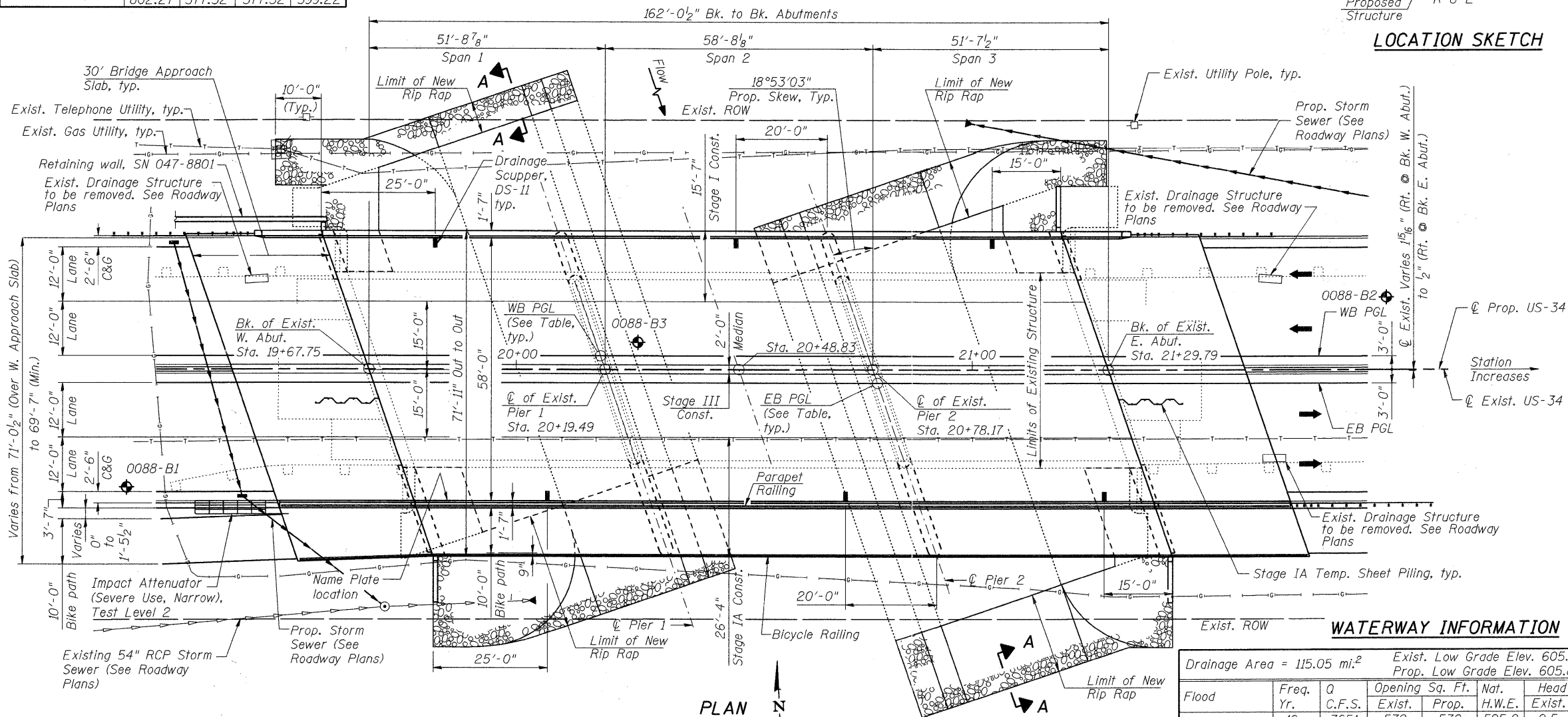
PRECAST PRESTRESSED UNITS (Exist.)

$f'_c = 6,000$ psi
 $f'_{ci} = 4,300$ psi (Spans 1 & 3)
 $f'_{ci} = 4,600$ psi (Span 2)
 $f'_s = 270,000$ psi ($1/2$ " strands)
 $f_{si} = 189,000$ psi ($1/2$ " strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0

	Station	Survey Elevation at PGL's
Bk. West Abut. at WB PGL	19+66.72	610.64
Bk. West Abut. at EB PGL	19+68.78	610.59
CL Pier 1 at WB PGL	20+18.46	609.27
CL Pier 1 at EB PGL	20+20.52	609.22
CL Pier 2 at WB PGL	20+77.14	608.06
CL Pier 2 at EB PGL	20+79.20	608.02
Bk. East Abut. at WB PGL	21+28.76	607.27
Bk. East Abut. at EB PGL	21+30.82	607.24



WATERWAY INFORMATION

Drainage Area = 115.05 mi.² Exist. Low Grade Elev. 605.46 @ Sta. 23+50
Prop. Low Grade Elev. 605.84 @ Sta. 23+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E. Exist.	Prop.	Exist.	Prop.	
Design	10	3651	572	572	595.2	0.5	0.6	595.7	595.8
Base	50	5306	743	743	596.6	0.6	0.9	597.1	597.5
Overtopping	100	5949	808	808	597.1	0.7	1.0	597.8	598.1
Max. Calc.	500	7502	940	940	598.1	1.0	1.3	599.1	599.4

LEGEND

Indicates Boring Location

Note:
1. Measurement Tolerances to Existing :
±1 inch for Length
and ±0°25' for Angle

SEC GROUP, INC.
230 WEST MONROE STREET,
SUITE 900
CHICAGO, IL 60606

SEC Group, Inc.
230 West Monroe Street,
Chicago, IL 60606
www.secgroup.com

USER NAME = whood	DESIGNED - MGH	REVISOR -
PLLOT SCALE =	CHECKED - SSM	REVISOR -
PLLOT DATE = 10/14/2011	DRAWN - WJH	REVISOR -
	CHECKED - RGD	REVISOR -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 047-0051

SHEET NO. S-1 OF S-43 SHEETS

F.A.P. RTE. 591	SECTION 14BR-1	COUNTY KENDALL	TOTAL SHEETS 429	SHEET NO. 251
CONTRACT NO. 66985				
ILLINOIS FED. AID PROJECT				

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Michael J. Davis
ENGINEER OF BRIDGES AND STRUCTURES



GENERAL PLAN
F.A.P. 591 (US-34)
OVER BIG ROCK CREEK
SECTION 14BR-1
KENDALL COUNTY
STATION 20+48.83
S.N. 047-0051