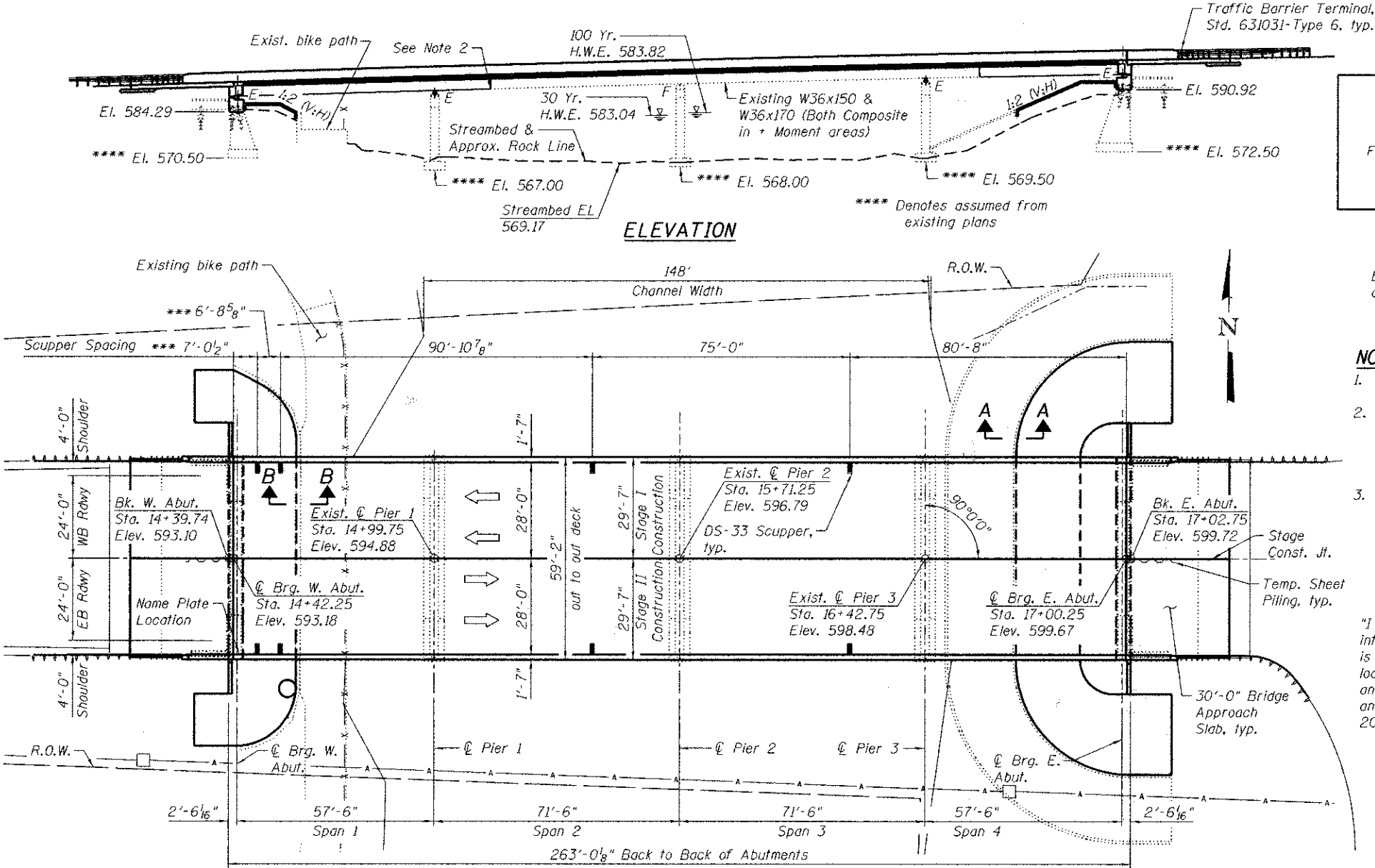


Bench Mark: Chis. "□" on top of S.E. corner of parapet wall on bridge over Du Page River. Elev. 601.96

Existing Structure: Originally constructed in 1958 as F.A.S. Route 301, Sec. 69B at Station 15+71.25 and rehabilitated in 1980 under Section 78-00069-07-BR. The structure consists of a four span (57'-6":71'-6":71'-6":57'-6") reinforced non-composite concrete deck on steel WF beams supported by spill-thru pile bent (widened portions) & buttress (original) abutments and solid wall concrete piers, all set in rock. 262'-0" back to back of abutments. 59'-2" out to out of deck. Concrete deck to be removed and replaced using stage construction.



SCOPE OF WORK:

1. Remove and replace existing concrete deck.
 2. Make new deck composite in positive moment regions.
 3. Reconfigure existing abutments and wingwalls to semi-integral configuration.
 4. Extend existing concrete sloped walls to abutment caps.
 5. Clean, paint and reuse fixed bearings at Pier 2.
 6. Remove and replace all expansion bearings.
 7. Replace steel beams and diaphragms as shown.
 8. Blast clean existing structural steel to remain per SSPC-SP10 & paint with System 1 (02/E/U).
- Note: Existing paint system contains lead. See Special Provisions.

STATION 15+71.25
RE-BUILT 2011 BY
WILL COUNTY
F.A.U. RT. 298 SEC. 04-00069-18-BR
LOADING HS20-44 & PERMIT LOAD
STRUCTURE NO. 099-3031

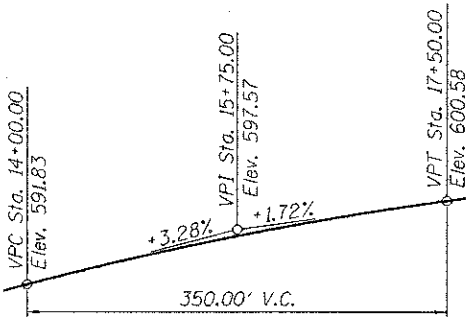
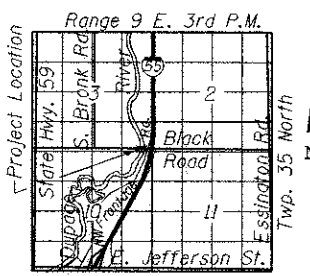
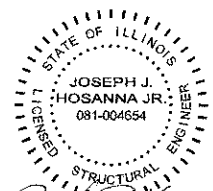
NAME PLATE

See Std. 515001
Existing name plates shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

NOTE:

1. For Section A-A & B-B see Sheet S-23.
2. The Contractor shall support the existing beam ends for an unfactored dead load reaction of 5 kips during structural steel removal. Cost included with "Furnishing and Erecting Structural Steel".
3. Contractor shall not permit debris generated by removal of portions of the existing bridge nor construction of the proposed structure to fall or roll into the river or wetlands at any time during the demolition and construction process.

"I certify that to the best of knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the 2002 AASHTO Standard Specifications."



PROFILE GRADE

LOADING HS20-44 &
IDOT 120K PERMIT TRUCK (NEW CONST.)

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

DESIGN SPECIFICATIONS (NEW CONST.)

2002 AASHTO Standard Specifications, 17th Edition

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.037
Site Coefficient (S) = 1.2

DESIGN STRESSES

FIELD UNITS (New Construction)

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

FIELD UNITS (Existing Construction)

Original: f'c = 3,500 psi
(Beams A-F) fy = 33,000 psi (Structural Steel)
fy = 40,000 psi (Reinforcement)
Widened: f'c = 3,500 psi
(Beams G-K) fy = 36,000 psi (Structural Steel)
fy = 60,000 psi (Reinforcement)

GENERAL PLAN & ELEVATION
BLACK ROAD OVER DU PAGE RIVER
F.A.U 298 - SECTION 04-00069-18-BR
WILL COUNTY
STATION 15+71.25
STRUCTURE NO. 099-3031

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.**	Pier 1*	Pier 2*	Pier 3*	E. Abut.**
	572.08	570.65	569.41	570.79	573.83

* Top of Rock Elevation at Pier Base
** Top of Rock Elevation at Concrete Sloped Wall Base

LEGEND:

— A — Aerial Line

PLAN

WATERWAY INFORMATION

Drainage Area = 322 sq. mi. Prop. Low Grade Elevation: 584.40 @ Sta. 11+51.25									
Flood	Freq. Yr	C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Existing	Proposed		Existing	Proposed	Existing	Proposed
Design	10	6,900			582.21	0.07	0.07	582.28	582.28
Base	30	9,000	2,235	2,235	583.04	0.16	0.16	583.20	583.20
Overtopping	100	11,280	2,433	2,433	583.82	0.27	0.27	584.09	584.09
Max. Calc.									

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