

Bench Mark UES26B: Chiseled "□" in S.E. hubguard of existing structure Sta. 433+55.881, 16.945' Rt, NAVD 88 = 477.098.

Existing Structure:
S.N. 005-0001 built in 1958 under SBI Route 31, Section 10B-1. Existing structure is a four span continuous 96" deep steel two-girder superstructure with floor beams and an 8" reinforced concrete deck with 1.5" bituminous overlay. The substructure consists of vaulted abutments and solid wall piers. 451'-0" bk. to bk. abutments, 35'-8" out to out and a skew of 27°-33'. The traffic shall be maintained on the existing structure during construction. The existing structure shall be removed after completion of the new structure.

No Salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CURVE DATA

Prop. Curve 2
P.I. = Sta. 430+49.42
Δ = 3° 30' 01" Rt.
D = 0° 36' 03"
R = 9,535.00'
T = 291.34'
L = 582.50'
E = 4.45'
e = 2%
T.R. = 53.28'
S.E. Run = 53.28'
P.C. = Sta. 427+58.08
P.T. = Sta. 433+40.58
S.E. Removed Sta. 433+22.82
to Sta. 434+29.38

INDEX OF SHEETS

1. General Plan
2. General Notes & Details
3. Construction Details-1
- 3a. Construction Details-2
- 4-6. Deck Elevations 1-3
7. Approach Slab Elevations
8. Superstructure
9. Superstructure Details
- 10-11. Bridge Approach Slab Details 1-2
12. Preformed Joint Strip Seal
13. Blank Sheet
14. Drainage Scupper, DS-11
15. Framing Plan & Steel Details
16. Miscellaneous Steel Details
17. Bearing Details
18. West Abutment
19. West Abutment Details
20. East Abutment
21. East Abutment Details
22. Pier 1 Details
23. Pier 2 Details
24. Bar Splicer Assembly and Mechanical Splicer Details
25. HP Pile Details
- 26-29. Soil Borings 1-4

LOADING HS20-44

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

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

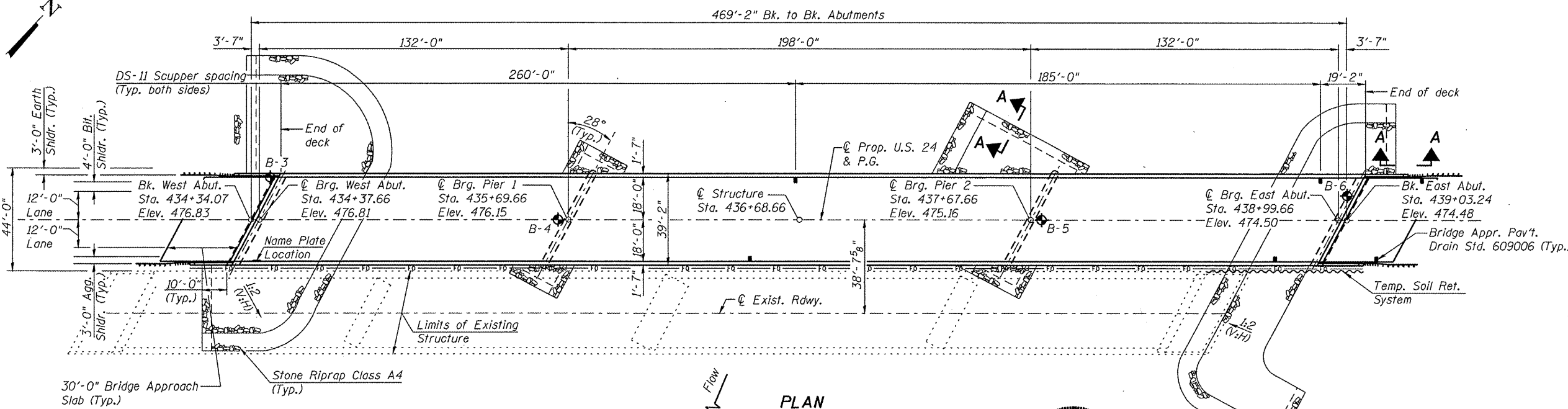
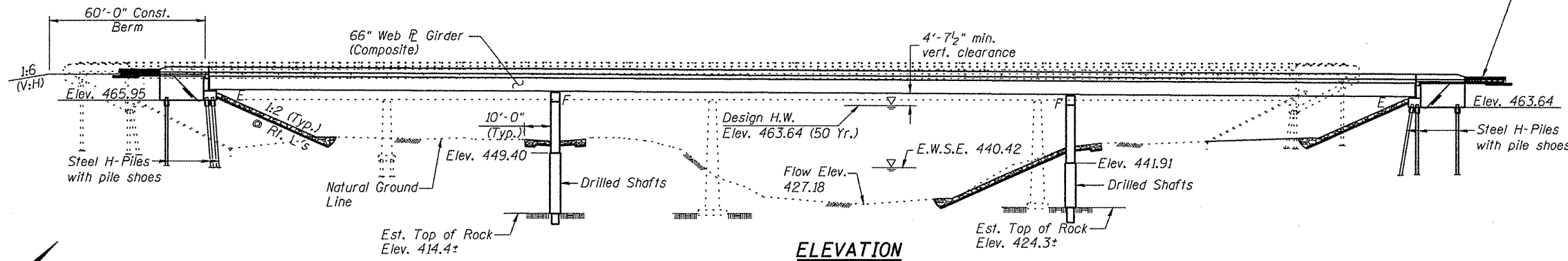
FIELD UNITS

$f_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50)
 $f_y = 36,000$ psi (M270 Grade 36)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.043g
Site Coefficient (S) = 1.0

GENERAL PLAN
US ROUTE 24 OVER LAMOINE RIVER
F.A.P. RTE. 317-SEC. (10B-1)R
BROWN/SCHUYLER COUNTY
STATION 436+68.66
STRUCTURE NO. 005-0500



DESIGN SCOUR ELEVATION TABLE

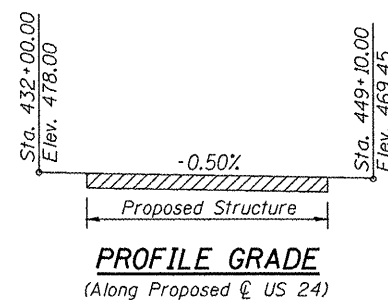
Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	465.9	410.0	417.0	463.6

WATERWAY INFORMATION

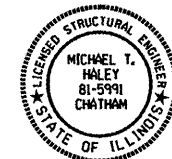
Drainage Area = 1,293 mi² Exist. Low Grade Elev. 473.70 @ Sta. 439+65
Prop. Low Grade Elev. 474.00 @ Sta. 440+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
Design	10	25,800	5,708	5,352	460.27	0.15	0.20	460.42	460.47
Base	50	38,500	6,587	6,624	463.64	0.33	0.42	463.97	464.06
Overturning	100	44,100	6,834	7,154	465.01	0.44	0.50	465.45	465.51
Max. Calc.	500	57,400	6,845	8,022	467.55	1.13	0.86	468.68	468.41

10 Year Velocity through Exist. Bridge = 5.08 fps 10 Year Velocity through Prop. Bridge = 5.09 fps

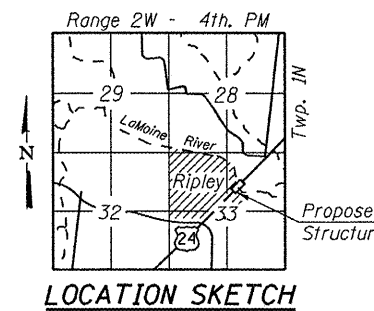


Michael J. Haley 4/28/10
Michael T. Haley
Licensed Structural Engineer
State of Illinois No. 81-5991
Expires 11/30/2010



APPROVED
For Structural Adequacy Only

Ralph E. Anderson (PE)
Engineer of Bridges & Structures



 LIN ENGINEERING, LTD. Consulting Engineers Chatham, Illinois <small>Designed By: ADB Checked By: WTH Drawn By: A.J.F. Date: 06/2009 File: 005-0500.DWG</small>	SHEET NO. 1	F.A.P. RTE. 317	SECTION (10B-1)R	COUNTY BROWN/SCHUYLER	TOTAL SHEETS 196	SHEET NO. 119
	29 SHEETS	CONTRACT NO. 72432		ILLINOIS FED. AID PROJECT		