

0310040-76410-01-6PEL.DGN DEC. 1, 2009

BENCHMARK: T.B.M. Iron Rod Set (by IDOT)
Sta. 230+17.23, 17.4' Rt.
El. 442.931

EXISTING STRUCTURE S.N. 031-0011 was built in 1939 as F.A. Route 155, Section 1B. The existing structure consists of a 6 1/2" concrete deck on 24" steel beams spanning between treated timber abutments on timber piles. The existing structure measures 33'-0" back to back of abutments and 37'-4" out to out of deck. Existing structure to be removed and replaced. The road shall be kept open to one lane of traffic at all times by utilizing stage construction.

SALVAGE: No Salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

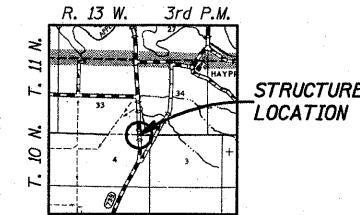
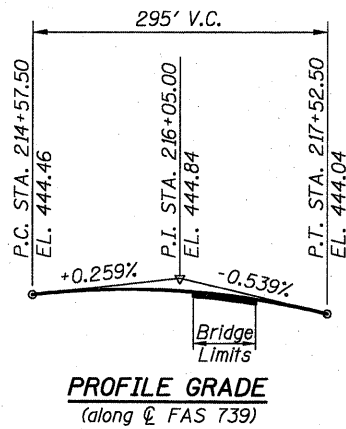
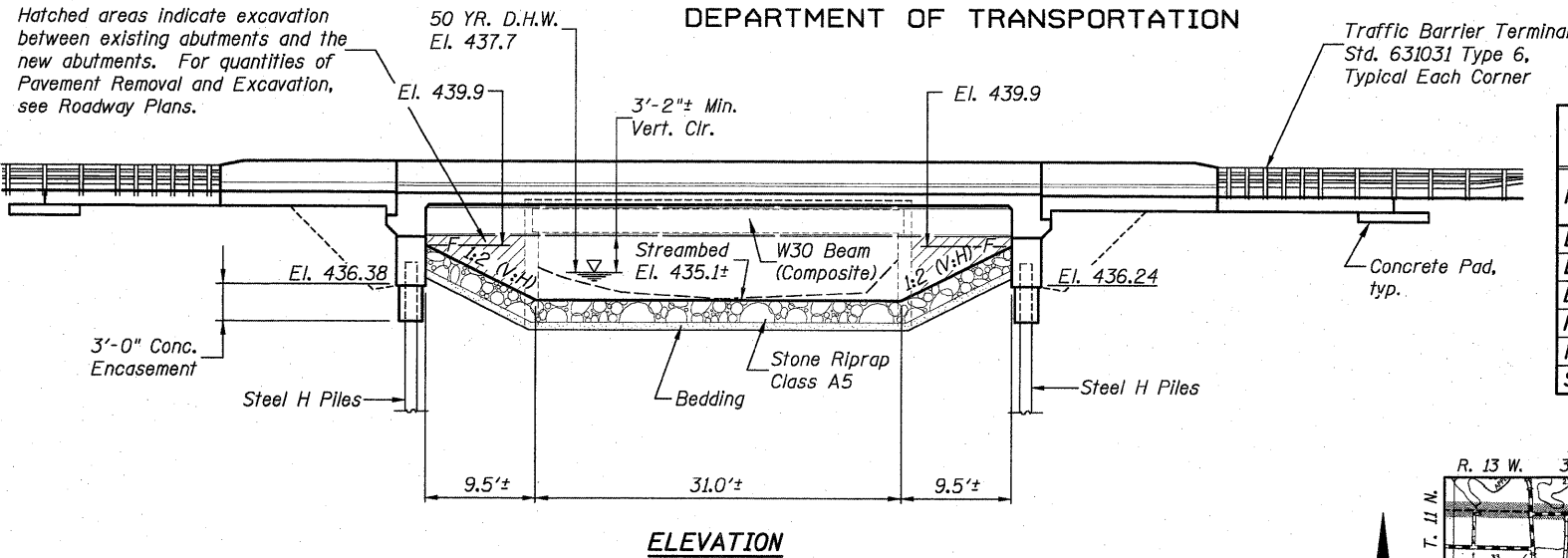
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (Feet)	S. Abut.	N. Abut.
	433.38	433.24

WATERWAY INFORMATION

Drainage Area = 0.77 Sq. Mi. Existing Low Grade El. 443.63 @ Sta. 218+62
Proposed Low Grade El. 443.72 @ Sta. 218+50

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exlst.	Prop.		Exlst.	Prop.	Exlst.	Prop.
Design	50	1,188	37	86	437.70	6.06	4.90	443.76	442.60
Base	100	1,395	39	90	437.80	6.93	5.37	444.73	443.17
Exlst. Overtopping	47	1,160	36	--	437.69	5.94	--	443.63	--
Prop. Overtopping	200	1,610	--	94	437.89	--	5.83	--	443.72
Max. Calc.	500	N/A	--	--	--	--	--	--	--
Scour	10	721	30	75	437.43	4.15	3.86	441.58	441.29



INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
3. Stage Construction Details
4. Temporary Concrete Barrier for Stage Construction
5. Top of Slab Elevations
6. Top of Slab Elevations
7. Top of Slab Elevations
8. Top of South Approach Slab Elevations
9. Top of North Approach Slab Elevations
10. Superstructure
11. Superstructure Details
12. Integral Abutment Diaphragm Details
13. Bridge Approach Slab Details
14. Bridge Approach Slab Details
15. Structural Steel
16. Steel Details
17. South Abutment
18. North Abutment
19. Bar Splicer Assembly Details
20. HP Pile Details
21. Soil Boring Logs

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications w/2008 Interims

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270, Grade 50)
fy = 36,000 psi (M270, Grade 36)

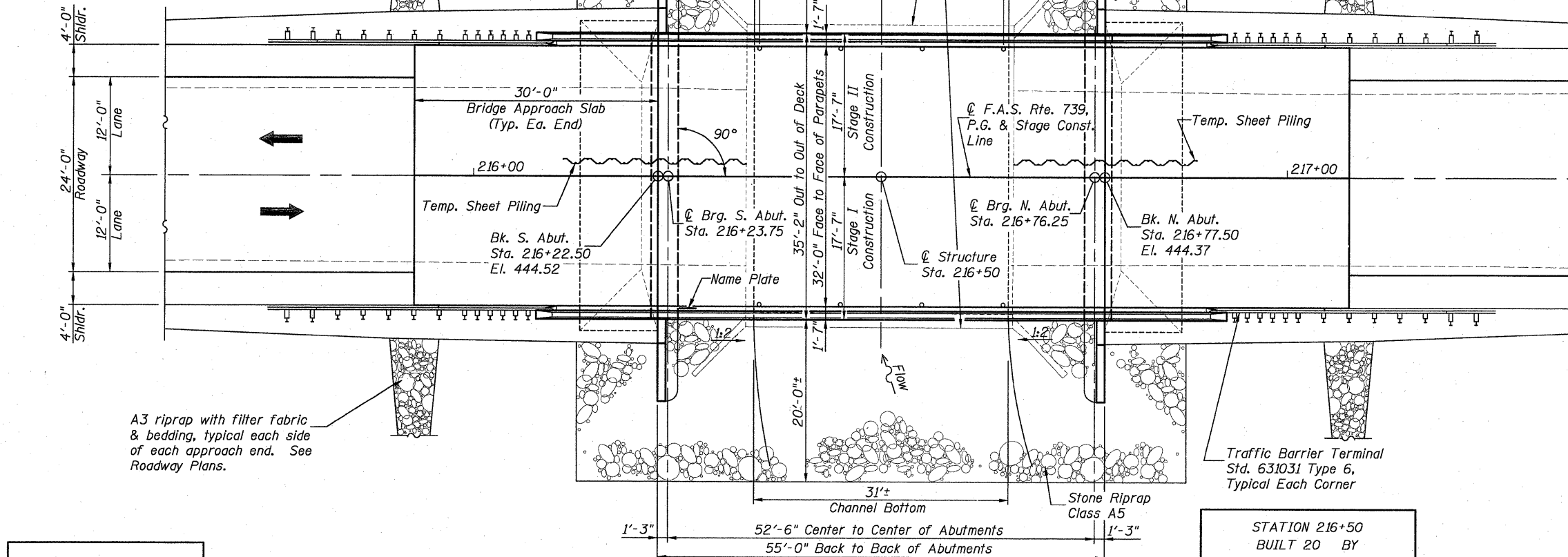
LOADING HL-93

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S₀₁) = 0.160g
Design Spectral Acceleration at 0.2 sec. (S₀₅) = 0.294g
Soil Site Class = D

**GENERAL PLAN & ELEVATION
ELDRED-HILLVIEW ROAD
OVER UNNAMED STREAM
STATION 216+50**



DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

Bradley G. Hummert
Bradley G. Hummert
Licensed Structural Engineer
in Carlyle, Illinois
No. 081-005428, Expires 11/30/2010

Date: 12/1/09



APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

PLAN

STATION 216+50
BUILT 20 BY
STATE OF ILLINOIS
F.A.S. RT. 739 SEC. 1-2BR
LOADING HL93
STRUCTURE NO. 031-0040

NAME PLATE
See Std. 515001

SHEET NO. 1 21 SHEETS	F.A.S. RTE. 739	SECTION 1-2BR	COUNTY GREENE	TOTAL SHEETS 150	SHEET NO. 83
	S.N. 031-0040			CONTRACT NO. 76410	
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		