

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 789	54BR-1	MADISON	62	25
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
25 SHEETS

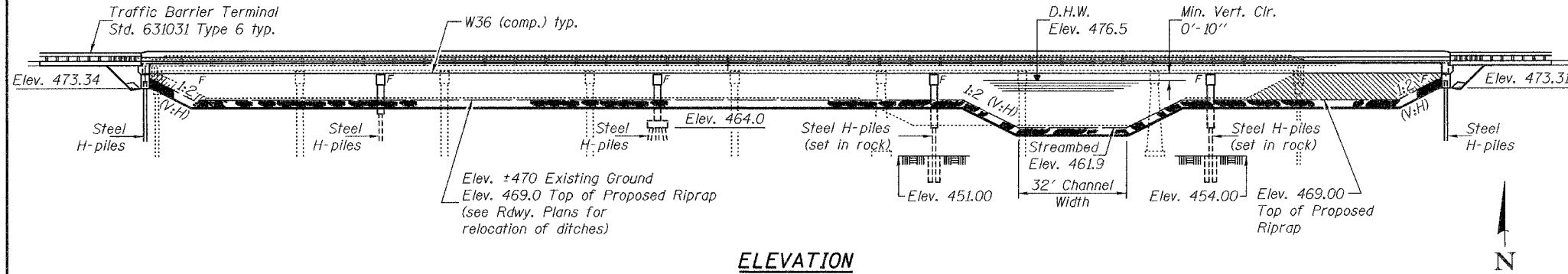
Contract #76864

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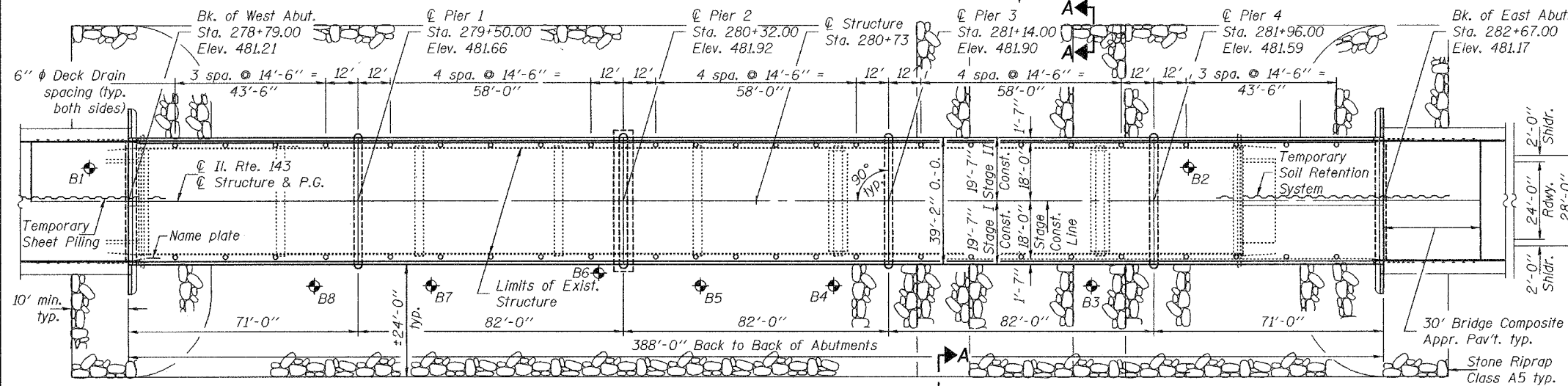
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Bench Mark: Chiseled "□" on S.E. corner of wingwall of structure 060-0149, Elevation 480.08.
Existing Structure: 060-0149 Built as S.A. Rt. 6 Sec. 54-15d at Station 281+40 as a 8 span 341'-5"
Bk.-Bk. abutments, supported on concrete piles. Bridge widening, and superstructure replacement with PPC deck beams in 1971. Existing bridge to be removed and replaced.
Traffic to be maintained utilizing stage construction.

No salvage



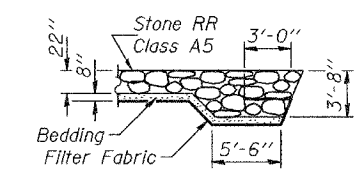
ELEVATION



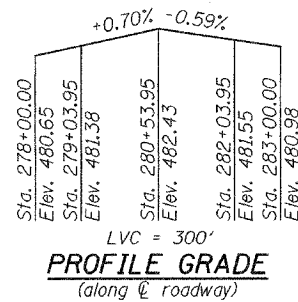
PLAN

STATION 280+73
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RT. 789 SEC. 54BR-1
LOADING HL93
STRUCTURE NO. 060-0340

NAME PLATE
See Std. 515001



SECTION A-A



PROFILE GRADE
(along roadway)

DESIGNED	<i>Chris M. Crox</i>
CHECKED	<i>Neil R...</i>
DRAWN	<i>h.t. duong</i>
CHECKED	<i>CMC NRS</i>

EXAMINED *Thomas J. ...* Nov. 15, 2006
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. ...*
ENGINEER OF BRIDGES AND STRUCTURES

WATERWAY INFORMATION

Exist. Low Grade Elev. 479.1 ft. @ Sta. 277+00
Prop. Low Grade Elev. 479.2 ft. @ Sta. 275+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	3930	1264	1443	475.7	1.3	1.3	477.0	477.0
Base	50	5640	1523	1742	476.5	1.6	1.5	478.1	478.0
Overtop(Exist.)	100	6283	1612	1845	476.8	1.7	1.6	478.5	478.4
Overtop(Prop.)	333	7545	1769		477.3	1.9		479.2	
Overtop(Prop.)	450	7850		2069	477.4		1.8		479.2

10 year velocity through Existing Bridge = 3.1 fps
10 year velocity through Proposed Bridge = 2.7 fps

Design Scour Elevation feet	W. Abutment	Pier 1	Pier 2	Pier 3	Pier 4	E. Abutment
	473.5	456.0	456.0	456.0	456.0	473.5

LOADING HL-93

Allow 50 psf for future wearing surface

DESIGN SPECIFICATIONS

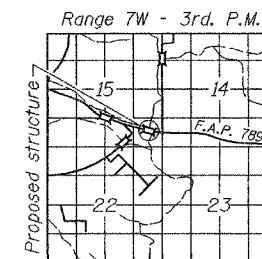
A.A.S.H.T.O. LRFD Bridge Design Specifications U.S., 3rd. Edition - 2004 w/ 2005 Interims

DESIGN STRESSES

$f'_c = 3,500$ psi (cast-in-place)
 $f'_c = 4,500$ psi (precast)
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 50,000$ psi (structural steel M270, GR50W)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Bedrock Acceleration Coefficient (A) = 0.10g
Site Coefficient (S) = 1.5



LOCATION SKETCH

GENERAL PLAN
IL. RTE. 143 OVER SILVER CREEK
F.A.P. RTE. 789 - SEC. 54BR-1
MADISON COUNTY
STATION 280+73
STRUCTURE NO. 060-0340