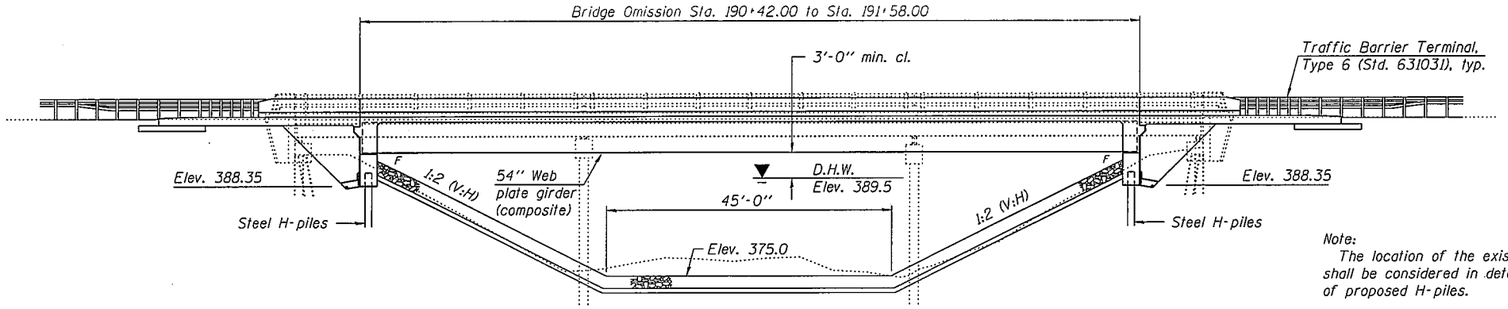
Bench Mark: Cut "□" on top of the SW corner of the SW end of a parapet extension of 073-0013, South side of Route 14 at Sta. 190+28 and 17 ft. right. Elev. 398.69

Existing structure: Struct. No. 073-0013, originally built in 1955 as S.B.I. Rt. 14, Section 2-B2. The existing structure consists of a 3 span continuous steel superstructure supported by pile bent piers and abutments. 137'-0" back to back abutments and 33'-8" out to out of deck. Structure to be be removed and replaced. Traffic to be maintained utilizing stage construction.

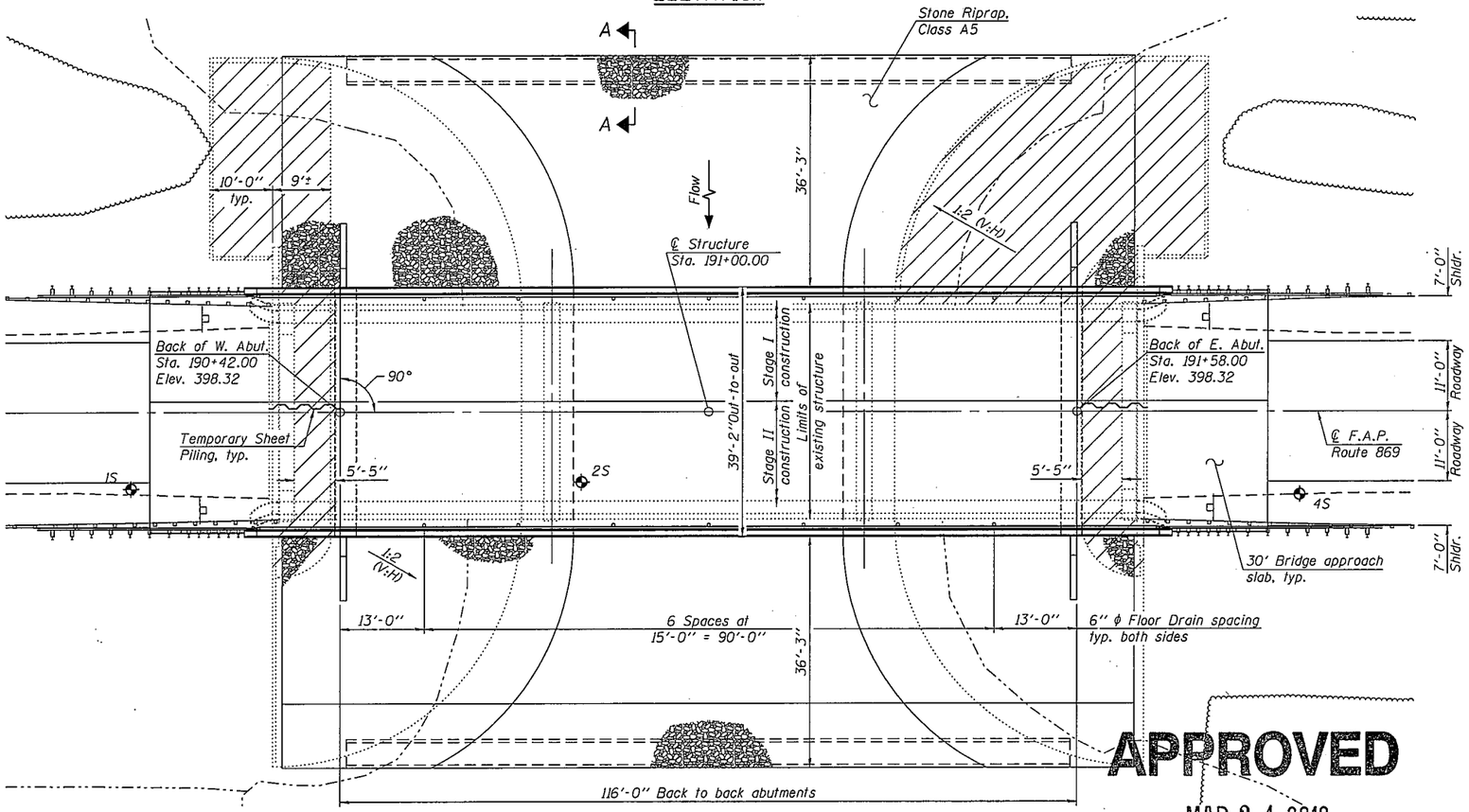
No salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION

Note:
The location of the existing battered piles shall be considered in determining locations of proposed H-piles.



PLAN

Limits of existing concrete slopewall.

HIGHWAY CLASSIFICATION

F.A.P. Rte. 869 - IL Rte. 14
Functional Class: Minor Arterial (Non-Urban)
ADT: 3,760 (2008); 5,070 (2028)
ADTT: 395 (2008); 530 (2028)
DHV: 320
Design Speed: 55 m.p.h.
Posted Speed: 55 m.p.h.
Two-Way Traffic
Directional Distribution: 50:50

LOADING HL-93

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 3
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.324
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.755
Soil Site Class = D

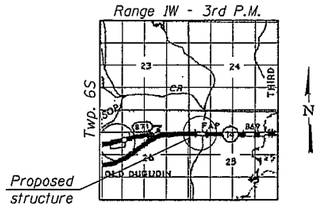
DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 and 2009 Interims

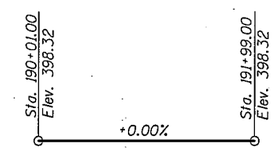
DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (M270 Grade 50W)



LOCATION SKETCH



PROFILE GRADE
(Along ℄ roadway)

GENERAL PLAN AND ELEVATION
ILLINOIS ROUTE 14 OVER REESE CREEK
F.A.P. RT. 869 - SEC. 1B-2
PERRY COUNTY
STATION 191+00.00
STRUCTURE NO. 073-0036

APPROVED
MAR 2 4 2010
AS A BASIS FOR PREPARATION OF DETAILED PLANS

DESIGNED	Dhruv P. Narielwala
CHECKED	Tom L. Kurtenbach
DRAWN	Michael B. Mossman
CHECKED	Tim A. Craven

SHEET NO. 1	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2 SHEETS	869	1B-2	PERRY		
			CONTRACT NO. 98797		
		ILLINOIS	FED. AID PROJECT		

3-23-2010

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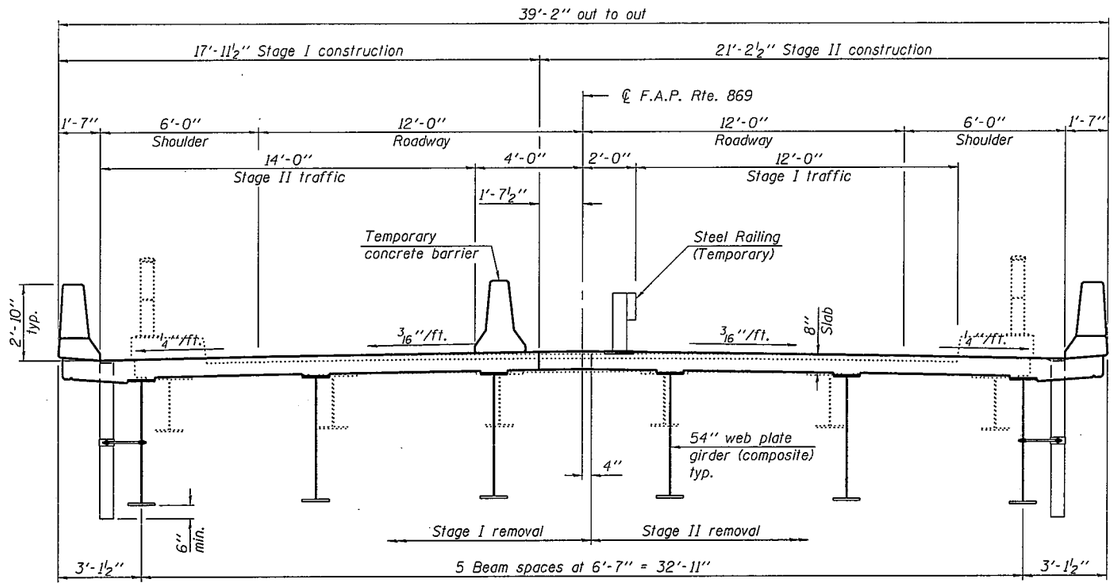
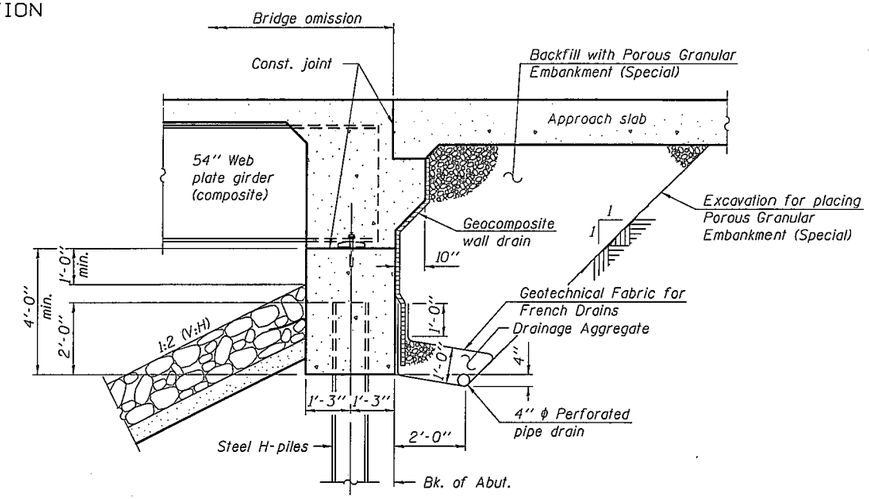
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



CROSS SECTION
(Looking East)

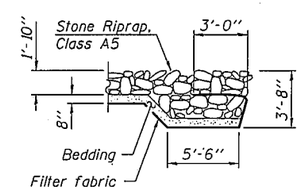


SECTION THRU INTEGRAL ABUTMENT

APPROVED

MAR 2 4 2010

AS A BASIS FOR
PREPARATION OF DETAILED PLANS



SECTION A-A

DESIGN SCOUR ELEVATION TABLE

Design scour elevation (ft.)	W. Abut.	E. Abut.
	385.35	385.35

WATERWAY INFORMATION

Drainage Area = 201.2 mi.²

Existing Low Grade Elev. 396.29 @ Sta. 238+00
Proposed Low Grade Elev. 396.39 @ Sta. 238+00

Flood	Freq. Yr.	Structure Number	Q - C.F.S. Exist.	Q - C.F.S. Prop.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	073-0013 (E) 073-0036 (P)	6015	6365	900	952	388.3	0.8	0.7	389.1	389.0
		*Total	11130		1661.0	1768.0					
Design	50	073-0013 (E) 073-0036 (P)	9090	9155	1020	1073	389.5	1.5	1.2	391.0	390.7
		*Total	17010		1968.0	2076.0					
Base	100	073-0013 (E) 073-0036 (P)	10490	10615	1075	1125	390.0	1.9	1.5	391.9	391.5
		*Total	19540		2106.0	2211.0					
Max. Calc.	500	073-0013 (E) 073-0036 (P)	13860	14250	1190	1243	391.1	2.8	2.3	393.9	393.4
		*Total	26040		2398.0	2511.0					

10 year velocity through existing bridge = 6.7 ft/s
10 year velocity through proposed bridge = 6.8 ft/s

* Three additional structures (SN 028-0015 (E), SN 073-2000 (E), and SN 028-2005 (E) contribute to the flow conveyance of this drainage area.

GENERAL PLAN AND ELEVATION
ILLINOIS ROUTE 14 OVER REESE CREEK
F.A.P. RT. 869 - SEC. 1B-2
PERRY COUNTY
STATION 191+00.00
STRUCTURE NO. 073-0036

DESIGNED	Dhruv P. Narielwala
CHECKED	Tom L. Kurtenbach
DRAWN	Michael B. Mossman
CHECKED	Tim A. Craven

SHEET NO. 2	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2 SHEETS	869	1B-2	PERRY		
			CONTRACT NO. 98797		
		ILLINOIS	FED. AID PROJECT		

3-23-2010

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