ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
-				
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1
2 SHEETS

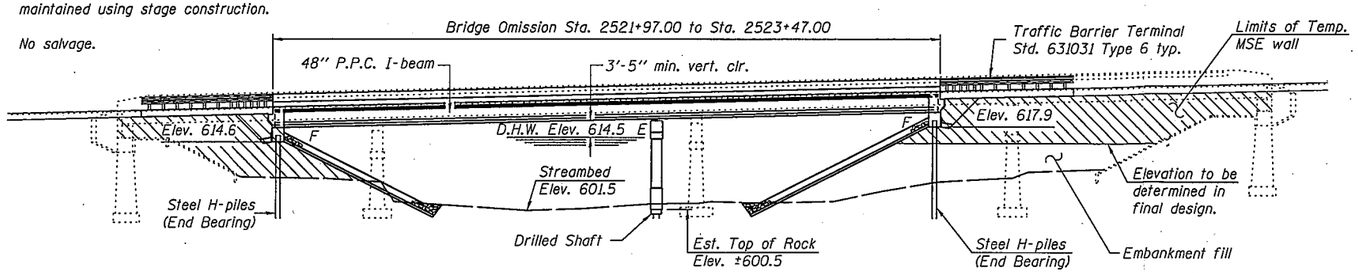
Contract #

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

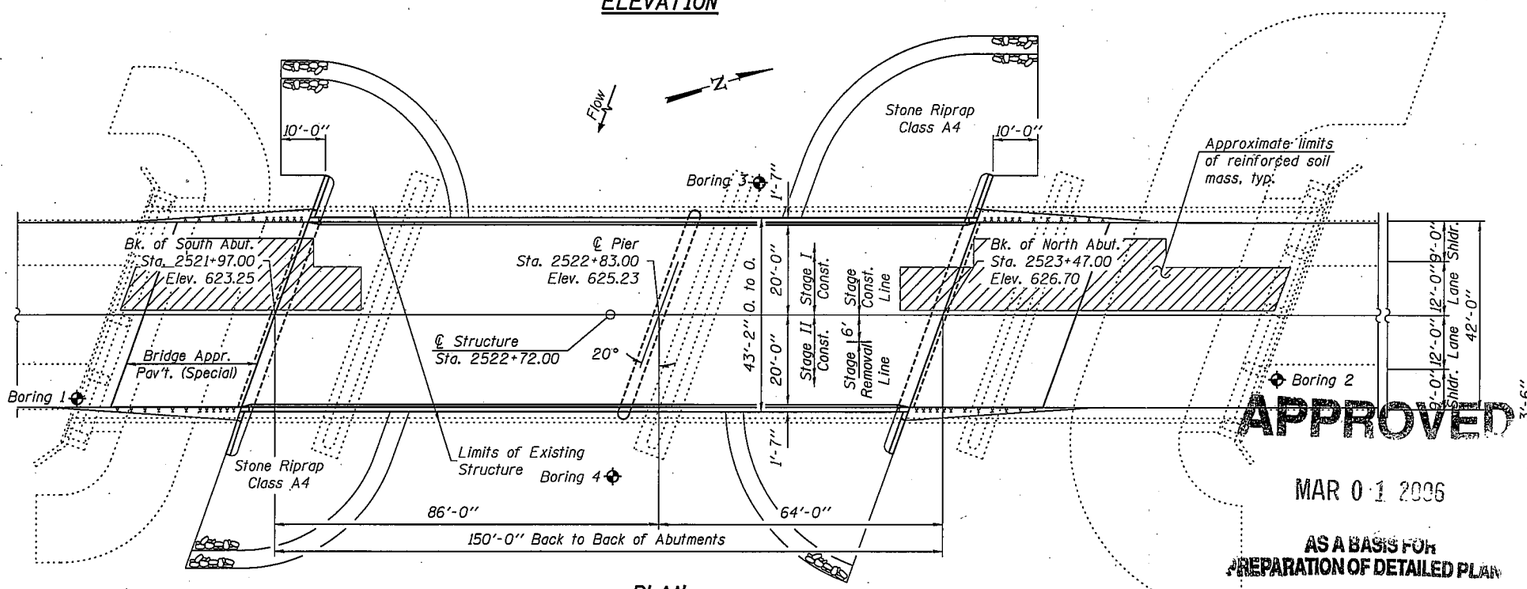
Bench Mark: 4584-15 Chiseled square located on the top of the southwest wingwall of the existing structure. Elev. 621.67

Existing Structure: S.N. 092-0041, originally built in 1936 as S.B.I. Route 1, Section 47B-WPH. In 1971, the superstructure was replaced and the substructure was modified as F.A. 1, Section 47BR. The existing structure is a four span PPC deck beam bridge supported on spill-thru, counterforted abutments and solid stem piers on spread footings. The back to back abutments measures 265'-11" and 48'-0" out to out of deck. The existing structure is to be removed and replaced. Traffic to be maintained using stage construction.

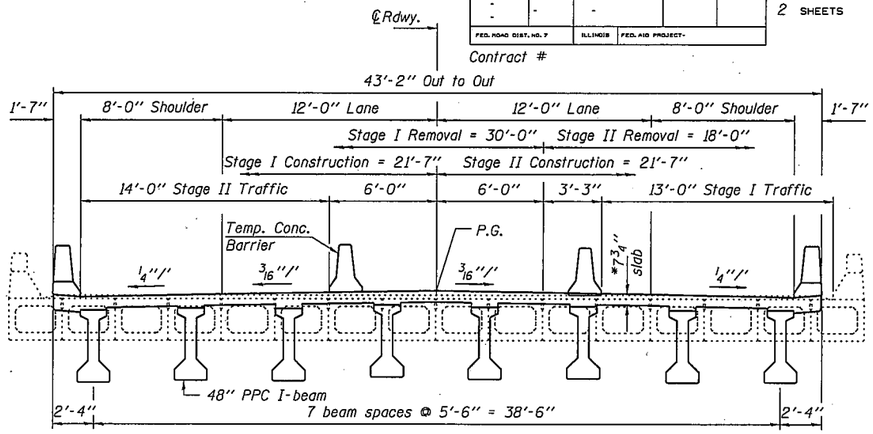
No salvage.



ELEVATION

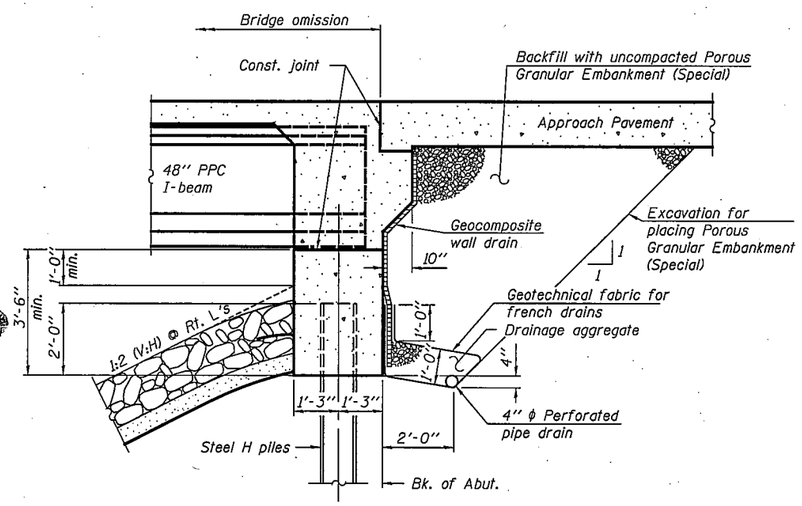


PLAN



*Use Bridge Smoothness Specification

CROSS SECTION
(Looking North)



SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

Design Scour Elev.	S. Abut.	Pier	N. Abut.
	614.6	600.5	617.9

APPROVED
MAR 01 2006
AS A BASIS FOR PREPARATION OF DETAILED PLAN

LOADING HL-93
Allow 50 psf for future wearing surface

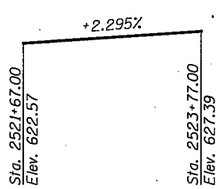
DESIGN SPECIFICATIONS
2004 AASHTO LRFD Bridge Design Specifications with 2005 Interims

DESIGN STRESSES
FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)

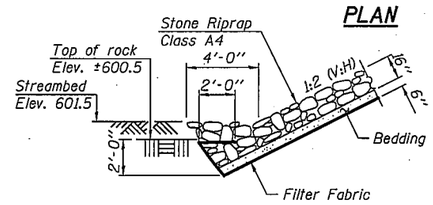
PRECAST PRESTRESSED UNITS
f'_c = 6,000 psi
f'_{ci} = 5,000 psi
f'_s = 270,000 psi (1/2" dia. low lax strands)
f_{si} = 201,960 psi (1/2" dia. low lax strands)

SEISMIC DATA
Seismic Performance Zone (SPZ) = 1
Bedrock Acceleration Coefficient (A) = 0.047g
Site Coefficient (S) = 1.0

HIGHWAY CLASSIFICATION
F.A.P. Rte. 332 - Il. Rte. 1
Functional Class - Principal Arterial (Other)
A.D.T.: 5900 (2004) 6600 (2024)
D.H.V.: 495
Design Speed : 60 mph
Posted Speed : 55 mph



PROFILE GRADE

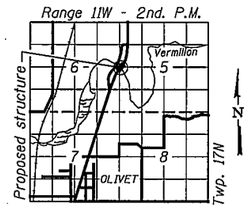


STONE RIPRAP ANCHOR DETAIL

WATERWAY INFORMATION
Low Grade Elev. 619.54 @ Sta. 2519+00

Drainage Area = 158.74 sq. mi. Low Grade Elev. 619.54 @ Sta. 2519+00

Flood	Freq. Yr.	Q C.F.S.	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	4027	1411	970	613.3	0	0.1	613.3	613.4
Design	50	5709	1648	1106	614.5	0	0.2	614.5	614.7
Base	100	6376	1729	1153	614.9	0	0.3	614.9	615.2
Overtopping									
Max. Calc.	500	7906	1894	1248	615.7	0	0.3	615.7	616.0



LOCATION SKETCH

GENERAL PLAN
U.S. RTE. 150 / IL. RTE. 1 OVER LITTLE VERMILION RIVER
F.A.P. RTE. 332 - SEC. 47BR-2
VERMILION COUNTY
STATION 2522+72.00
STRUCTURE NO. 092-0206

DESIGNED	J.A. Elston
CHECKED	A. Siudyla
DRAWN	W.D. Collins
CHECKED	B.V. Garde

- 200

EXAMINED
ENGINEER OF BRIDGE DESIGN

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

3-1-06

D-95-060-04

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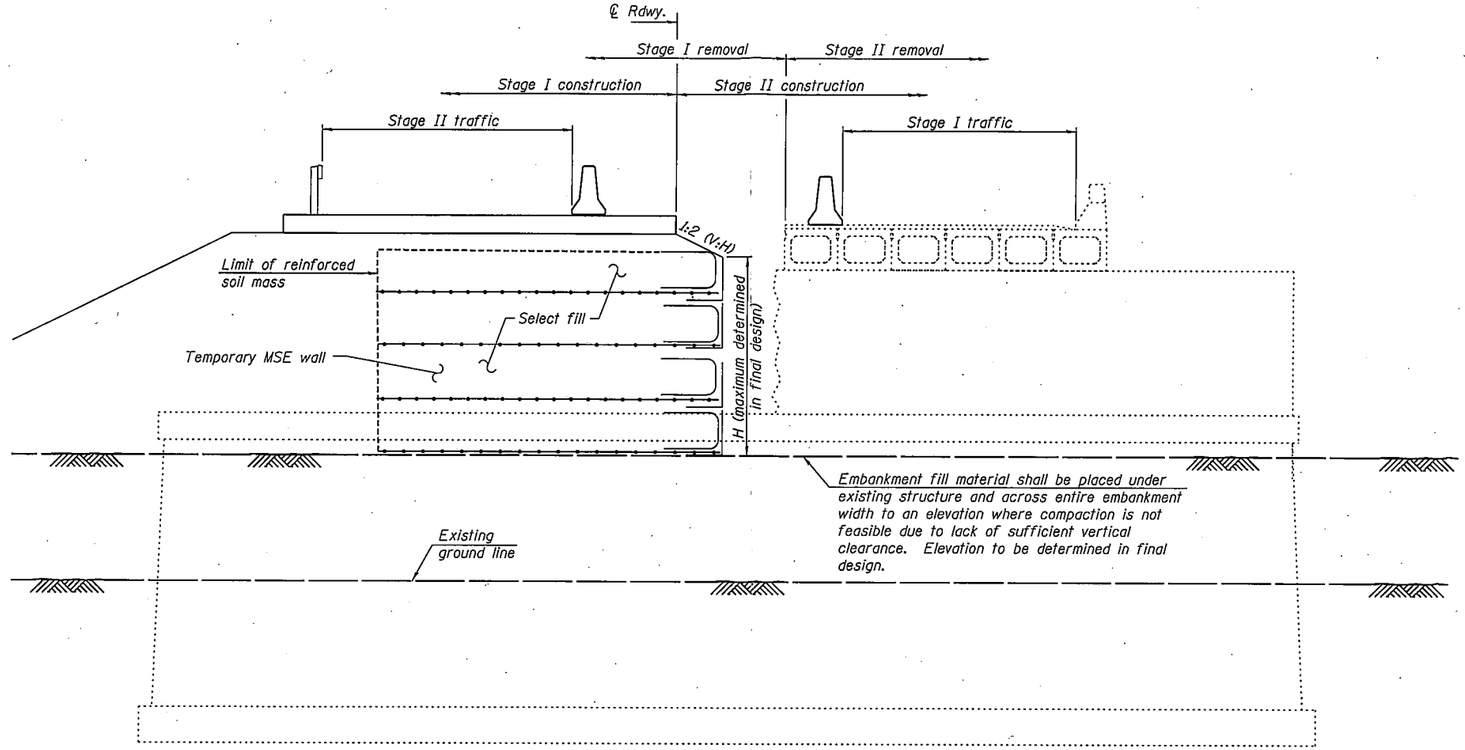
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

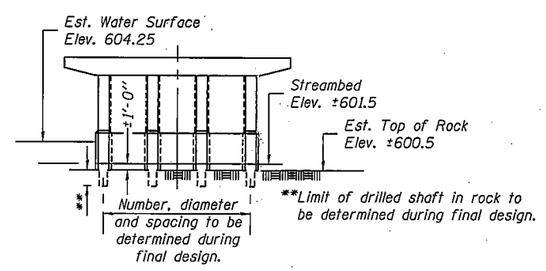
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 2
2 SHEETS

Contract #



TEMPORARY MSE WALL DETAIL



PIER SKETCH

DESIGNED	J.A. Elston
CHECKED	A. Siudyla
DRAWN	W.D. Collins
CHECKED	B.V. Garde

- 200

EXAMINED
ENGINEER OF BRIDGE DESIGN

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

GENERAL PLAN
U.S. RTE. 150 / IL. RTE. 1 OVER
LITTLE VERMILION RIVER
F.A.P. RTE. 332 - SEC. 47BR-2
VERMILION COUNTY
STATION 2522+72.00
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3-1-06

D-95-060-04

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