APPROVED

APR 1 0 2006

AS A BASIS FOR
PREPARATION OF DETAILED PLANS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SHEET NO. 1
1 SHEETS

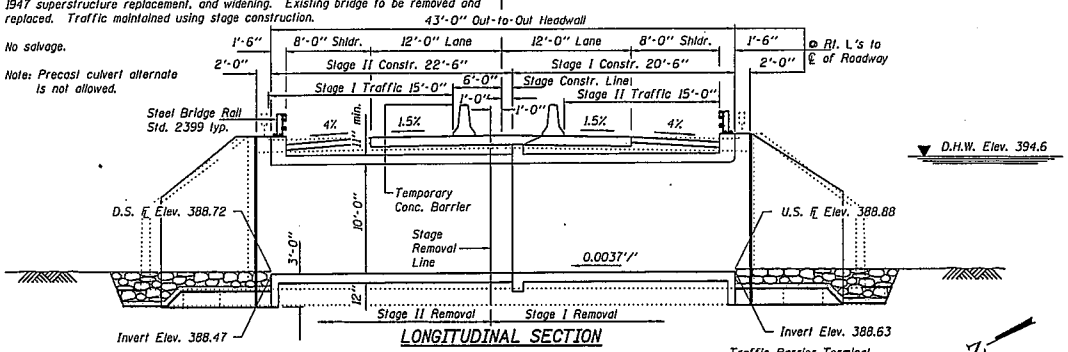
Contract #

Bench Mark: Square cut on S.W. wingwall of 028-0065, Elev. 400.99

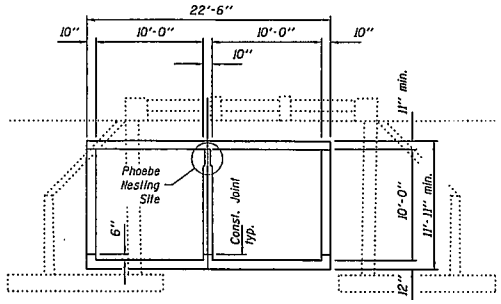
Existing Structure: 028-0065. Built in 1925 as S.B.I. Route 14, Section 4B at Station 579+05 as a 1-span R.C. slab bridge, closed abutments, spread footing. 1947 superstructure replacement, and widening. Existing bridge to be removed and replaced. Traffic maintained using stage construction.

No salvage.

Note: Precast culvert alternate is not allowed.

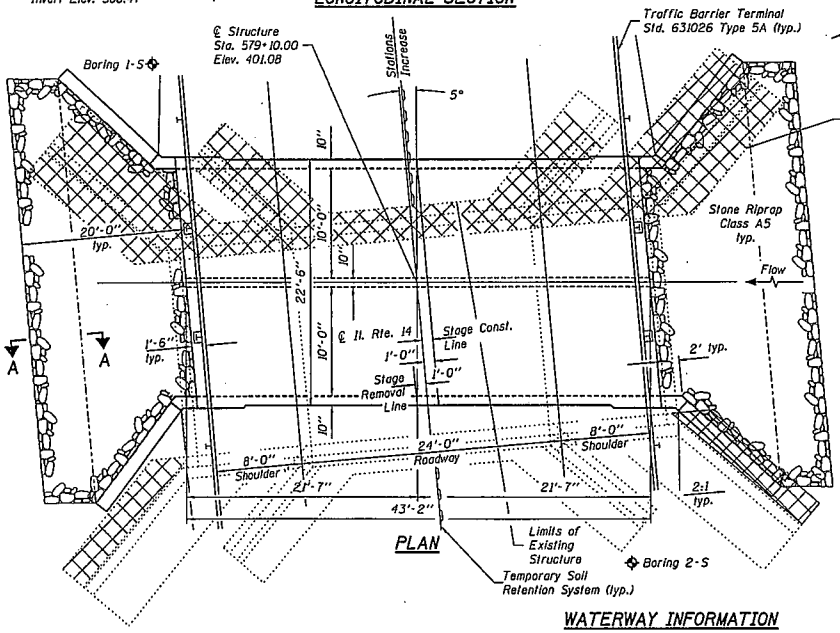


LONGITUDINAL SECTION



SECTION THRU BARREL

Note: Temporary brace or excavate behind existing abutments during removal of existing superstructure and substructure.

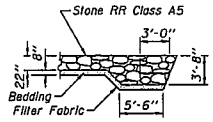


PLAN

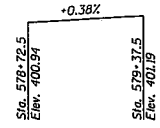
Note: Cross-hatched portions indicate areas of existing concrete removal.

Note: Epoxy coated rebar shall be used throughout the culvert.

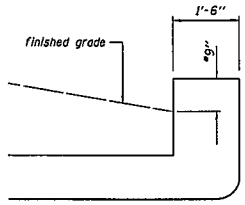
Design Scour Elevation (ft.)	Upstream	Downstream
	385.63	385.47



SECTION A-A



PROFILE GRADE



*See Standard 2399 for steel bridge rail details

HEADWALL DETAIL

HIGHWAY CLASSIFICATION

F.A.P. Rte. 869 - Il. Rte. 14
Functional Class: Minor Arterial
ADT: 6140 (2008); 8270 (2028)
DHV: 795
Design Speed: 55 m.p.h.
Posted Speed: 55 m.p.h.

LOADING HS20-44

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

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

FIELD UNITS

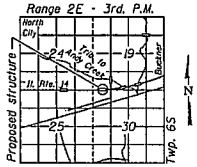
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)

WATERWAY INFORMATION

Exist. Low Grade Elev. 400.71 @ Sta. -
Drainage Area = 2.52 sq. mi. Prop. Low Grade Elev. 400.7 @ Sta. -

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	770	88.4	104.4	394.1	1.8	0.9	395.9	395.0
Design	50	1,150	98.4	114.4	394.6	3.0	1.8	397.6	396.4
Base	100	1,310	102.4	118.4	394.8	3.5	2.2	398.3	397.0
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	1,680	110.4	126.4	395.2	4.6	3.3	399.8	398.5

10-Year Velocity through Existing Bridge = 8.71 fps 10-Year Velocity through Prop. Bridge = 7.38 fps



LOCATION SKETCH

GENERAL PLAN
ILLINOIS ROUTE 14 OVER
TRIBUTARY TO ANDY CREEK
F.A.P. ROUTE 869 - SECTION 4B-1
FRANKLIN COUNTY
STATION 579+10.00
STRUCTURE NO. 028-2016

DESIGNED R.J. Chaput	- 200
CHECKED -	EXAMINED
DRAWN W.D. Collins	PASSED ENGINEER OF BRIDGE DESIGN
CHECKED M.K. Christensen	ENGINEER OF BRIDGES AND STRUCTURES

4-5-06

D-99-004-05

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