BENCHMARK: BM#40 - Spike in power pole 40' Lt., Sta. 195+23, Elev. 416.909.

EXISTING STRUCTURE: SN 097-2007 was built in 1927 as SBI Route 140 Section 109. The structure is a double barrel 10'x4.5' box culvert 22.5' bk.-bk. sidewalls and 42.0' o.-o. length. The culvert is to be removed and replaced using staged construction to maintain one lane of traffic at all times.

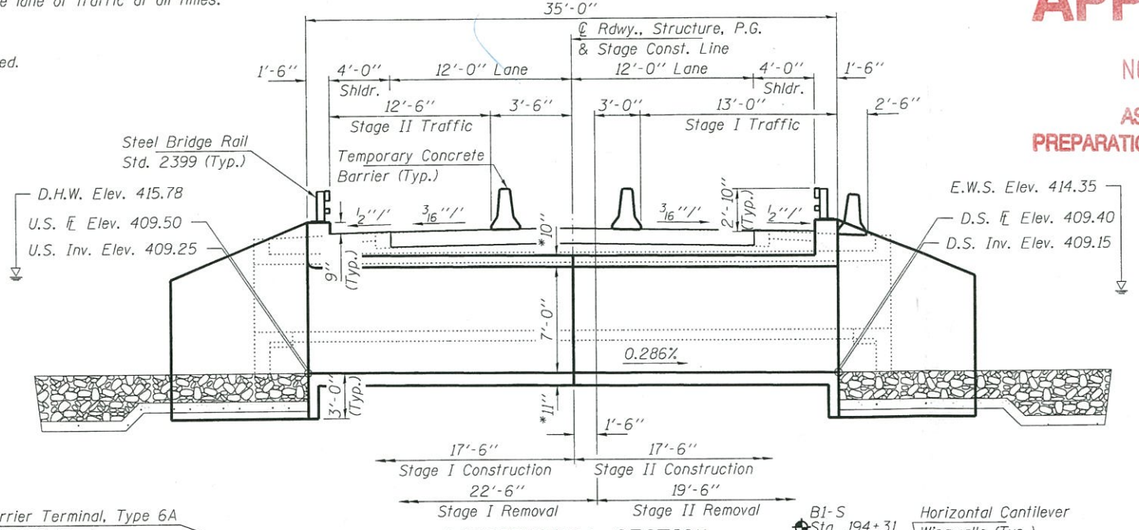
Salvage: None

Precast alternate not allowed.

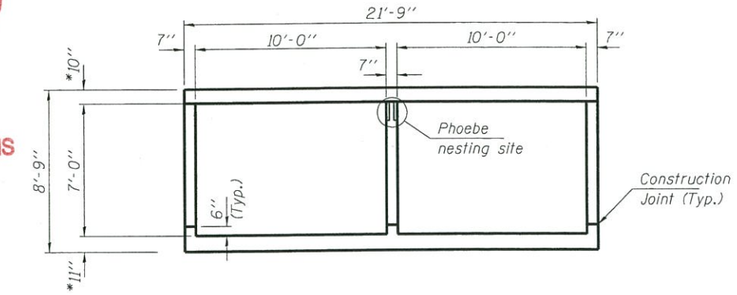
APPROVED

NOV 20 2014

AS A BASIS FOR PREPARATION OF DETAILED PLANS

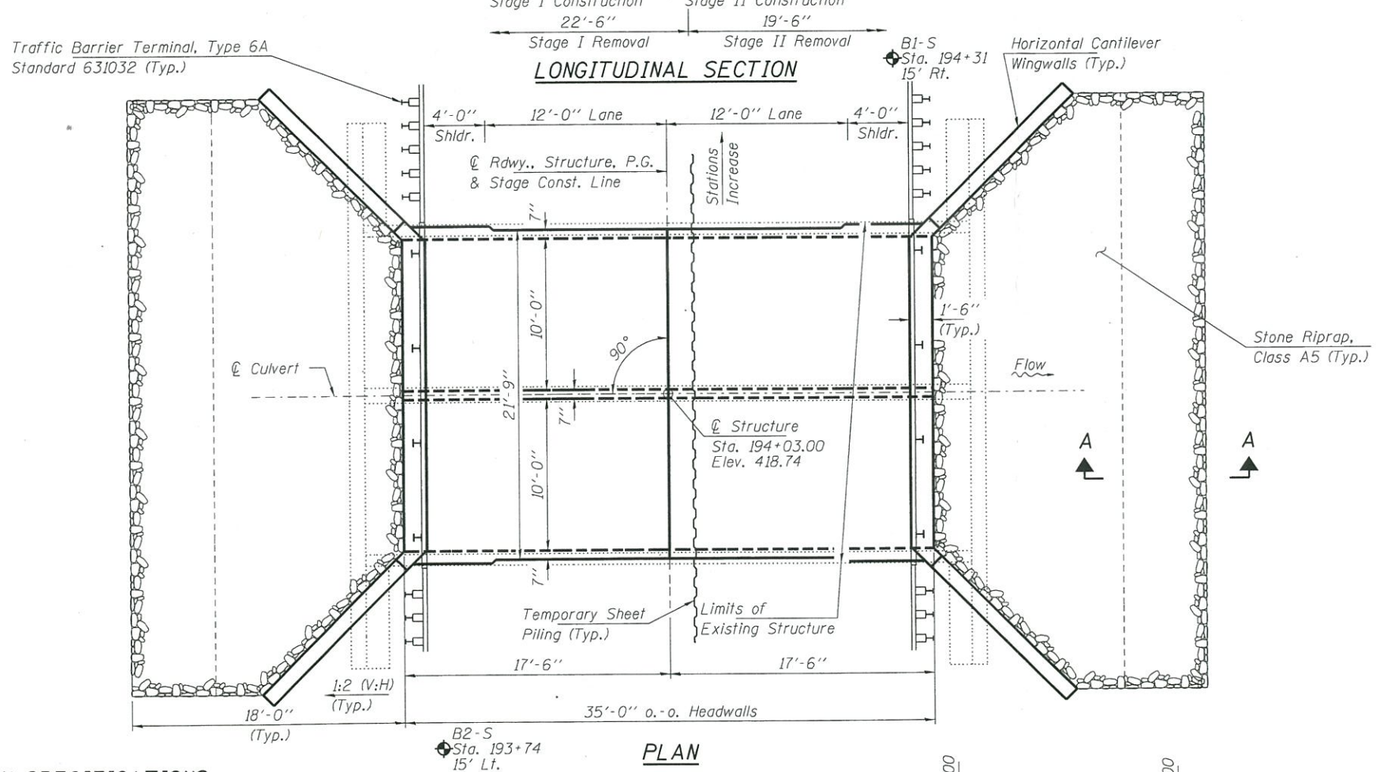


LONGITUDINAL SECTION

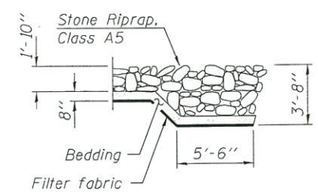


SECTION THRU BARREL

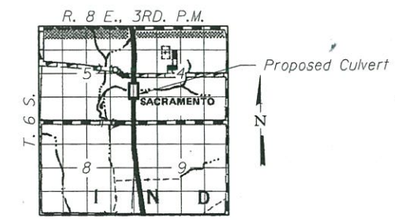
*Slab thickness may be refined in final design.



PLAN



SECTION A-A



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area = 0.8 Sq. Mi.

Existing Low Grade Elev. 416.4 @ Sta. 200+00
Proposed Low Grade Elev. 416.4 @ Sta. 200+00

Flood		Freq. Yr.	Q (C.F.S.) Exist.	Q (C.F.S.) Prop.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	Main Channel	10	442	486	65	100	415.25	0.84	0.00	416.09	415.25
	Relief Struct.		137	93	20	20					
	Total		579	579	85	120					
Design/ Over-tapping	Main Channel	50	574	774	75	110	415.78	1.14	0.80	416.92	416.58
	Relief Struct.		405	205	20	20					
	Total		979	979	95	130					
Base	Main Channel	100	602	814	80	115	416.00	1.05	0.76	417.05	416.76
	Relief Struct.		558	346	20	20					
	Total		1160	1160	100	135					

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications

LOADING HL-93

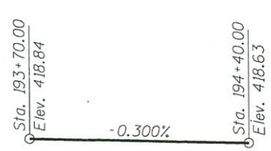
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi (Reinf.)

HIGHWAY CLASSIFICATION

FAP Route 328 - US 45
Functional Class: other principal arterial
ADT: 1600 (2011) / 1603 (2032)
ADTT: 240 / 240 (15%)
DHV: 120 (2032)
Design Speed: 55 m.p.h.
Posted Speed: 55 m.p.h.
Directional Distribution: 50% / 50%



PROFILE GRADE
(along ℄ roadway)

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	406.25	406.15

GENERAL PLAN
US ROUTE 45
OVER UNNAMED STREAM
FAP ROUTE 328 - SECTION 109B-1
WHITE COUNTY
STATION 194+03.00
STRUCTURE NUMBER 097-2015

FILE NAME = 0972007-sht-culvert.dgn	USER NAME = $USER$	DESIGNED - M.D.C.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959		CHECKED - T.J.A.	REVISED -
	PLOT SCALE = $SCALE$	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 11/11/2014	CHECKED - S.M.S.	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
STRUCTURE NO. 097-2015
SHEET NO. 1 OF 1 SHEETS

FAP	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	109B-1	WHITE		
		CONTRACT NO. 78163		
		ILLINOIS FED. AID PROJECT		