Benchmark: Survey Point #425: Northeast corner of upstream headwall.
2,004,700.0827 N. 2,551,100.3570 E: Elev. = 685.757

Existing Structure: S.N. 071-1098. Double 7' x 5' cast in place reinforced concrete box culvert. 32'-0" out-to-out built in 1923 as Section 55A. To be removed and replaced with a double 8' x 5' cast in place reinforced concrete box culvert. Traffic to be detoured during construction.

No Salvage

Precast option is not allowed.

WATERWAY INFORMATION

Drainage Area = 206.4 acres
Low Grade Elev. 688.88 @ Sta. 1312+11 (E)
Low Grade Elev. 688.88 @ Sta. 1312+11 (P)

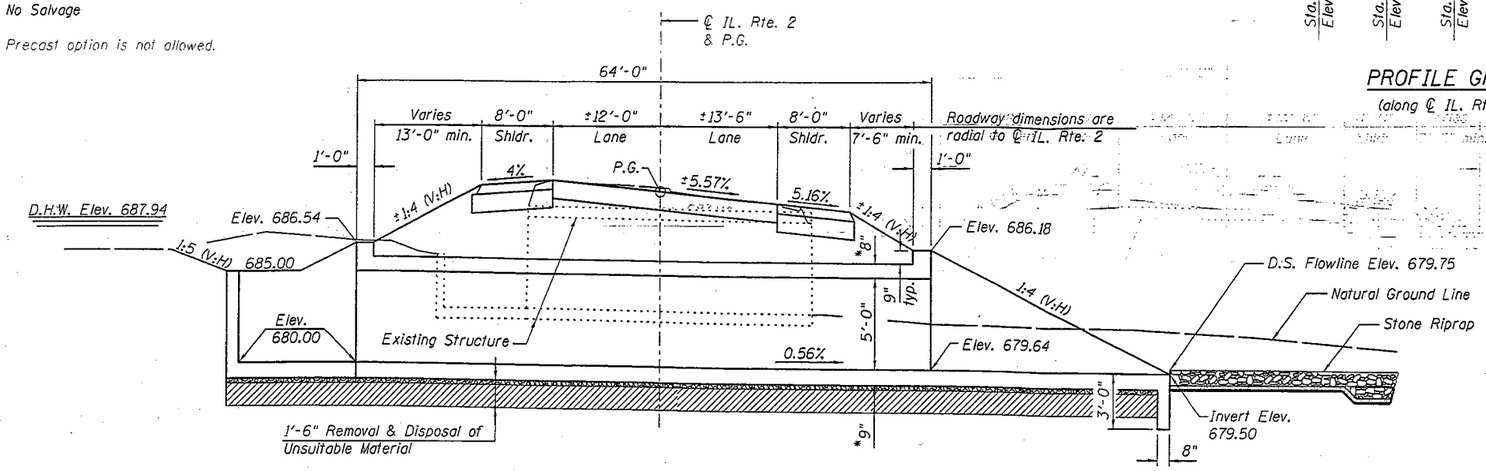
Flood	Freq. Yr.	Q C.F.S.	Headwater El. Exist.	Headwater El. Prop.
Ten-Year	10	368	687.54	687.34
Design	50	513	688.91	687.16
Base	100	592	689.96	687.87
OVT (E)	49	510	688.88	--
OVT (P)	265	723		688.88

10-Year Velocity through Existing Culvert = 14.25 fps
10-Year Velocity through Proposed Culvert = 4.6 fps

PROFILE GRADE

(along ℄ IL. Rte. 2)

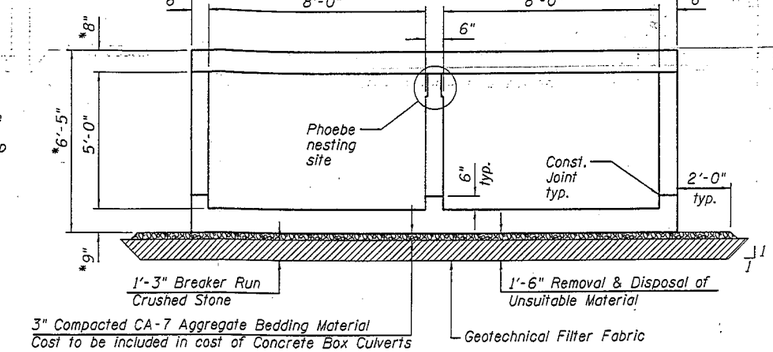
Sta. 1315+00 Elev. 689.34 | Sta. 1315+50 Elev. 689.39 | Sta. 1316+00 Elev. 689.46 | Sta. 1316+50 Elev. 689.51 | Sta. 1317+00 Elev. 689.45



LONGITUDINAL SECTION

DESIGN SCOUR ELEVATION TABLE

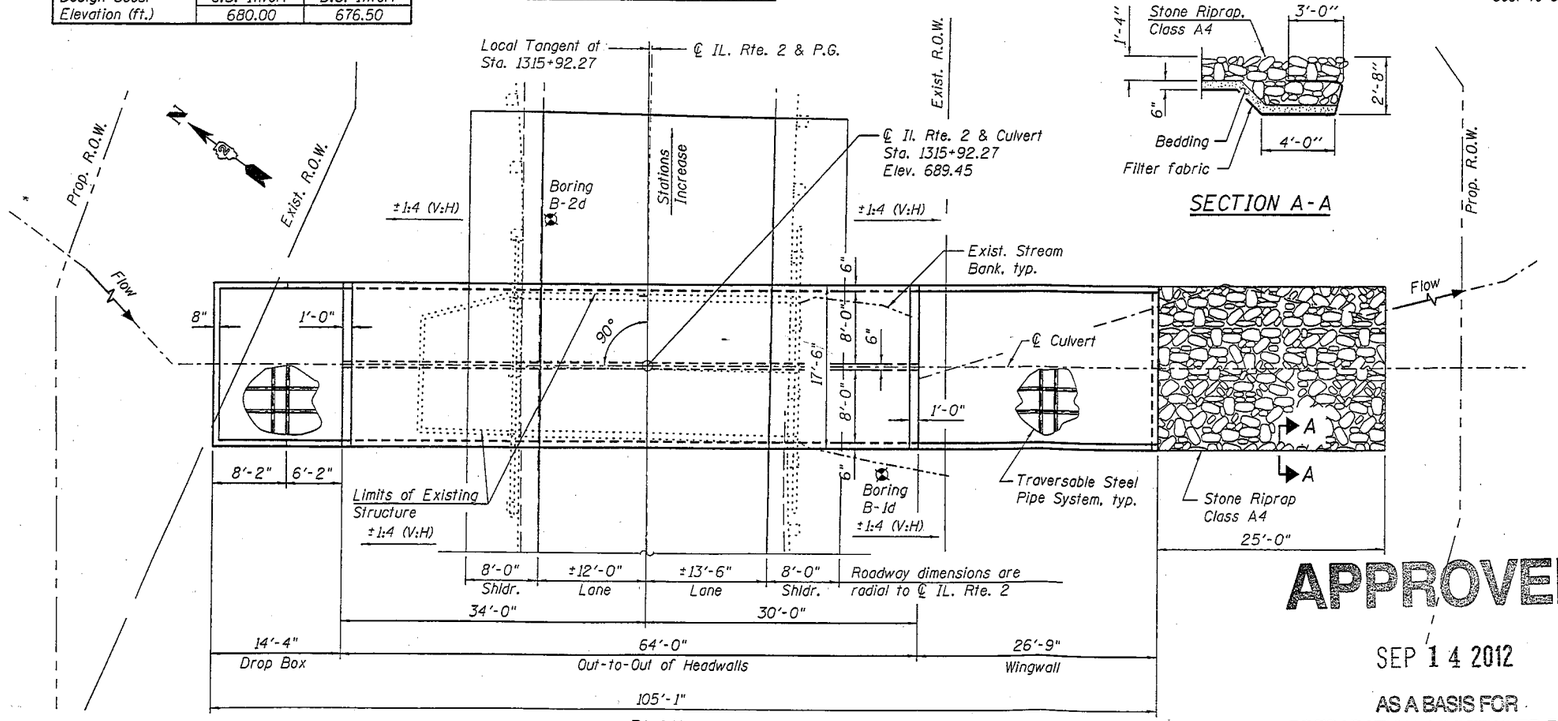
Design Scour Elevation (ft.)	U.S. Invert	D.S. Invert
	680.00	676.50



SECTION THRU BARREL

*Slab thickness may be refined in final design

SECTION A-A

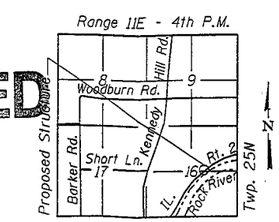


PLAN

CURVE DATA

Δ = 21° 38' 58" (RT)
D = 3° 06' 21"
T = 352.72'
L = 697.02'
E = 33.42'
R = 1844.70'
S.E. = 5.57%
P.C. = Sta. 1310+48.06
P.T. = Sta. 1317+45.09
P.I. = Sta. 1314+00.78

APPROVED
SEP 14 2012
AS A BASIS FOR
PREPARATION OF DETAILED PLANS



LOCATION SKETCH

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications.

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

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

HIGHWAY CLASSIFICATION

F.A.P. Rte 742 - IL. 2
Functional Class: Principal Arterial
ADT: 7,900 (2009); 10,600 (2029)
ADTT: 593 (2009); 795 (2029)
DHV: 1,060
Design Speed: 60 m.p.h.
Posted Speed: 55 m.p.h.
2-Way Traffic
Directional Distribution: 50:50

GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 2 OVER TRIBUTARY TO ROCK RIVER
F.A.P. 742 - SEC. 34,35 T-2
OGLE COUNTY
STATION 1315+92.27
STRUCTURE NO. 071-1233

FILE NAME = M:\Projects\2010\100120 PTB 157\25\cadd\Structural\Dgn\MD #1 IL 2 TSL\071233-64E15-001-TSLOPE.dgn

WILLS BURKE KELSEY ASSOCIATES LTD.
118 West Main Street, Suite 201
St. Charles, Illinois 60174

USER NAME = nperris	DESIGNED - AEU	REVISED -	
	CHECKED - DLS	REVISED -	
PLOT SCALE =	DRAWN - AWH	REVISED -	
PLOT DATE = 8/29/2012	CHECKED - AEU	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 1 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
742	34,35 T-2	OGLE	1	1
		CONTRACT NO. 64E15		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		