

Benchmark: Railroad spike in tree at Sta. 818+63.87, 56.39' RT. Elev. = 683.74
 Existing Structure: S.N. 071-1107, Single Barrel 10' X 7.5' R.C. Box Culvert at proposed IL. Rte. 2
 Station 832+39.52 with a culvert length of ±48'. No salvage.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

HIGHWAY INFORMATION

F.A.P. 742 - IL. Rte. 2
 Functional Class: Other Principal Arterial
 ADT: 8950 (2005); 10,350 (2025)
 ADTT: 7.5% (2005)
 DHV: 1035 (2025)
 Design Speed: 55 m.p.h.
 Posted Speed: 55 m.p.h.
 2 Way Traffic

DESIGN STRESSES

Field Units
 $f_y = 60,000$ psi
 $f'_c = 3,500$ psi

SHEET INDEX

NO.	DESCRIPTION
1	GENERAL PLAN & ELEVATION
2	GENERAL NOTES & TOTAL BILL OF MATERIALS
3	CULVERT DETAILS
4-5	BORING LOGS

DESIGN SPECIFICATIONS
 2002 A.A.S.H.T.O. Specifications

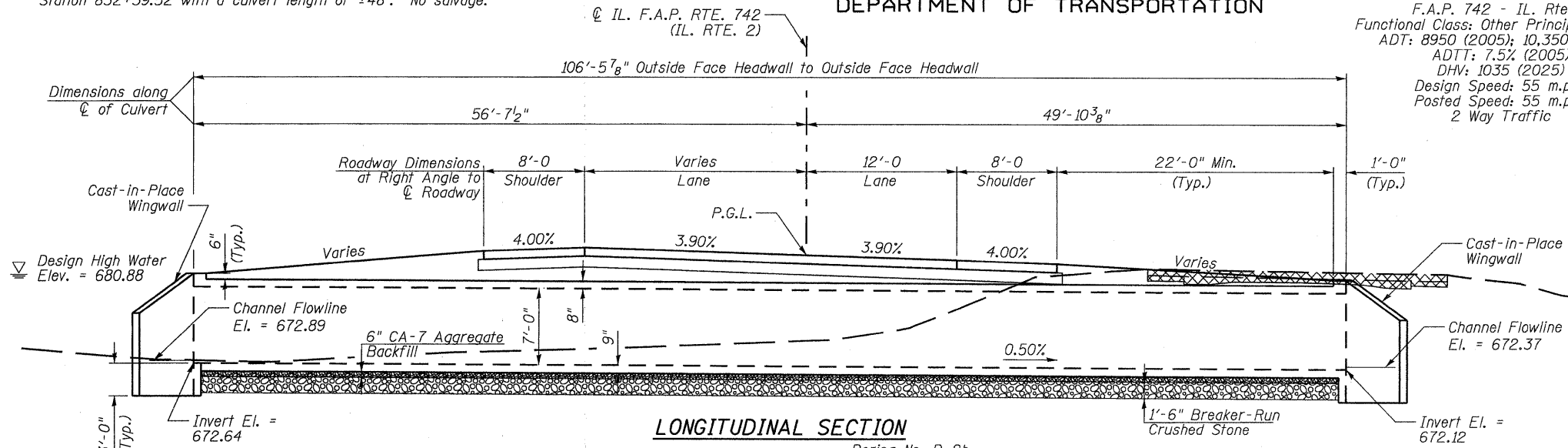
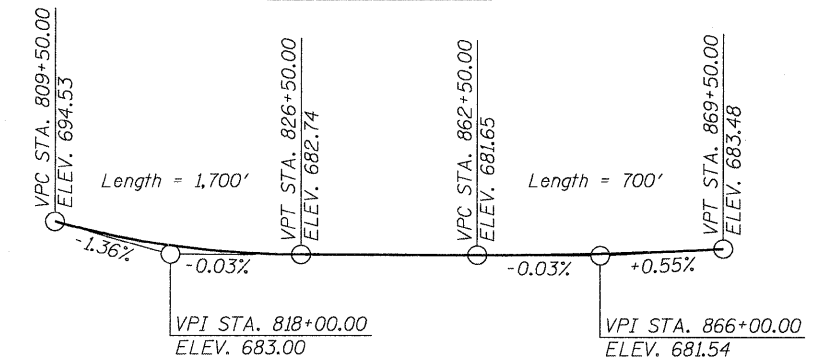
LOADING HS 20-44

Allow 50#/Sq. Ft. for future wearing surface

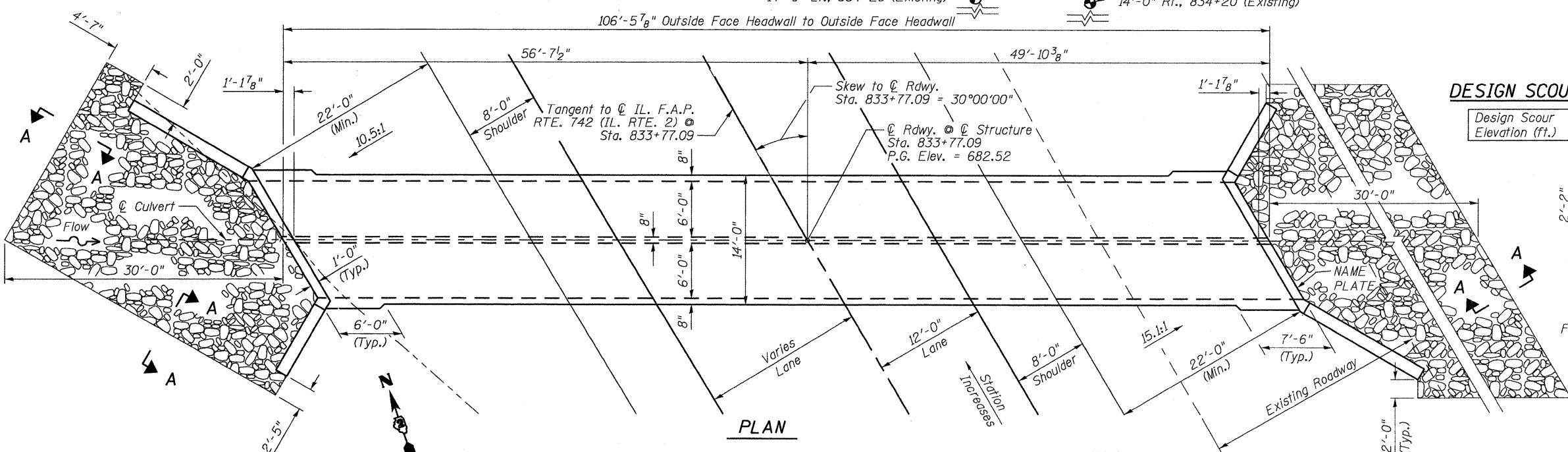
NOTES

See sheet 2 for General Notes.

PROFILE GRADE



LONGITUDINAL SECTION



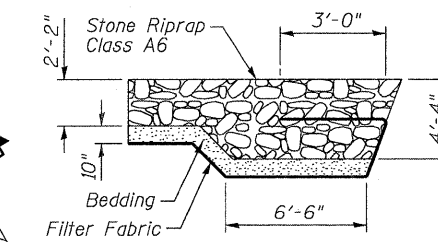
PLAN

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	669.64	669.12

HORIZONTAL CURVE DATA

IL. Rte. 2
 P.I. Sta. = 833+30.82
 $\Delta = 22^\circ 09' 13.7''$ (RT)
 $D = 1^\circ 54' 35''$
 $R = 3,000.00'$
 $T = 587.32'$
 $L = 1,159.97'$
 $E = 56.95'$
 $S.E. = 0.039''$
 P.C. Sta. = 827+43.50
 P.T. Sta. = 839+03.47



SECTION A-A

WATERWAY INFORMATION TABLE

Drainage Area = 0.75 sq. mi.	Existing Low Grade Elevation: 681.31 ft. @ Sta. 2060+10
	Proposed Low Grade Elevation: 683.21 ft. @ Sta. 833+77

Flood	Frequency Year	Discharge (cfs)	Headwater Elev. (ft) Existing	Proposed
Ten-Year	10	446	681.22	679.73
Design	50	715	682.04	680.88
Base	100	831	685.91	681.54
EX OVT	66	730	681.31	
PR OVT	406	1108		683.21

10-Year Velocity through Existing Structure = 9.5 fps
 10-Year Velocity through Proposed Structure = 5.4 fps

GENERAL PLAN & ELEVATION

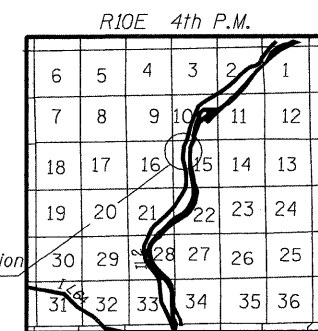
IL. RTE. 2 OVER TRIBUTARY TO ROCK RIVER

F.A.P. RTE. 742 SEC. 37 R-4

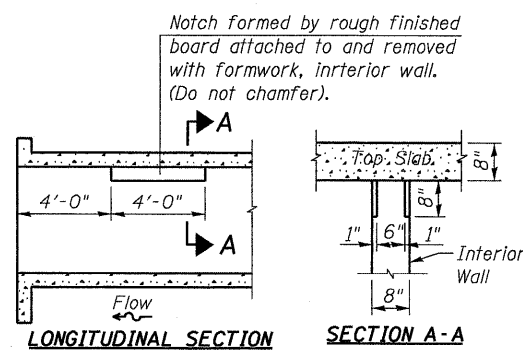
OGLE COUNTY

STA. 833+77

STRUCTURE NO. 071-1135



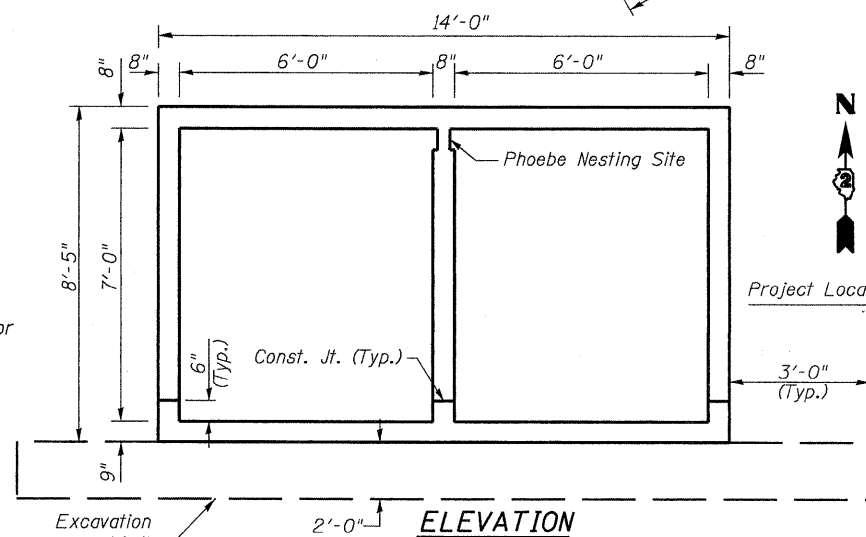
LOCATION SKETCH



LONGITUDINAL SECTION SECTION A-A

PHOEBE NESTING SITE DETAILS

(Downstream End Only)



ELEVATION



David F. Maxwell, S.E.
 Reg. No. 081-005455
 Date: 3/3/10
 My registration expires November 30, 2010.

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson (P.E.)
 ENGINEER OF BRIDGES AND STRUCTURES

DESIGNED KJB
CHECKED CTH
DRAWN CTH
CHECKED DFM

STATION 833+77.09
 BUILT 20__ BY
 STATE OF ILLINOIS
 F.A.P. RTE. 742 SEC. 37R-4
 LOADING HS20-44
 STRUCTURE NO. 071-1135

NAME PLATE
 See Std. 515001

Howard R. Green Company

SHEET NO. 1	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5 SHEETS	742	37 R-4	OGLE	867	191
			CONTRACT NO. 64E17		
		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT			