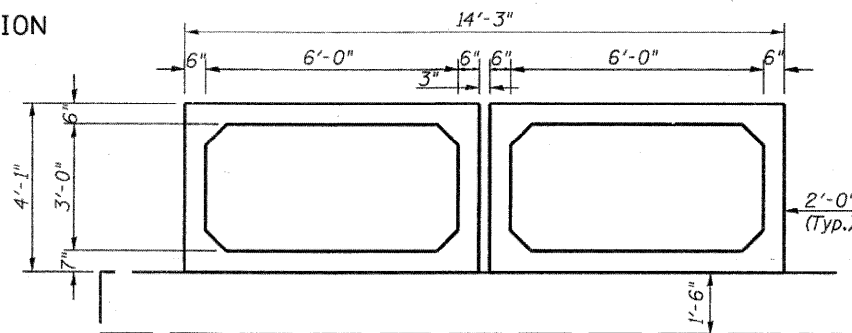
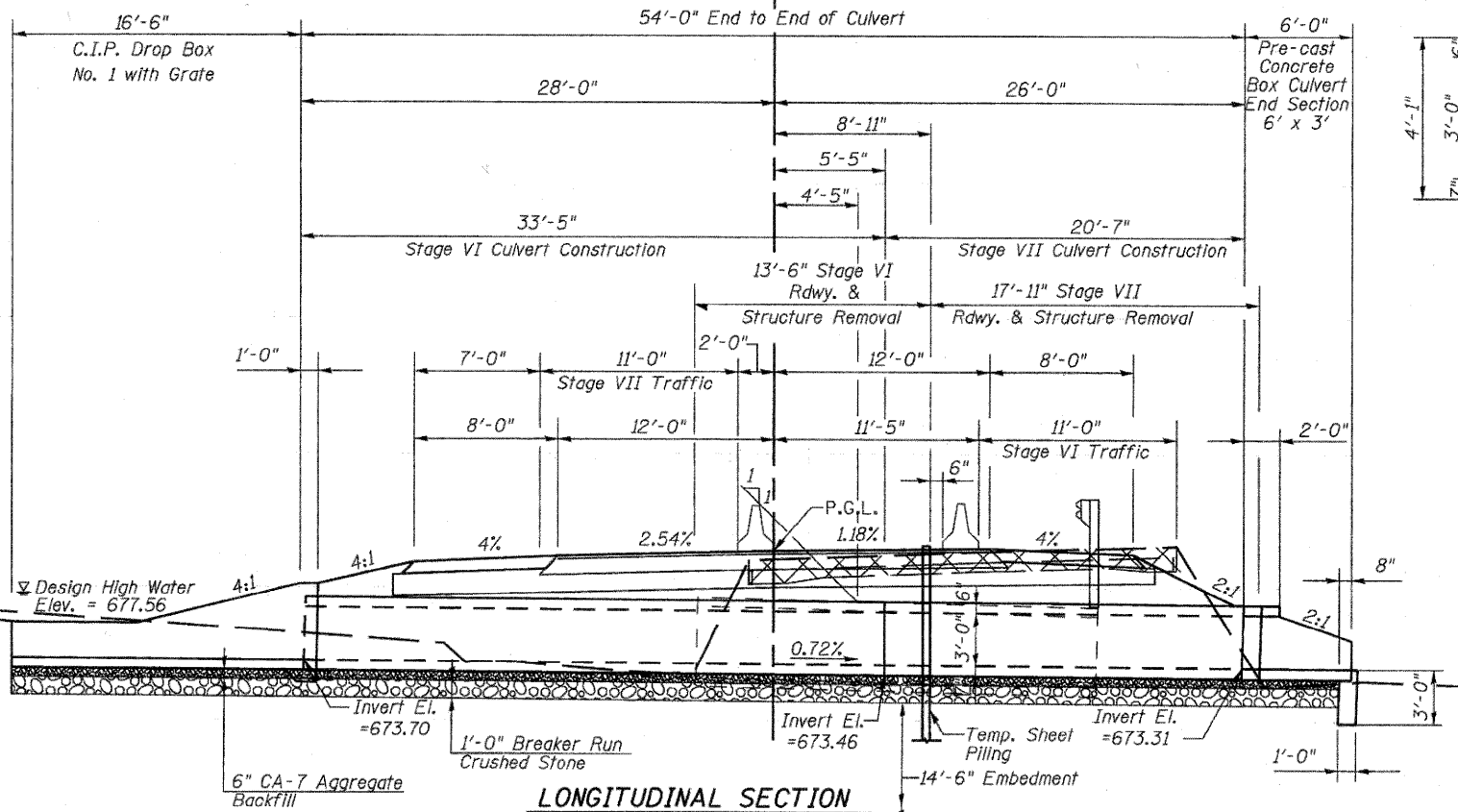


Benchmark:
Existing Structure: Built in 1952 as a Single Barrel 4'-0" X 4'-0" R.C. Box Culvert, with a Culvert Length of +31'-5". Traffic to be Maintained Utilizing Stage Construction. No Salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Proposed IL. F.A.P. RTE 742
(IL. RTE. 2)



SHEET INDEX

NO.	DESCRIPTION
1	GENERAL PLAN & ELEVATION
2	BORING LOG

DESIGN STRESSES

$f_y = 60,000$ psi
 $f_y = 65,000$ psi (Welded Wire Fabric)
 $f'_c = 3,500$ psi
 $f'_c = 5,000$ psi (Precast)

DESIGN SPECIFICATIONS

2002 A.A.S.H.T.O. Specifications & Supplements

LOADING HS 20-44

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

GENERAL NOTES

Precast Box shall conform to the requirements of A.A.S.H.T.O. M273 (A.S.T.M. C850). The maximum design fill height for this structure is 4'-0".

Culvert Concrete thickness shown shall be considered the minimum acceptable. Other thickness will be allowed if approved by the engineer.

Breaker-Run Crushed Stone to be placed as a subbase. Min. depth is 1'-0".

Work this sheet with Staging sheets.

TOTAL BILL OF MATERIALS

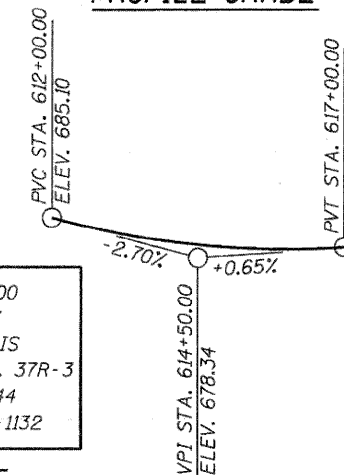
DESCRIPTION	UNIT	QTY.
Removal of Existing Structures No. 1	Each	1
Precast Concrete Box Culvert 6' X 3'	Foot	108
Breaker-Run Crushed Stone	Ton	96
Temporary Sheet Piling*	Sq. Ft.	578.4
Precast Concrete Box Culvert End Section, 6' x 3'	Each	2
Drop Box, No. 1	Each	1

*See sheet piling design on staging culvert typical section sheet.

HORIZONTAL CURVE DATA

PI STA. = 617+60.09
 $\Delta = 9^\circ 48' 58.6"$ (LT)
 $D = 2^\circ 00' 00"$
 $R = 2,864.79'$
 $T = 246.01'$
 $L = 490.81'$
 $E = 10.54'$
 P.C. STA. = 615+14.08
 P.T. STA. = 620+04.89
 $S.E. = 0.0341'$

PROFILE GRADE



STATION 615+22.00
 BUILT 20__ BY
 STATE OF ILLINOIS
 F.A.P. RTE. 742 SEC. 37R-3
 LOADING HS20-44
 STRUCTURE NO. 071-1132

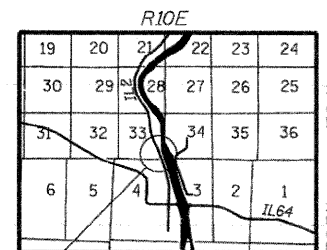
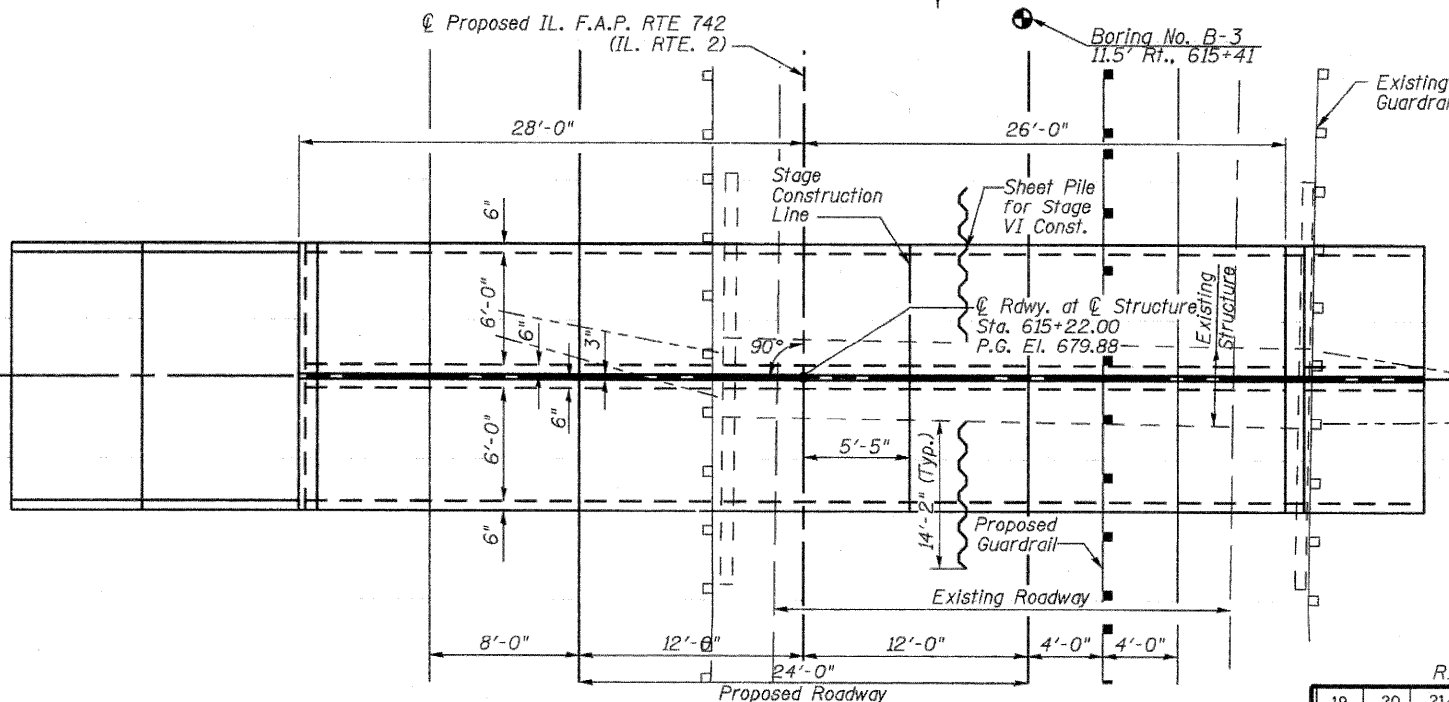
NAME PLATE
See Std. 515001

WATERWAY INFORMATION TABLE

	Frequency Year	Discharge (cfs)	Waterway Opening Sq. Ft.		Natural H.W.E.	Head (ft)		Headwater Elev. (ft)	
			Existing	Proposed		Existing	Proposed	Existing	Proposed
Ten-Year Design	10	90	16.0	36.0	5.04	3.67	678.01	677.39	
Base	50	124	16.0	36.0	5.77	3.84	678.74	677.56	
EX OVT	100	145	16.0	36.0	6.34	3.97	679.31	677.69	
PR OVT	176	156	16.0	36.0	6.81		679.78		
Max Calc	500	200		36.0		4.41		678.13	

10-Year Velocity through Existing Structure = 11.6 fps
 10-Year Velocity through Proposed Structure = 7.1 fps

GENERAL PLAN & ELEVATION
 IL. RTE. 2 OVER
 TRIBUTARY TO ROCK RIVER
 STA. 615+22.00



Project Location

DESIGNED CTH
 CHECKED DSG
 DRAWN EBS
 CHECKED DFM

STATE OF ILLINOIS
 DAVID F. MAXWELL
 081-005455
 ST. LOUIS, MO.
 LICENSED STRUCTURAL ENGINEER

David F. Maxwell, S.E.
 Date: 2/19/09
 My registration expires November 30, 2010.
 Reg. No. 081-005455

PLAN

Howard R. Green Company

SHEET NO. 1	F.A.P. RTE. 742	SECTION 37 R-3	COUNTY OGLE	TOTAL SHEETS 345	SHEET NO. 182
2 SHEETS		SN 071-1132	CONTRACT NO. 84788		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					