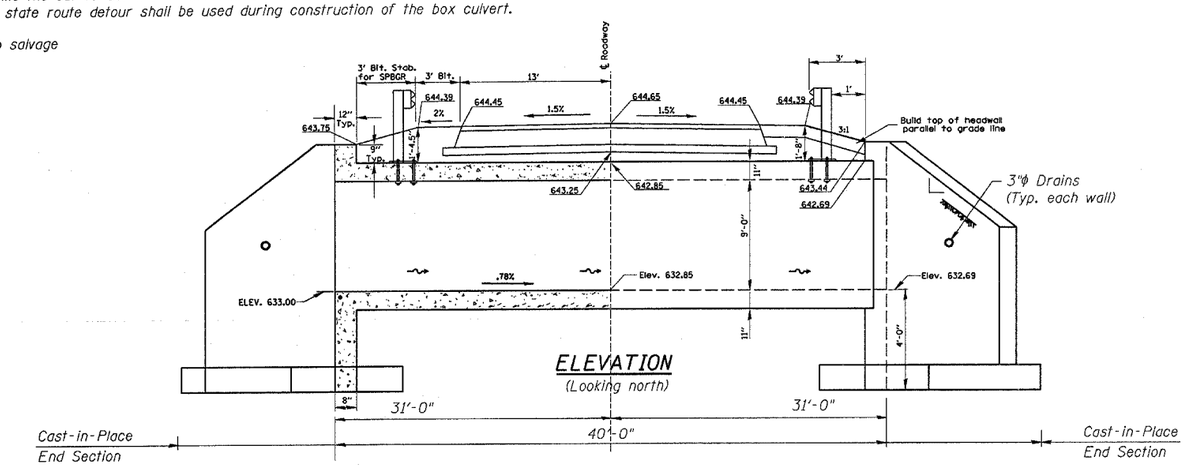
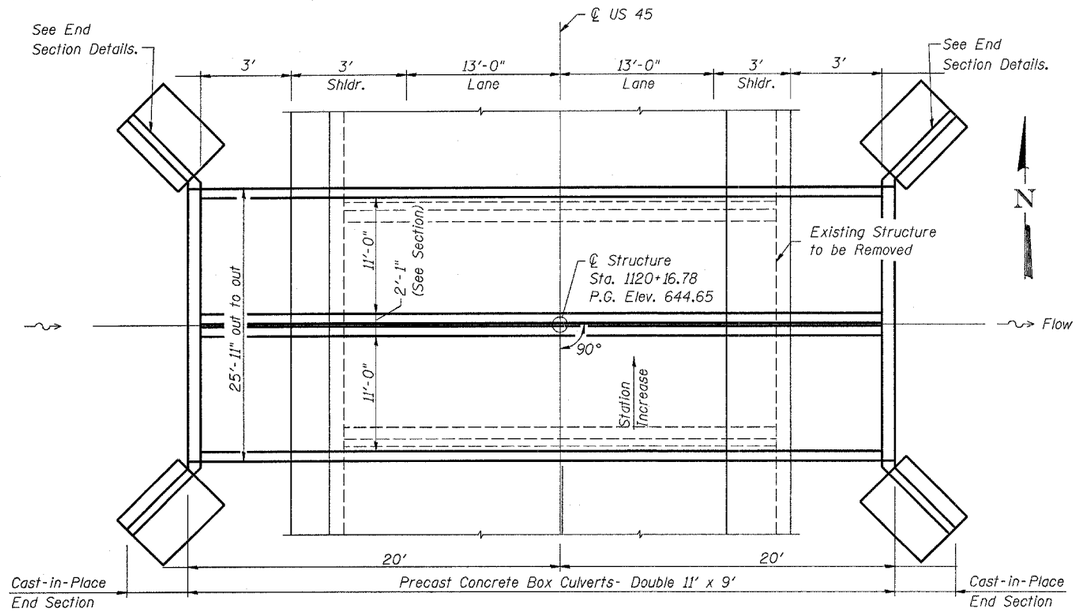
B.M. - USGS Disk on top of N.E. wingwall, R202 Elev. 644.36

Existing Structure: SN 038-0038 was originally constructed in 1930. The superstructure was replaced and the substructure was widened in 1977. The superstructure consists of a single span of (8) - 11" PPC Beams on closed abutments. The back-to-back abutments dimension measures 18'-0" while the out-to-out width measures 34'-8". The existing superstructure and substructure shall be removed. A state route detour shall be used during construction of the box culvert.

No salvage



ELEVATION
(Looking north)



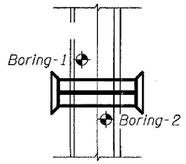
PLAN

WATERWAY INFORMATION

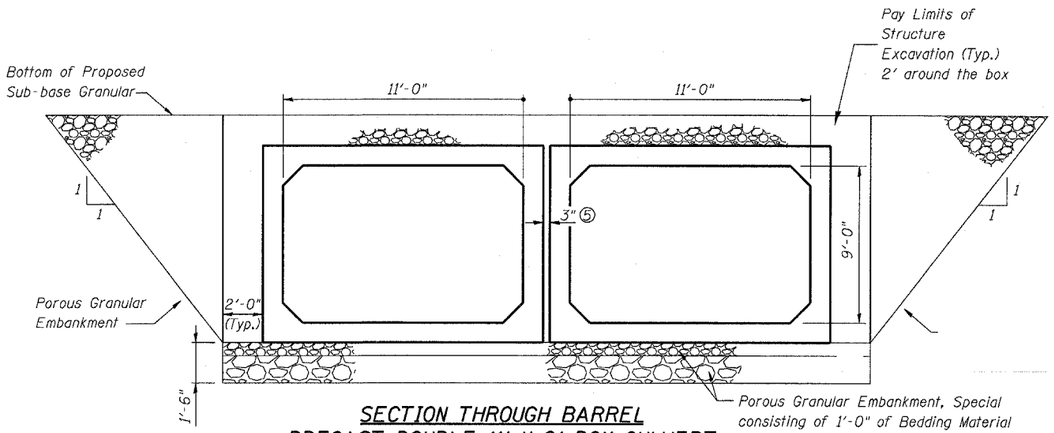
Drainage Area = 3.12 sq. mi. Low Grade Elev. 644.48 @ Sta. 1121+50

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	330	77	139	639.3	0.3	0.2	639.6	639.4
Design	50	484	105	165	640.5	0.5	0.4	641.0	640.9
Base	100	545	115	174	640.9	0.5	0.5	641.4	641.4
Overtopping									
Max. Calc.	500	688	134	191	641.7	0.8	0.8	642.5	642.5

Prop. Low Grade El. = 644.48 @ Sta. 1121+50.
10-year velocity through exist. strct. = 4.0 fps
10-year velocity through prop. struct. = 2.40 fps



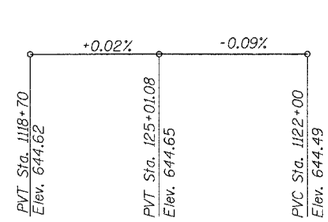
BORING LOCATIONS



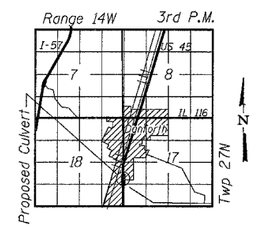
SECTION THROUGH BARREL
PRECAST DOUBLE 11' X 9' BOX CULVERT

GENERAL NOTES

① Precast Concrete Box Culvert sections shall conform to the requirements of Article 540.06 of the Standard Specifications and the applicable requirements of AASHTO M 273.
② Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
③ Reinforcement bars designated (E) shall be epoxy coated.
④ Lifting holes shall be filled with concrete plugs and mastic after box sections are in place.
⑤ Fill space between boxes with class SI Concrete in accordance with Article 540.06 of the Standard Specifications. Cost included with Precast Concrete Box Culvert 11'x9' (M273).
⑥ Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage 1 removal to ensure the remaining portion will not be prematurely damaged.



PROFILE GRADE
(Along ℄ Roadway)



LOCATION SKETCH

DESIGN SPECIFICATIONS
1996 AASHTO with 1997 thru 2002 Interims

LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface.

Design Fill Height = <2 ft.

DESIGN STRESSES
Precast
f'c = 3500 psi
fy = 65,000 psi (welded wire fabric)
Cast-In-Place
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)
Max. Soil Pressure under footing = 2466 psf

BILL OF MATERIAL

Item	Unit	Total
Porous Granular Embankment	Cu. Yd.	206.4
Porous Granular Embankment, Special	Cu. Yd.	70.9
Removal of Existing Structures	L. Sum	1
Structure Excavation	Cu. Yd.	358
Concrete Structures	Cu. Yd.	43.6
Reinforcement Bars	Pound	3082
Pedestrian Bridge Removal	Each	1
Precast Concrete Box Culvert 11'x9' (M273)	Foot	80
Name Plates	Each	1
Reinforcement Bars (Epoxy Coated)	Pound	1001

GENERAL PLAN
US45 OVER PRAIRIE CREEK
FAS ROUTE 317 - SECTION 36BR
IROQUOIS COUNTY
STATION 1120+16.78
PROP. S.N. 038-2017

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	PLOT DATE = Oct 31, 2007 - 03:53:17 PM	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT SHEET

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	29	13
STA. 1117+00 TO STA. 1123+00		CONTRACT NO. 66646		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		