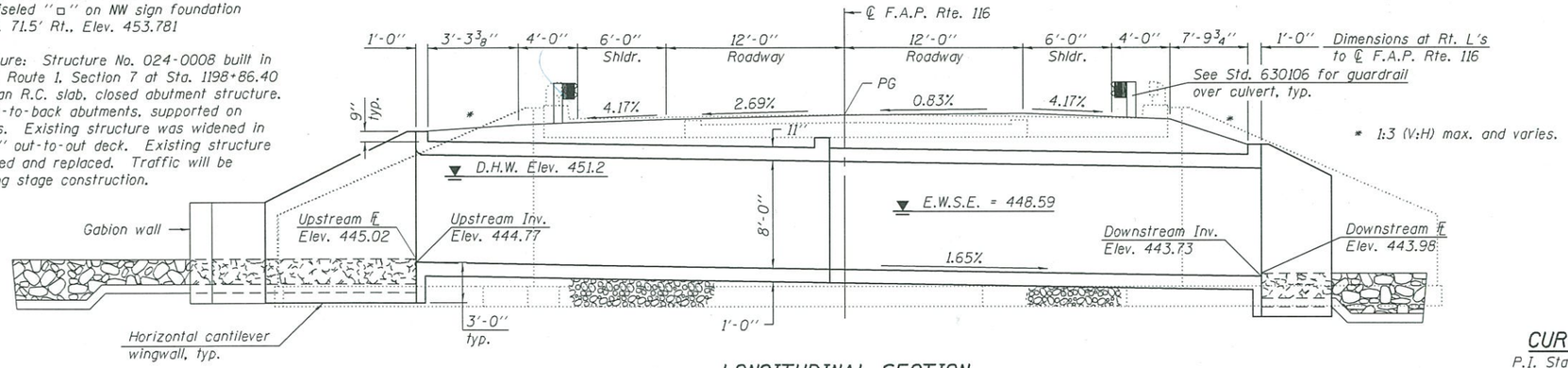
BM #617 - Chiseled "□" on top of SE wingwall of S.N. 024-0008; Sta. 1198+95, 20.9' Rt., Elev. 456.092
BM #500: Chiseled "□" on NW sign foundation Sta. 1198+63.5, 71.5' Rt., Elev. 453.781

Existing Structure: Structure No. 024-0008 built in 1922 as S.B.I. Route 1, Section 7 at Sta. 1198+86.40 as a single span R.C. slab, closed abutment structure. 22'-3¾" back-to-back abutments, supported on spread footings. Existing structure was widened in 1954 to 40'-4" out-to-out deck. Existing structure is to be removed and replaced. Traffic will be maintained using stage construction.

No salvage.



LONGITUDINAL SECTION

Note:
Contractor shall excavate behind existing abutments prior to removal of superstructure to balance front and back soil pressure.
Drainage behind wingwalls to be provided in design phase.
The entire footprint of the proposed box culvert shall be undercut down to the elevations of the existing foundations. Replace with rockfill.
Undercut horizontal wingwalls and cutoff walls 12" to prevent differential settlement.
Precast alternate is not allowed.
The Contractor is responsible for water diversion per Article 540.04 of the Standard Specifications. Please note non-standard techniques may be required due to the offset of the proposed structure.
Remove existing bituminous overlay prior to installation of temporary slab.
Install temporary slab prior to saw-cutting existing slab at stage line.

CURVE DATA

P.I. Sta. = 1203+08.09
Δ = 18° 15' 39" (Lt.)
D = 1° 52' 06"
R = 3,066.86'
T = 492.90'
L = 977.44'
E = 39.36'
P.C. Sta. = 1198+15.19
P.T. Sta. = 1207+92.63

DESIGN SPECIFICATIONS

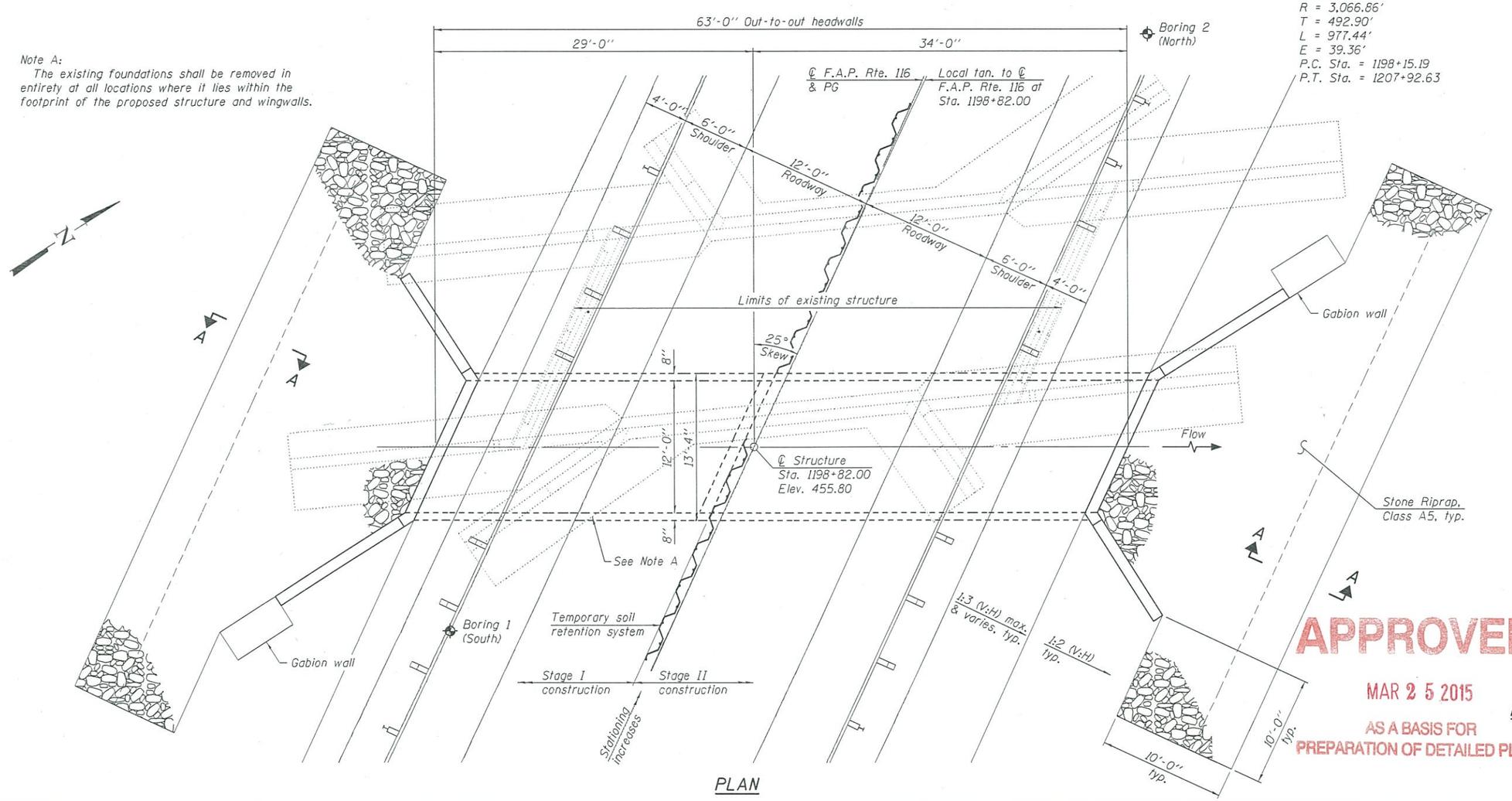
2014 AASHTO LRFD Bridge Design Specifications, 7th Edition

DESIGN STRESSES

FIELD UNITS

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

Note A:
The existing foundations shall be removed in entirety at all locations where it lies within the footprint of the proposed structure and wingwalls.



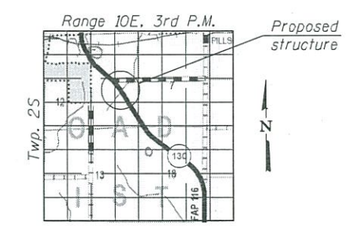
PLAN

HIGHWAY CLASSIFICATION

F.A.P. Rte. 116 - IL Rte. 130
Functional Class: Rural Minor Arterial
ADT: 3,700 (2009); 3,931 (2017)
ADTT: 800 (2009)
DHV: 370 (one way)
Design Speed: 60 m.p.h.
Posted Speed: 55 m.p.h.
Two-Way Traffic
Directional Distribution: 51:49

LOADING HL-93

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



LOCATION SKETCH

APPROVED
MAR 25 2015
AS A BASIS FOR PREPARATION OF DETAILED PLANS

GENERAL PLAN & ELEVATION
IL. RTE. 130 OVER STREAM
F.A.P. RTE. 116 - SEC. (7BY)B-1
EDWARDS COUNTY
STATION 1198+82.00
STRUCTURE NO. 024-7033

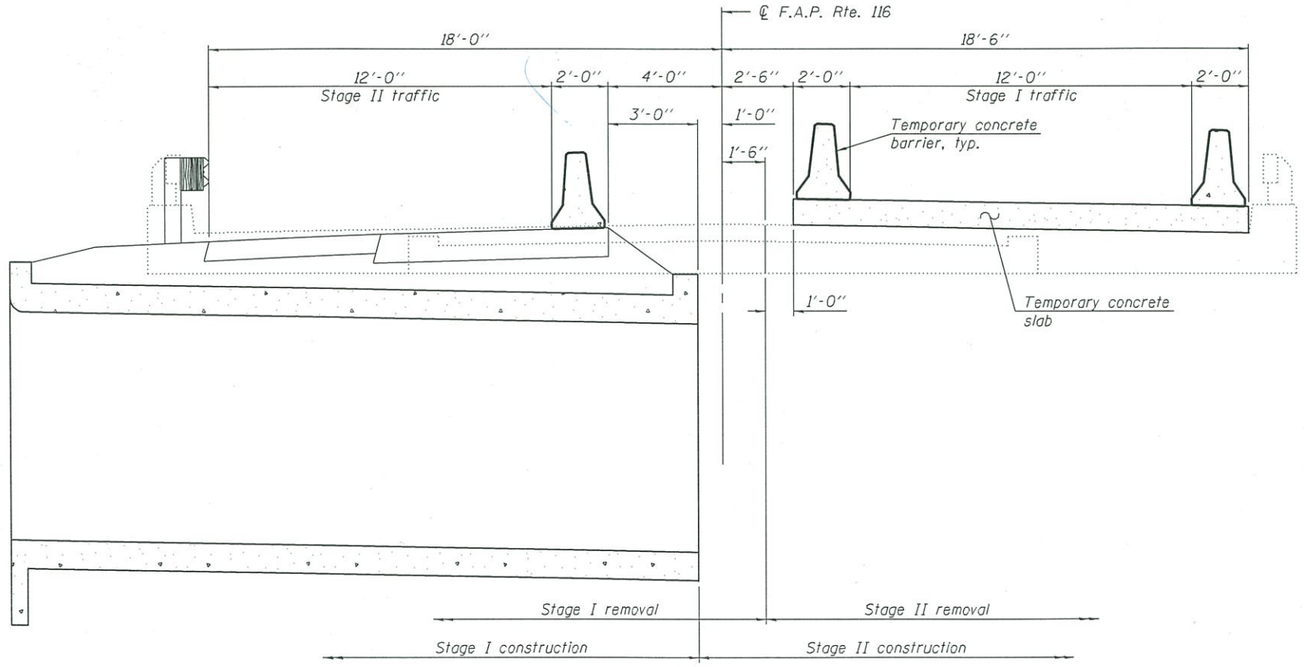
DESIGNED	-	DEREK G. VERHULST
CHECKED	-	JEFFREY S. BURKE
DRAWN	-	MICHAEL B. MOSSMAN
CHECKED	-	D.G.V. / J.S.B.

3-25-2015

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

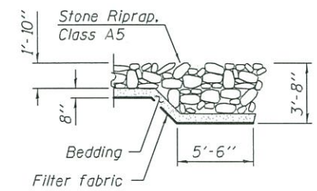
SHEET NO. 1 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	(7BY)B-1	EDWARDS		
		CONTRACT NO. 74354		
		ILLINOIS FED. AID PROJECT		



STAGE CONSTRUCTION SKETCH

(Horizontal dimensions are taken at Rt. L's to ℄ F.A.P. Rte. 116)



SECTION A-A

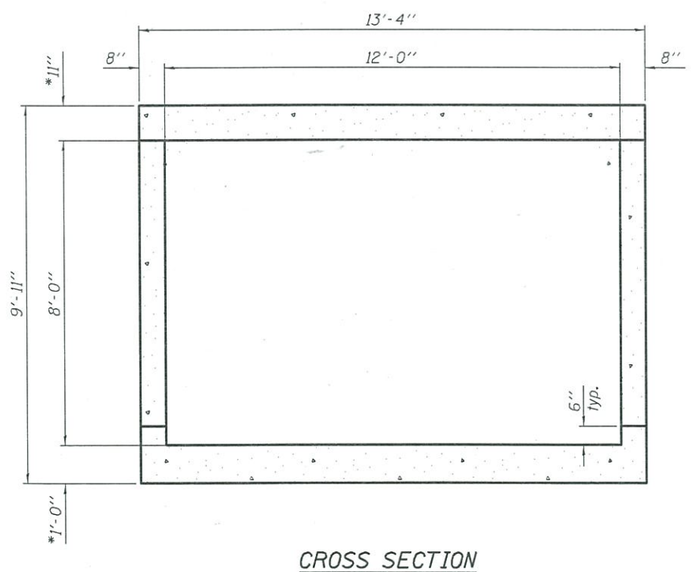
WATERWAY INFORMATION

Drainage Area = 0.25 sq. mi.

Existing Low Grade Elev. 455.69 @ Sta. 1199+25
Proposed Low Grade Elev. 455.69 @ Sta. 1199+25

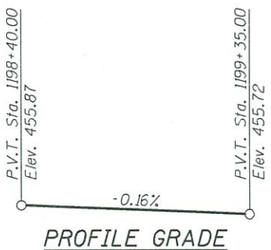
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	270	77	60	449.8	0.0	0.0	449.8	449.8
Design	50	469	101	76	451.2	0.0	0.0	451.2	451.2
Base	100	564	110	82	451.7	0.0	0.0	451.7	451.7
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	806	124	92	452.5	0.0	0.5	452.5	453.0

Existing 10-year velocity = 3.51 ft./sec.
Proposed 10-year velocity = 4.50 ft./sec.



CROSS SECTION

* Subject to refinement in design.



PROFILE GRADE

(Along ℄ F.A.P. Rte. 116)

APPROVED

MAR 25 2015

AS A BASIS FOR PREPARATION OF DETAILED PLANS

DETAILS
IL. RTE. 130 OVER STREAM
F.A.P. RTE. 116 - SEC. (7BY)B-1
EDWARDS COUNTY
STATION 1198+82.00
STRUCTURE NO. 024-7033

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STATE OF ILLINOIS
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SHEET NO. 2 OF 2 SHEETS

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116	(7BY)B-1	EDWARDS		
		CONTRACT NO. 74354		
		ILLINOIS FED. AID PROJECT		