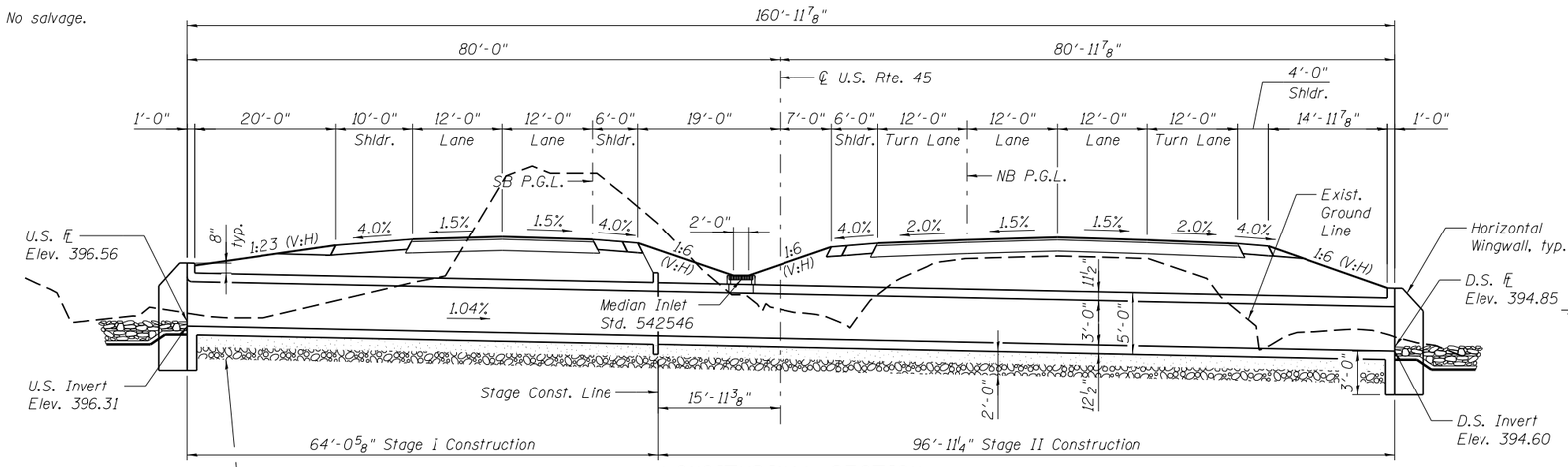
Bench Mark: Saw cut "□" on top of East headwall of 3'x6' exterior concrete box culvert along Rte. 45 Sta. 463+13± & 21'± Rt. Elev. 399.32.

Existing Structure No. 2: The structure is a 72" ϕ steel pipe.
Existing Structure No. 3: SN 083-7061, built in 1950 under SB Route 1, Section (29,29X,30)W. The structure is a single cell cast in place box culvert with 6' span, 3' rise, and 47' length.
The structures are to be removed and replaced with an 8'x3' cast in place box culvert utilizing staged construction.

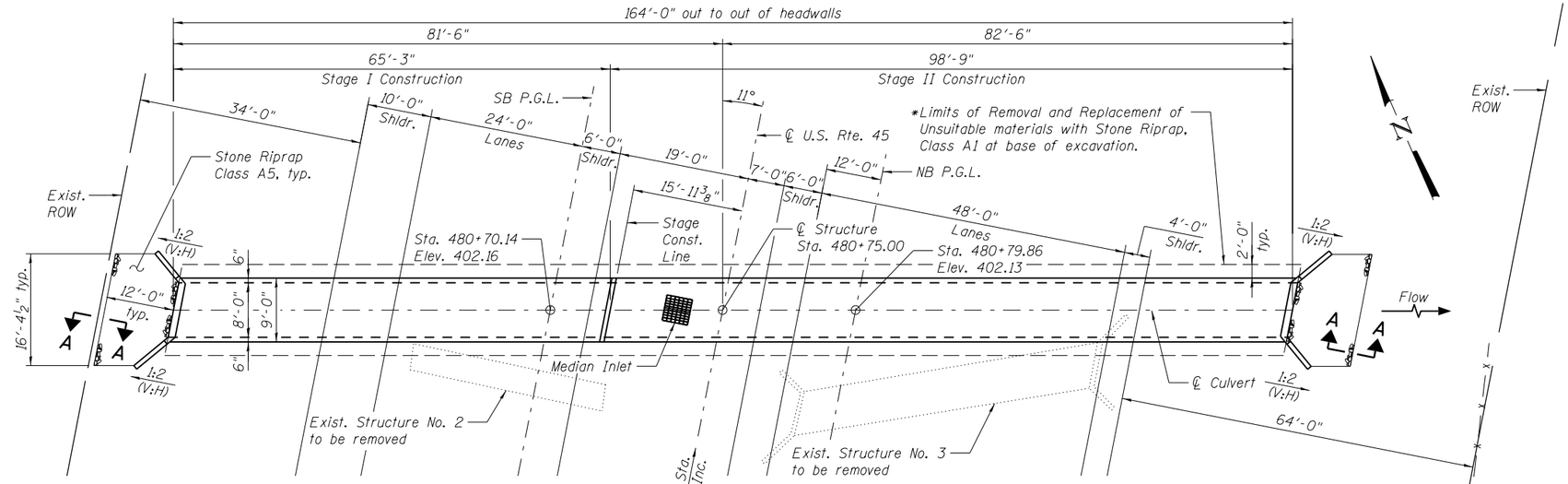
No salvage.



*Removal and replacement of unsuitable materials with Stone Riprap, Class A1 capped with 12" of PGE (CA6).

LONGITUDINAL SECTION

(Dimensions at Rt. L's to ℄ Roadway)
(Looking North)



PLAN

INDEX OF SHEETS

GENERAL NOTES

Backfill within the limits of the paved surface to the top of culvert elevation shall be performed using Porous Granular Embankment.

See Roadway plans for location and quantity of median inlet. Precast alternate is not allowed.

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition w/2013 Interims

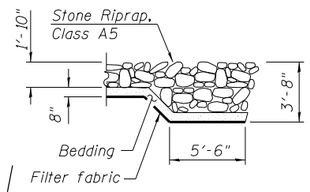
DESIGN STRESSES

FIELD UNITS

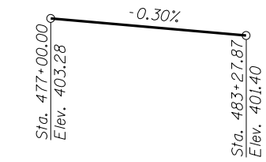
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

LOADING HL-93

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



SECTION A-A



PROPOSED PROFILE GRADE

(25' Lt./Rt. of ℄ Roadway)

Michael T. Haley — Date
Licensed Structural Engineer
State of Illinois No. 81-5991
Expires 11/30/2014

WATERWAY INFORMATION

Drainage Area = 0.225 Sq. Mi.
Existing Overtopping Elev. 401.62 @ Sta. 482+50
Proposed Overtopping Elev. 401.78 @ Sta. 482+00

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	125	11	7	397.2	1.9	2.4	399.1	399.6
Design	50	173	13	9	397.4	3.0	3.3	400.4	400.7
Base	100	199	13	10	397.5	3.9	3.1	401.3	401.4
OVT(E)	~100	211						401.6	
OVT(P)	>100	213							401.8
Max. Calc.	500	275	15	12	397.8	4.2	4.4	402.0	402.2

10-Year Outlet Velocity from Existing Structure = 10.6 fps
10-Year Outlet Velocity from Proposed Structure = 11.7 fps

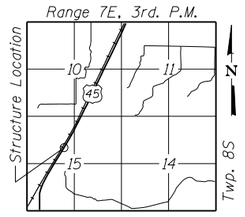
TOTAL BILL OF MATERIAL

Item	Unit	Total
Porous Granular Embankment	Cu. Yd.	173
Stone Riprap, Class A1	Sq. Yd.	237
Stone Riprap, Class A5	Sq. Yd.	42
Filter Fabric	Sq. Yd.	42
Removal of Existing Structures No. 2	Each	1
Removal of Existing Structures No. 3	Each	1
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	158
Reinforcement Bars	Pound	16330
Concrete Box Culverts	Cu. Yd.	133.4
Bar Splicers	Each	36

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	393.31	391.60

*The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions encountered in the field.



LOCATION SKETCH

LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME =	DESIGNED - BDC	REVISED
FILE NAME =	CHECKED - MTH	REVISED
PLOT SCALE =	DRAWN - AJF	REVISED
PLOT DATE =	CHECKED - XX	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
SN 083-7095
SHEET NO. 1 OF 5 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(29,30)R-1	SALINE	745	475
		CONTRACT NO. 78077		
	ILLINOIS FED. AID PROJECT			