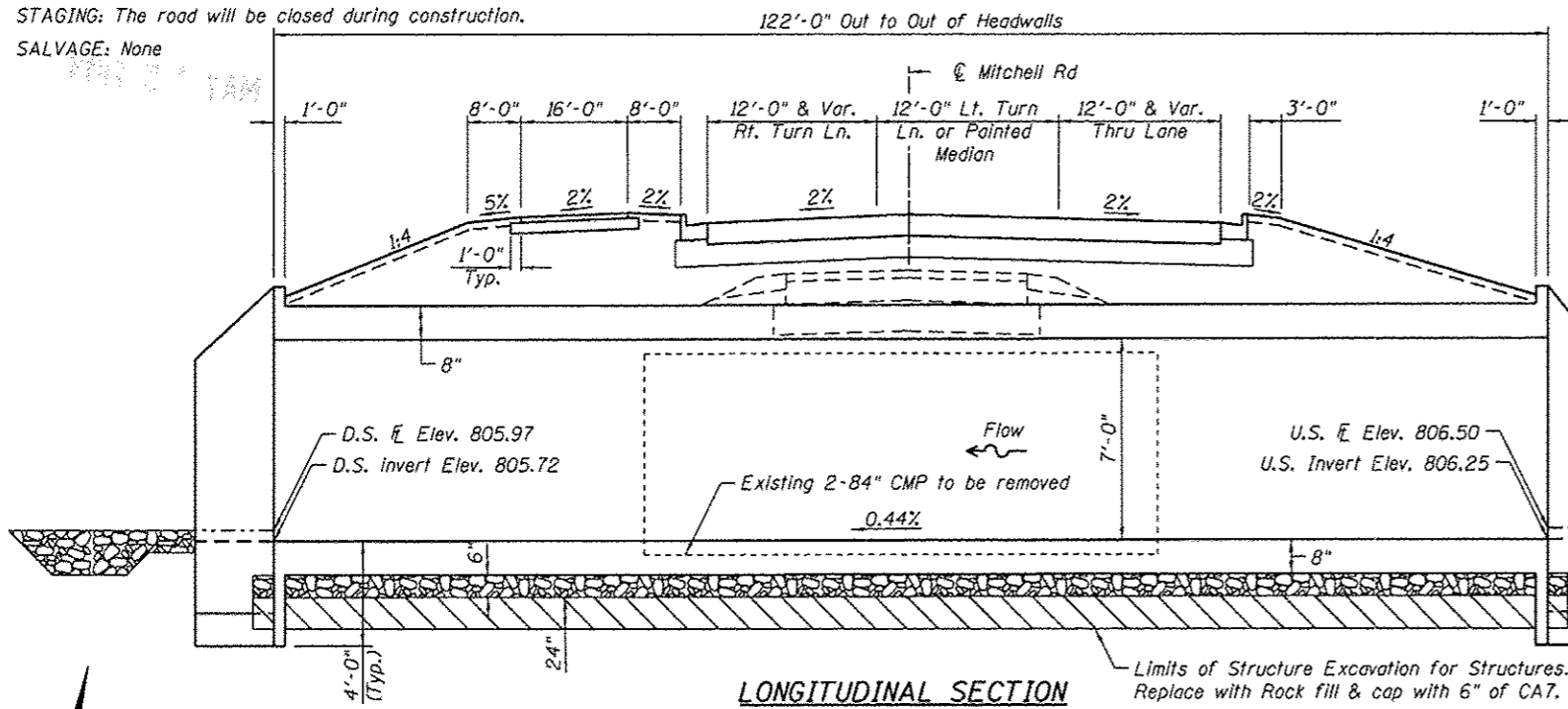


BENCHMARK: (BM#90246) GPS control point, Left side of CL IL 173 STA. 113+78.61, 35.87' Lt., ELEV. = 816.14.

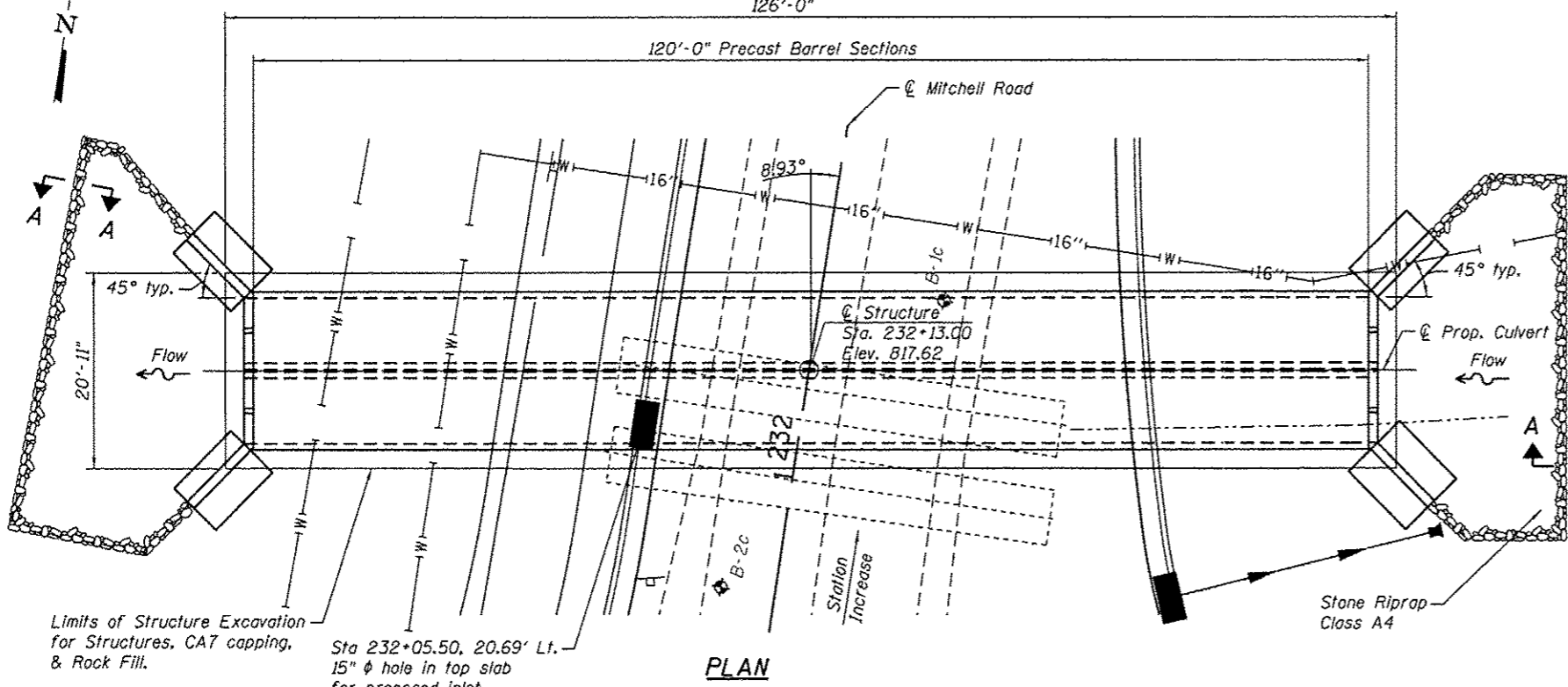
EXISTING STRUCTURE: Double 84" CMP, 48 ft in length, on a 0° skew.

STAGING: The road will be closed during construction.

SALVAGE: None



LONGITUDINAL SECTION



PLAN

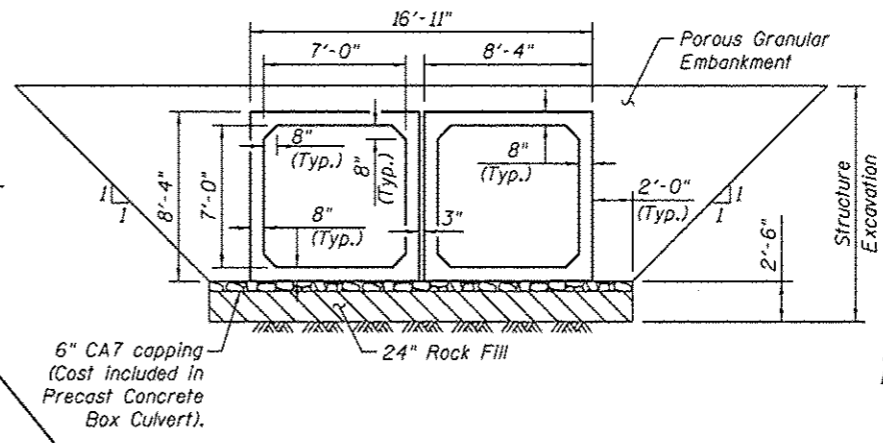
WATERWAY INFORMATION

Existing Low Grade Elev. 815.10 ft @ Sta. 231+00
 Proposed Low Grade Elev. 817.61 ft @ Sta. 232+00
 Drainage Area = 1.29 Sq. MI

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Ten-Year	10	388	44	42	809.9	809.5	2.1	1.9	812.0	811.4
Design	50	642	52	53	810.5	810.3	3.8	3.2	814.3	813.5
Overtopping	86	746	56	-	810.8	-	4.3	-	815.1	-
Base	100	760	56	56	810.8	810.5	4.4	3.9	815.2	814.4
Max. Calc.	500	1060	61	59	811.2	810.7	4.6	6.4	815.8	817.1

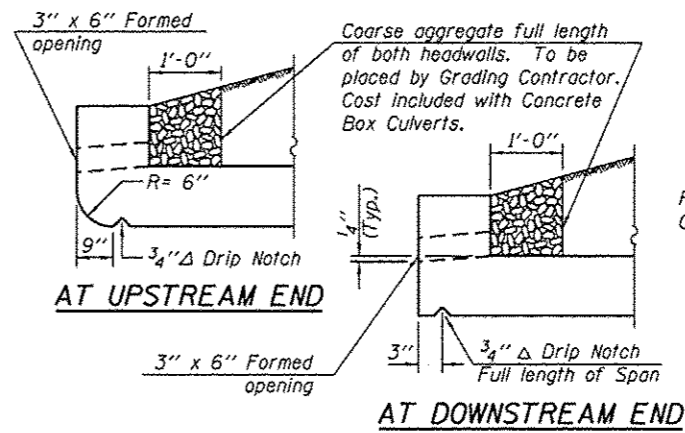
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Reinforcement Bars, Epoxy Coated	Lbs.	400
Reinforcement Bars	Lbs.	2970
Name Plates	Each	1
Precast Concrete Box Culvert 7'x7'	Foot	240
Porous Granular Embankment	Ton	1666
Structure Excavation	Cu.Yd.	641
Concrete Box Culverts	Cu.Yd.	34.2
Rock Fill	Ton	400

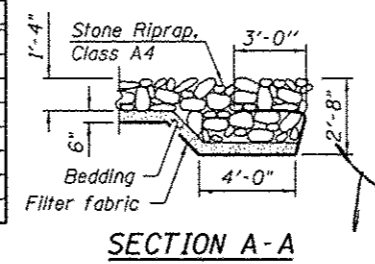


SECTION THROUGH PRECAST BARREL

- GENERAL NOTES**
- Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60. See Special Provisions.
 - Precast Concrete box culvert sections shall conform to the requirement of article 540.06 of the Standard Specifications and the applicable requirement of ASTM C 1577.
 - The removal and replacement required for the culvert barrel installation is based on the recommendation of the District Geotechnical Engineer. Limits and quantities of removal and replacement may adjust based on conditions encountered in the field when approved by the Engineer.
 - Lifting holes shall be filled with concrete plugs and mastic after box sections are in place.
 - Exposed edges shall have a 3/4" chamfer.
 - Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
 - Prior to commencing work, the Contractor shall verify the location of all existing utilities. Work shall be completed in such a manner so as not to disturb or damage the existing utilities.
 - Reinforcement bars designated (E) shall be epoxy coated.



DRAIN DETAIL



SECTION A-A

STATION 232+13.00
 BUILT 20 BY
 STATE OF ILLINOIS
 F.A.P. RT 303 SEC. 129R
 LOADING HL-93
 STRUCTURE NO. 101-1327

NAME PLATE
 See Std. 515001

DESIGN SPECIFICATIONS
 AASHTO LRFD Design Specifications,
 5th Edition with 2010 Interim Revisions

DESIGN STRESSES
FIELD UNITS

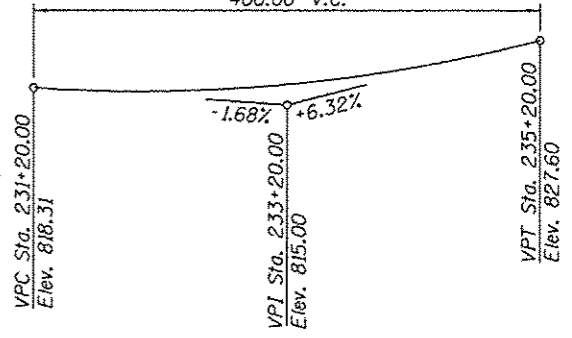
$f'_c = 3,500 \text{ psi}$
 $f_y = 60,000 \text{ psi (Reinforcement)}$

LOADING HL-93

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{01}) = .076g
 Design Spectral Acceleration at 0.2 sec. (S_{05}) = .125g
 Soil Site Class = D

$e_x = 4.00'$
 $k = 50$
 $400.00' \text{ V.C.}$



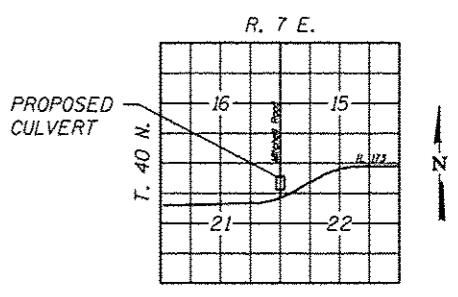
PROFILE GRADE
 (along CL roadway)

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	802.50	802.00

INDEX OF SHEETS

- General Plan
- Cast-In-Place End Section Details
- Soil Boring Logs



LOCATION SKETCH

GENERAL PLAN
MITCHELL ROAD
OVER UNNAMED TRIBUTARY
TO WILLOW CREEK
SECTION 129R
WINNEBAGO COUNTY
STATION 232+13
STRUCTURE NO. 101-1327

FILE NAME: 1810228-68V13-201-CP.dgn
 MODEL: DeFault
 PLOT DRIVER: VBI_Swp_1001_BW.plt



USER NAME	DESIGNED	REVISIONS
RJP	RJP	1
DRB	DRB	2
JTF	JTF	3
DRB	DRB	4

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
 MITCHELL ROAD OVER UNNAMED TRIBUTARY
 SHEET NO. 1 OF 3 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
303	129R	WINNEBAGO	9	685

CONTRACT NO. 64988
 ILLINOIS FED. AID PROJECT