

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
F.A.S. 331	Z-BR	Vermilion	49	19	- SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Bench Mark: #4386-2 Chiseled square on the North West wingwall of existing structure 092-0070
 Station 48+44.96 19.30 Lt. Elevation 691.54 ft.

Existing Structure: S.N. 092-0070 built in 1953 under Proj. S-80(2), F.A.S. 331, Sec. Z-B at Sta. 2+04.35.
 The superstructure consists of a concrete deck supported on simple steel beams. The substructure consists of closed abutments. The Bk. to Bk. dimension measures 47'-11 1/4" while the o.-o. width measures 35'-0".
 The road will be closed during construction.

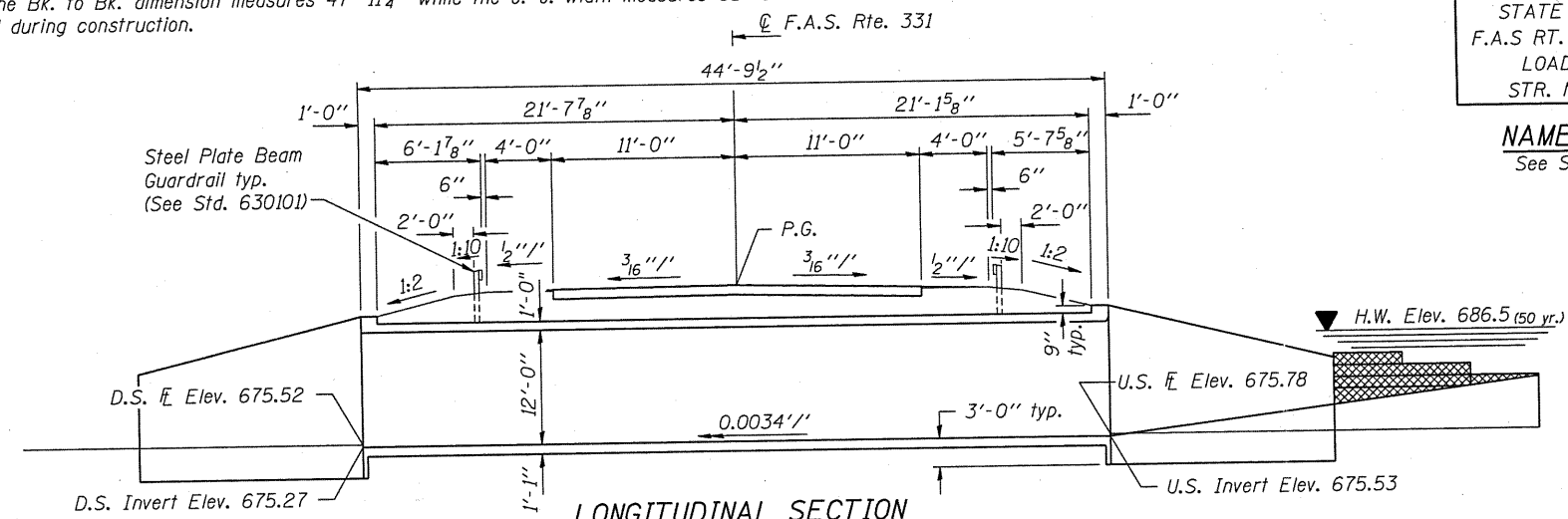
No salvage

STATION 47+96.00
 BUILT BY
 STATE OF ILLINOIS
 F.A.S. RT. 331-SEC. Z-BR
 LOADING HS20
 STR. NO. 092-2039

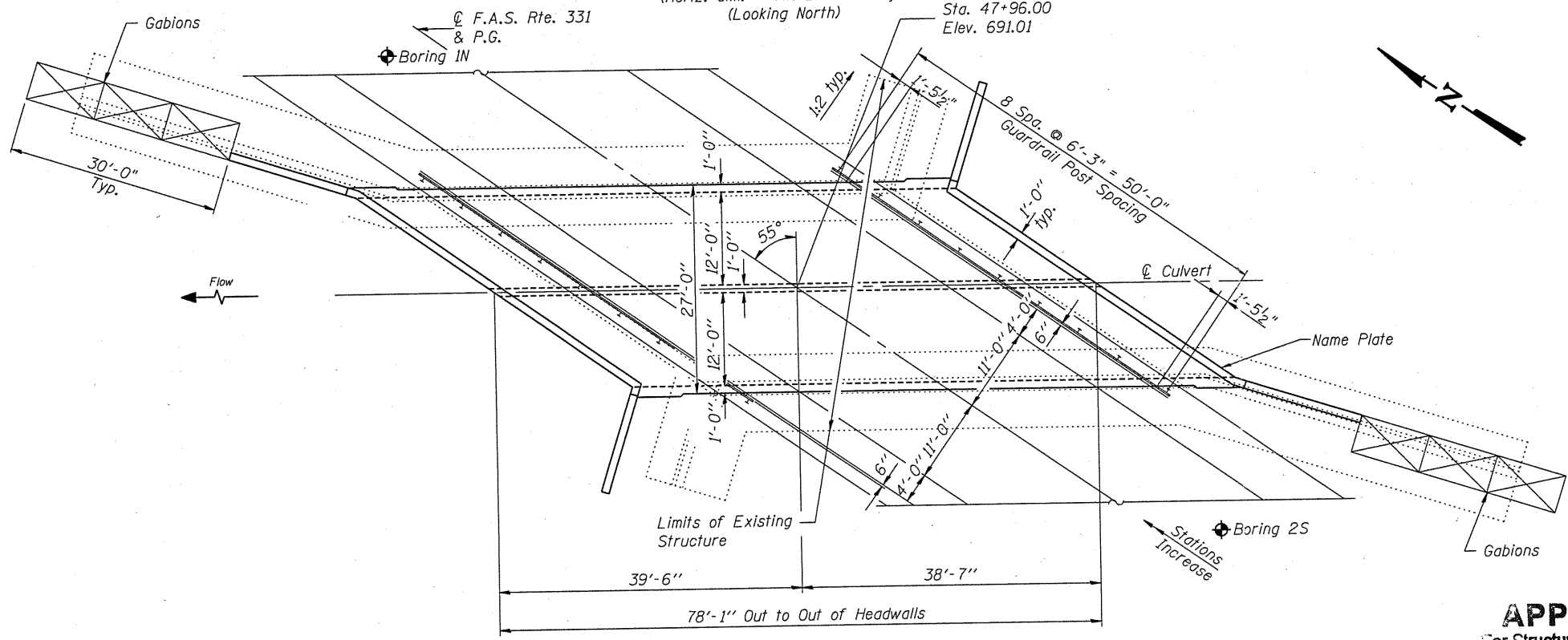
NAME PLATE
 See Std. 515001

GENERAL NOTES

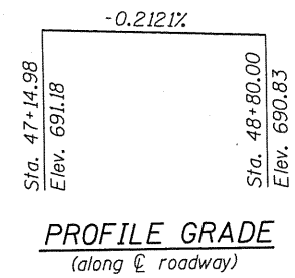
1. It shall be the responsibility of the Contractor to divert the stream flow during construction in order to keep the construction areas free of water. The method of water diversion shall be subject to the approval of the Engineer and cost shall be included with "Concrete Box Culvert".
2. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
3. At least seven feet of the culvert shall be poured monolithically with the reinforced concrete wingwalls.
4. Exposed edges shall have a 3/4" chamfer unless otherwise noted.
5. For backfilling and embankment, see Standard Specifications.
6. All construction joints shall be bonded.
7. Reinforcing bars shall conform to the requirements of ASTM A 706 Gr. 60. See Special Provision.
8. Precast Culvert alternate is not allowed.
9. Excavation behind existing abutment walls shall be done before removing the existing superstructure.
10. Remove existing structure entirely. Cost included with "Removal of Existing Structure."



LONGITUDINAL SECTION
 (Horiz. dim. @ Rt. L's to Rdwy.)
 (Looking North)



PLAN



PROFILE GRADE
 (along @ roadway)

WATERWAY INFORMATION

Drainage Area = 5.82 sq. mi. Low Grade Elev. 688.02 @ Sta. 57+71.61

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	720	170	247	685.8	0.2	0	686.0	685.8
Base	50	1076	187	264	686.5	0.5	0.2	687.0	686.7
Overtopping	100	1222	194	271	686.8	0.6	0.2	687.4	687.0
Max. Calc.	500	1563	208	285	687.4	1.0	0.5	688.4	687.9

APPROVED
 For Structural Adequacy Only

Robert E. Anderson (TJD)
 Engineer of Bridges & Structures



Sean Marzano
 Structural Engineer
 Clark Dietz, Inc.

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

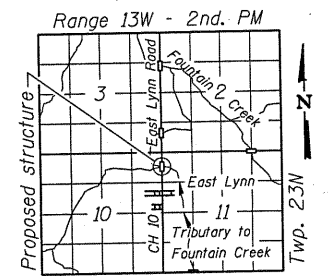
DESIGN SPECIFICATIONS
 2002 AASHTO

DESIGN STRESSES

FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)

TOTAL BILL OF MATERIAL

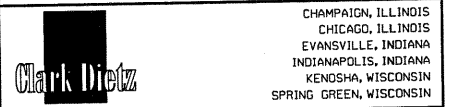
ITEM	UNIT	TOTAL
Removal of Existing Structure	Each	1
Concrete Box Culverts	Cu. Yd.	322.9
Reinforcement Bars	Pound	86,640
Name Plates	Each	1
Gabions	Cu. Yd.	188
Porous Granular Embankment	Cu. Yd.	1837
Filter Fabric	Sq. Yd.	120
Steel Plate Beam Guardrail, Attached to Structures	Ft.	100
Structure Excavation	Cu. Yd.	50



LOCATION SKETCH

GENERAL PLAN

CH 10 / EAST LYNN ROAD OVER
 TRIBUTARY TO FOUNTAIN CREEK
 F.A.S. ROUTE 331 - SECTION Z-BR
 VERMILION COUNTY
 STATION 47+96.00
 STRUCTURE NO. 092-2039



NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DESIGNED BY	S.M.M.	PROJECT NO.	182313
DRAWN BY	MEW	DATE	8/05
CHECKED BY	M.M.		
APPROVED BY	S.M.M.		
ACTIVITY	INITIALS		

DRAWING NUMBER
S-1