

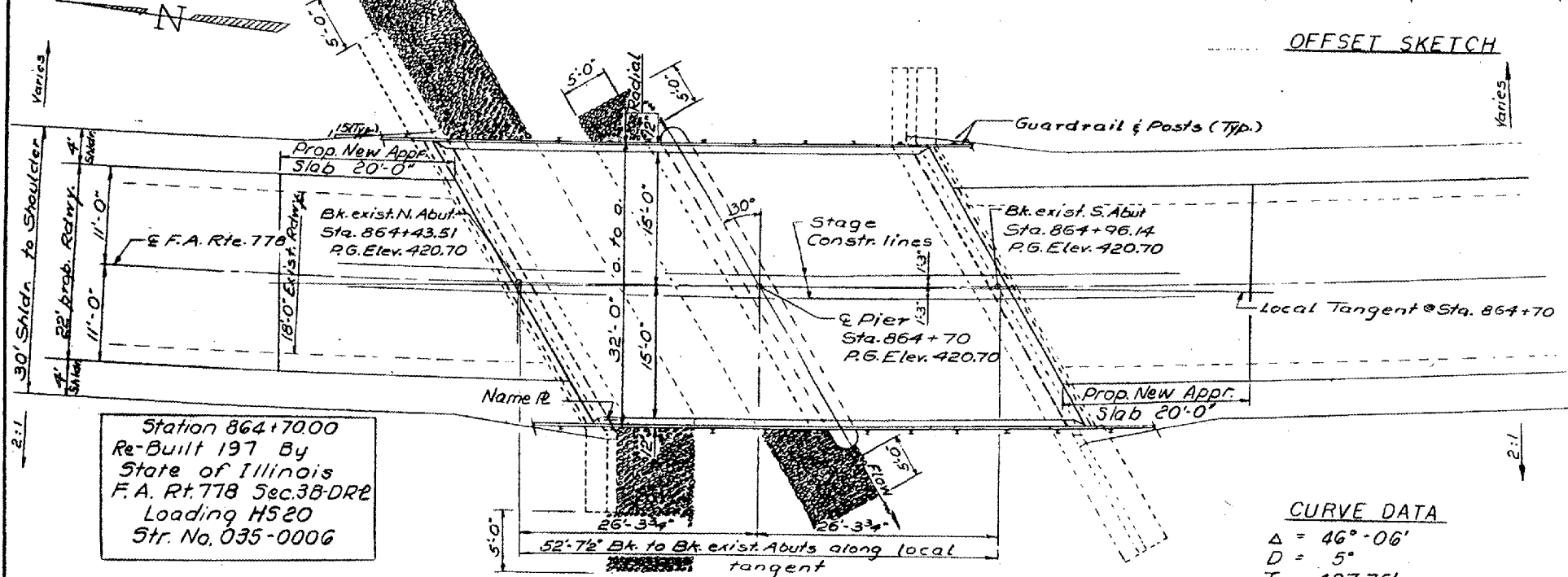
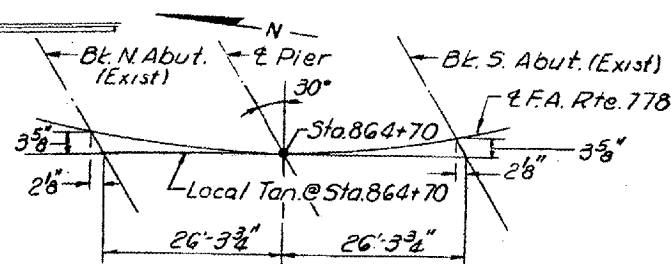
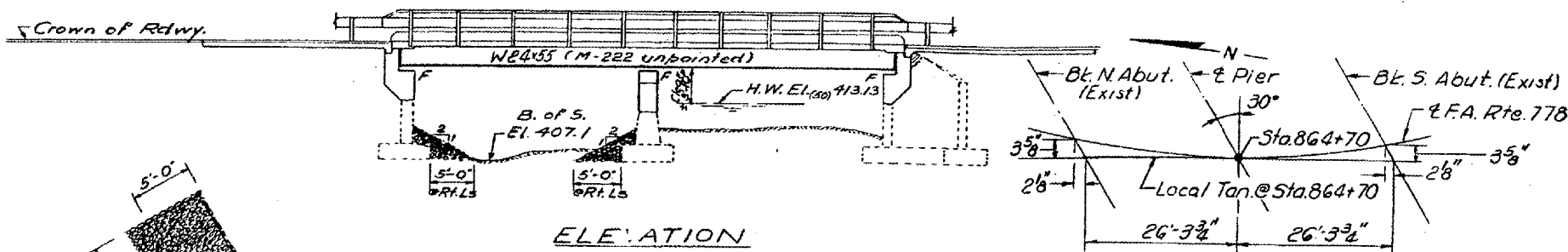
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	ROUTE	POST MILE	SHEET NO. / TOTAL SHEETS
778	DR-2	Hardin	18	6	10 SHEETS

B.M.: R.R. Spike in Power Pole 28' Rt. Sta. 869+35
 Elev. 423.27.
 Existing structure N 035-0006, built as S.B.I.
 Rt. 34, Sec. 3B in 1924, 2 spans R.C. slab on R.
 C. closed abutments & pier. The contractor
 shall remove the existing superstructure in
 stages and provide a new superstructure
 with 24" W Flange Beams. Repair and rebuild
 the pier & abutments as required. One way
 traffic shall be maintained at all times
 using stage construction.
 No salvage.

GENERAL NOTES

- Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$ " ϕ , open holes $\frac{13}{16}$ " ϕ , unless otherwise noted.
- Calculated weight of Structural Steel = 17560 Lbs.
- All structural steel shall be AASHTO: M 222 unpainted except expansion joint angles and attached bars which shall be AASHTO: M 183 and shop painted with two coats of basic lead silico chromate paint.
- Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
- Anchor bolts shall be set before bolting diaphragms over supports.
- It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.
- Expansion bolts shall consist of self drilling expansion anchors and $\frac{3}{4}$ " ϕ x 12" hooked bolts.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\pm \frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
- The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the tension flanges, webs and all splice plate material of the steel girders or wide flange beams.
- Protective coat shall be applied to deck surface, inside faces and top faces of curb.
- Reinforcement bars shall conform to the requirements of AASHTO M-31 Grade 60



TOTAL BILL OF MATERIALS

Item	Unit	Super	Sub	Total
Removal of Existing Superstructure	Each		1	1
Class X Concrete	Cu. Yds.	453	431	884
Reinforcement Bars	Lbs.	5960	3320	9280
Reinforcement Bars (Epoxy Coated)	Lbs.	10280		10280
Structural Steel	L. S.			0.26
Protective Coat	Sq. Yds.	201		201
Temporary Guardrail	Lin. Ft.	55		55
Concrete Removal	Cu. Yds.		232	232
Expansion Bolts $\frac{3}{4}$ " ϕ	Each		33	33
Steel Railing T. T.	Lin. Ft.	110		110
Name Plate	Each	1		1

Note: Adequate struts shall be placed at the abutments before existing superstructure is removed and shall remain in place until new superstructure has been erected to prevent damage to abutments from unrestrained earth pressure. Cost incidental

CURVE DATA

$\Delta = 46^{\circ} 06'$
 $D = 5'$
 $T = 487.75'$
 $L = 922'$
 $R = 1146.28'$
 $E = 99.42'$
 Prop. S.E. = 0.08 $\frac{1}{4}$ " $\frac{1}{4}$ "
 Arisar. S.E. Sta 862+15 to Sta. 864+31
 Trans. from .08 to Exist. S.E. - Sta. 866+25 to Sta. 867+25

DESIGN STRESSES

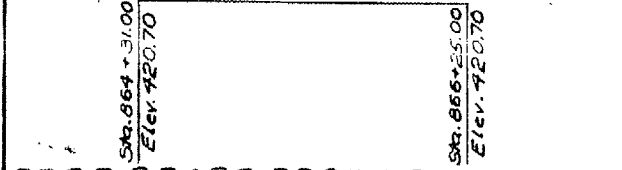
$f_c = 3,500$ psi
 $f_y = 60,000$ psi. (Reinf.)
 $f_y = 50,000$ psi. (Struct) M-222 Gr. 50
 $f_y = 36,000$ psi. M-183
 Loading H520-44
 Allow 25 $\frac{1}{8}$ " ϕ for Future W. S.
 Design Specifications: 1973 AASHTO, 1974, 1975, 1976 and 1977 Interim Specifications.
 **Epoxy Coated Reinf. Bars shall be used in the top layer of the slab.

WATERWAY INFORMATION

Drainage Area 145 Sq. Miles
 Existing Opening 169 Sq. Ft.
 Required Opening 169 Sq. Ft.
 Proposed Opening (below 50yr H.W.E) 169 Sq. Ft.

H.W.E. (50) = 413.13'
 $Q(50) = 1090$ cfs
 Created Head - Negligible
 H.W.E. (100) = 413.5'
 $Q(100) = 1260$ cfs
 Created Head - Negligible

PROR GRADE PROFILE F.A. RTE. 778 (@ E Rdwy.)



DESIGNED <i>Priscilla Balwin</i>	EXAMINED <i>Feb 23 1978 Carl E. Hummer</i>
CHECKED <i>Paul S. McCoy</i>	PASSED
DRAWN <i>Mercado V.H.</i>	APPROVED
CHECKED <i>P.S.M.</i>	

FOR INFORMATION ONLY:

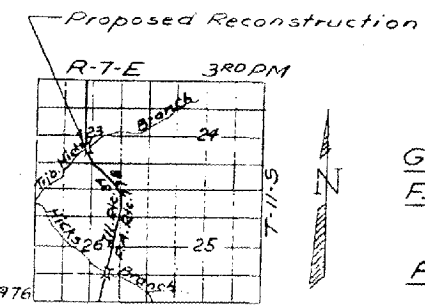
BRIDGE NO. 2 STRUCTURE 035-0006

GENERAL PLAN & ELEVATION
 F.A. RTE. 778 OVER TRIB. HICKS

BRANCH
 F.A. RTE. 778 SEC. 3B-DR-2

HARDIN COUNTY

STA. 864+70.00



LOCATION SKETCH