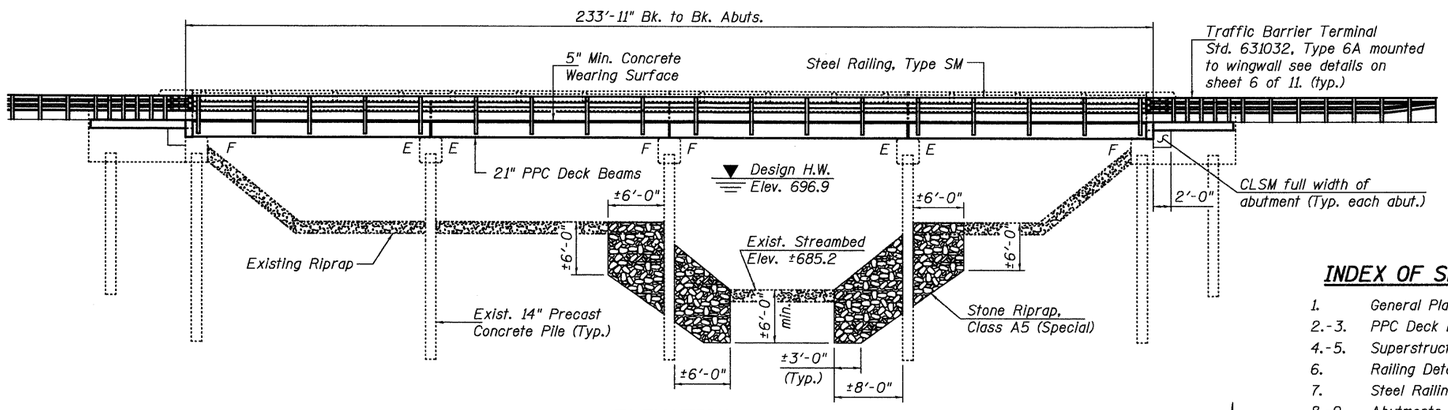
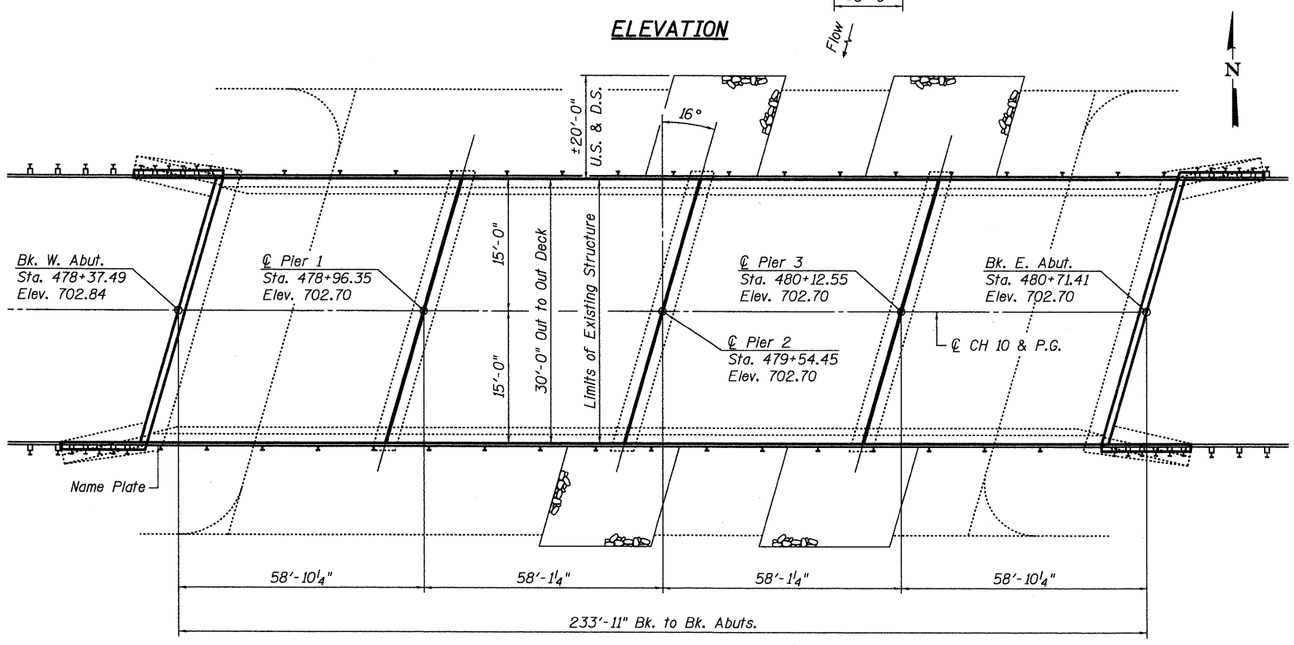
Benchmark: BM#20 - "□" Chiseled on top of S.W. Wingwall at S.W. corner of S.N. 020-3900, Sta. 478+16, 15' Rt., Elev. 704.46.

Existing Structure: Original Construction 1970 - 4 span PPC Deck Beam Bridge with bituminous wearing surface, concrete parapets, and Precast concrete pile bent piers and abutments. Contractor to remove and replace superstructure. Road to be closed during construction.

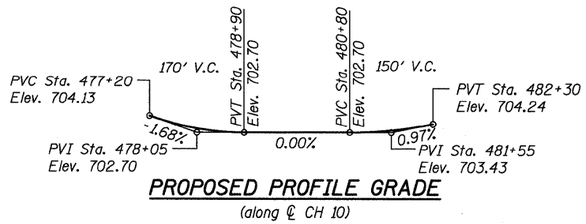
No Salvage



ELEVATION



PLAN



PROPOSED PROFILE GRADE

(along ℄ CH 10)

INDEX OF SHEETS

NORTH FORK SALT CREEK
REBUILT 20 BY
DEWITT COUNTY
SEC. 09-00025-01-BR
F.A.S. RT. 543 STA. 479+54.45
STR. NO. 020-3900 LOADING HL93

NAME PLATE

See Std. 515001

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

WATERWAY INFORMATION

Drainage Area = 112.42 sq. mi. | Exist. Low Grade Elev. = 702.40 @ Sta. 479+54.45 | Prop. Low Grade Elev. = 702.40 @ Sta. 479+54.45

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.
Design	20	7,830	1331	1331	696.90	0.50	0.50	697.40	697.40
Base	100	11,900	1421	1421	698.23	0.88	0.88	699.11	699.11
Max. Calc.	500	15,900	1848	1848	699.33	1.29	1.29	700.62	700.62

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5 (Special)	Ton		860	860
Protective Coat	Sq. Yd.	790		790
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		8.9	8.9
Concrete Structures	Cu. Yd.		7.4	7.4
Bridge Deck Grooving	Sq. Yd.	722		722
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	6,960		6,960
Reinforcement Bars, Epoxy Coated	Pound	9710	910	10,620
Steel Railing, Type SM	Foot	468		468
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	63		63
Concrete Sealer	Sq. Ft.		560	560
Epoxy Crack Injection	Foot		12.0	12.0
Controlled Low-Strength Material	Cu. Yd.		16.0	16.0
Structural Repair of Concrete (Depth greater than 5")	Sq. Ft.		5.0	5.0
Structural Repair of Concrete (Depth equal to or less than 5")	Sq. Ft.		6.0	6.0
Concrete Wearing Surface, 5"	Sq. Yd.		773	773
Asbestos Bearing Pad Removal	Each		88	88

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

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

Repair of the pier caps shall be completed prior to placement of the new beams.

The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

If the Contractor's procedure for existing beam removal or placement of new beams involves placement of heavy equipment on the new or existing beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads.

LOADING HL-93

No Future Wearing Surface Allowed

DESIGN SPECIFICATIONS

New Construction:
2007 AASHTO LRFD Bridge Design Specifications with 2008 Interims

DESIGN STRESSES

FIELD UNITS (Existing Construction)

f'_c = 3,500 psi
f_y = 40,000 psi (reinforcement)

FIELD UNITS (New Construction)

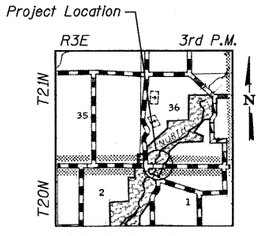
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)

PRECAST PRESTRESSED UNITS (New Construction)

f'_c = 6,000 psi
f'_{ci} = 5,000 psi
f_{pu} = 270,000 psi (½"ϕ low lax. strands)
f_{pbt} = 201,960 psi (½"ϕ low lax strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.046g
Site Coefficient (S) = 1.0



LOCATION SKETCH

FILENAME: I:\jobs\dewitt county\7211 ch 10 over n fork salt creek\cadd\CADD Sheets\0203900-00000.dgn

USER NAME = dheberling	DESIGNED - FLL	REVISED
	DRAWN - DLH	REVISED
PLOT SCALE = 01 1/16 '' / IN.	CHECKED - CWC	REVISED
PLOT DATE = 8/18/2009	DATE -	REVISED

WHKS & CO. ENGINEERING

7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
CH 10 OVER NORTH FORK SALT CREEK
SCALE: | SHEET NO. 1 OF 11 SHEETS | ℄ STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
543	09-00025-01-BR	DEWITT	17	7
S.N. 020-3900		CONTRACT NO. 91423		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		