Bench Mark: BM 270-11 - Cut square on the center of the pier base for EB I270 bridge, just east of the east bank of the Chain of Rocks Canal, Elev. 429.361;
BM 270-20 - Cut square at SE corner of the pier base for WB I270 bridge over Chain of Rocks Canal, west side of Waterworks Rd (marked BM9), Elev. 443.974.

Existing Structures: SN 060-0036 (EB) & SN 060-0037 (WB) originally built in 1963 to carry FAI-270, bridge deck repairs, microsilica overlay added in late 1995. Structures consist of two identical 12-span bridges. Each has four approach spans at the west end (95'-8½", 106'-0½", 105'-3¼", 106'-7¼") and five approach spans at the east end (115'-3⅛", 144'-7⅞", 144'-8⅛", 114'-8⅝", 95'-8½"). The approach spans are continuous steel plate girders. The main spans consist of a three-span cantilevered through truss (240'-7⅝", 480'-0", 240'-7⅝"). The back to back abutment length is 1,991'-11" and the out to out bridge width is 36'-0" each. Stay-in-place forms are still in place beneath the deck. Structures to be kept open and removed after a new bridge is constructed.

Roadway to be kept open during bridge construction.

No salvage.

(1) Point of min. vert. clr.

(2) Sta. 1193+88.11 (Align.) = Sta. 1439+20.83 (Relocated Waterworks Rd)

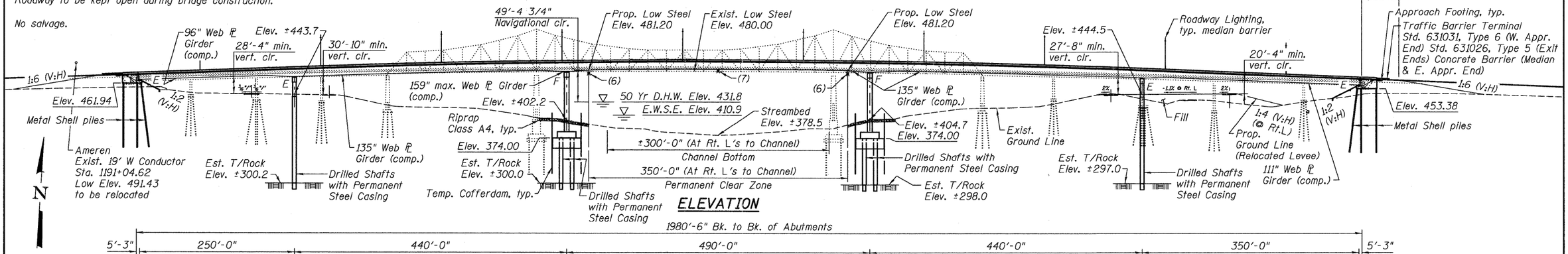
(3) Sta. 1195+13.91 (Align.) = Sta. 25+91.43 (Exist. Levee Rd (West))

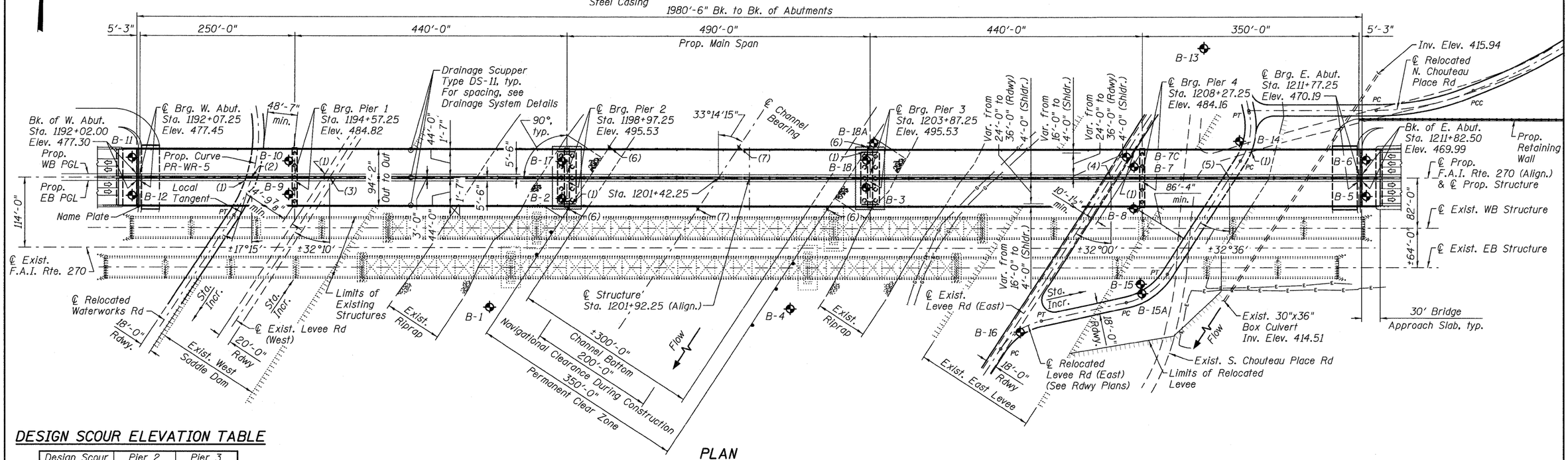
(4) Sta. 1207+76.92 (Align.) = Sta. 52+62.45 (Exist. Levee Rd (East))

(5) Sta. 1209+68.32 (Align.) = Sta. 153+03.65 (Relocated Levee Rd (East))

(6) Navigation Light, 180° Red, Each Side

(7) Navigation Light, 360° Green, Each Side





PLAN

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Pier 2	Pier 3
	*	*

* No scour potential

LOADING HL-93

Allow 50 psf for future wearing surface.

SCOPE OF WORK

1. Construct new bridge.
2. Remove existing EB & WB structures.

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications
(AASHTO LRFD - Vehicle Live Load Deflection Criteria L/800)

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50W)
fy = 70,000 psi (M270 Grade HPS 70W) for flanges at pier locations only

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.23g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.50g
Soil Site Class = D

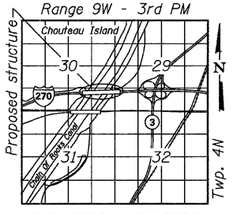
APPROVED
FOR STRUCTURAL ADEQUACY ONLY
ENGINEER OF BRIDGES AND STRUCTURES

JAMES G. PETERMAN III 081-005448 LICENSED STRUCTURAL ENGINEER OF ILLINOIS

BY: _____ DATE: 3/16/2011
HDR ENGINEERING, INC.
SHTS. 380-446, 451-460, 469-478, 483
LICENSE EXPIRES 11-30-12

GERALD S. KOTLASS 081-005264 LICENSED STRUCTURAL ENGINEER OF ILLINOIS

BY: _____ DATE: 3/16/2011
McDONOUGH & ASSOCIATES
SHTS. 447-450, 461-468, 479-482
LICENSE EXPIRES 11-30-12



LOCATION SKETCH

GENERAL PLAN & ELEVATION
I-270 OVER CHAIN OF ROCKS CANAL
PUBLIC WATERS
F.A.I. RTE. 270 - SEC. 60-1B-1
MADISON COUNTY
STATION 1201+92.25
STRUCTURE NO. 060-0345

HDR ENGINEERING, INC.

USER NAME = Jmlgus	DESIGNED - BWC	REVISED -	
FILE NAME = 0600345-76A91-001-GPE.DGN	CHECKED - LGP	REVISED -	
PLOT SCALE = NONE	DRAWN - JM	REVISED -	
PLOT DATE = 3/18/2011	CHECKED - BSK	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE SHEET NO. 1 OF 133 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
270	60-1B-1	MADISON	712	380
		CONTRACT NO. 76A91		
	ILLINOIS FED. AID PROJECT			

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Jmlgus
3/16/2011
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