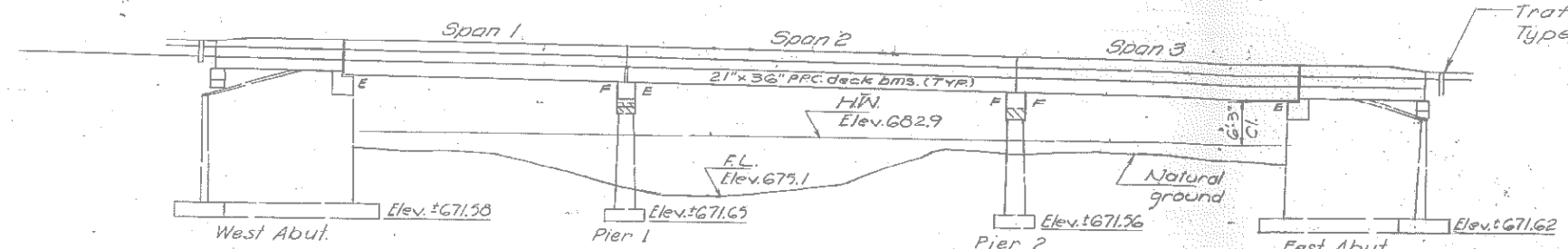


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Expansion guards which are not cast in the precast unit shall be fabricated and erected in accordance with Art. 505.07(c) of the Std. Specs. and are included in quantity of structural steel.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
53	121 BR	MCLEAN	30	18	18

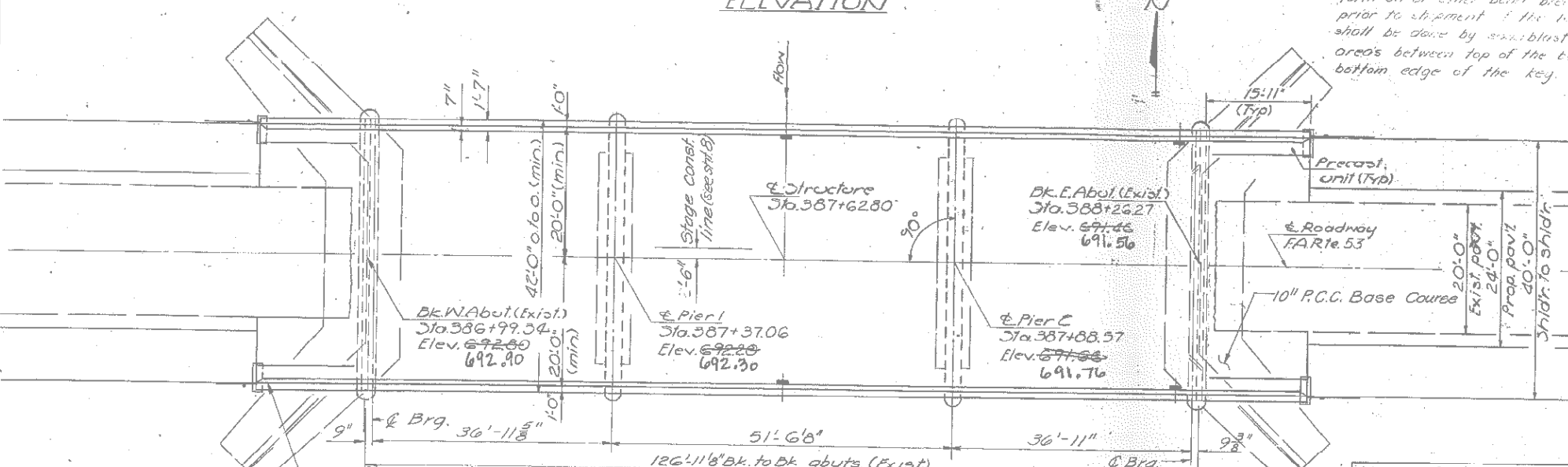
Bench Mark - #133 Orange paint, E. edge of NW. wingwall.  
17' Lt. Sta. 386+96 Elev. 692.95  
Exist. Structure - No. 057-0092 built in 1936 as F.A. Rt. 119, Sec. 121-D Old Sta. 387+84 RC deck girders, closed conc. abutments and solid conc. piers.  
The Superstructure will be removed, the structure widened and traffic maintained utilizing stage construction and temporary bridge rail. No salvage. See Special Provisions for deck removal sequence.



ELEVATION

Traffic Barrier Terminal Type 6 (Standard 2341)

Keyway surfaces shall be cleaned to remove form oil or other heavy greasy residue prior to shipment of the beams. Chipping shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.



PLAN

NOTES

- THE "STATE OF ILLINOIS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED 10-1-79 SHALL APPLY.
- CONCRETE: CLASS X CONCRETE SHALL BE USED THROUGHOUT EXCEPT FOR PRECAST PRESTRESSED UNITS. SEE THE APPLICABLE SPECIFICATIONS FOR CONCRETE REQUIREMENTS FOR PRECAST PRESTRESSED UNITS.
- ALL BAR BEND DIMENSIONS ARE SHOWN OUT TO OUT OF BARS
- REINFORCEMENT SHALL CONFORM TO AASHTO M-31 OR M-53, GRADE 60.
- Expansion bolts shall consist of approved expansion anchors, providing min. proof load = 4,080 lbs. & 3/4" x 12" hooked bolts.
- ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH 2 COATS OF BASIC LEAD SILICO CHROMATE PAINT
- THE CONCRETE RAIL SECTION ABOVE THE TOP OF THE DECK BEAM SHALL BE CONSTRUCTED OF CLASS X CONCRETE, EXCEPT THE AGGREGATES SHALL CONFORM TO THE REQUIREMENTS FOR HANDRAIL CONCRETE.
- PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACES TO WHICH WATERPROOFING MEMBRANE SYSTEM IS APPLIED
- A CALCIUM NITRITE CORROSION INHIBITOR AS COVERED IN THE SUPPLEMENTAL SPECIAL PROVISIONS SHALL BE USED IN THE CONCRETE FOR P.P.C. DECK BEAMS ONLY.
- 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
- THE TOP SURFACE OF THE BEAMS SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 505.06 OF THE STANDARD SPECIFICATIONS EXCEPT THAT THE SURFACE SHALL NOT BE ROUGHENED BY BROOMING. THE FINISHED SURFACE SHALL BE FREE OF DEPRESSIONS OR HIGH SPOTS WITH SHARP CORNERS, AND THE TOP EDGE OF KEYS SHALL BE ROUNDED OR CHAMFERED 1/4" MIN.

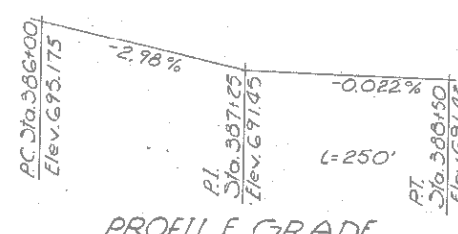
BILL OF MATERIALS

ITEM	UNIT	QUANTITY		TOTAL
		SUPERSTR.	SUBSTR.	
BIT. CONC. SURFACE CSE., MIX. D. CL I	TON	80.4	---	80.4
PORTLAND CEMENT CONCRETE BASE COURSE 10"	SQ. YD.	---	---	52
PAVEMENT FABRIC	SQ. YD.	---	---	68
REM. OF EXIST. SUPER-STRUCTURES	EACH	1	---	1
CONC. REMOVAL	CY. YD.	---	17.9	17.9
EXPANSION BOLTS (3/4" φ)	EACH	---	104	104
PROTECTIVE COAT	SQ. YD.	125	---	125
CLASS "X" CONC.	CU. YD.	43.3	54.7	98.0
3/4" φ ANCHOR BOLTS, 12"	EACH	---	---	44
PRECAST CONCRETE BRIDGE SLABS	SQ. FT.	239	---	239
PRECAST PRESTRESSED CONC. DECK BEAM 21"	SQ. FT.	5306	---	5306
WATERPROOFING MEMBRANE SYSTEM	SQ. YD.	545	---	545
STRUCTURAL STEEL	LB.	8031	---	8031
REINFORCEMENT BARS	LB.	4090	10,440	14,130
REINFORCEMENT BARS (EPOXY COATED)	LB.	340	---	340
NAME PLATES	EACH	---	---	1
PAVEMENT REMOVAL	SQ. YD.	---	---	14
PAVEMENT REPLACEMENT	SQ. YD.	---	---	16
PREFORMED JOINT SEAL 2 1/2"	LIN. FT.	126	---	126
TEMP. BRIDGERAIL	LIN. FT.	127	---	127
PORTLAND CEMENT MORTAR, FAIRING COURSE	LIN. FT.	1642	---	1642
EXP. TIE ANCHORS 3/4"	EACH	52	---	52

NOTE: See sheet 8 for stage construction sequence

WATERWAY INFORMATION

Drainage Area - 4.5 Miles  
Character - Level, rolling, cultivated  
Present Opening - 432 a'  
Required Opening - 432 a'  
Recommended Opening - 432 a'  
Q(100) = 1486 cfs  
Q(100) = 1876 cfs  
H.W. Elev. (100) 682.9  
H.W. Elev. (100) 683.4



PROFILE GRADE

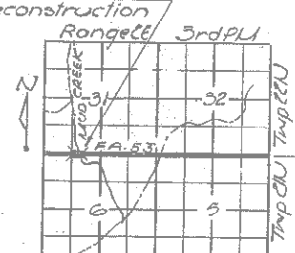
DESIGN STRESSES

FIELD UNITS  
f<sub>c</sub> = 3500 psi  
f<sub>y</sub> = 60,000 psi  
n = 9

PRECAST UNITS  
f<sub>c</sub> = 4500 psi  
f<sub>c</sub> = 1800 psi  
f<sub>s</sub> = 20,000 psi  
n = 8

PRECAST PRESTR. UNITS

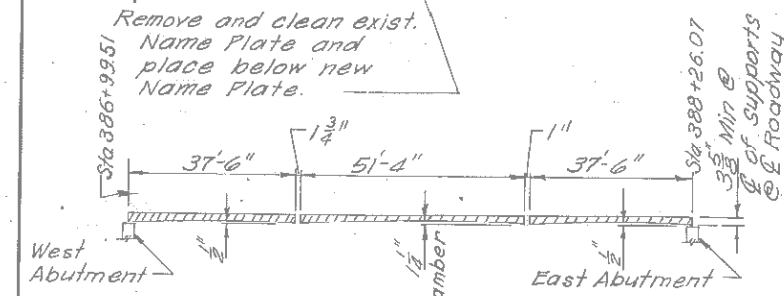
f<sub>c</sub> = 3000 psi  
f<sub>c</sub> = 4000 psi  
f<sub>s</sub> = 270,000 psi (1/2" φ strands)  
f<sub>s</sub> = 180,000 psi (1/2" φ strands)  
Allow 25% a' for fut. wearing surf.  
Design Specifications  
1977 AASHTO, 1978, 1979, 1980 & 1981  
interim specifications



LOCATION SKETCH

10-8-76 Woodrow C. Chenault, Jr.  
DATE  
WOODROW C. CHENAULT, JR.  
ILL. REG. STRUCTURAL ENGINEER  
NO. 3567

GENERAL PLAN & ELEVATION  
F.A. ROUTE 53 OVER MUD CREEK  
SECTION 121 BR  
MCLEAN COUNTY  
STATION 387+62.80



BITUMINOUS SURFACE PROFILE  
(Limits of Bit. Conc. Surf. Crse, Mixt D<sub>3</sub> Class I Thickness shown includes 2" Waterproofing Membrane System.)

STA. 387 + 62.80  
BUILT 198\_ BY  
STATE OF ILLINOIS  
F.A. RT. 53 SEC. 121 BR  
F.A. PROJ. BH-F-53(36)  
LOADING HS 20  
STR. NO. 057-0092

NAME PLATE

DESIGNED	19
CHECKED	
DRAWN	
CHECKED	

Rev. 10-23-75 Rev. 9-2-81 Exp. Bolts 3/4" φ from 136 to 104 Each, Added 3/4" Exp. Tie Anchors 52 Each D.D.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN  
FOR INFORMATION ONLY

FILE NAME =	USER NAME = rook	DESIGNED -	REVISED -	F.A.P. RTE. 315	SECTION 121-BR-1	COUNTY MCLEAN	TOTAL SHEETS 67	SHEET NO. 28
P:\0340802.01 Mud Creek\CADD Sheets\057-0092-sht-01dbridgeplans.dgn		DRAWN -	REVISED -	SCALE:	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	CONTRACT NO. 70528	
PLOT SCALE = 40.0000' / IN.		CHECKED -	REVISED -	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
PLOT DATE = 10/20/2009		DATE -	REVISED -					