

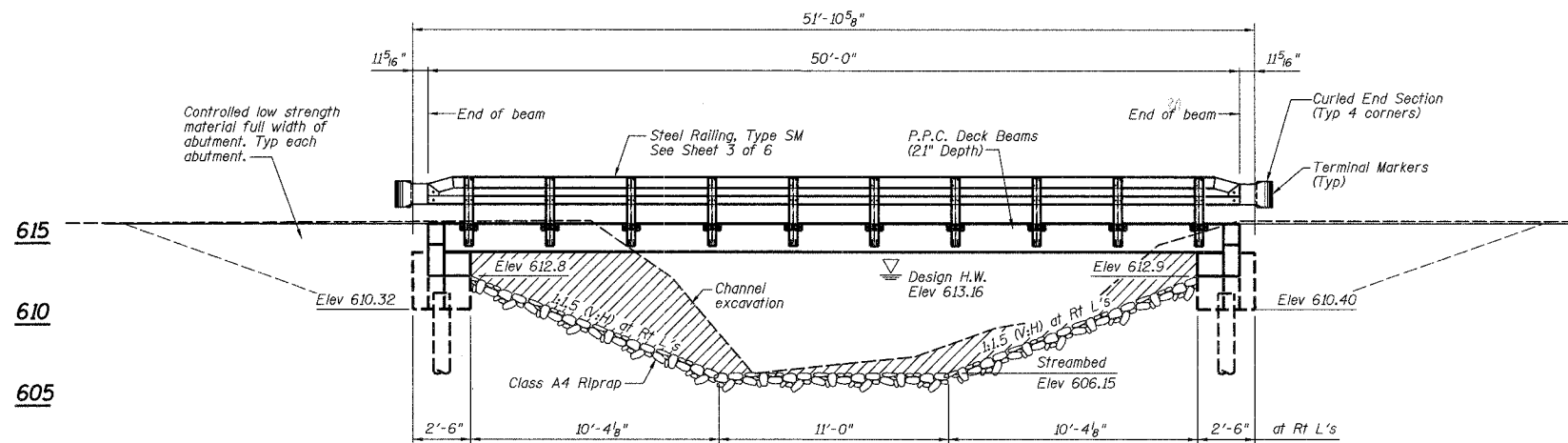
Bench Mark #1:
Chiseled square on NW wingwall.
Elev 615.93

Existing Structure:
Single span steel stringer bridge with closed
abutments on spread footings. SN 058-3090
Remove and replace existing deck and abutments.
Road to be closed during construction.

Sheet No. 1
of 6 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 27	*	MACON	16	5

FEDERAL DIST. NO. ILLINOIS PROJECT
*03-07146-00-BR



UNNAMED DRAINAGE DITCH
BUILT 20 BY
MACON COUNTY
SECTION 03-07146-00-BR
STA. 10+00.00
STR. NO. 058-3372 LOADING HS20

NAME PLATE
See Std. 515001

DESIGN SPECIFICATIONS
2002 AASHTO 17th Edition

LOADING HS20

Allow 50 lb/sq ft for future wearing surface.

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS
f'c = 5,000 psi
f'ci = 4,000 psi
f's = 270,000 psi (1/2" φ stress relieved strands)
f'si = 202,000 psi (1/2" φ stress relieved strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = .048
Site Coefficient (S) = 1.5

GENERAL NOTES

For Boring Data see Special Provisions.

Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-322 Grade 60.

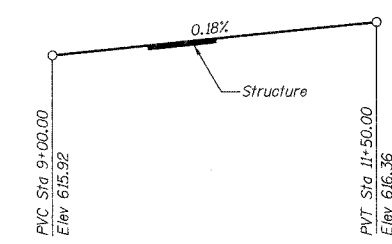
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

The top surface of the beams shall be finished according to Article 504.06 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 a minimum of 1/4".

The Contractor shall drive one (1) test pile in a permanent location at Abutment No. 2 as directed by the Engineer before ordering the remainder of piles.

All Construction joints shall be bonded.

See Roadway Plans for riprap limits.



CONSTRUCTION PROFILE

WATERWAY INFORMATION

Drainage Area = 1.40 sq mi Low Grade Elev. = 615.58 Sta 3+05.00

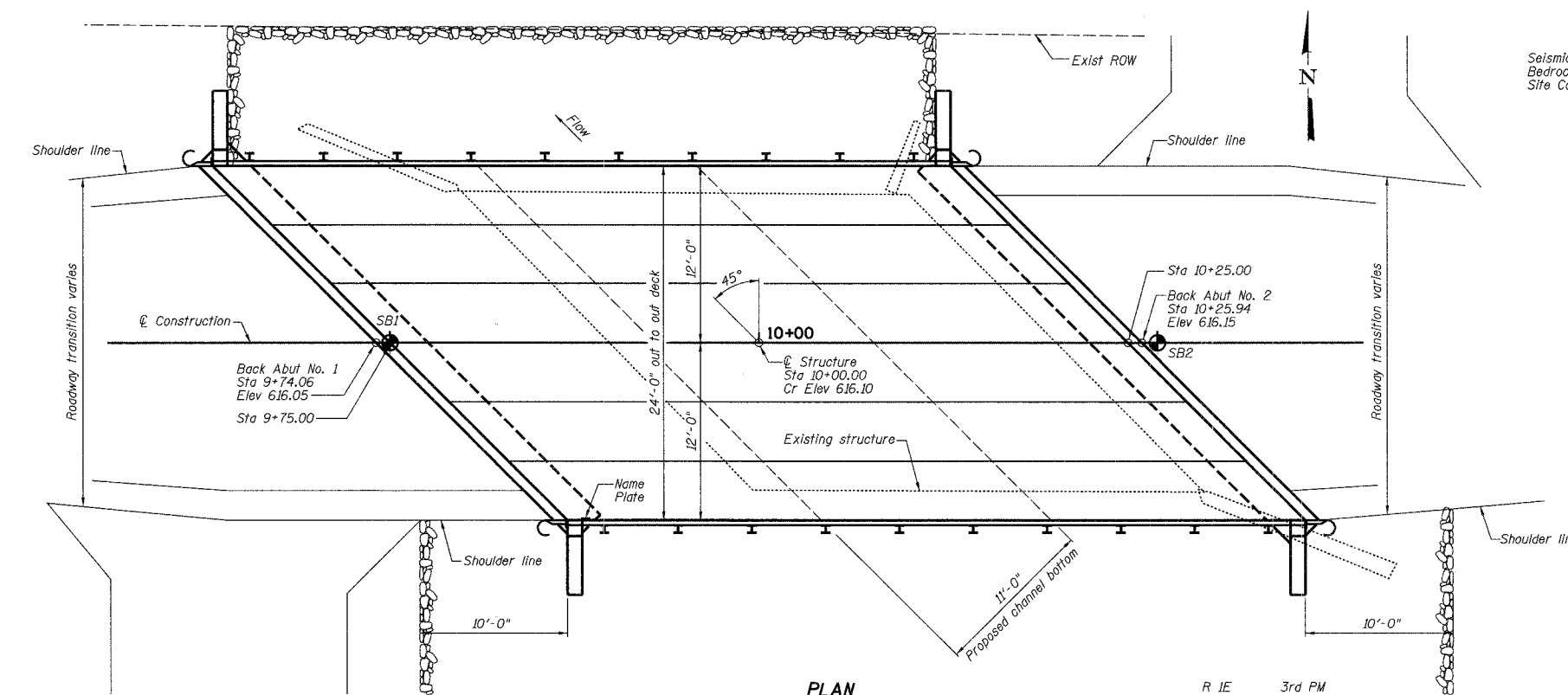
Flood	Freq. Yr.	Q C.F.S.	Opening sq ft		Nat. H.W.E.		Head-ft		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	15	385	83.01	126.83	613.16	613.16	0.00	0.00	613.16	613.16
Base	100	644	107.66	167.51	613.87	613.87	0.05	0.00	613.92	613.87
Max Calc	500	863	122.95	187.23	614.71	614.71	0.60	0.33	615.31	615.04

TOTAL BILL OF MATERIAL

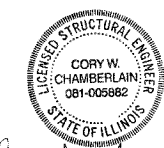
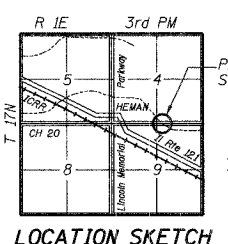
Item	Unit	Quantity
Removal of Existing Structures	Each	1
Structure Excavation	Cu Yd	138
Channel Excavation	Cu Yd	186
Concrete Structures	Cu Yd	27.0
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq Ft	1200
Reinforcement Bars, Epoxy Coated	Pound	1960
Steel Railing, Type SM	Lin Ft	100
Furnishing Concrete Piles	Foot	608
Driving Concrete Piles	Foot	608
Test Pile Concrete	Each	1
Name Plates	Each	1
Portland Cement Mortar Fairing Course	Foot	100
Terminal Markers - Direct Applied	Each	4
Controlled Low Strength Material	Cu Yd	52.6

GENERAL PLAN AND ELEVATION

REVISIONS	NO.	DATE	INITIALS	DESCRIPTION	DRAWN BY	DATE
1				TR 27 (HEMAN ROAD) OVER DRAINAGE DITCH	R King	1/05
2				TR 27 (HEMAN ROAD)	CWC	1/05
3				SEC 03-07146-00-BR		
4				SM 058-3372		
5				MACON COUNTY		
6				HOMER L. CHASTAIN & ASSOCIATES, LLP		
7				CONSULTING ENGINEERS		
8				184-00397		
9						
10						



PLAN



Cory W. Chamberlain
DATE: 08/02/05
EXP 11/30/06

I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THIS BRIDGE DESIGN IS STRUCTURALLY ADEQUATE FOR THE DESIGN LOADING SHOWN ON THE PLANS. THE DESIGN IS AN ECONOMICAL ONE FOR THE STYLE OF STRUCTURE AND COMPLIES WITH THE REQUIREMENTS OF THE CURRENT "AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES."