CONTRACT NO. 93522

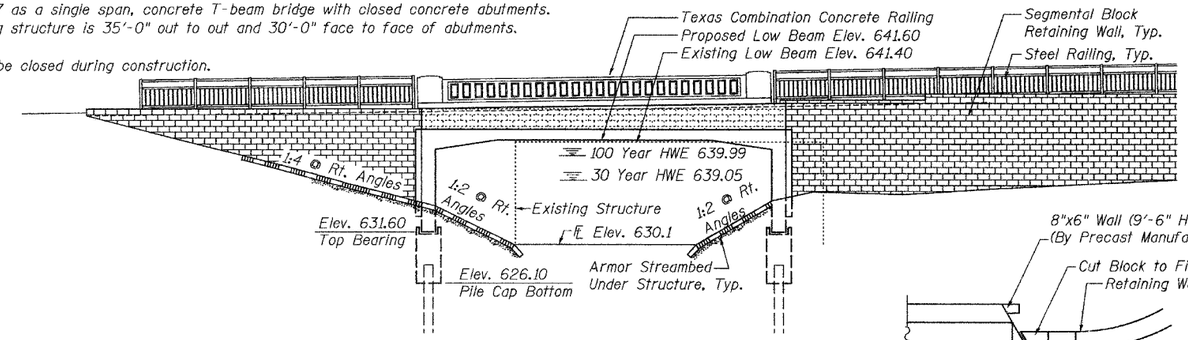
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7622	06-00085-00-BR	COLES	16	9
STA. 14+00	TO STA. 15+80			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Sheet 1 of 6 Sheets

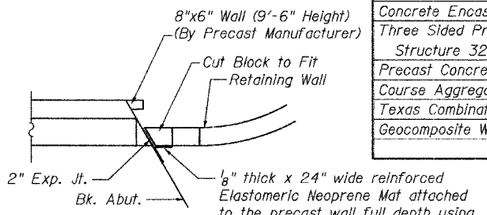
Benchmark: Spike in 2nd power pole northeast of bridge(Pole #772604). Elevation 651.81

Existing Structure: S.N. 015-6001 to be removed. The existing structure was built under 4CS in 1937 as a single span, concrete T-beam bridge with closed concrete abutments. The existing structure is 35'-0" out to out and 30'-0" face to face of abutments.

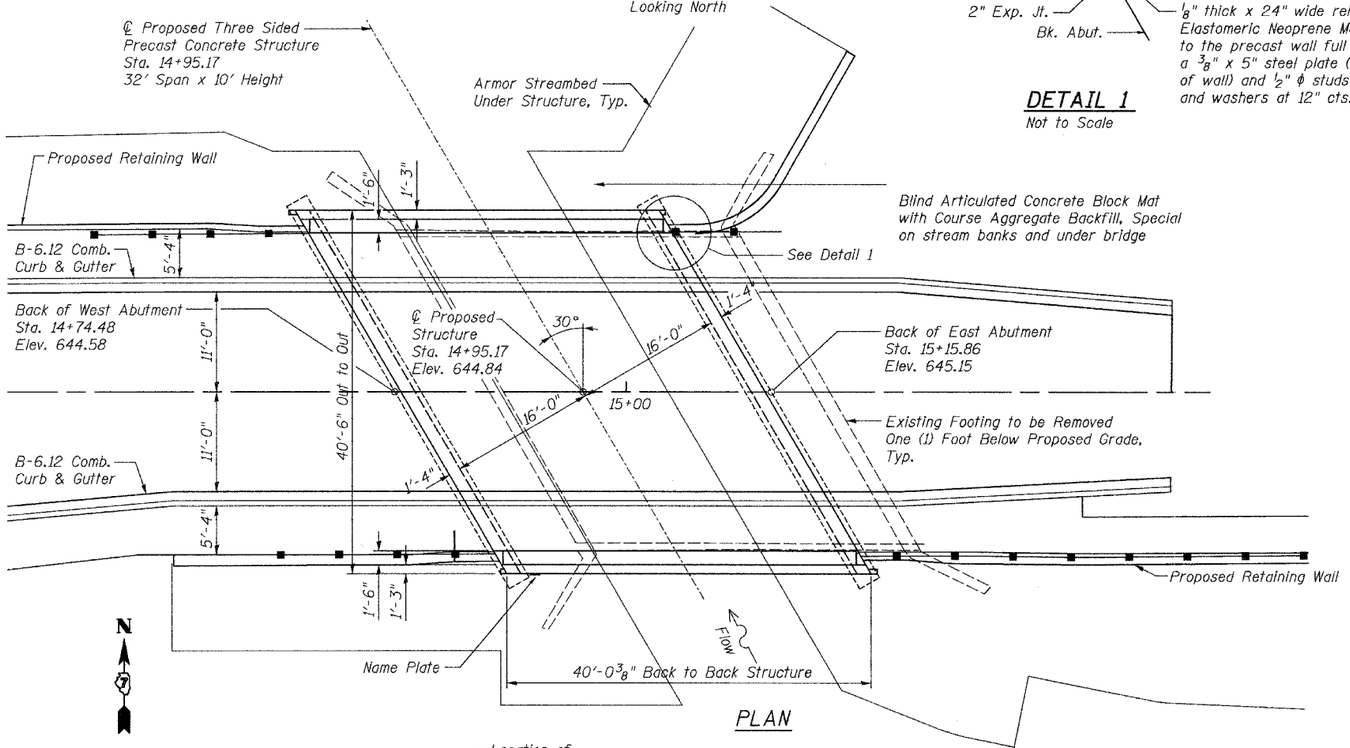
Road shall be closed during construction.
No salvage.



ELEVATION
Looking North



DETAIL 1
Not to Scale

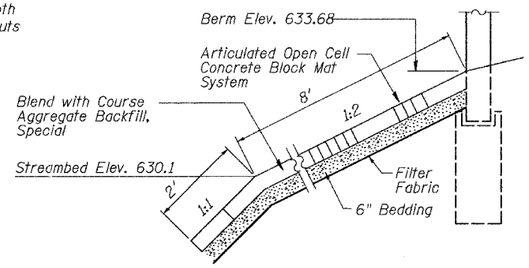


PLAN

Location of Boring #1

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yds.	65	158	223
Articulated Block Revetment Mat	Sq. Yds.		275	275
Removal of Existing Structure	Each	1		1
Structure Excavation	Cu. Yds.		400	400
Concrete Structures	Cu. Yds.		49.5	49.5
Reinforcement Bars (Epoxy Coated)	Lbs.		5320	5320
Name Plates	Each	1		1
Furnishing Steel Piles HP10x42	Lin. Ft.		945	945
Driving Piles	Lin. Ft.		945	945
Test Plie Steel HP10x42	Each		1	1
Concrete Encasement	Cu. Yds.		7.7	7.7
Three Sided Precast Concrete Structure 32'x10'	Feet	46.8		46.8
Precast Concrete Headwalls	L. Sum	1		1
Course Aggregate Backfill, (Special)	Cu. Yds.		12	12
Texas Combination Concrete Railing	Lin. Ft.	78		78
Geocomposite Wall Drain	Sq. Yd.		95	95

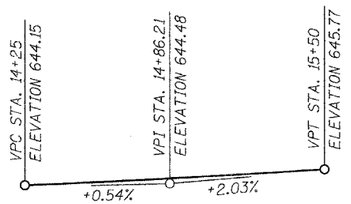


SLOPE WALL DETAIL
Not to Scale

GENERAL NOTES

1. The contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the engineer before ordering the remainder of the piles.
2. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (II Modified).
3. Reinforcement bars designated (E) shall be epoxy coated.
4. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the engineer.
5. The ends of the three-sided Precast Structure shall be oriented parallel with the roadway.
6. The footing design is based on the following maximum reactions applied at the top of the footing/pedestal wall:
   11.6 k/ft Dead (vert.) 5.0 k/ft Dead (horiz.)
   4.5 k/ft Live (vert.) 2.1 k/ft Live (horiz.)
   The contractor shall verify that the selected structure meets these design parameters. If the design parameters are exceeded, a complete footing design with calculations, details, and the required seals shall be submitted for review and approval.
7. Dimensions of three sided structure and substructure are based from Hy-Span structure alternative. Substructure shall be revised as necessary per chosen alternative and be reviewed and approved by Engineer prior to construction.

INDEX OF SHEETS



PROFILE GRADE
Along ℄ of Roadway

DESIGN STRESSES

SUBSTRUCTURE
f'y = 60,000 p.s.i. (Reinforcement)
f'c = 3,500 p.s.i.

DESIGN LOADING

HS 20-44

DESIGN SPECIFICATION

2002 A.A.S.H.T.O., Standard Specification for Highway Bridges

SEISMIC DATA

Seismic Performance Catagory (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.056
Site Coefficient (S) = 1.0

This structure has been designed to be stable for scour conditions in accordance with the FHWA Technical Advisory - T 5140.23, "Evaluating scour at Bridges" and hydraulic engineering circular 18 - EVALUATING SCOUR AT BRIDGES

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

MARTIN J. SILVESTER 081-004873 LICENSED STRUCTURAL ENGINEER OF CHICAGO, ILLINOIS

06-27-07

MARTIN J. SILVESTER
STRUCTURAL ENGINEER
LICENSE EXP. DATE: 11-30-08

WATERWAY INFORMATION

Drainage Area = 5.65 Sq. Mi. Low Grade Elev. 644.04 ft @ Sta. 14+00

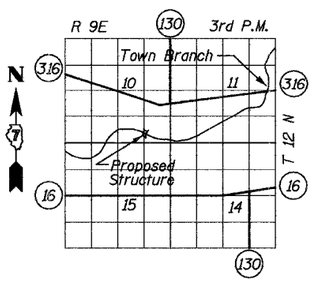
Flood	Freq. Yr.	Q cfs	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - ft. Exist.	Head - ft. Prop.	Headwater Elev. - ft. Exist.	Headwater Elev. - ft. Prop.
Design	30	1606	264.7	286.4	638.65	0.82	0.40	639.47	639.05
Base	100	1950	297.0	316.5	639.39	1.02	0.60	640.41	639.99
Max. Calc.	500	2502	338.7	360.6	640.47	1.33	0.90	641.80	641.37

DESIGN SCOUR ELEVATION TABLE

	W. Abut.	E. Abut.
Design Scour Elevation (ft.)	626.10	626.10

TOWN BRANCH CREEK
BUILT 20__ BY
CITY OF CHARLESTON
SEC. 06-00085-00-BR
STATION 14+95.17
STR. NO. 015-6340 LOADING HS20
PROJ NO. BRM-5013(15)

LETTERING FOR NAME PLATE
(SEE STD 515001



LOCATION SKETCH

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN AND ELEVATION
JACKSON AVE. OVER TOWN BRANCH CREEK
SECTION 06-00085-00-BR
CITY OF CHARLESTON STA. 14+95.17
STRUCTURE NO. 015-6340

SCALE: VERT. HORIZ.
DATE
DRAWN BY SAE
CHECKED BY BJF

PLOT DATE = $DATE$
FILE NAME = $FILEL$
PLOT SCALE = $SCALE$
USER NAME = $USER$

THE UPCHURCH GROUP
architects engineers surveyors
HILLSIDE, IL. (708) 449-2321
MATTOON, IL. (217) 235-3177