

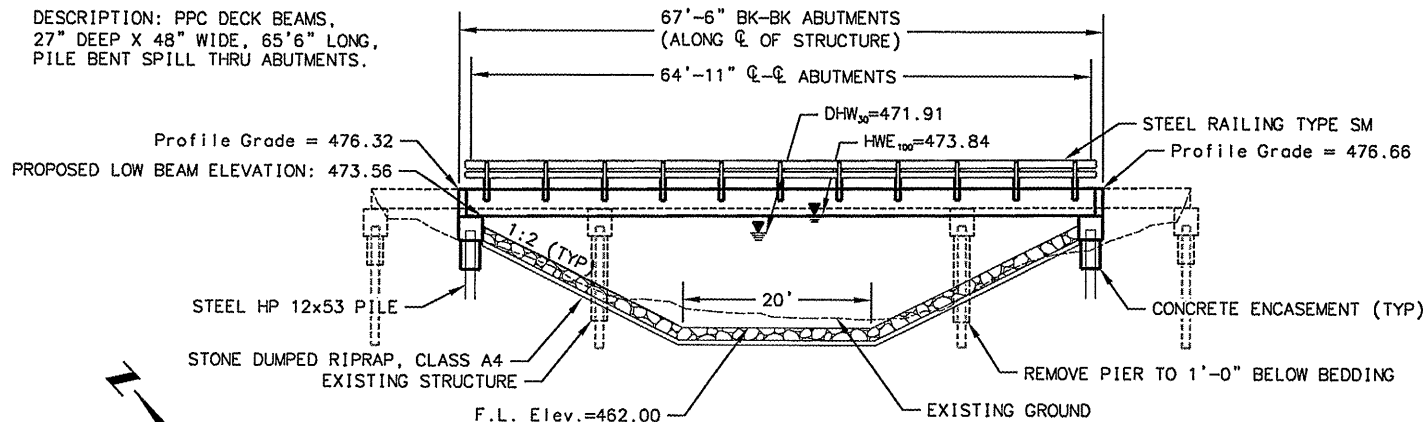
BM: CHISLED SQUARE IN NW WINGWALL OF EXISTING STRUCTURE.
 STA 92+18.84, 17.97' RT
 ELEV = 476.72

EXISTING STRUCTURE, NO. 082-3061, HAS THREE SPANS (24', 38' & 24'). THE SUPERSTRUCTURE HAS 9 PRECAST CONCRETE BRIDGE SLABS THAT ARE 1'-9" DEEP AND 3'-9" WIDE FOR A TOTAL WIDTH OF 33'-9". THE CAPS AT THE ABUTMENTS AND PIERS ARE REINFORCED CONCRETE AND ARE SUPPORTED BY 6 HP 10X42 STEEL PILING.

SALVAGE: ALL MATERIALS REQUIRED TO BE REMOVED WHICH ARE CONSIDERED SALVAGABLE BY THE ENGINEER SHALL REMAIN THE PROPERTY OF ST. CLAIR COUNTY. ALL OTHERS SHALL BE DISPOSED OF BY THE CONTRACTOR AT HIS OWN EXPENSE.

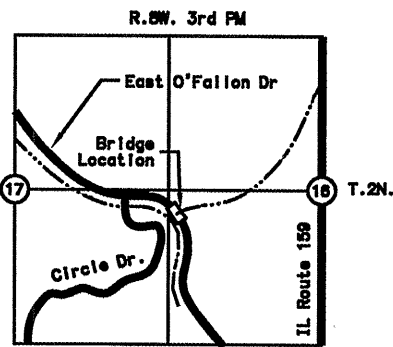
SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
06-00201-02-BR	CH 58	ST. CLAIR	4 OF 13
FHWA REG. NO. 7	ILLINOIS	PROJ: BRM-5011(309)	
GENERAL PLAN & ELEV		CONTRACT 97465	

DESCRIPTION: PPC DECK BEAMS, 27" DEEP X 48" WIDE, 65'6" LONG, PILE BENT SPILL THRU ABUTMENTS.



ELEVATION

PGE = PROFILE GRADE ELEVATION
 TCE = TOP OF CAP ELEVATION



LOCATION SKETCH

GENERAL NOTES

1. THE CONTRACTOR SHALL DRIVE TEST PILES TO 110% OF THE NOMINAL REQUIRED BEARING SPECIFIED IN PRODUCTION LOCATIONS AT THE SUBSTRUCTURES SPECIFIED OR APPROVED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF THE PILES.
2. REFER TO THE SPECIAL PROVISIONS FOR BORING LOG INFORMATION.
3. A CORROSION INHIBITOR SHALL BE USED IN THE CONCRETE FOR THE PRECAST, PRESTRESSED CONCRETE DECK BEAMS. ACCORDING TO ARTICLE 1020.05(b)(12) OF THE STANDARD SPECIFICATIONS.
4. RAILING SHALL BE IN ACCORDANCE WITH SECTION 509 OF THE STANDARD SPECIFICATIONS, EXCEPT AS NOTED ON THE PLANS, AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR STEEL RAILING, TYPE SM WHICH PRICE SHALL INCLUDE THE COST OF FURNISHING AND ERECTING.
5. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A706 GRADE 60 (IL MODIFIED). SEE SUPPLEMENTAL SPECIFICATIONS.
6. THE COST OF STRUCTURE EXCAVATION SHALL BE CONSIDERED INCLUDED IN THE COST OF CONCRETE STRUCTURES.
7. LAYOUT OF SLOPE PROTECTION SYSTEM MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.
8. BACKFILL BEHIND THE ABUTMENTS SHALL BE PLACED AFTER THE SUPERSTRUCTURE IS IN PLACE AND THE DOWEL RODS GROUTED.
9. THE STEEL H-PILES SHALL BE ACCORDING TO AASHTO M270 GRADE 50

TOTAL BILL OF MATERIALS (STRUCTURE)

ITEM	UNIT	SUPER	SUB	TOTAL
STONE DUMPED RIPRAP, CLASS A4	SQ YD			270
FILTER FABRIC	SQ YD			270
HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	33		33
REMOVAL OF EXISTING STRUCTURES	EACH			1
CONCRETE STRUCTURES	CU YD		32.2	32.2
CONCRETE ENCASEMENT	CU YD		4.2	4.2
PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	2096		2096
STUD SHEAR CONNECTORS	EACH		96	96
REINFORCEMENT BARS, EPOXY COATED	POUND		2578	2578
STEEL RAILING, TYPE SM	FOOT	132		132
FURNISHING STEEL PILES HP 12X53	FOOT		605	605
DRIVING PILES	FOOT		605	605
TEST PILE STEEL HP 12X53	EACH		1	1
PILE SHOES	EACH		12	12
NAME PLATES	EACH			1
WATERPROOFING MEMBRANE SYSTEM	SQ YD	233		233
PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	459		459

DESIGN SPECIFICATIONS

2007 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS WITH 2008 INTERIMS.
 LOADING HL-93
 ALLOW 50 PSF FOR FUTURE WEARING SURFACE.

PILE DATA (2-ABUTS)

TYPE & SIZE..... STEEL HP 12X53
 NOMINAL REQUIRED BEARING..... 418 KIPS
 FACTORED RESISTANCE AVAILABLE..... 209 KIPS
 ESTIMATED LENGTH..... 55 FT
 NO. OF PRODUCTION PILES..... 11
 NO. OF TEST PILE (ABUTMENT #2)..... 1
 NO. OF PILE SHOES..... 12

INDEX OF SHEETS

4. GENERAL PLAN & ELEVATION
5. SUPERSTRUCTURE
6. P.C.C. DECK BEAM
7. P.C.C. DECK BEAM DETAILS
8. ABUTMENT DETAILS
9. STEEL RAILING TYPE SM
10. PILE DETAILS

SEISMIC DATA

SEISMIC PERFORMANCE ZONE (S.P.Z.) = 2
 DESIGN SPECTRAL ACCELERATION AT 1.0 SEC (S_{D1}) = 0.26g
 DESIGN SPECTRAL ACCELERATION AT 0.2 SEC (S_{D2}) = 0.60g
 SOIL SITE CLASS = D

DESIGN STRESSES

f'_c = 3500 psi
 f_y = 60,000 psi

BRANCH OF LITTLE CANTOEN CREEK BUILT 2011 BY ST. CLAIR COUNTY SEC. 06-00201-02-BR STA. 92+60.80 STR. NO. 082-3104 LOADING HL93

LETTERING FOR NAME PLATE

LOCATE NAME PLATE AT N.W. WINGWALL OF BRIDGE (SEE STD. 515001)

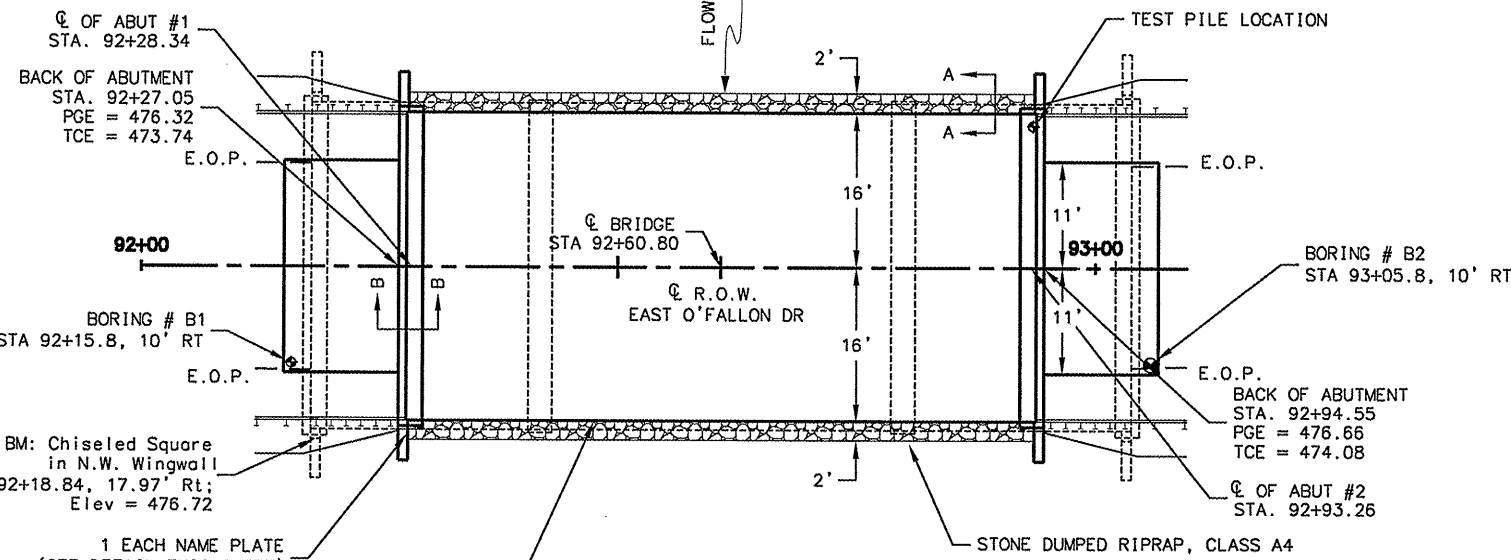
WATERWAY INFORMATION

DRAINAGE AREA = 2.83 sq.mi.		LOW GRADE ELEVATION = 474.30 @ STA 90+50.00				
FLOOD	FREQUENCY (year)	FLOWRATE Q (cfs)	OPENING (sq.ft.)	NATURAL H.W.E.	HEAD (ft.)	HEADWATER ELEVATION
DESIGN	30	1524	352	471.91	-0.02	471.89
BASE	100	2120	485	473.84	-0.03	473.81
ADDITIONAL OVER-THE-ROAD FLOW AREA:						

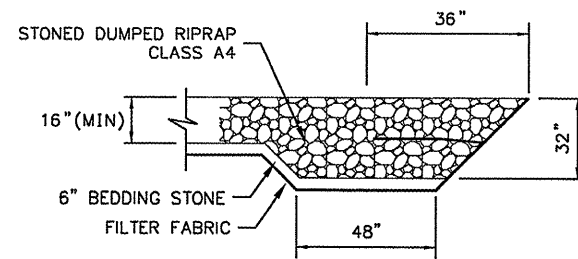


I certify that to the best of my knowledge, information and belief, this bridge is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements for the current "AASHTO LRFD Bridge Design Specifications".

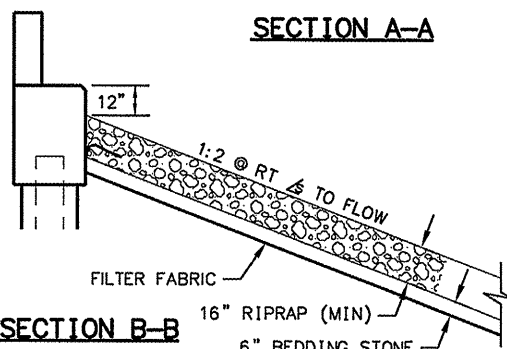
Robert A. Bruckner MARCH 23, 2011
 LICENSE NO. 081-004669
 LICENSE EXPIRATION DATE: 11/30/2012



PLAN

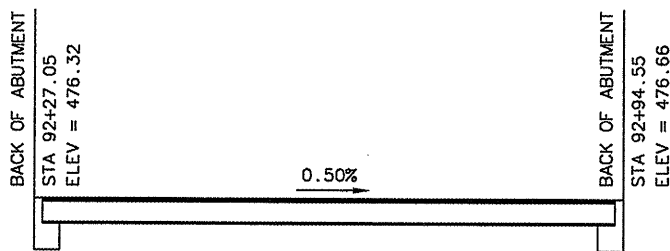


SECTION A-A



SECTION B-B

PROPOSED PROFILE ALONG CL OF STRUCTURE



DRAWING FILE: Gen Plan and Elev.dwg

	INITIALS	DATE
DESIGNED	WS	11/10
CHECKED	RAB	3/11
DRAWN	WS	11/10
CHECKED	RAB	3/11
PREPARED BY ST. CLAIR COUNTY		

GENERAL PLAN & ELEVATION

EAST O'FALLON DR (CH 58)
 OVER BRANCH OF LITTLE CANTOEN CREEK
 SECTION 06-00201-02-BR
 ST. CLAIR COUNTY
 STATION 92+60.80
 S.N. 082-3104