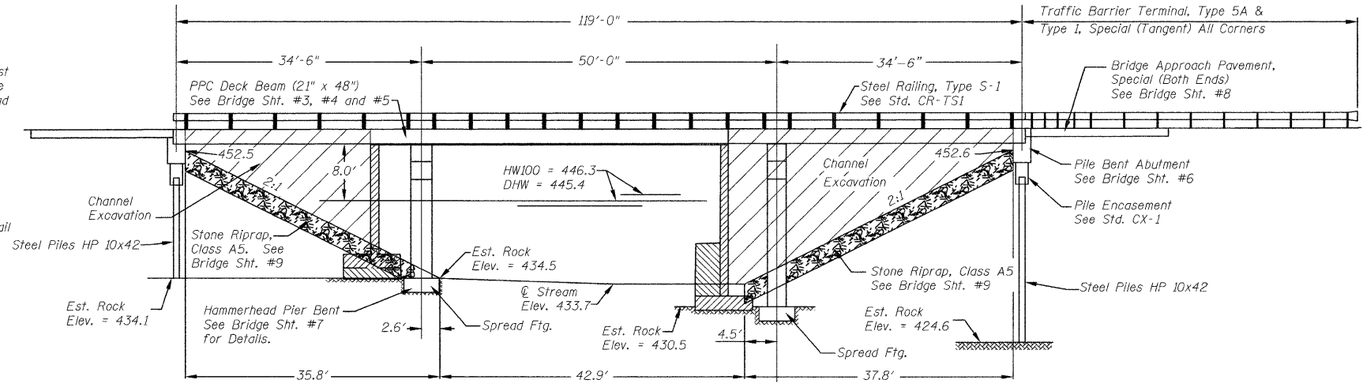
93471

BM #1 - 60d Spike in Power Pole
29' Lt. Sta. 11+36
Elev. 454.04

Existing Structure - 001-3015 - 24' X 50' Precast Prestressed Conc. Deck Bridge on Closed Abutments on Spread Footings Set in Rock.

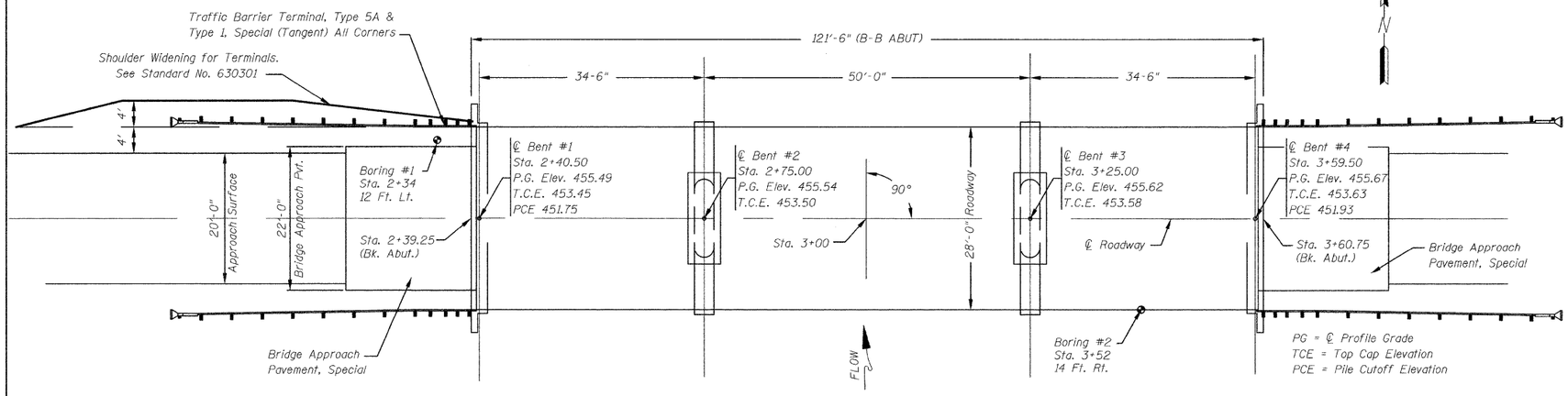
Salvage - All Salvagable Materials To Become The Property of the Contractor

Estimated Materials - 1200 S.F. PPCDB 21"/Curb
210 C.Y. Concrete
11650 LB. Rebar
96 FT. Metal Plate Bridge Rail



ELEVATION

Shown Along ℄ Roadway



PG = ℄ Profile Grade
TCE = Top Cap Elevation
PCE = Pile Cutoff Elevation

PLAN

Bridge Sheet No. 1 of 9

COUNTY	ROUTE	SECTION	SHEET
ADAMS	FAS 591	07-00202-00-BR	10
PROJECT NO. BRS-059(105)			
BRIDGE GENERAL PLAN & ELEVATION			

GENERAL NOTES

1. See Bridge Sheet #9 for boring logs.
2. All grout on this project shall be non-shrink.
3. Waterproofing Membrane System will be required on this project.
4. Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
5. Stone Riprap shall be placed to the dimensions shown over a Geotechnical Fabric in accordance with the riprap placement detail and the applicable Special Provisions.
6. Reinforcement Bars shall conform to the requirements of ASTM A706, Grade 60. See Special Provisions.
7. Reinforcement bars designated (E) shall be epoxy coated.
8. Protective coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.
9. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
10. 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 piles.

TOTAL BILL OF MATERIAL

	Item	Unit	Super	Sub. Pier	Sub. Abut	Total
	Channel Excavation	Cu.Yd.	----	----	1,137	1,137
*	Riprap, Special	Ton	----	----	1,236	1,236
	HMA Surface Course, Mix "C", N50	Ton	56.1	----	----	56
*	Bridge Approach Pavement (Special)	Sq. Yd.	97.8	----	----	97.8
	Removal Of Existing Structures	Each	----	----	----	1
	Rock Excavation For Structures	Cu. Yd.	----	10.4	----	10.4
	Concrete Structures	Cu.Yd.	----	79.2	18.8	98.0
	Concrete Encasement	Cu.Yd.	----	----	2.6	2.6
	P. P. Concrete Deck Beams (21" Depth)	Sq.Ft.	3,353	----	----	3,353
	Reinforcement Bars	Pound	----	11,250	2,220	13,470
	Reinforcement Bars, Epoxy Coated	Pound	----	2,500	----	2,500
	Steel Railing, Type S1	Foot	240	----	----	240
	Furnishing Steel Piles HP10X42	Foot	----	----	192	192
	Driving Piles	Foot	----	----	192	192
	Test Pile Steel HP10X42	Each	----	----	2	2
	Pile Shoes	Each	----	----	10	10
	Name Plates	Each	----	----	1	1
	Waterproofing Membrane System	Sq. Yd.	373	----	----	373
*	Underwater Structure Excavation Protection - Location 1 (Bent #2)	Each	----	1	----	1
*	Underwater Structure Excavation Protection - Location 2 (Bent #3)	Each	----	1	----	1

* See Special Provisions

I Certify That to the Best of my Knowledge, Information and Belief, the Revised Standard Detail Sheets and/or Special Component Sheets Included with the Standard Bridge Detail Sheets are Structurally Adequate for the Design Loading Shown on the Plans and Comply with the Requirements of the Current AASHTO Standard Specifications for Highway Bridges.
Bridge Sheets 1 through 9.

Charles S. Bach, Jr.
Licensed Structural Engineer
State of Illinois No. 81-004116
expires 11/30/2008

CHARLES S. BACH, JR. 081-004116 LICENSED STRUCTURAL ENGINEER 6/6/08 DATE QUINCY ILLINOIS

I Certify That to the Best of my Knowledge, Information and Belief, the Bridge Plans and, if Included, Revised or Special Non-Standard Detail Sheets Incorporated with the Standard Plans are Structurally Adequate for the Seismic Design Loadings Shown on the Plans and Specified by the Current AASHTO Standard Specifications for Highway Bridges.
Bridge Sheets 1 through 9.

Charles S. Bach, Jr.
Licensed Structural Engineer
State of Illinois No. 81-004116
expires 11/30/2008

CHARLES S. BACH, JR. 081-004116 LICENSED STRUCTURAL ENGINEER 6/6/08 DATE QUINCY ILLINOIS

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications - 4th ed. with 2008 Interims

This Design Complies With all Requirements Of The Current AASHTO Guide Specifications For Seismic Design Of Highway Bridges.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Bedrock Acceleration Coefficient (A) = 0.044
Site Coefficient (S) = 1.0

LOADING HL-93

Allow 50#/sq. ft. for Future Wearing Surface

DESIGN STRESSES

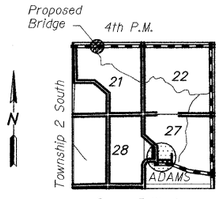
(PRESTRESS UNITS)	(FIELD UNITS)
f'ci = 5.0 ksi	f'c = 3.5 ksi
f'c = 6.0 ksi	fy = 60 ksi
fy = 60 ksi	

PILE DATA (2-ABUTS.)

Pile Type and Size:	HP 10x42 with Pile Shoes
Nominal Required Bearing :	335 Kips
Factored Resistance Available:	Refusal (168 kips)
Estimated Length:	19 ft (Bent #1) 29 ft (Bent #4)
Number of Production Piles:	4 (Bent #1) 4 (Bent #4)
Number of Test Piles:	1 (Bent #1) 1 (Bent #4)

The Steel H-piles shall be according to AASHTO M270 Grade 50.

Construction Permits: The Requirements Of The Division Of Water Resources Have Been Fulfilled With Statewide Permit No. 12



LOCATION SKETCH

TOURNEAR CREEK
BUILT 20__ BY
ADAMS COUNTY
SECTION 07-00202-00-BR
PROJECT BRS-059(105)
STATION 3+00
STR. NO. 001-3337 LOADING HL-93

LETTERING FOR NAME PLATE

Locate Name Plate at Southeast Coner of Bridge (See Std. CN)

INDEX OF SHEETS

WATERWAY INFORMATION

Drainage Area = 18.15 Sq. Mi. | Low Grade Elevation = 455.43 | At Station 2+00

Flood	Freq. Yr.	Q CFS	Opening Sq. Ft. Exist. Bridge	Exist. Over-Road	Prop. Bridge	Prop. Over-Road	Natural H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	25	3,477	489		750		445.40		0.01		445.41
Base	100	4,693	532		827		446.30		0.03		446.33
Overtopping											
Max. Calc.	500	6,136									

REVISIONS NAME	DATE

BRIDGE GENERAL PLAN & ELEVATION

FAS 591 OVER
TOURNEAR CREEK
SEC 07-00202-00-BR
ADAMS COUNTY
STA 3+00
STRUCTURE NUMBER 001-3337

SCALE: VERT. N/A HORIZ. N/A
DRAWN BY JLS
DATE: APR 2008
CHECKED BY CSB