

B.M. #9

Chisled "X" on flange bolt of fire hydrant, southwest corner of Park Street and French Street. Elevation = 444.23

EXISTING STRUCTURE:

Structure No. 007-0015 built in 1924 ds. F.A.S. ROUTE 754, SEC 4RS-2, 4BR single-span, reinforced concrete slab bridge on closed abutments with spread footings, 0° skew, 21'-0" back-to-back of abutments, 32'-2" out to out deck.

Road shall be kept open to one lane of traffic at all times by utilizing stage construction.

No salvage.

NOTES:

Deck drains shall be located clear of all diaphragms.

Field welding of construction accessories will not be permitted to beams or girders.

Fasteners shall be high strength bolts. Bolts shall be 3/4" dia., open holes 13/16" dia., unless noted otherwise.

All construction joints shall be bonded.

B.M. #10

Chisled "X" on flange bolt of fire hydrant, southwest corner of Park Street and North County Road. Elevation = 437.29

NOTES: (Cont.)

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams.

Reinforcement bars shall conform to the requirements of AASHTO M31 or M322, Grade 60.

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

The contractor shall drive 1 steel HP 12x53 test pile in a permanent location near the roadway centerline at the south abutment as directed by the Engineer before ordering the remainder of piles.

Excavation behind existing abutment walls shall be done before removing the existing superstructure. The Contractor shall sawcut the existing abutments at the stage removal line before Stage I removal.

The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in water, except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR permit number DS2002105 which was issued for the permanent construction.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

NOTES: (Cont.)

Calculated weight of M 270, Grade 36 = 1494 lbs.
Calculated weight of M 270, Grade 50 = 103,278 lbs.

The inorganic zinc rich primer/Acrylic/Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of final finish coat for exterior and bottom flange of the fascia beams shall be Gray, Munsell No. 5B 7/1. See Special Provision for "Cleaning and Painting New Metal Structures".

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu Yd		150	150
Stone Riprap, Class A5	Sq Yd	758		758
Removal of Existing Structures	Each			1
Structure Excavation	Cu Yd		300	300
Floor Drains	Each	10		10
Concrete Structures	Cu Yd		35.2	35.2
Concrete Superstructure	Cu Yd	140.2		140.2
Bridge Deck Grooving	Sq Yd	277		277
Protective Coat	Sq Yd	434		434
Furnishing and Erecting Structural Steel	L Sum	1		1
Stud Shear Connectors	Each	2373		2373
Reinforcement Bars, Epoxy Coated	Pound	24880	4580	29460
Aluminum Railing, Type L	Foot	75		75
Furnishing Steel Piles HP12x53	Foot		510	510
Driving Steel Piles	Foot		510	510
Test Pile Steel HP12x53	Each		1	1
Metal Shoes	Each		11	11
Temporary Sheet Piling	Sq Ft		3050	3050
Name Plates	Each		1	1
Filter Fabric	Sq Yd	758		758
Bar Splacers	Each	313	20	333

WATERWAY INFORMATION

Drainage Area = 1.371 mi ²		Low Grade Elev. = 434.50 @ Sta. 7+10.00					
Flood	Freq.	Q	Opening	Sq. Ft.	Nat.	Head-Ft.	Headwater El.
	Yr.	C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.
Design	50	2370	194	679	434.3	1.6	0.0
Base	100	2799	194	681	434.4	3.0	0.0
Overtopping	3	600	194		434.3	0.2	--
Max. Calc.	500	3869	194	690	434.5	5.7	0.1

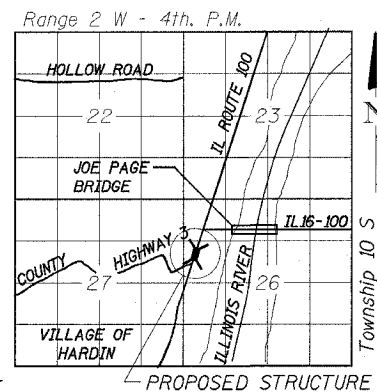
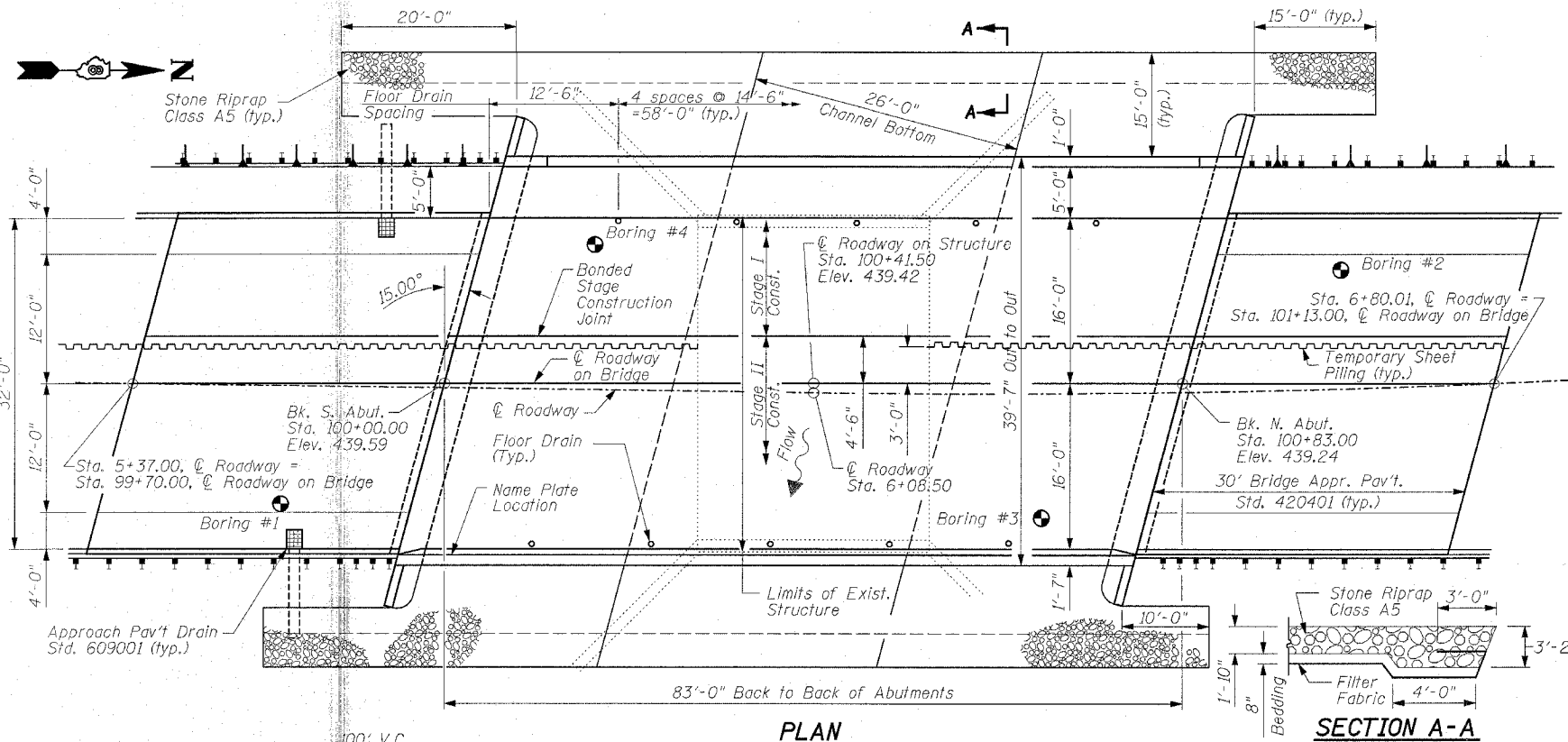
Note: 10-year Illinois River backwater of 434.3' used for starting water surface elevation.

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GENERAL PLAN
PARK STREET OVER
AN UNNAMED CREEK
F.A.S. ROUTE 754
SECTION 4RS-2, 4BR
CALHOUN COUNTY
ROADWAY STATION 6+08.50
STRUCTURE NO. 007-0026

Benton & Associates, Inc.
Consulting Engineers / Land Surveyors
1970 West Lafayette Avenue Jacksonville, Illinois 62650
Phone : 217-245-4146 Fax : 217-245-4149
IL Design Firm Registration No. 184-000852



LOCATION SKETCH

DESIGN SPECIFICATIONS

1996 AASHTO with 1997-2002 Interims

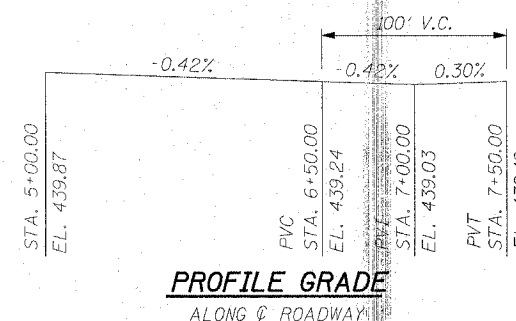
DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $F_y = 50,000$ psi (AASHTO M270 Grade 50)
 $F_y = 36,000$ psi (AASHTO M270 Grade 36)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 7.0%g
Site Coefficient (S) = 1.0



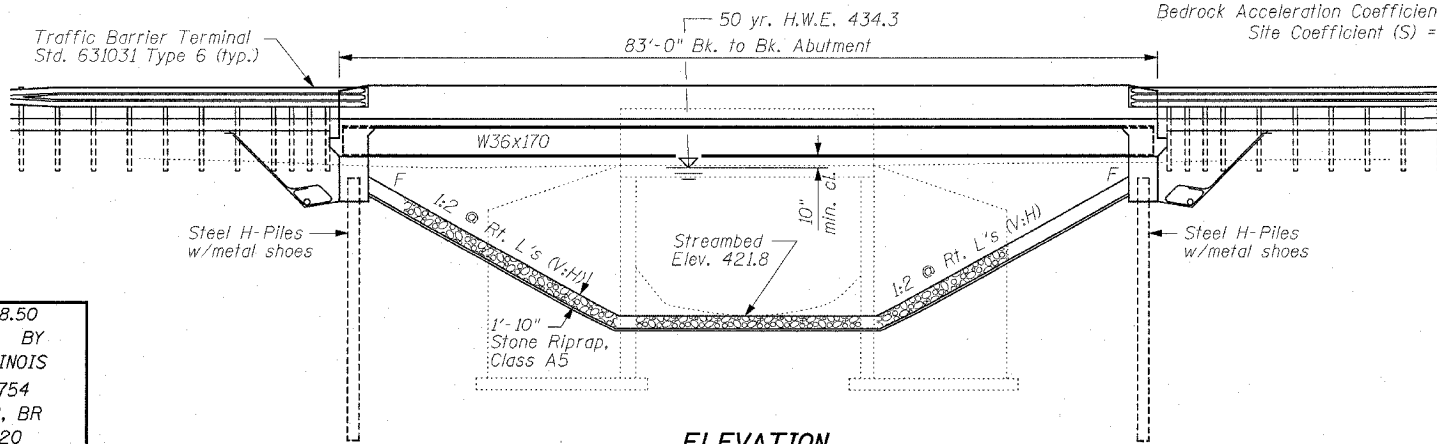
PROFILE GRADE ALONG ROADWAY

DESIGNED	- L.E.L.
CHECKED	- REG
DRAWN	- M.T.L.
CHECKED	- L.E.L.

STATION 6+08.50
BUILT 20__ BY
STATE OF ILLINOIS
FAS ROUTE 754
SECTION 4RS-2, BR
LOADING HS20
STR. NO. 007-0026

NAME PLATE

See Std. 515001



ELEVATION

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