

**B.M. #9**

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

**B.M. #10**

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

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**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.

**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	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	24820	4580	29400
Aluminum Railing, Type I	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 Splicers	Each	313	20	333

**WATERWAY INFORMATION**

Drainage Area = 1,371 mi <sup>2</sup>		Low Grade Elev. = 434.50 @ Sta. 7+10.00		Flood		Design		Base		Overtopping		Max. Calc.	
Freq.	0	Opening	Sq. Ft.	Nat.	Head-Ft.	Headwater El.	Yr.	C.F.S.	Exist.	Prop.	11.W.C.	Exist.	Prop.
50	2370	194	679	434.3	1.6	0.0	435.9	434.3					
100	2799	194	681	434.4	3.0	0.0	437.4	434.4					
3	600	194		434.3	0.2	--	434.5	--					
500	3869	194	690	434.5	5.7	0.1	440.2	434.6					

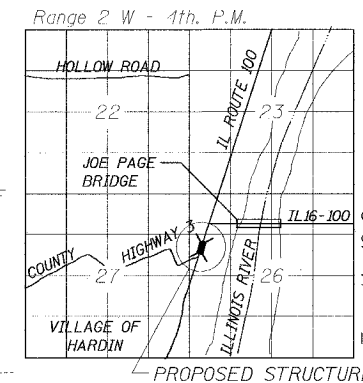
Note: 10-year Illinois River backwater of 434.3' used for starting water surface elevation.

**INDEX OF SHEETS**

General Plan	1
Stage Construction	2
Temporary Sheetpile Wall	3
Temporary Concrete Barrier for Stage Construction	4
Top of Slab Elevations	5 & 6
Superstructure	7
Superstructure Details	8
Superstructure Details II	9
Diaphragm Details	10
Type L Aluminum Railing	11
Framing Plan & Details	12
Anchor Bolt Details	13
North Abutment	14
South Abutment	15
Bar Splicer Detail	16
Soil Boring Logs	17 & 18
Detour Route SN 007-5012	19 & 20

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**

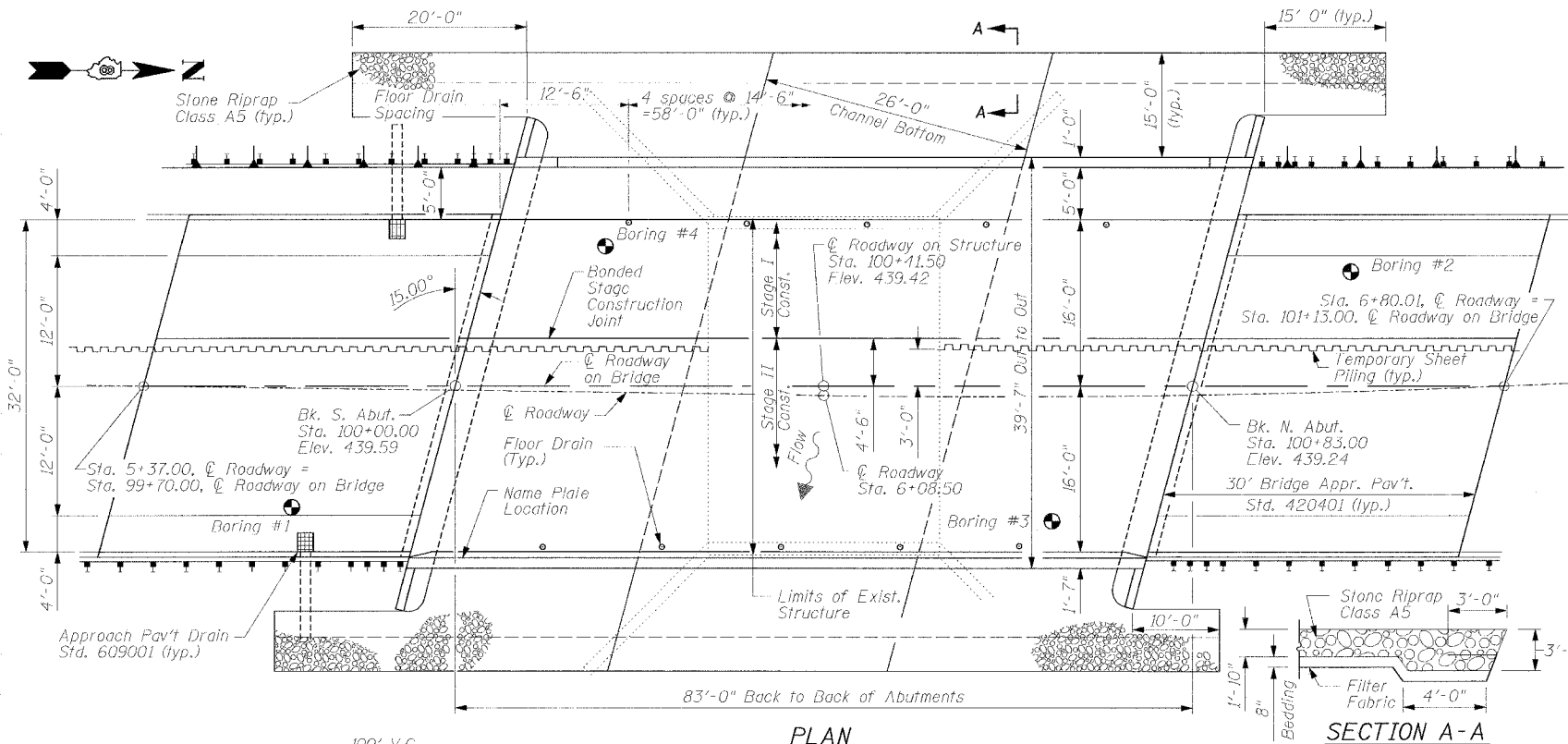
**DESIGN SPECIFICATIONS**  
1996 AASHTO with 1997-2002 Interims

**DESIGN STRESSES**

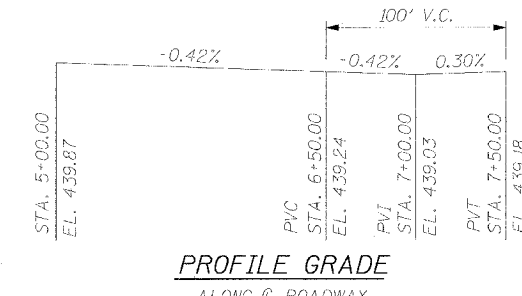
**FIELD UNITS**  
f<sub>c</sub> = 3,500 psi  
f<sub>y</sub> = 60,000 psi (reinforcement)  
F<sub>y</sub> = 50,000 psi (AASHTO M270 Grade 50)  
F<sub>y</sub> = 36,000 psi (AASHTO M270 Grade 36)

**SEISMIC DATA**

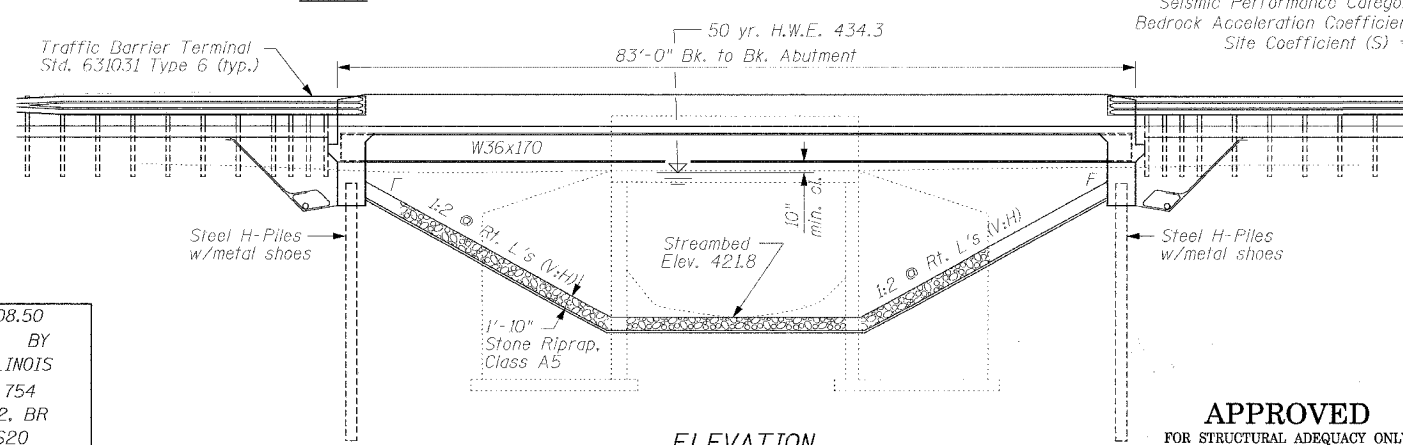
Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 7.0%  
Site Coefficient (S) = 1.0



**SECTION A-A**



**PROFILE GRADE**  
ALONG ROADWAY



**ELEVATION**

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

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY  
Ralph E. Anderson  
ENGINEER OF BRIDGES AND STRUCTURES

**REGINALD H. BENTON**  
001-00085  
LICENSED  
STRUCTURAL  
ENGINEER  
OF  
ILLINOIS  
R. H. Benton  
10/12/05  
EXP 11/30/10