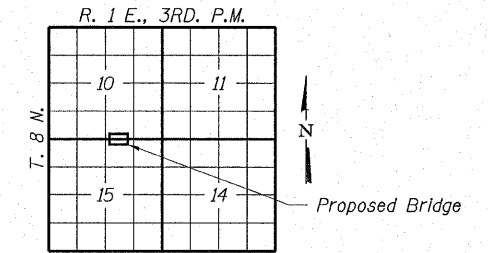


ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
F.A.S. 712	02-00104-00-BR	FAYETTE	21	14
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

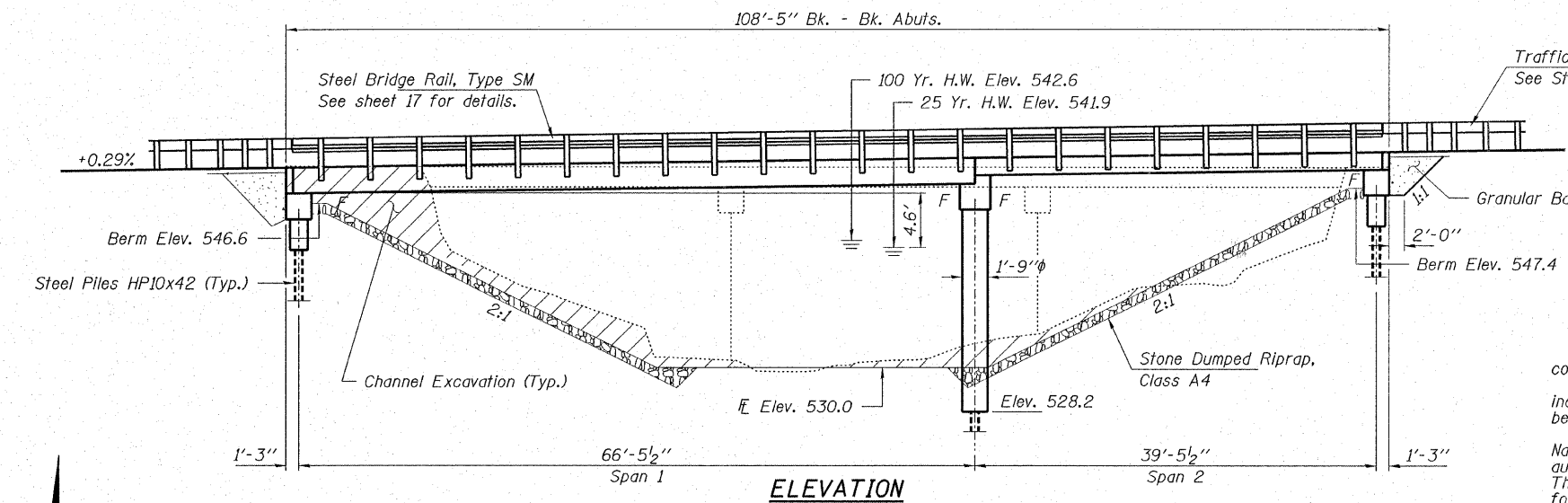
CONTRACT NO. 95469

ASH CREEK  
 BUILT 200\_ BY  
 F.A.S. 712 / C.H. 24  
 FAYETTE COUNTY  
 SEC. 02-00104-00-BR  
 F.A. PROJ. BRS-712(105)  
 STR. NO. 026-3431 LOADING HS 20

**NAME PLATE**  
 See Std. 515001

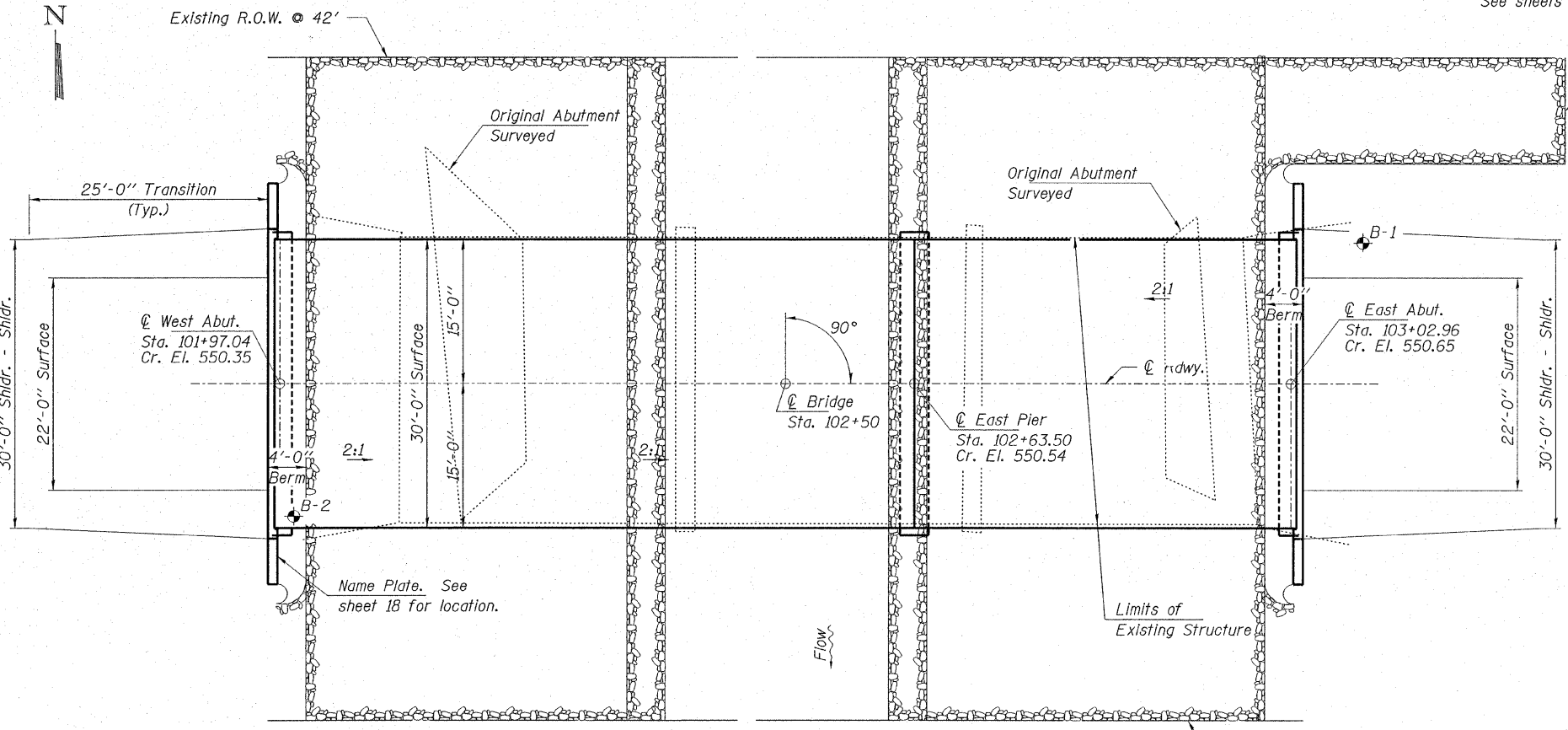


**LOCATION SKETCH**



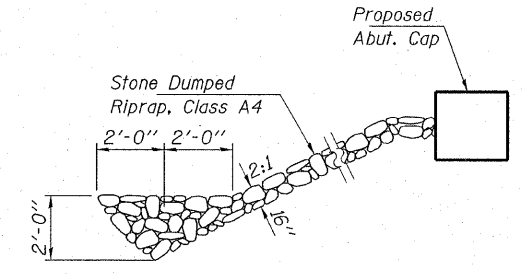
**ELEVATION**

**GENERAL NOTES**  
 Layout of riprap may be varied in the field to suit ground conditions as directed by the Engineer.  
 Excavation required to construct the Abutments shall be considered incidental to Concrete Structures. No additional compensation will be allowed for Structure Excavations.  
 All proposed construction activity shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act. The IEPA has Issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions. See sheets 21 for Borings.



**PLAN**

100 tons Stone Dumped Riprap-Grade and Shape as directed by the Engineer.



**SECTION A-A**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,200		1,200
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	2,010		2,010
Concrete Structures	Cu. Yd.		32.4	32.4
Reinforcement Bars, Epoxy Coated	Pound		4,470	4,470
Steel Bridge Rail, Type SM	Foot	220		220
Name Plates	Each		1	1
Stone Dumped Riprap, Class A4	Ton		740	740
Steel Piles HP10x42	Foot		301	301
Setting Piles in Rock	Each		6	6
Driving Steel Piles	Foot		163	163
Test Pile Steel HP10x42	Each		1	1
Granular Backfill	Cu. Yd.		45	45
Concrete Encasement	Cu. Yd.		10.8	10.8
Waterproofing Membrane System	Sq. Yd.	366		366
Leveling Binder (MM) Superpave	Ton	8		8
P.C. Mortar Fairing Course	Foot	241		241
Bituminous Concrete Surface Course Superpave	Ton	30		30

**DESIGN STRESSES**

**FIELD UNITS**

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinf.)

**PRECAST PRESTRESSED UNITS**

$f'_c = 5,000$  psi  
 $f'_ci = 4,000$  psi  
 $f'_s = 270,000$  psi ( $1/2"$  low lax. strands)  
 $f'_{si} = 201,960$  psi ( $1/2"$  low lax. strands)  
 $f_y = 60,000$  psi (Reinf.)

Loading HS 20-44  
 Design Specifications; 2002 AASHTO & all applicable interims.  
 25#/Sq. Ft. included in dead load for future wearing surface.

**SEISMIC DATA**

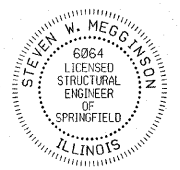
Seismic Performance Category (SPC) = B  
 Bedrock Acceleration Coefficient (A) = 0.075g  
 Site Coefficient (S) = 1.5

**WATERWAY INFORMATION**

Drainage Area = 12.8 Sq. Mi.		Low Grade Elev. 550.1 @ Sta. 101+00								
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Natural H.W.E.	Head - Ft.	Headwater El.	Exist.	Prop.	Exist.	Prop.
Temporary	5	1,870	310	540.7	NA	NA	NA	NA	NA	NA
Design	25	3,230	580	541.9	0.3	0.6	542.2	542.5		
Base	100	4,400	640	542.6	0.7	1.0	543.3	543.6		
Overtopping										
Max. Calc.	500	5,791	700	543.3	1.3	1.6	544.6	544.9		

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 requirements of the current "AASHTO Standard Specifications for Highway Bridges".

*Stan Morrison*  
 ILLINOIS STRUCTURAL NO. 6064 12-06



Expires 11-30-06

**HLR**  
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 217-546-3400  
 P.O. Box 1036  
 DuQuoin, Illinois 62832  
 618-790-4637  
 Date: 03/13/06  
 DESIGNED: S.M.S. CHECKED: S.W.M. DRAWN: D.T.M.

**GENERAL PLAN AND ELEVATION**  
 SECTION 02-00104-00-BR  
 F.A.S. 712 / C.H. 24  
 FAYETTE COUNTY  
 STR. NO. 026-3431 / STATION 102+50