

Bench Mark: BM #122 Chiseled "□" S.E. corner handrail S.N. 069-0006. Elev. 610.88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
F.A.P. 310	81B-1	MORGAN	114	52
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
16 SHEETS

Existing Structure: S.N. 069-0006 built in 1924 as SBI Route 3, Section 81-B, at Sta. 140+25.
Superstructure replaced and approach spans added in 1954 as SBI Route 3, Section 81BR at Sta. 140+25.
Structure consists of reinforced concrete slab approaches and concrete T-girder main span on concrete pile approach bents and closed abutments on untreated timber piles. 98'-5" Bk.-Bk. approach bents. 36'-4" 0.-0. deck. Structure to be removed and replaced using stage construction.

No salvage

Contract #72528
GENERAL NOTES

Fasteners shall be high strength bolts (AASHTO M 164, Type 3 in unpainted areas and mechanically galvanized AASHTO M 164, Type 1 or 2 in painted areas). Bolts 7/8" φ, open holes 15/16" φ, unless otherwise noted.
Calculated weight of Structural Steel = 93,700 lbs.
All structural steel shall be AASHTO M 270 Grade 50W.
Field welding of construction accessories will not be permitted to beams or girders.

Anchor bolts shall be set before bolting diaphragms over supports.
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 and all splice plate material except fill plates.

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.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/2" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

The contractor shall drive two test piles in a permanent location, one HP12 x 53 at the South Abutment and one HP12 x 74 at the Pier, as directed by the Engineer before ordering the remainder of the piles.

AASHTO M 270 Grade 50W structural steel shall only be painted, at the ends of the beams, for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Those areas shall be primed in the shop with an inorganic zinc rich primer per AASHTO M 300, Type 1. No field painting shall be required. All structural steel shall be cleaned as specified in the special provision for "Surface Preparation and Painting Requirements for Weathering Steel".

All construction joints shall be bonded.
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.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yd.		137	137
Concrete Superstructure	Cu. Yd.	164.8		164.8
Concrete Structures	Cu. Yd.		83.1	83.1
Furnishing and Erecting Structural Steel	L. Sum			1
Reinforcement Bars, Epoxy Coated	Pound	39,890	8390	48,280
Porous Granular Embankment (Special)	Cu. Yd.		144.6	144.6
Bridge Deck Grooving	Sq. Yd.	473		473
Stud Shear Connectors	Each	2196		2196
Removal of Existing Structures	Each			1
Driving Steel Piles	Foot		521	521
Furnishing Steel Piles HP12x53	Foot		361	361
Furnishing Steel Piles HP12x74	Foot		160	160
Test Pile Steel HP12x53	Each		1	1
Test Pile Steel HP12x74	Each		1	1
Temporary Soil Retention System	Sq. Ft.		905	905
Bar Splicers	Each	492	49	541
Name Plates	Each	1		1
Protective Coat	Sq. Yd.	592		592
Stone Riprap, Class A5	Sq. Yd.		620	620
Filter Fabric	Sq. Yd.		620	620
Underwater Structure Excavation Protection, Location 1	Each		1	1

STATION 140+34.43
BUILT 200 BY
STATE OF ILLINOIS
F.A.P. RT. 310 SEC. 81B-1
LOADING HS20
STR. NO. 069-0504

NAME PLATE

See Std. 515001-02

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications

DESIGN STRESSES

FIELD UNITS

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

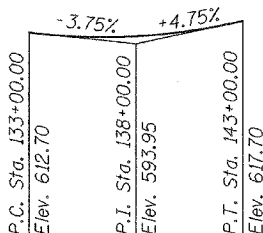
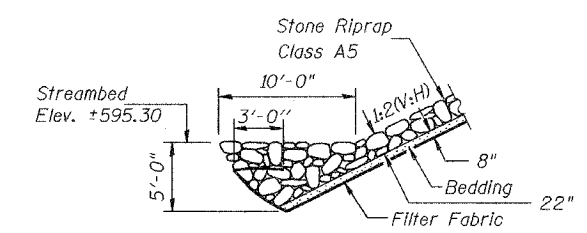
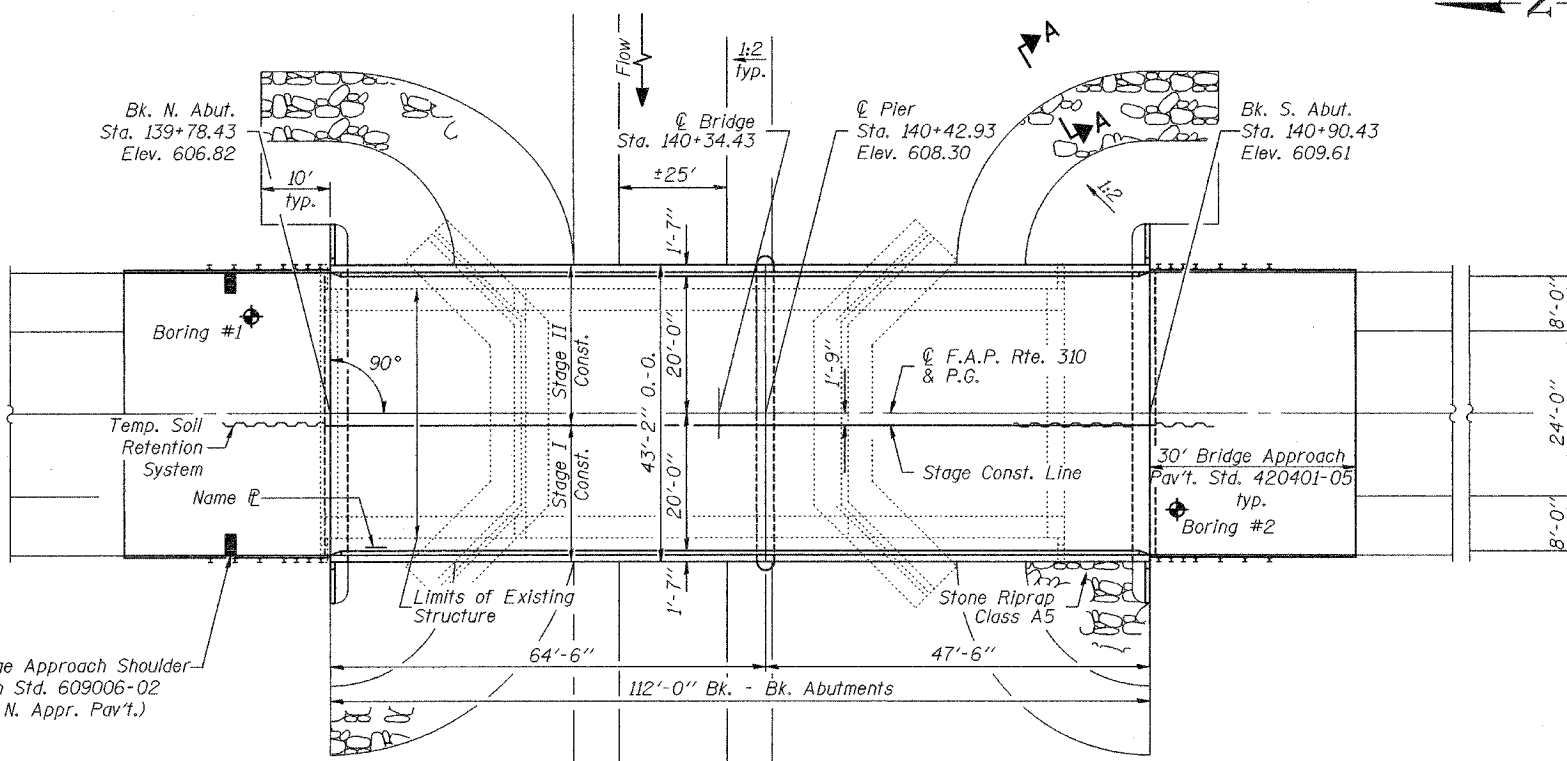
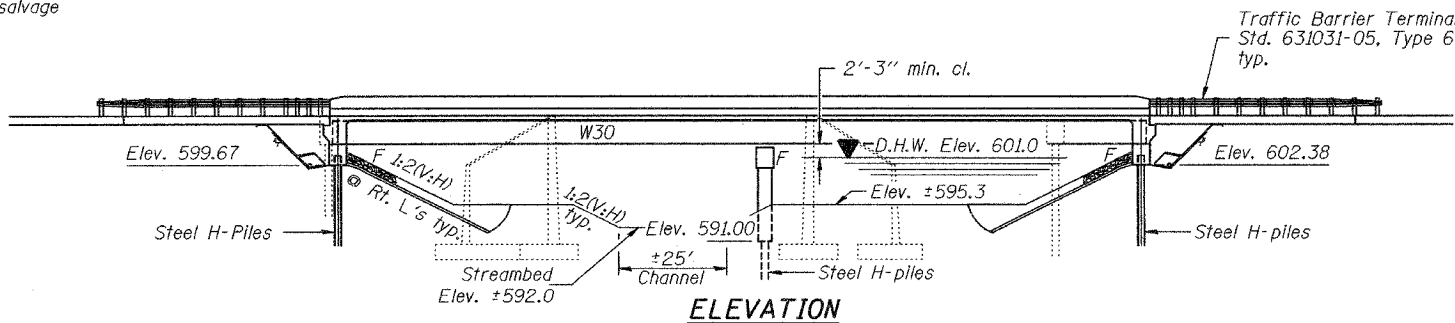
SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 4.8%g
Site Coefficient (S) = 1.5

WATERWAY INFORMATION

Drainage Area = 13.8 sq. mi. Low Grade Elev. 604.7 ft. @ Sta. 603+77.79

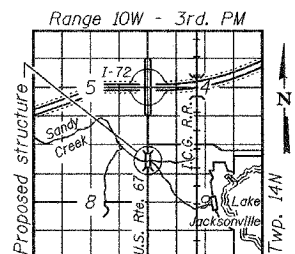
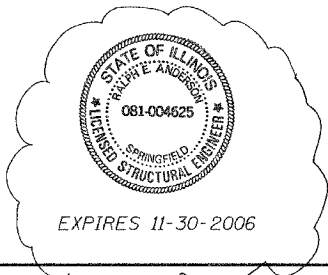
Flood	Freq. Yr.	Q C.F.S.	Opening Exist.	Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	50	3669	269	593	601.0	4.2	0.5	605.2	601.5
Base	100	4229	281	619	601.3	4.3	0.6	605.6	601.9
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	5578	310	674	601.8	4.5	2.1	606.3	603.9



PROFILE GRADE
(along roadway)

DESIGNED	Alfa Gorengout
CHECKED	William A. Bessner
DRAWN	OMC Frank Lowry
CHECKED	A. B. G. WAB

September 30, 2005
EXAMINED
PASSED
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES



LOCATION SKETCH

GENERAL PLAN
U.S. ROUTE 67 OVER
SANDY CREEK
F.A.P. ROUTE 310 - SECTION 81B-1
MORGAN COUNTY
STATION 140+34.43
STRUCTURE NO. 069-0504

Rev. 11-1-05