Bench Mark: Brass disk set in N.E. abutment S.N. 090-0049 Elev. 459.45

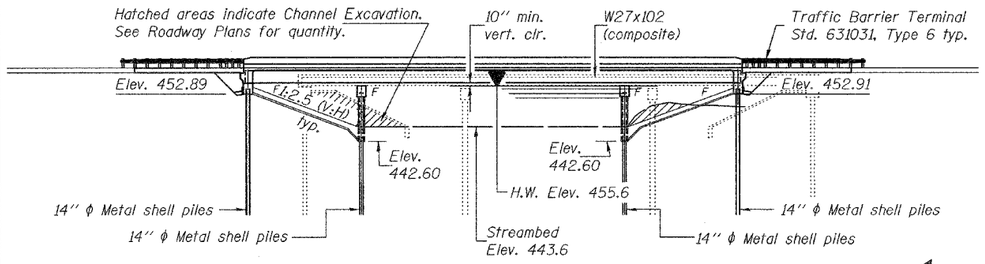
Existing Structure: S.N. 090-0049 Built in 1956 as S.B.I. Rte. 24, Section 11-BR at Sta. 302+06
as a 3-span continuous WF 143'-5" bk. to bk. abutments with two 24 ft. roadways with 4 ft. raised median.
Open pile abutments and piers, supported on concrete piles. Existing structure to be removed.
Traffic to be maintained using stage construction.
No salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

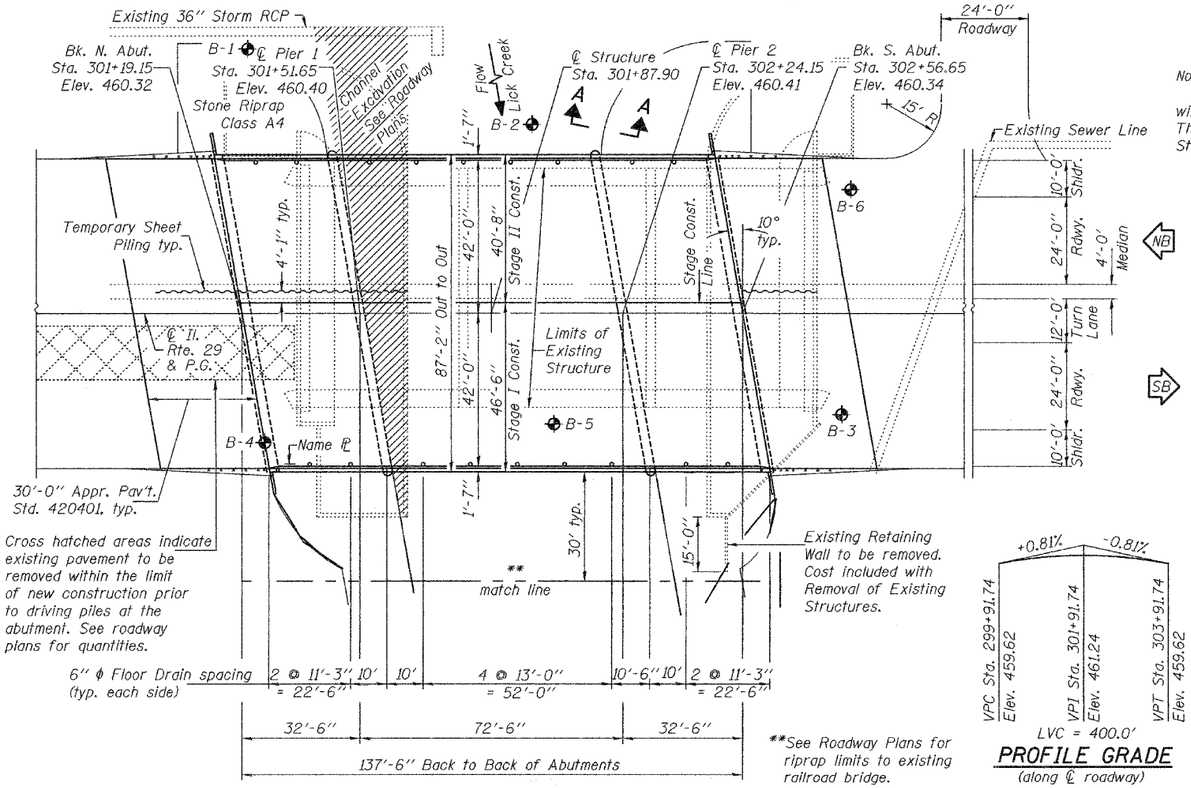
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 669	11BR-1	TAZEWELL	442	270
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1
32 SHEETS

Contract #88804

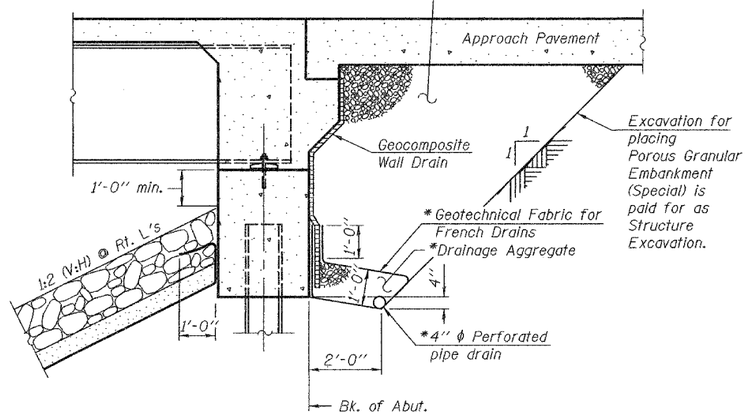


ELEVATION



**See Roadway Plans for riprap limits to existing railroad bridge.

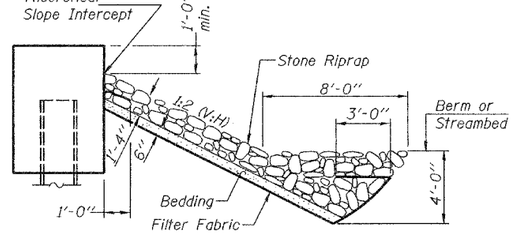
PROFILE GRADE
(along ℄ roadway)



SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

Note: * Included in the cost of Pipe Underdrains for Structures.

All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



SECTION A-A

STATION 301+87.90
BUILT 200 BY
STATE OF ILLINOIS
F.A.P. ROUTE 669 - SECTION 11BR-1

LOADING HS20-44
STR. NO. 090-0172

NAME PLATE
See Std. 515001

LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
1996 AASHTO with 1997 thru 2002 Interims

DESIGN STRESSES

FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (M270 Gr.50) (structural steel)
f_y = 36,000 psi (M270 Gr.36) (structural steel)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 4.25%g
Site Coefficient (S) = 1.0

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$" ϕ, open holes $\frac{15}{16}$" ϕ, unless otherwise noted.

Calculated weight of Structural Steel = 221,180 pounds (M270 Gr. 50)
Calculated weight of Structural Steel = 28,280 pounds (M270 Gr. 36)

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

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 M 31 or M 322 Grade 60.

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

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{2}$" 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 3 test piles in Stage I at permanent locations. One test pile at each abutment and one at Pier 1 as directed by the Engineer before ordering the remainder of piles. See substructure sheets for details.

The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.

All construction joints shall be bonded.

The organic zinc rich primer/epoxy/urethane paint system shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners, and damaged areas shall be touched up in the field. The color of the final finish coat for all surfaces shall be light grey, Munsell No. 10Y 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.		241.8	241.8
Stone Riprap, Class A4	Sq. Yd.		1011	1011
Filter Fabric	Sq. Yd.		1011	1011
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		136	136
Floor Drains	Each	18		18
Concrete Structures	Cu. Yd.		256.6	256.6
Concrete Superstructure	Cu. Yd.	364.0		364.0
Bridge Deck Grooving	Sq. Yd.	1253		1253
Protective Coat	Sq. Yd.	1399		1399
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	3690		3690
Reinforcement Bars, Epoxy Coated	Pound	83,230	23,560	106,790
Furnishing Metal Pile Shells 14"	Foot		5339	5339
Driving and Filling Shells	Foot		5339	5339
Test Pile Metal Shells	Each		3	3
Temporary Sheet Piling	Sq. Ft.		1352	1352
Name Plates	Each	1		1
Bar Splicers	Each	575	104	679
Underwater Structure Excavation Protection, Location 1	Each		1	1
Underwater Structure Excavation Protection, Location 2	Each		1	1
Geocomposite Wall Drain	Sq. Yd.		142	142
Pipe Underdrains for Structures 4"	Foot		250	250

PLAN

WATERWAY INFORMATION

Drainage Area = 19.52 sq. mi. Low Grade Elev. 457.94 @ Sta. 309+40

Flood	Freq. Yr.	Q C.F.S.	Opening Exist.	Opening Prop.	Sq. Ft. Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	3333	827	1007	454.2	0.2	0.1	454.4	454.3
Design	50	5416	1020	1183	455.6	1.2	0.2	456.8	455.8
Base	100	6342	1045	1267	456.3	1.3	0.3	457.6	456.6
Ex. Overtop	100	6500	1045	-	456.5	1.4	-	457.9	-
Pr. Overtop	190	7346	-	1267	457.3	-	0.6	-	457.9

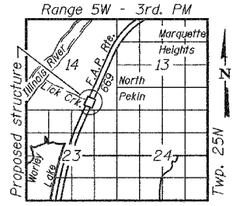
Exist. 10-yr. velocity: 4.10 ft./sec. Prop. 10-yr. velocity: 3.31 ft./sec.

DESIGNED	Tom Kuntstadt
CHECKED	Alan Johnson
DRAWN	BECKY M. LEACH
CHECKED	AMS / PEC

EXAMINED Thomas J. Domagalski, May 10, 2006, ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson, ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS ALAN E. ANDERSON 081-004625 REGISTERED SPRINGFIELD STRUCTURAL ENGINEER

EXPIRES 11-30-2006



LOCATION SKETCH

GENERAL PLAN
ILLINOIS ROUTE 29 OVER
LICK CREEK
F.A.P. ROUTE 669 - SECTION 11BR-1
TAZEWELL COUNTY
STATION 301+87.90
STRUCTURE NO. 090-0172