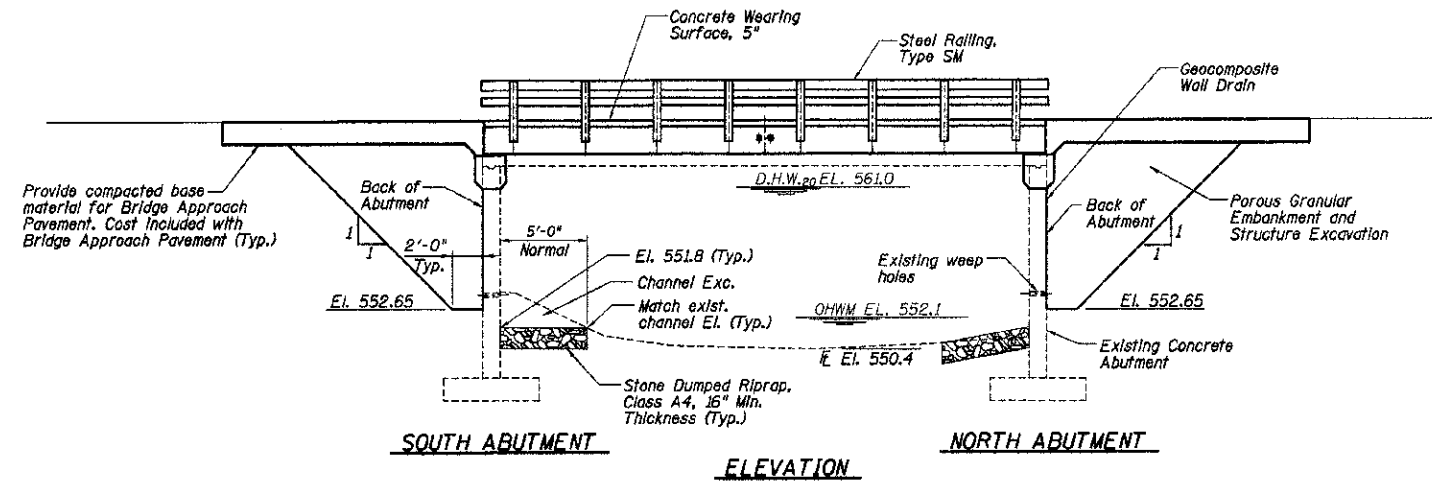


TBM - RR spike in power pole,
39.91' Lt. of Sta. 603+29.33 - Elev. 561.45

Existing Structure: Existing Structure Number 026-3001. Single span bridge with concrete T-beam and slab on closed concrete abutments and wingwalls. 37'-3 3/4" L. X 27'-4" W.



STATION 604+38
BUILT 1939 BY
FAYETTE COUNTY
SEC. 16-B-M.F.T.

EXISTING NAME PLATE
Existing Name Plate shall be cleaned and relocated below new Name Plate. Cost included with Name Plates.

DISMAL CREEK
RE-BUILT 201 BY
FAYETTE COUNTY
SEC. 12-00124-00-BR
LOADING HS-20
STRUCTURE NO. 026-3001

PROPOSED NAME PLATE
(See State Standard 515001 for details)

BILL OF MATERIALS (BRIDGE ONLY)

ITEM	UNIT	TOTAL
Channel Excavation	Cu Yd	5
Porous Granular Embankment	Ton	500
Stone Dumped Riprap, Class A4	Ton	303
Removal of Existing Superstructures	Each	1
Concrete Removal	Cu Yd	8.6
Structure Excavation	Cu Yd	240
Concrete Structures	Cu Yd	11.8
Bridge Deck Grooving	Sq Yd	107
Protective Coat	Sq Yd	115.5
PPCDB (21" Depth)	Sq Ft	1040
Reinforcement Bars, Epoxy Coated	Pound	10,330
Steel Railing, Type SM	Foot	75
Name Plates	Each	1
Geocomposite Wall Drain	Sq Yd	76
Concrete Wearing Surface, 5"	Sq Yd	115.5
Structural Repair of Concrete (Depth Equal to or Less than 5")	Sq Ft	86.5

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Plans for the existing structure are available for review in the office of the Fayette County Highway Department.

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

Do not scale these drawings.

The abutment bearing seat surfaces for the precast prestressed concrete deck beams shall be adjusted by shimming to assure firm and even bearing. As required, 1/2" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

Prior to removing the superstructure, the approach pavement and backfill shall be removed at each abutment to the elevations shown to remove lateral load on the closed concrete backwall.

SEQUENCE OF CONSTRUCTION

- 1) Perform construction activities to remove backfill and lateral soil pressures on abutment backwall to Elevation 552.65 prior to removing superstructure.
- 2) Perform construction activity without adding additional lateral load to abutment backwall above Elevation 552.65.
- 3) Complete deck beam anchor bolt installation and grouting of shear key to provide lateral support for top of abutment backwall prior to placing PGE backfill behind abutment.
- 4) Structure Excavation and placement of PGE shall be done with balanced method of removal and placement of material. Work shall be done simultaneously at both abutments.

LOADING HS-20

50#/sq. ft. included in dead load for future wearing surface.

DESIGN SPECIFICATIONS
2010 AASHTO LRFD
Bridge Design Specifications

DESIGN STRESSES

EXISTING SUBSTRUCTURE
 $f'_c = 3,500$ psi
 $f_y = 40,000$ psi (reinforcement)

FIELD UNITS

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

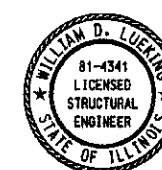
PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_ci = 5,000$ psi
 $f_{pu} = 270,000$ psi (1/2" ϕ low lax. strands)
 $f_{pbt} = 201,960$ psi (1/2" ϕ low lax. strands)
 $f_y = 60,000$ psi (reinforcement)

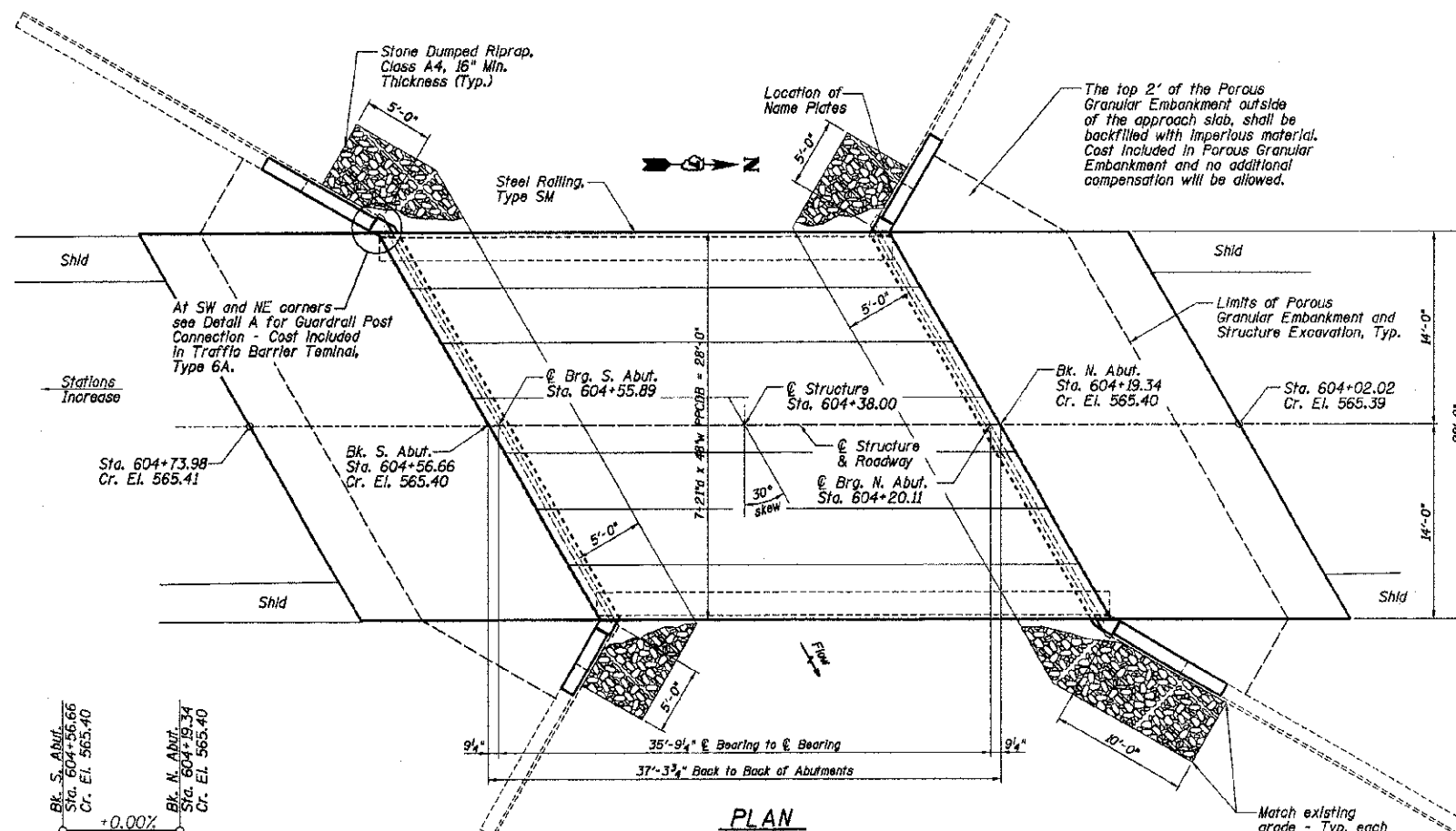
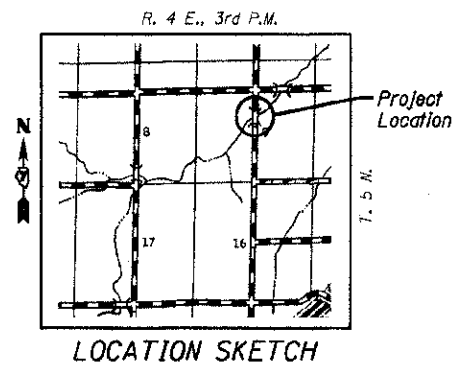
SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Soil Site Classification = D
 $S_{ci} = 0.24$ $S_{ps} = 0.54$

I certify that to the best of knowledge, information and belief, this bridge superstructure 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.



William D. Lueking
William D. Lueking
6-30-2012
Date of Signing
11-30-2012
Date of License Expiration

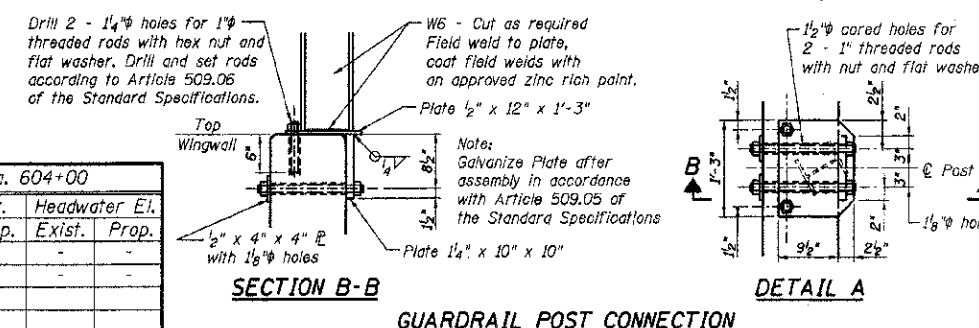


PROFILE GRADE
ACROSS STRUCTURE
Along ϕ Roadway

WATERWAY DATA

Drainage Area = 7.19 Sq. Mi. Low Grade Elev. 465.39 @ Sta. 604+00

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	20	1575	345	345	561.0	-	-	-
Base	100	2320	395	395	563.6	-	-	-
Max. Calc.								



RHUTASEL and ASSOCIATES, INC.
CONSULTING ENGINEERS • LAND SURVEYORS
CENTRALIA, ILLINOIS
ILLINOIS DESIGN FIRM LICENSE NO. 164-000287

DESIGNED - WDL	REVISED -
DRAWN - JN	REVISED -
CHECKED - WDL	REVISED -
DATE - 05/29/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 026-3001

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 28	12-00124-00-BR	FAYETTE	12	4
CONTRACT NO. 95691				
RAIL JOB NO. 61312 ILLINOIS FED. AID PROJECT				