

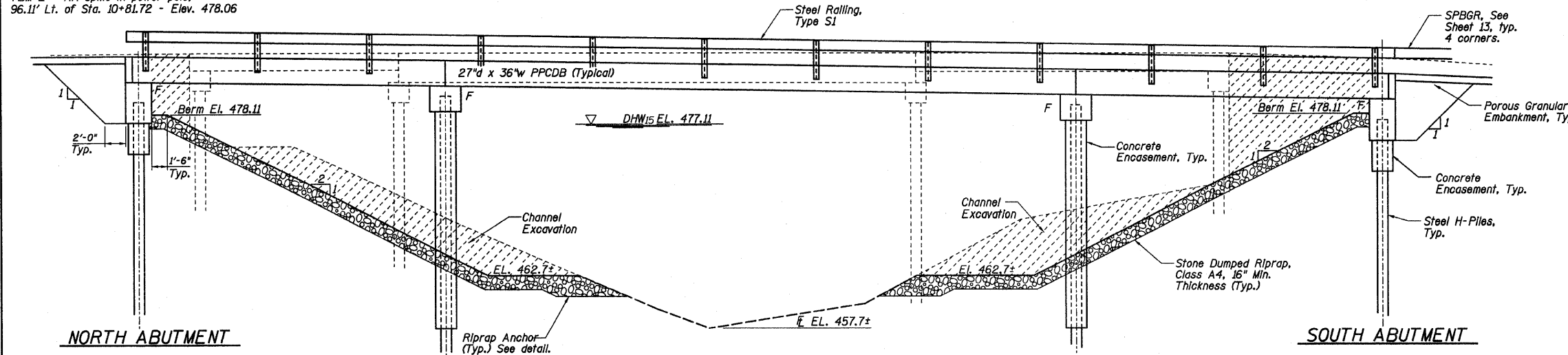
TBM 1 - RR spike in 15" tree,
47.28' Rt. of Sta. 9+51.63 - Elev. 481.80

TBM 2 - RR spike in power pole,
96.11' Lt. of Sta. 10+81.72 - Elev. 478.06

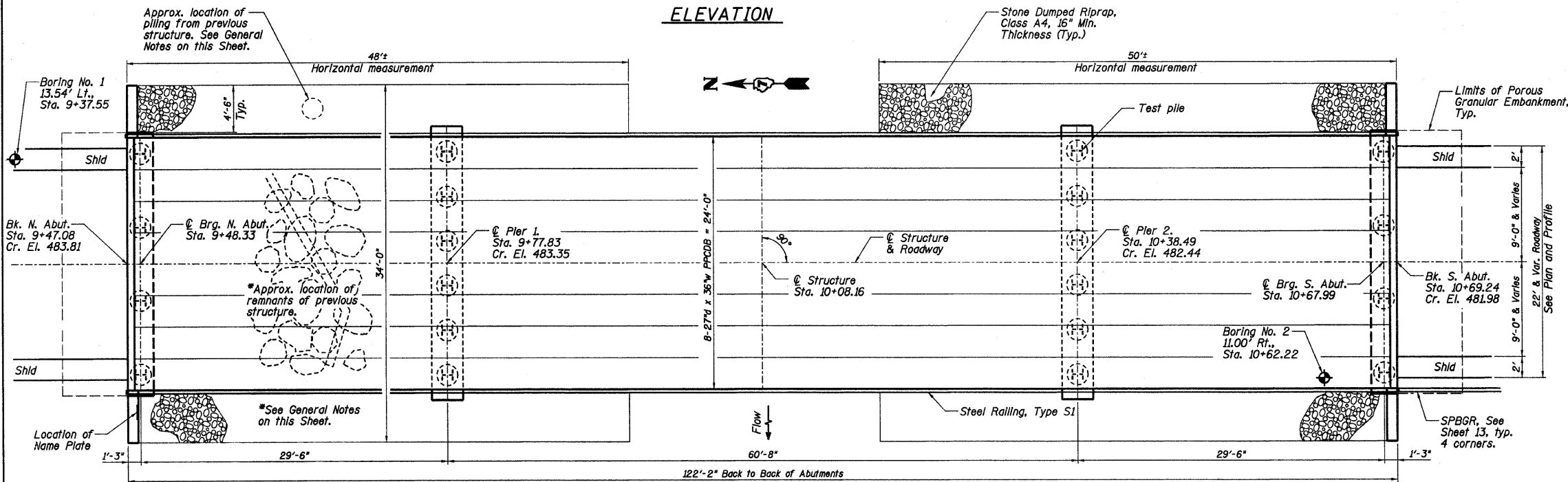
Existing Structure: Three span bridge with precast concrete channel beams (end spans) and concrete slab on steel stringers (center span) on closed timber abutments and timber pile bent piers, to be removed. 100'L. x 23'W. No skew. See Special Provisions for salvage requirements.

BILL OF MATERIALS (BRIDGE ONLY)

ITEM	UNIT	TOTAL
Channel Excavation	Cu Yd	377
Porous Granular Embankment	Ton	108
Stone Dumped Riprap, Class A4	Ton	299
Removal of Existing Structures	Each	1
Concrete Structures	Cu Yd	44.8
Concrete Encasement	Cu Yd	45.4
PPCDB (27" Depth)	Sq Ft	2892
Reinforcement Bars	Pound	6220
Steel Railing, Type S1	Foot	244
Furnishing Steel Piles HP12x53	Foot	372
Furnishing Steel Piles HP14x73	Foot	528
Driving Piles	Foot	900
Test Pile Steel HP14x73	Each	1
Pile Shoes	Each	10
Name Plates	Each	1



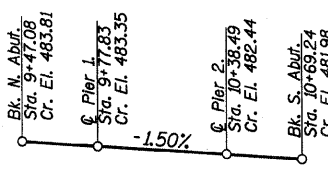
ELEVATION



PLAN

DESIGN SCOUR TABLE

Location	N. Abut.	Pier 1	Pier 2	S. Abut.
Design Scour Elevation	477.2	458.7	458.7	475.4



PROFILE GRADE ACROSS STRUCTURE
Along Centerline of Roadway

**HICKORY CREEK
BUILT 201 BY
FAYETTE COUNTY
SEC. 10-18121-00-BR
LOADING HL-93
STRUCTURE NO. 026-3455**

NAME PLATE
(See State Standard 515001 for details)

PRECAST PRESTRESSED UNITS
 $f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
 $f_{pbt} = 201,960$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
 $f_y = 60,000$ psi (reinforcement)

SEISMIC DATA
 Seismic Performance Zone (SPZ) = 3
 Soil Site Classification = E
 $S_{DI} = 0.342$ $S_{DS} = 0.758$

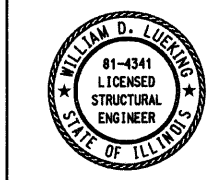
LOADING HL-93
50#/sq. ft. included in dead load for future wearing surface.

DESIGN SPECIFICATIONS
2010 AASHTO LRFD Bridge Design Specifications

DESIGN STRESSES
FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)

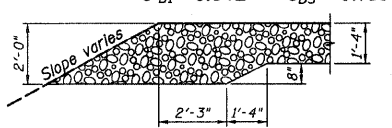
I certify that to the best of knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.

William D. Lueking
 William D. Lueking
 04-06-2012
 Date of Signing
 11-30-2012
 Date of License Expiration



WATERWAY DATA

		Q		Natural		Head - Ft.		Headwater El.	
Flood	Freq. Yr.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	15	8180	1050	1220	477.11	0.15	0.15	477.26	477.26
Base	100	13,500	1436	1574	480.81	0.37	0.37	481.18	481.18
Max. Calc.	500	18,100	1522	1581	483.43	0.33	0.33	483.76	483.76



RIPRAP ANCHOR DETAIL

GENERAL NOTES

Remnants of a former bridge abutment exists between the existing bridge's north abutment and north pier. The remnants consist of a cast-in-place concrete wall and a steel pipe support column. These remnants shall be removed to facilitate the construction of the proposed bridge. The cost of this work shall be included in the cost per Each for Removal of Existing Structures and no additional compensation will be allowed.

The Contractor's attention is also called to the existence of numerous pieces broken concrete on the north bank of the existing stream. Removal or redistribution of this material shall be done at the Engineer's direction to facilitate the construction / reshaping of the stream bank for the proposed bridge. The cost of this work shall be included in the cost per Each for Removal of Existing Structures and no additional compensation will be allowed.

The Contractor is hereby advised that very stiff soils may be encountered prior to the location of anticipated nominal required bearing. See the soil borings for further information.

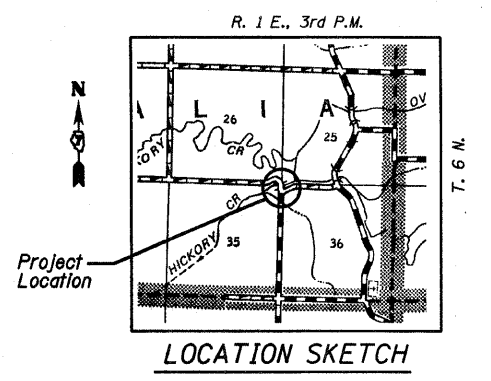
Channel excavation shall be excavated as shown within the limits of the proposed bridge, then tapered to the existing channel at the ROW line. If the Engineer deems the material satisfactory, it may be used to construct the roadway embankment.

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

See Specifications for Soil Borings.

Do not scale these drawings.

The bearing seat surfaces for the precast prestressed concrete deck beams shall be adjusted by shimming to assure firm and even bearing. As required, $\frac{1}{8}$ " fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing.



RHUTASEL and ASSOCIATES, INC.
 CONSULTING ENGINEERS • LAND SURVEYORS
 CENTRALIA, ILLINOIS FREEBURG, ILLINOIS
 ILLINOIS DESIGN FIRM LICENSE NO. 184-000287

DESIGNED - BLT	REVISED -
DRAWN - JN	REVISED -
CHECKED - WDL	REVISED -
DATE - 04/06/2012	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN AND ELEVATION
STRUCTURE NO. 026-3455**

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 429	10-18121-00-BR	FAYETTE	15	4
CONTRACT NO. 95677				