

TBM #1 - RR Spike in north face of 36" Maple,
74.9' Rt. of Sta. 49+12.5 - Elev. 524.15

TBM #2 - Chiseled "X" in SW corner of concrete
pad, 52' Lt. of Sta. 53+58 - Elev. 520.54

Traffic Barrier Terminals,
Type 1, Special (Tangent)
& 5A Typ. All 4 Corners

Porous Granular
Embankment

Concrete
Encasement

HP 12x53

Stone Dumped Riprap,
Class A4, 16" Min. Thickness
(Typ.)

Pay limits of Structure
Excavation

SPAN 1

WEST ABUT.

PIER 1

151'-0" End to End of Railing

Concrete curb
Span 2 only
See Sheet 10.

Steel Railing,
Type S1 (Special)
See Sheet 11
for details

Traffic Barrier Terminals,
Type 1, Special (Tangent)
& 5A Typ. All 4 Corners

Porous Granular
Embankment

Concrete
Encasement

HP 12x53

Stone Dumped Riprap,
Class A4, 16" Min. Thickness
(Typ.)

Pay limits of Structure
Excavation

SPAN 2

PIER 2

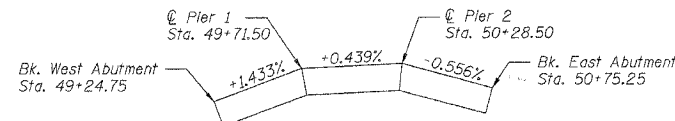
EAST ABUT.

The quantity of excavation under the proposed
structure is included in the quantity shown in
Earth Excavation (Except Structure Excavation).
See Sheet 3.

ELEVATION

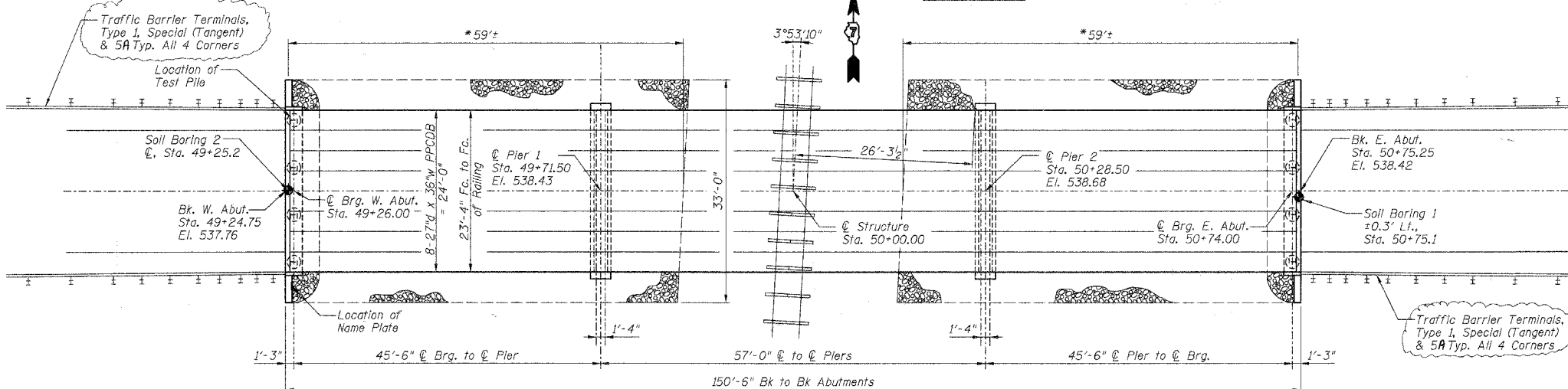
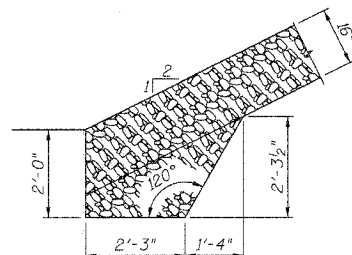
Design Top of Rail Elev. 512.54 was established
to eliminate a depressed portion of the existing
rail in the immediate vicinity of the existing
structure. Actual top of rail at time of
field survey (09/06/05) = Elev. 511.30

Final ditch grades to be established in the field
by Illinois Central Railroad Engineers. Elevations
shown are standard for Illinois Central Railroad
road bed cross section Drawing No. 185.



GRADE ON STRUCTURE

RIPRAP ANCHOR DETAIL



PLAN

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.09g
Site Coefficient (S) = 1.0

DESIGN SPECIFICATIONS

AASHTO - 2002 17th Edition

LOADING HS 20-44

Allow 25#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi
 $f'_{ci} = 4,000$ psi
 $f'_s = 270,000$ psi ($\frac{1}{2}$ " ϕ strands)
 $f'_{si} = 189,000$ psi ($\frac{1}{2}$ " ϕ strands)

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



GARY L. HAHN
CENTRALIA, ILLINOIS
ILLINOIS LICENSED STRUCTURAL
ENGINEER NO. 81-4853
EXPIRES NOV. 30, 2008

Existing Structures: Seven (7) span bridge with timber
deck on timber pile bent piers and abutments.
104' long x 16' wide. To be removed.
See Special Provisions.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 293	96-10120-01-BR	CLAY	13	8
FED. ROAD DIST. NO. 7		ILLINOIS		
		FEDERAL AID PROJECT		
		CONTRACT NO. 95514		

BILL OF MATERIALS (BRIDGE ONLY)

ITEM	UNIT	SUB	SUPER	TOTAL
POROUS GRANULAR EMBANKMENT	TON	34	-	34
STONE DUMPED RIPRAP, CLASS A4	TON	345	-	345
REMOVAL OF EXISTING STRUCTURES	EACH	-	1	1
STRUCTURE EXCAVATION	CU YD	150	-	150
CONCRETE STRUCTURES	CU YD	152.6	-	152.6
CONCRETE ENCASUREMENT	CU YD	2.8	-	2.8
PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	-	3576	3576
REINFORCEMENT BARS	POUND	14120	-	14120
STEEL RAILING, TYPE S1 (SPECIAL)	FOOT	-	302	302
FURNISHING STEEL PILES HP12X53	FOOT	361	-	361
FURNISHING STEEL PILES HP14X73	FOOT	464	-	464
DRIVING PILES	FOOT	825	-	825
TEST PILE STEEL HP12X53	EACH	1	-	1
TEST PILE STEEL HP14X73	EACH	2	-	2
NAME PLATES	EACH	1	-	1
RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	-	1	1

GENERAL NOTES

See Specifications for Soil Borings.

See Section 502 of the Standard Specifications for Structural Excavation.

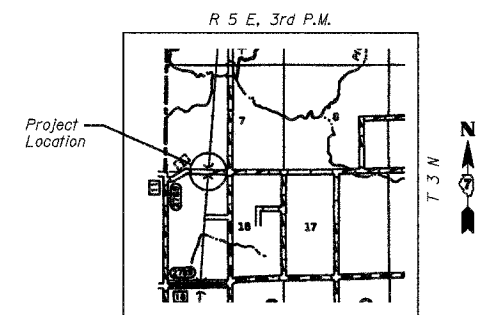
The Contractor shall drive one (1) Steel HP12X53 Test Pile in a production location
at the West Abutment and one (1) Steel HP14X73 Test Pile in a production location
at each Pier as directed by the Engineer before ordering the remainder of the piles.

The Contractor is hereby advised that very stiff soils will be encountered
prior to the location of anticipated refusal. See the Soil Borings for further
information.

Reinforcement Bars shall conform to 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.

Do not scale these drawings.



LOCATION SKETCH

CN / IC RAILROAD
BUILT 200 BY
CLAY COUNTY
SEC. 96-10120-01-BR
LOADING HS-20
STRUCTURE NO. 013-9918

NAME PLATE

(See State Standard 515001 for details)

GENERAL PLAN AND ELEVATION

TR 293 BRIDGE OVER
CN / IC RAILROAD
SECTION 96-10120-01-BR
CLAY COUNTY, ILLINOIS

Sheet
8
of 13
Job No. 51005

04/03/2007

RHUTASEL and ASSOCIATES, INC.
CONSULTING ENGINEERS • LAND SURVEYORS
CENTRALIA, ILLINOIS • FREEBURG, ILLINOIS