Benchmark: TBM #316 Set cut box on foundation of overhead sign truss (C3) NE corner of exit ramp to I-80 westbound: approximately mile marker 74.30 Elev. = 183.274

Existing Structure: S.N. 016-0164, three-span continuous 39.49 m Bk. to Bk. abutments, variable width from 21.60 m to 23.4 m O. to O. Haunched R.C. slab on multicolumn piers and closed abutments. Built as S.A. Route 66, Sec. 066-0303.1-MFT at Station 4+61.67 (English) in 1945. Bridge was widened in 1969 and deck was rehabilitated in 1995.

Salvage: No salvage.

Note: All dimensions are in millimeters (mm) except as noted. (Dimensions, Stations and Elevations in parenthesis are in English Units.)

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

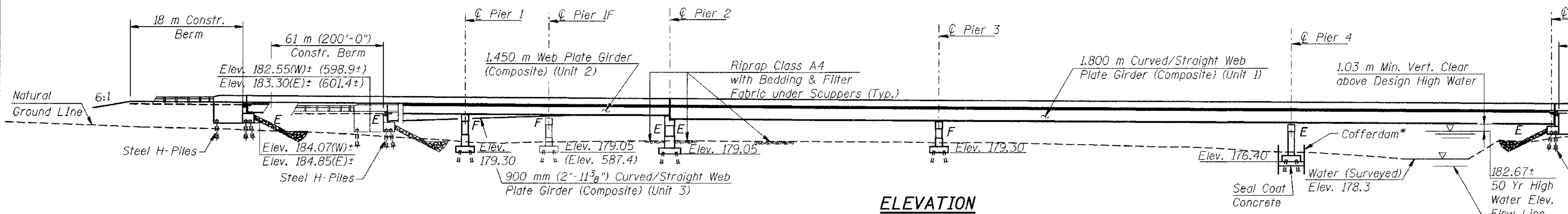
Staging: New bridge to be constructed while WB I-80/NB I-294 and EB I-94/I-80 traffic is maintained on existing bridge (SN 016-0164) and while SB IL-394 traffic has been detoured off the existing bridge to new NB IL-394 pavement.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. 80/94	*	COOK	90	16
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1

42 SHEETS

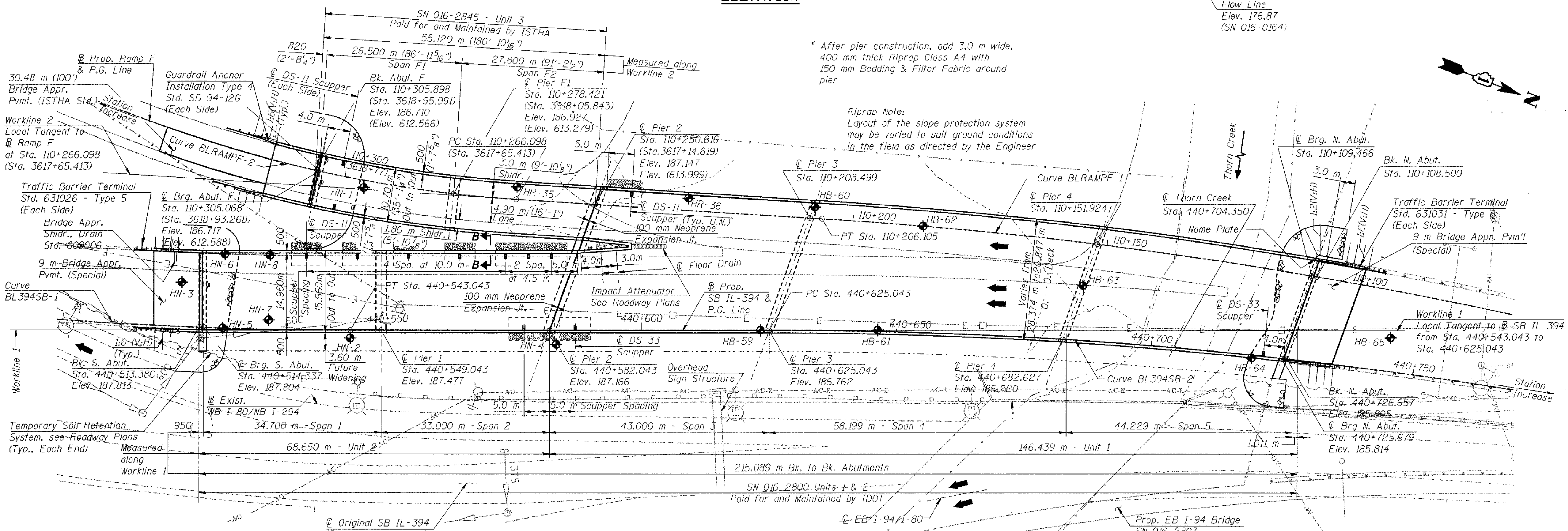
* 2004-133F CONTRACT NO. 62898



ELEVATION

* After pier construction, add 3.0 m wide, 400 mm thick Riprap Class A4 with 150 mm Bedding & Filter Fabric around pier

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



PLAN

Note: For skew angles, see Offset Sketch.

Limits of Existing EB I-94 & SB IL 394 & WB I-80/ NB I-294 Bridge S.N. 016-0164

WATERWAY INFORMATION

Drainage Area = 274.43 km² Prop. Low Grade Elev. 184.80 @ Sta. 440+750									
	Freq. Yr.	Q m^3/s	Opening m^2 Exist.	Opening m^2 Prop.	Nat. H.W.E.	Head-m. Exist.	Head-m. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	124.6		208.7	181.97		0.01		181.98
Design	50	188.3		276.1	182.67		0.01		182.68
Base	100	213.5		307.8	182.98		0.01		182.99
Overtop	100	213.5		---	182.98		---		---
Max. Calc.	500	280.3		339.6	183.77		0.03		183.82

LOADING MS18 & ALT.

Allow 2.4 kN/m^2 for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO

2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges

Bridge Design Criteria: IDOT except Illinois State Toll Highway Authority, June 2000 with Approved Revisions- Unit 3 only (Ramp F South of Pier 2, excluding Pier 2 Joint)

DESIGNED	DD
CHECKED	PCA
DRAWN	LK/JRB
CHECKED	PCA

DESIGN STRESSES

FIELD UNITS

f'_c = 24 MPa

f_y = 400 MPa (reinforcement)

f_y = 345 MPa (structural steel) (M270M Grade 345)

f_y = 250 MPa (structural steel) (M270M Grade 250)

SEISMIC DATA

Seismic Performance Category (SPC) = A

Bedrock Acceleration Coefficient (A) = .04

Site Coefficient (S) = 1.0

LEGEND

- Boring
- Exist. Guardrail
- Exist. Manhole
- Exist. Inlet
- Exist. Light Pole
- Exist. Drainage
- Exist. Elec. Conduit
- Exist. Utility Power Pole
- Exist. Fence

STATE OF ILLINOIS PHILIP C. AZZARELLO 081-004245 CHICAGO, ILLINOIS LICENSED STRUCTURAL ENGINEER

Philip C. Azzarello 5-20-05

Philip C. Azzarello, S.E.
Ill. Reg. No. 081-004245
Expires 11-30-06

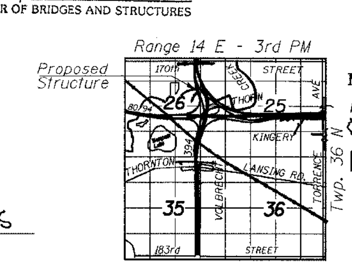
APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson

ENGINEER OF BRIDGES AND STRUCTURES

Notes:

1. All Work shown on this drawing not related to the fabrication of the structural steel and bearings is for information only.



LOCATION SKETCH

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND

GENERAL PLAN & ELEVATION

SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION 2004-133F
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845

DATE 05/16/05

SCALE ---

HNTB

lkelte
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