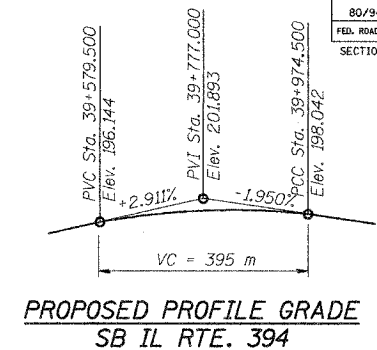


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.L. 80/94		COOK	870	474
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-		37 SHEETS
SECTION (0203.1 & 0312-708W) R-3		CONTRACT # 62108		

Benchmark: TBM #224; Cut box on southwest corner of box sign truss foundation on northbound IL 394 (Sign: 294-1 mile and I-80/94 - 3/4 mile) #C4E box on west foundation; Elev 190.364
 Existing Structure: S.N. 016-0972; Three-spans 62.5 m Bk. to Bk. abutments, 11.94 m Out to Out, reinf. conc. deck supported by continuous steel girders supported by concrete piers and abutments with timber pile supported footings. Built as F.A.I. Route 122, Sec. 066-0303.7A-MFT at Station 46+96.22 in 1952. Deck was rehabilitated in 1995. Staging: Outside lanes (west half) to be constructed under N.B. IL 394 Reconstruction Contract while maintaining traffic on existing bridge. Inside lanes (east half) to be constructed and existing bridge to be removed under S.B. IL 394 Reconstruction Contract while maintaining one lane of Ramp E traffic on west half of new southbound bridge and one lane of N.B. & S.B. traffic on new northbound bridge constructed under N.B. IL 394 Reconstruction Contract.
 Salvage: No Salvage



LOADING MS18 & ALT.
 Allow 2.4 kN/m² for future wearing surface.
DESIGN SPECIFICATIONS
 2002 AASHTO

DESIGN STRESSES
FIELD UNITS
 $f_c = 24$ MPa
 $f_y = 400$ MPa (reinforcement)
 $f_y = 250$ MPa (Structural Steel) (M270 M Grade 250)
PRECAST PRESTRESSED UNITS
 $f_c = 42$ MPa
 $f_y = 35$ MPa
 $f_s = 1,860$ MPa (12.7 mm ϕ low relaxation strands)
 $f_{sl} = 1,395$ MPa

SEISMIC DATA
 Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = .04
 Site Coefficient (S) = 1.0

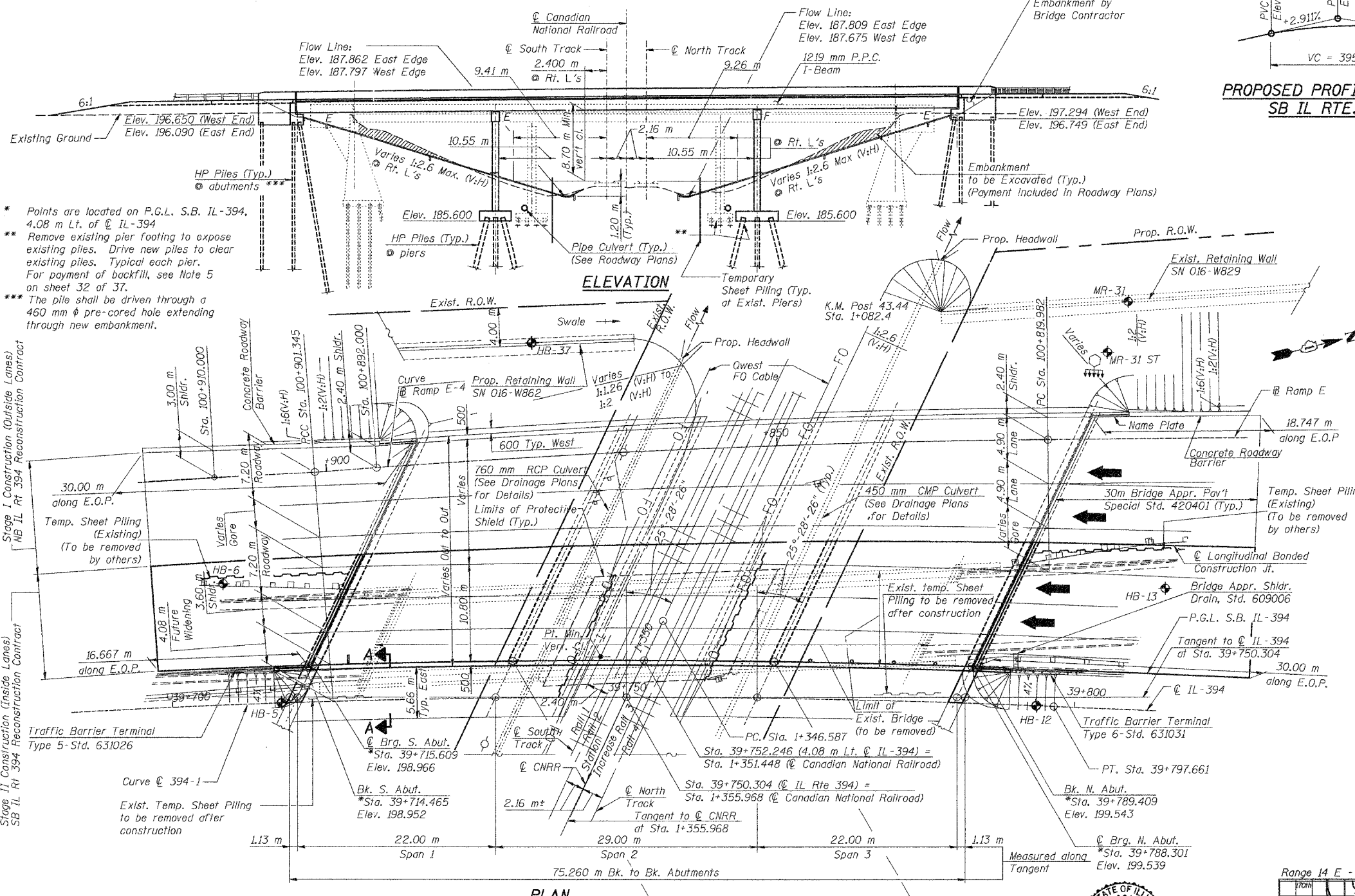
394-1 CURVE DATA
 PI STA = 39+630.602
 $\Delta = 17^\circ 32' 30''$
 $R = 1,100,000$ m
 $T = 169,715$ m
 $L = 336,774$ m
 $E = 13,015$ m
 S.E. RUN = 4.5%
 PC STA = 39+460.887
 PT STA = 39+797.661
 S.E. IN = Sta. 39+370.500 to 39+495.000
 S.E. OUT = Sta. 39+770.000 to 39+886.000

RAMPE-4 CURVE DATA
 PI STA = 100+860.681
 $\Delta = 4^\circ 05' 21''$
 $R = 1,140,055$ m
 $T = 40,699$ m
 $L = 81,364$ m
 $E = 0,726$ m
 S.E. RUN = 4.5%
 PC STA = 100+819.982
 PCC STA = 100+901.345
 S.E. IN = Sta. 39+848.664 to 39+769.995
 S.E. OUT = Curve E-5 Full Superelevation

- LEGEND:**
- ⊕ Boring
 - ▭ Exist. Guardrail
 - ▨ Embankment Excavation
 - Exist. Telephone pole
 - ⊠ Exist. Sign
 - ⊔ Exist. Buried Telephone (MCI World Com)
 - FO— Exist. Buried Fiber Optics
 - ⊙ Highmast Light Pole

EXISTING CNRR CURVE DATA
 PI STA = 1+516.832
 $\Delta = 10^\circ 55' 10''$ (LT)
 $R = 1,781,208$ m
 $T = 170,246$ m
 $L = 339,460$ m
 $E = 8,117$ m
 P.C. STA = 1+346.587
 P.T. STA = 1+686.047

- Notes:**
- See Sheet No. 2 of 37 for section A-A.
 - All dimensions are in millimeters (mm) except as noted.
 - The exact location of the fiber optics lines that appear to be in conflict with the temporary sheet piling for the pier removal will be determined by the others. The fiber optics lines will be encased by others and the Bridge Contractor will need to locate the sheet piling to clear the line while maintaining flow in the existing ditch.



- * Points are located on P.G.L. S.B. IL-394, 4.08 m Lt. of \odot IL-394
- ** Remove existing pier footing to expose existing piles. Drive new piles to clear existing piles. Typical each pier. For payment of backfill, see Note 5 on sheet 32 of 37.
- *** The pile shall be driven through a 460 mm ϕ pre-cored hole extending through new embankment.

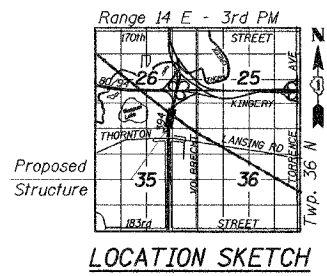
Stage I Construction (Outside Lanes) NB IL Rt 394 Reconstruction Contract
 Stage II Construction (Inside Lanes) SB IL Rt 394 Reconstruction Contract

EXISTING TOP OF RAIL ELEVATIONS CANADIAN NATIONAL RAILROAD

DESIGNED	M.R./ H.T.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	
CHECKED	H.T.	Rail 1	1+308.387	188.932	1+333.376	189.035	1+358.433	189.136
DRAWN	J.B./ J.S.	Rail 2	1+308.464	188.948	1+333.284	189.040	1+358.380	189.119
CHECKED	H.T./ M.R.	Rail 3	1+308.455	188.920	1+333.194	189.022	1+358.297	189.113
		Rail 4	1+308.401	188.913	1+333.134	189.006	1+358.249	189.092

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY
 Ralph E. Anderson (TJD)
 ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
 HAKIM H. TAYEBI
 ILLINOIS LICENSED
 STRUCTURAL ENGINEER
 NO. 081-003266
 LICENSE EXP. 11-30-06



ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-94/IL 394 SOUTH BOUND
GENERAL PLAN & ELEVATION
 SB IL. ROUTE 394 OVER CANADIAN NATIONAL RR
 F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
 COOK COUNTY
 STA. 39+752.246 S.N. 016-2798 (INSIDE LANES)
 DATE: July 18, 2005
 SCALE: NONE
 Soodan & Associates, Inc.
 100 North LaSalle Street, Suite 1800
 Chicago, Illinois 60602