

Bench Mark: B.M. "A" - Square cut on Light Pole Concrete Base, Sta. 88+91.50 39.76' Left, Elev. 645.29' NAVD 88

Existing Structure: SN 016-0519, constructed in 1956 as S.B.I. Rte. 46, Section 461-VB-VF over B & OCT R.R. as a multi span bridge on steel beam superstructure. In 1969, the approach pavements and bridge deck have been repaired and resurfaced. In 1984, the railing was removed and replaced by a concrete parapet with Type L Aluminum Railing. The Structure carries two 12'-0" lane in each direction and a 4'-10" sidewalk on both sides of the bridge. The Out to Out of deck measures 69'-8" and the Bk. to Bk. abutments is 256'-6". The substructure consists of reinforced concrete abutments supported on spread footing and multi-column piers on spread footing. Traffic is to be maintained utilizing stage construction. One Lane for each direction will be provided.

Salvage: None

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATION 92+29.76
REBUILT BY
STATE OF ILLINOIS
F.A.U. 1548/79th STREET
SEC 461 (VB&VF) I
LOADING HS-20-44
STRUCTURE NO. 016-0519

LOADING HS20-44
No future wearing surface allowed.
DESIGN SPECIFICATIONS
2002 AASHTO Standard Specifications, 17th Edition

DESIGN STRESSES
FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (Structural Steel M270 Gr. 50)
 $f_y = 36,000$ psi (Structural Steel M270 Gr. 36)

EXISTING
 $f_c = 1,400$ psi (Superstructure)
 $f_c = 800$ psi (Substructure)
 $f_y = 33,000$ psi (Structural Steel)
 $f_s = 20,000$ psi (Reinforcement)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0

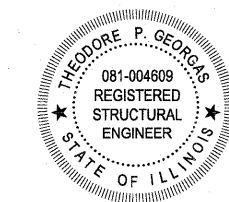
SCOPE OF WORK

1. Remove and replace Type L railing.
2. Remove and replace bridge deck.
3. Remove and replace approach slabs.
4. Provide French Drain behind abutments.
5. Provide Temporary Sheet Piling.
6. Remove and Replace Expansion Joint System with Strip Seal.
7. Remove and replace abutment backwall and portion of the bearing seat.
8. Remove and replace deteriorated & rusty diaphragms.
9. Cut, remove and replace segment of deteriorated steel beams.
10. Remove and replace expansion bearings at abutments.
11. Remove existing concrete gutter in front of the abutments.
12. Substructure modification and repairs.
13. Clean and paint steel beams.
14. Repair and restore Slopewall.
15. Repair and restore segmental block retaining wall.
16. Maintain Traffic in all Stages of Construction.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

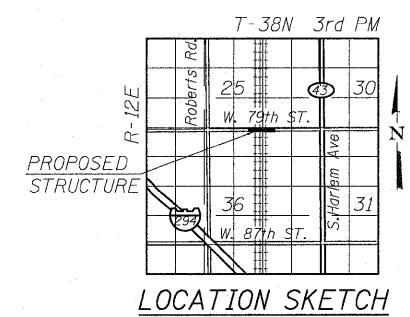
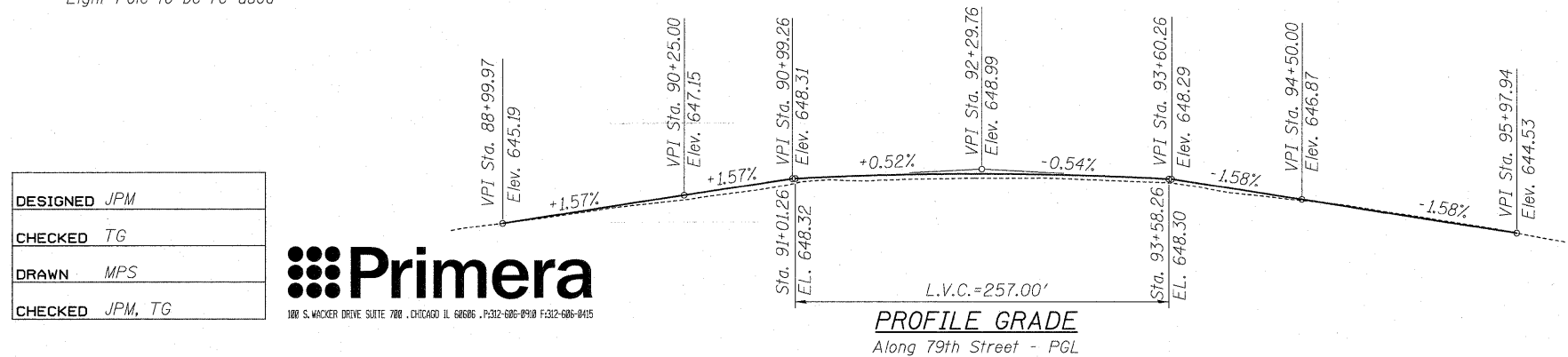
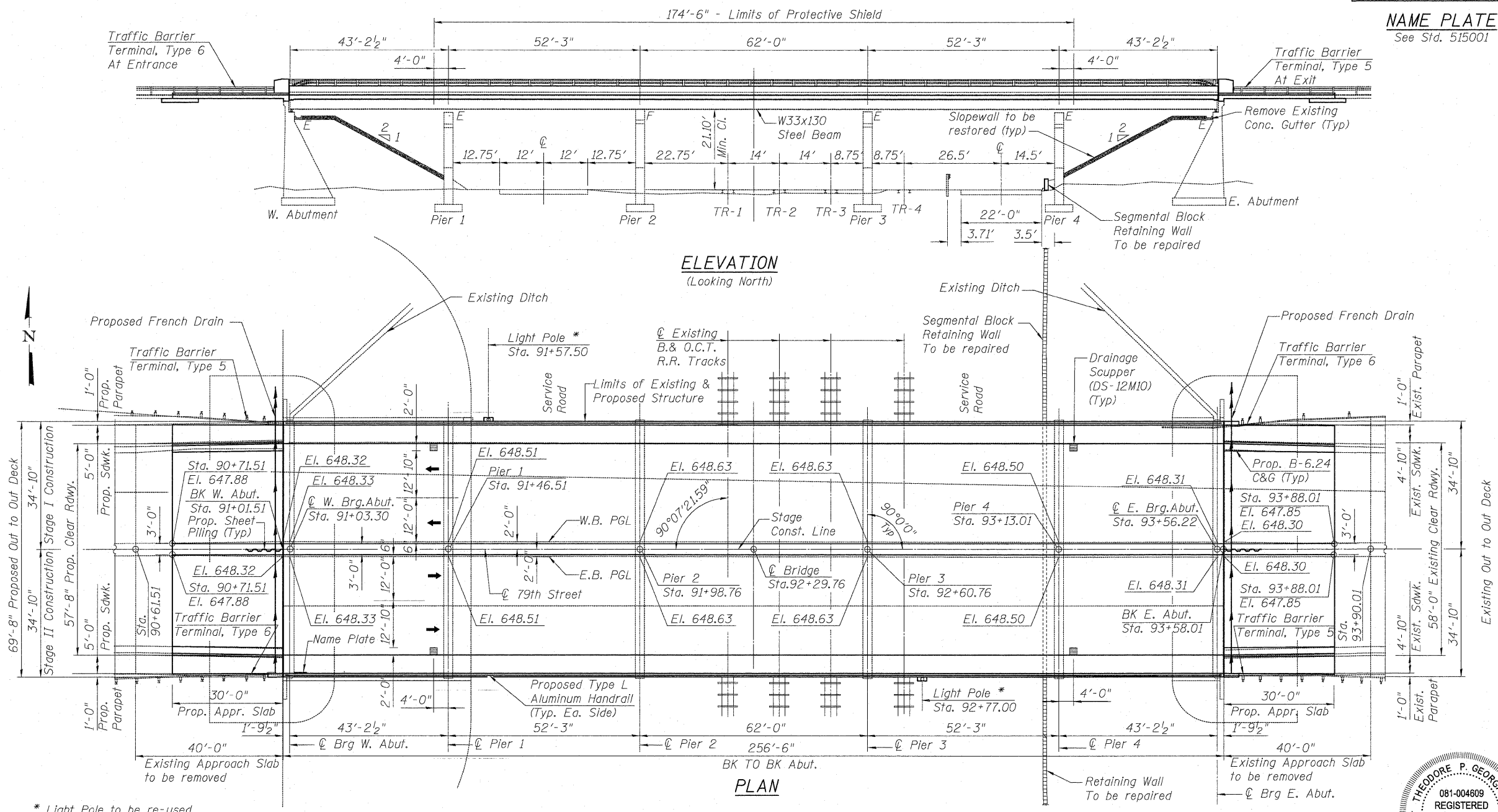
Robert E. Anderson (TSP)
ENGINEER OF BRIDGES AND STRUCTURES

NAME PLATE
See Std. 515001



Theodore P. Georgas 6-22-10
Theodore P. Georgas Date
Licensed Structural Engineer
State of Illinois 081-4609
Expires 11/30/2010

GENERAL PLAN AND ELEVATION
FAU 1548/79th STREET
OVER B & OCT & IHB RAILROAD
COOK COUNTY
STA. 92+29.76
STRUCTURE NO. 016-0519



DESIGNED	JPM
CHECKED	TG
DRAWN	MPS
CHECKED	JPM, TG



SHEET NO. 51	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1548	461 (VB&VF) I	COOK	52	13
S34 SHEETS			CONTRACT NO. 60H65		
DATE: 06-22-2010		ILLINOIS FED. AID PROJECT			