Existing Structure: SN 016-0536, built in 1949. The existing structure consists of a four span continuous steel rolled beam bridge with a reinforced concrete deck. The substructure consists of stub abutments supported by piles and three multi-column piers on spread footings. The span lengths are 51'-0", 63'-10½", 63'-10½" and 51'-0" and the out to out width is 80'-5". The bridge was widened to the North in 1991. Deck was scarified and latex concrete overlay was placed in 2010. Steel beams were painted in 2012.

Salvage: Name plate to be removed, cleaned, stored, and reinstalled.

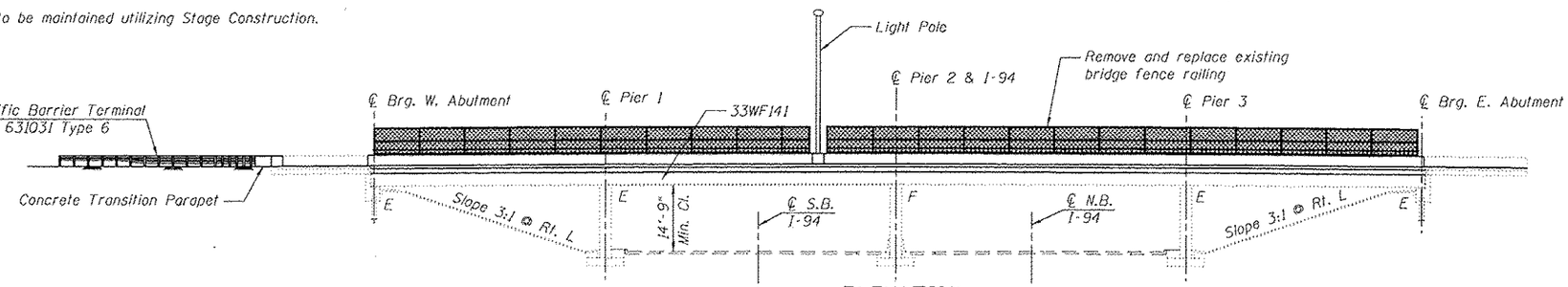
Traffic to be maintained utilizing Stage Construction.

SCOPE OF WORK

1. Remove, Replace and widen South sidewalk.
2. Remove and replace South Bridge parapet.
3. Remove and replace existing bridge fence railing on both sides.
4. Straighten North fascia beam.
5. Repair concrete spall on South fascia of deck near Pier 2.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.	68.3		68.3
Bridge Rail Removal	Foot	464		464
Protective Shield	Sq. Yd.	85		85
Concrete Superstructure	Cu. Yd.	80.5		80.5
Protective Coat	Sq. Yd.	316		316
Reinforcement Bars, Epoxy Coated	Pound	11600		11600
Bridge Fence Railing	Foot	464		464
Preformed Joint Strip Seal	Foot	20		20
Beam Straightening	L. Sum	1		1
Structural Steel Repair	Pound	296		296
Bridge Deck Scarification 2 1/4"	Sq. Yd.	67		67
Structural Repair of Concrete (Depth Equal to or less than 5 inches)	Sq. Ft.	7		7



ELEVATION

INDEX OF SHEETS

1 General Plan and Elevation
2 General Notes and Construction Staging
3 Removal Plan
4 Sidewalk and Parapet Details
5-6 Reinforcement Details
7-8 Expansion Joint Details
9-10 Steel Beam Repair Details
11 Bridge Fence Railing, Parapet Mounted

LOADING HS20-44

DESIGN SPECIFICATIONS

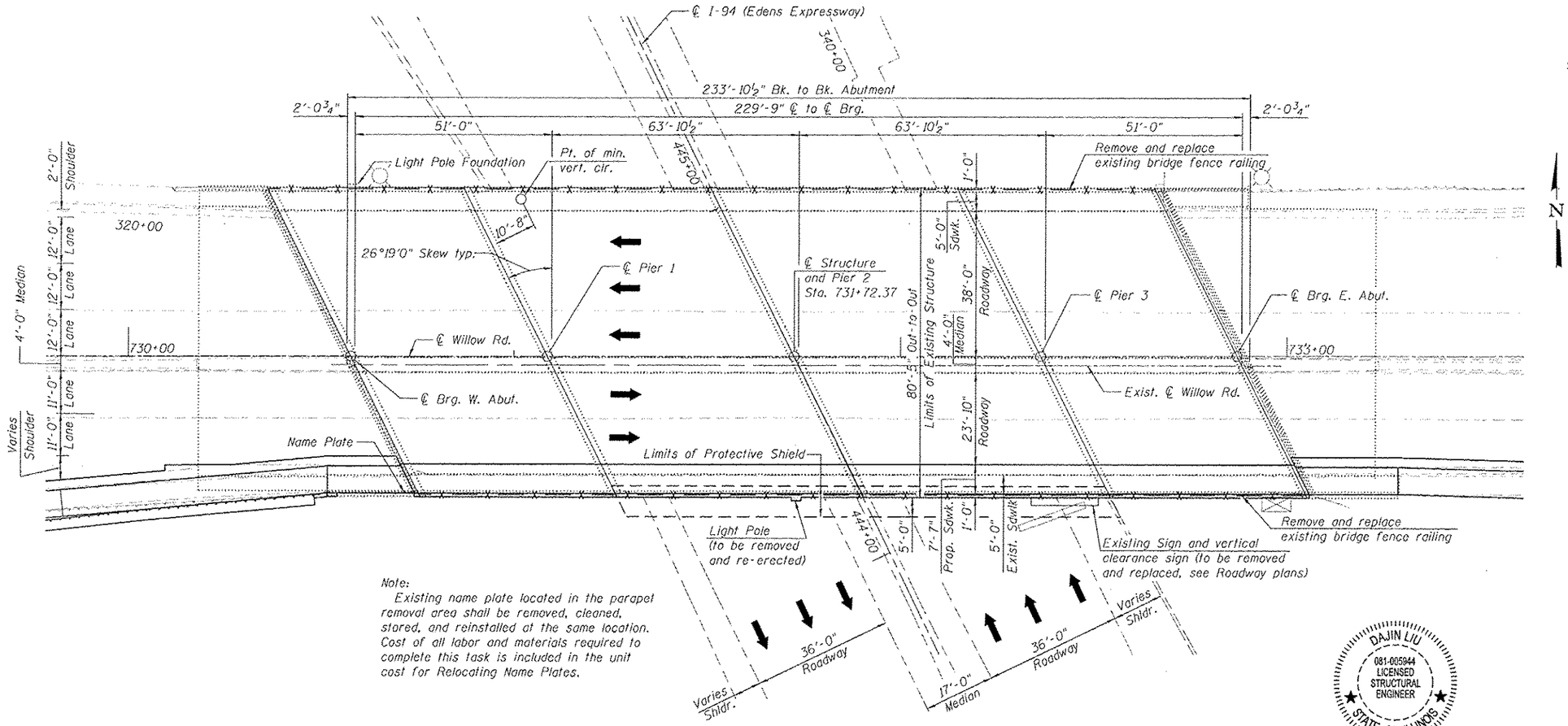
2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

DESIGN STRESSES

Proposed:
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (M270 Grade 36)

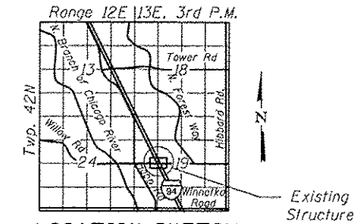
Original Construction (1949):
fc = 1,200 psi (Concrete)
fy = 20,000 psi (Reinforcement)
fs = 18,000 psi (Structural Steel)

North Widening (1991):
f'c = 3,500 psi (Concrete)
fy = 60,000 psi (Reinforcement)
fs = 20,000 psi (Structural Steel)



Note:
Existing name plate located in the parapet removal area shall be removed, cleaned, stored, and reinstalled at the same location. Cost of all labor and materials required to complete this task is included in the unit cost for Relocating Name Plates.

PLAN



LOCATION SKETCH

DAJIN LIU
081-005944
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS

DAJIN LIU, P.E., S.E.
NO. 081-005944
EXP. DATE 11/30/2014

12/3/12

GENERAL PLAN
WILLOW ROAD OVER
EDENS EXPRESSWAY (I-94)
F.A.P. RTE. 0305
SEC. (1920.01,1518,2022&1922.4B)R
COOK COUNTY
STATION 731+72.37
STRUCTURE NO. 016-0536

TranSystems

USER NAME = kahastings	DESIGNED - JST	REVISED -	
	CHECKED - JRM	REVISED -	
PLOT SCALE = 3200 '/' / in.	DRAWN - DMG	REVISED -	
PLOT DATE = 12/3/2012	CHECKED - DL/KAH	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0305	(1920.01,1518,2022&1922.4B)R	COOK	919	491
		CONTRACT NO. 60T35		
		ILLINOIS FED. AID PROJECT		

12/3/2012 4:17:15 PM - G:\CH\005B\Bridge\CADD\Sheets\0160536-D160T35-01-GPE.dgn