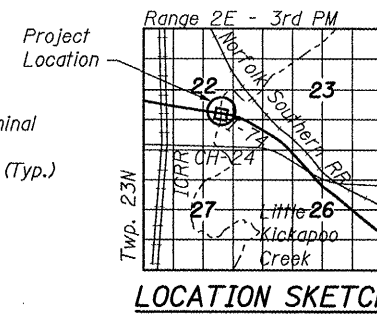


Benchmark: Chiseled square on concrete drainage way of Eastbound (SN 057-0120) Elevation 786.68

Existing Structures: S.N. 057-0120 (EB) and S.N. 057-0121 (WB) built in 1968 as FAI Route 74 Section 57-21B at Station 780+50. Superstructure consists of 42" P.P.C. I Beams and a 7 1/2" RC Deck with bituminous wearing surface. The substructure consists of RC stub abutments supported on concrete piles and RC solid wall piers supported on spread footings. Structure measures 161'-7" Bk. to Bk. abutments, and 42'-0" Out-to-Out of deck. Existing superstructures shall be removed and replaced, existing stub abutments to be converted to semi-integral abutments. Traffic to be maintained using stage construction.

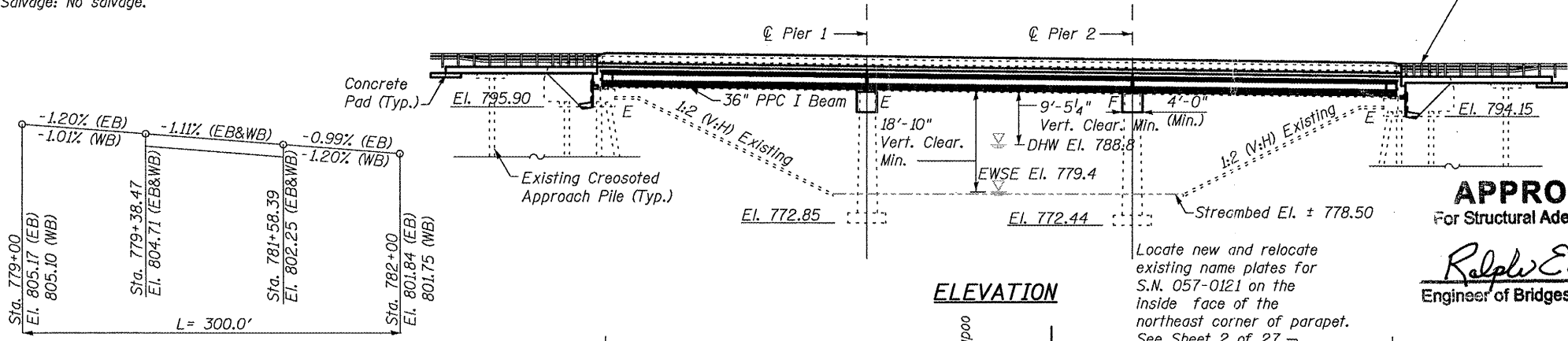
Salvage: No salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



INDEX OF SHEETS

- 1 General Plan and Elevation
- 2 General Data
- 3-4 Stage Construction
- 5-9 Top of Slab Elevations
- 10-12 Superstructure Details
- 13 Framing Plan
- 14-16 Beam Details
- 17 Bearing Details
- 18-19 Abutment Repair Details
- 20-21 Abutment Cap and Wingwalls
- 22-25 Pier Repair Details
- 26-27 Standard Details



APPROVED
For Structural Adequacy Only
Ralph E. Anderson
Engineer of Bridges & Structures

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.144g
Design Spectral Acceleration at 0.2 sec. (SDs) = 0.224g
Soil Site Class = D

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications
with 2008 Interims

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

PRECAST PRESTRESSED UNITS

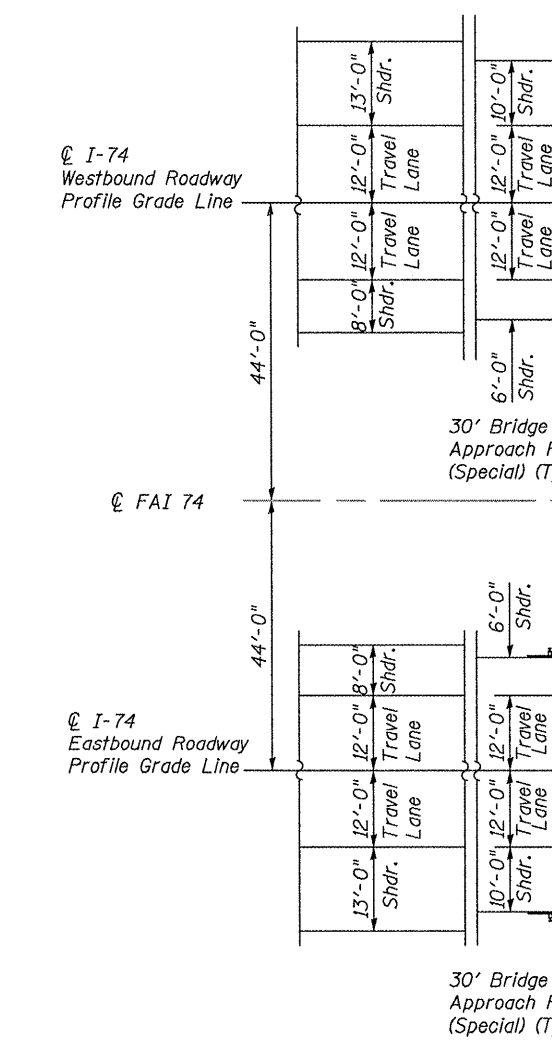
f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (1/2" Low Lax. Strands)
fpbt = 201,960 psi (1/2" Low Lax. Strands)

EXISTING SUBSTRUCTURE FIELD UNITS

f'c = 1,400 psi
fs = 20,000 psi (reinforcement)

PROFILE GRADE

(Westbound and Eastbound)



SCOPE OF WORK

1. Remove and replace existing deck parapets, PPC I-beam superstructure, and bridge approach pavements utilizing stage construction. Use elastomeric expansion bearings at abutments and expansion pier.
2. Modify and widen existing abutment to semi-integral abutments. Remove existing wingwalls and replace with new 'dogear' type wingwalls.

WATERWAY INFORMATION

Flood		Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
				Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
	10	1548	490	490	600	787.8	0.6	0.6	788.4	788.4	788.4
Design	50	2500	600	600	600	788.8	1.1	1.1	789.9	789.9	789.9
Base	100	2924	636	636	636	789.2	1.3	1.3	790.5	790.5	790.5
Max. Calc.	500	3960	729	729	729	790.0	1.7	1.7	791.7	791.7	791.7

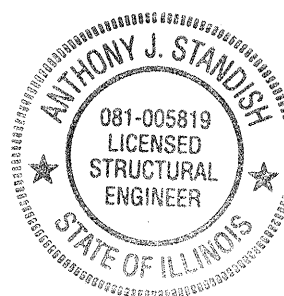
Scour counter measures are in place. Scour is not anticipated.

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

ILLINOIS STRUCTURAL NO. 081-005819 (Expires 11/30/08)

GENERAL PLAN & ELEVATION
I-74 OVER LITTLE KICKAPOO CREEK
STRUCTURE NO. 057-0120
AND 057-0121

STRAND ASSOCIATES, INC.



DESIGNED	RRD
CHECKED	AJS
DRAWN	KAS
CHECKED	JAR

Note:
The profile grade shows the final elevations after grinding. Up to 1/4" will be ground off the bridge deck and the bridge approach pavement.

PLAN

SHEET NO. 1 27 SHEETS	F.A.I. RTE. 74	SECTION (57-21B)BR	COUNTY MCLEAN	TOTAL SHEETS 61	SHEET NO. 13
	GENERAL PLAN & ELEVATION			CONTRACT NO. 70641	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					