

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

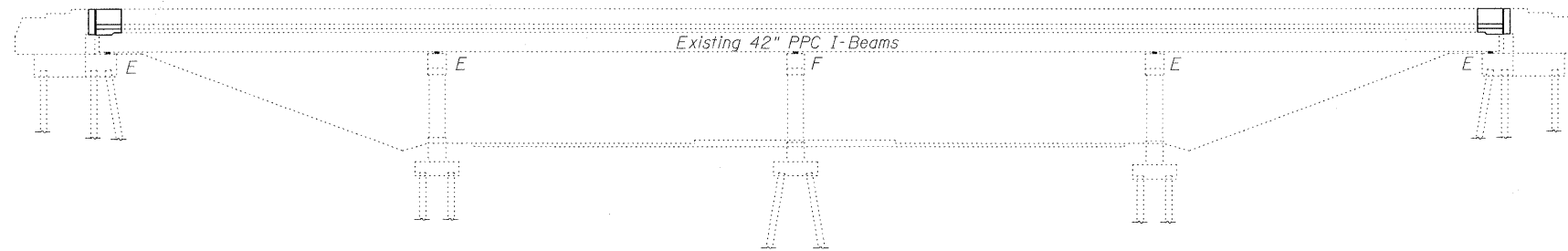
Existing Structure:
Structure No. 016-0973, constructed in 1965 as F.A. 61, Section 531-34B-2. In 1971, the deck was patched and overlay was provided. In 1987 under F.A. 432, existing bituminous surface was replaced with 2" concrete overlay and parapet was retrofitted. Existing structure is a four span bridge utilizing PPC I-Beams, supported by multi-column concrete piers and pile bent abutments, 228'-3" bk. to bk. abutments, 58'-0" out to out deck with a left ahead skew angle of 46°05'30". Stage Construction shall be utilized to maintain traffic during construction.

SCOPE OF WORK

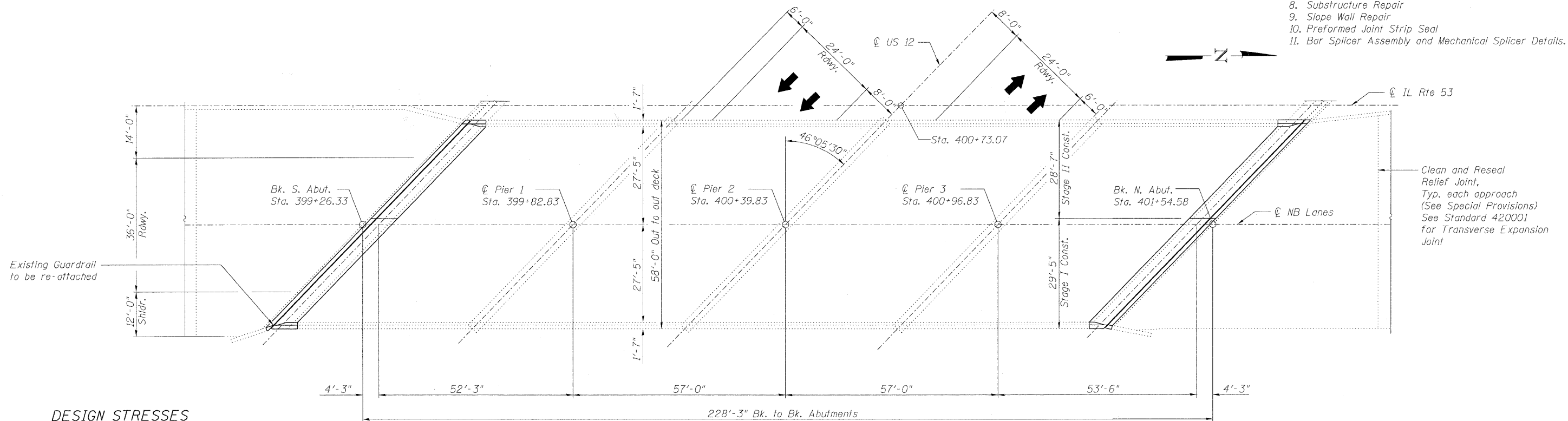
1. Remove and replace concrete deck adjacent to expansion joints.
2. Provide preformed joint strip seal expansion joints at abutments.
3. Apply Concrete Sealer to top of concrete deck and top and inside vertical face of parapets.
4. Repair deck slab.
5. Clean and Reseal Relief Joints.
6. Repair deteriorated concrete on abutments, piers and slope wall.
7. Jack and remove existing bearings and replace with elastomeric bearings.

INDEX OF SHEETS

1. General Plan and Elevation
2. General Notes and Details
3. Temporary Concrete Barrier for Stage Construction
4. Deck Slab Repair
5. Concrete Removal
6. Concrete Details
7. Bearing Details
8. Substructure Repair
9. Slope Wall Repair
10. Preformed Joint Strip Seal
11. Bar Splicer Assembly and Mechanical Splicer Details.



ELEVATION



DESIGN STRESSES

FIELD UNITS

Existing Construction
 $f_c = 1,400$ psi (Substructure & Superstructure)
 $f_s = 20,000$ psi (Reinforcement)
 $f_s = 20,000$ psi (Structural Steel)

New Construction
 $f_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 36,000$ psi (Structural Steel) (M270 Gr. 36)

PRECAST PRESTRESSED UNITS

Existing Construction
 $f_c = 5,000$ psi
 $f_{ci} = 4,000$ psi
 $f_s = 248,000$ psi
 $f_{si} = 173,600$ psi

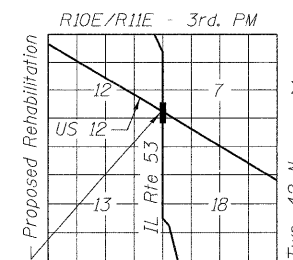
DESIGN SPECIFICATIONS

(New Construction)
 2002 AASHTO "Standard
 Specifications for Highway Bridges"

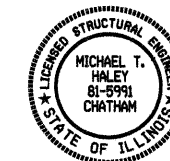
LOADING HS 20-44

(Original Construction)

PLAN



LOCATION SKETCH



Michael J. Haley 2/8/10
 Michael T. Haley
 Licensed Structural Engineer
 State of Illinois No. 81-5991
 Expires 11/30/2010

GENERAL PLAN AND ELEVATION
 NB IL RTE 53 OVER US 12 (RAND RD.)
 F.A.I. RTE 290
 SECTION (531-3.1,0305-302K)RS-5
 COOK COUNTY
 STATION 400+73.07
 STRUCTURE NO. 016-0973

LIN ENGINEERING, LTD. Consulting Engineers Chatham, Illinois	SHEET NO. 1	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11 SHEETS	290	(531-3.1,0305-302K)RS-5	COOK	314	138
Designed By: ESH Checked By: MTH Date: 12/2/09		Drawn By: TBP File: 016-0973.dgn		CONTRACT NO. 60138		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT						