Existing Structures: Dual bridges over IL Rte 53 Chicago Street, SN 099-0059 carrying I-80 Eastbound and SN 099-0058 carrying I-80 Westbound, were originally constructed in 1962 as a part of F.A.I. 80 Project, I-80-4(31)134, Section 99-4,99-4(B,HB). The superstructures consist of 3 simple span steel multi-girder units supported on concrete abutments and piers. The existing bridge decks consist of 7-inch reinforced concrete composite slab with 2" bituminous overlay and waterproofing membrane. The transverse deck joints are PJS type with vertical armor plates. In 1971 the longitudinal deck joint was eliminated. In 1990 and 1998 repairs were made to the decks, abutments, piers, deck joints, rail and drainage system. In 2001, the bituminous overlay and waterproofing membrane was replaced. The structure was fully painted in 1985; the facias and beam ends under joints were re-painted in 2003. Traffic shall be maintained utilizing stage construction. No salvage. € Pier 3—— © IL Rte. 53 Bk. SE Abut. Bk. SW Abut.-Тур. 97'-10"± Limits of Protective Shield (Permanent) (General Note 5) Crown of-Roadway EIX: EXD. Steel Piles Structural Repair of Concrete TVD. (Typ. at Piers and W. Abutment) **ELEVATION** 

-Bk. NW Abut.

635+82,43

£ Pier 1—/ Sta. 636+18.85

636+00

 $\oplus$ 

-Bk. SW Abut. Sta. 635+94.44

34'-7"

Span 1

REVISED

REVISED

REVISED

REVISED

### INDEX OF SHEETS

- S1. General Plan and Elevation
- S2. Construction Staging and Total Bill of Material
- S3. Deck and Expansion Joint Repairs
- S4. Abutment and Pier Repairs
- S5. Permanent Protective Shield
- S6. Temporary Concrete Barrier for Stage Construction

# SCOPE OF WORK:

Piles. Typ.

638+00

-Replace Existing Joint

1'-10"

w/Silicone Joint Sealer,  $1^{3}$ 

- 1. Remove existing Hot-Mix Asphalt Overlay.
- 2. Install Protective Shield.
- Full and partial depth deck slab repair.
- 4. Remove and replace deck joints with silicone joint sealer.
- 5. Install temporary beam shoring.
- 6. Structural concrete repair at abutments and piers.
- 7. Construct Hot-Mix Asphalt Overlay.

## DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges. 17th Edition

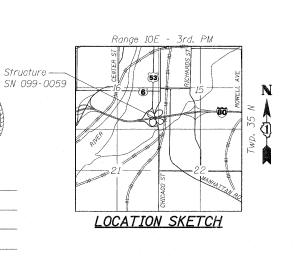
### DESIGN STRESSES

FIELD UNITS: f'c = 3.500 psi

fy = 60,000 psi (Reinforcement)

### **GENERAL NOTES:**

- 1. Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60. See Special Provisions.
- 2. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. Contractor should verify dimensions and make necessary approved adjustments prior to starting construction. Such variations shall not be cause for additional compensation for a change in scope of work, however, the Contractor will be paid for actual quantity furnished and approved by Engineer at unit price bid for the work.
- 3. Areas of proposed deck repairs are estimated. Actual type, location and dimension of deck repairs are to be determined by the Engineer during construction.
- 4. Contractor shall remove the existing asphalt wearing surface and, as necessary, adjust the milling depth to prevent damage to the existing waterproofing membrane. After satisfactory completion of the deck repair work, an asphalt surface course shall be placed in sufficient thickness as to match the elevation of the original surface.
- 5. Protective shield shall be installed prior to start of Deck Slab Repair work.



HBP

Protective Shield-

Sta. 636+30.86

Replace Existing Joint

w/Silicone Joint Sealer, 23<sub>4</sub>"

97'-104'

Span 2

179'-7'4" Bk. to Bk. Abutments

PLAN

(Permanent)

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

-@ Pier 2 Sta. 637+16.70

Bk. NE Abut.-

∕-- € IL Rte. 53

I.-80 Sta. 636+73.50

IL Rte. 53 Sta. 20+00

Sta. 637+28.

Sta. 637+62.03

—Deck Slab Repair

Bk. SE Abut.-

-Replace Exist. Joint

w/Silicone Joint Sealer, 1"

Span 3

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Sta. 637+74.05

**GENERAL PLAN AND ELEVATION** EASTBOUND I-80 OVER IL ROUTE 53 (CHICAGO STREET) SN 099-0059 TO STA. SCALE: SHEET S1 0F S6

SN 099-0058

,—€ I-80

-€ SN 099-0059

SIGNED:

DATE:

EXP:

Januarin

02/08/2011

11/30/2012

SHEETS: SI THRU S6

(EB Rdwv)

-Existing 40 ft. Approach

Slab (Typ. Ea. End)

(WB Rdwy)

SECTION 99 (2&3) RS-3 WILL 200 143 CONTRACT NO. 60M64 FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT

01/21/2011 .\fs|\tranprojects\idct\21050.005 (1-80 phase 11)\drawings\cadd sheats\bridge p&e\il 53\EB\099-0059-D160M64-GPE-IL53.dgr

I-C-/A-Y

A.Y./R.L.D.

DESIGNED - A.Y./L.C.

CHECKED -

DATE

Replace Existing Joint-

w/Silicone Joint

Sealer, 13<sub>4</sub>

LEGEND

PLOT SCALE = 1:16

PLOT DATE = 2/8/2011

JSER NAME = ayargıcəglu(Rdwy\_Lisle)

PLOT CONFIG= PDF(I-80\_TopoGrey\_Large).plt DRAWN

Temporary Shoring and Cribbing

Protective Shield (Permanent)