

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	*	ST. CLAIR	99	22
* FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT- IM-70	
* 82-3HVB-3R-5			SHEET S-1 OF S-56	
CONTRACT NO. 76985				

**SET 1 OF  
2 SETS**

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**FAI ROUTE 70 (I-55/64/70)**  
**POPLAR STREET BRIDGE APPROACHES**  
**SECTION 82-3HVB-3R-5**  
**PROJECT IM-70**  
**PLANS FOR PROPOSED**  
**ROADWAY REHABILITATION**  
**ST. CLAIR COUNTY**

ENCOMPASSING THE FOLLOWING ROADWAYS  
 • SN-082-0141 (ROADWAY A)

**LOADING HS20-44**

**SEISMIC DATA**

Seismic Performance Category (SPC) = B  
 Bedrock Acceleration Coefficient (A) = 0.12g  
 Site Coefficient (S) = 1

**DESIGN SPECIFICATIONS**

2002 AASHTO  
 1995 Seismic Retrofitting Manual for  
 Highway Bridges FHWA-RD-94-052

**HIGHWAY CLASSIFICATION**

F.A.I. Route 70 - Poplar Street Complex  
 Functional Class: Collector - Distributor  
 Roadways  
 A.D.T.: 4,300 (2005)  
 D.H.V.: 100  
 Design Speed: 50 mph  
 Posted Speed: 50 mph

**DESIGN STRESSES**

**FIELD UNITS (ORIGINAL)**

$f_c$  = 1,400 psi  
 (Super- and Sub-structures)  
 $f_s$  = 20,000 psi (A36 Structural Steel)  
 $f_s$  = 20,000 psi (Reinforcement)  
 $f_y$  = 40,000 psi (Reinforcement)

**FIELD UNITS (Previous Repair)**

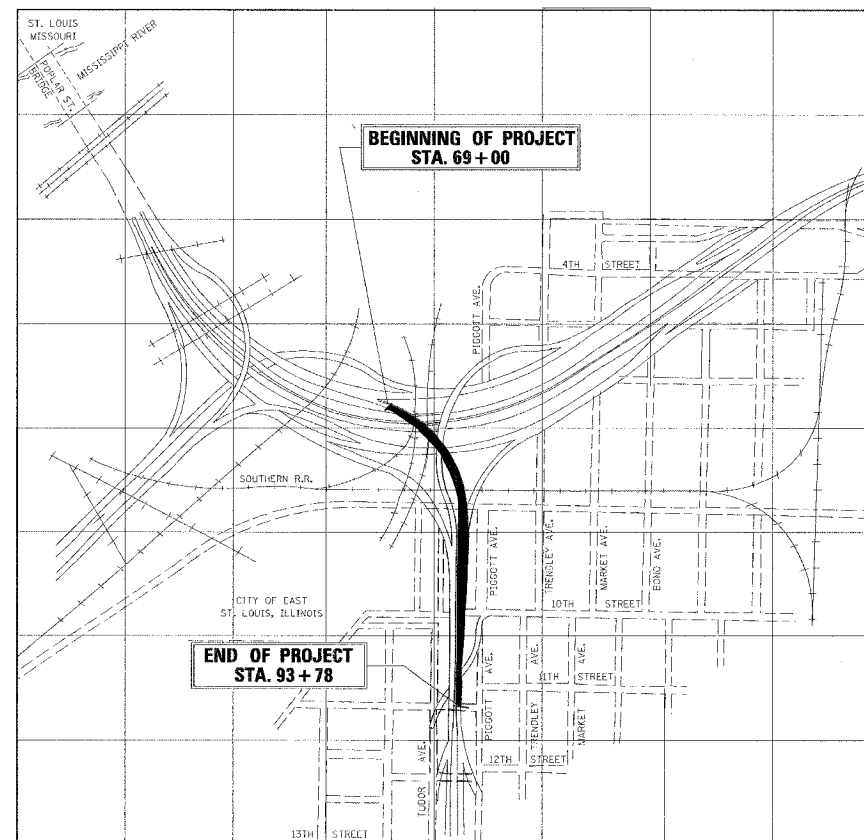
$f_c$  = 3,500 psi  
 $f_y$  = Varies, 36,000 - 50,000 psi  
 (Structural Steel)  
 $f_y$  = 60,000 psi (Reinforcement)

**FIELD UNITS (NEW)**

$f_c$  = 4,000 psi  
 $f_y$  = 36,000 psi (M270 Grade 36)  
 $f_y$  = 50,000 psi (M270 Grade 50)  
 $f_y$  = 70,000 psi (M270 Grade HPS TOW)  
 $f_y$  = 60,000 psi (Reinforcement)

**INDEX OF DRAWINGS**

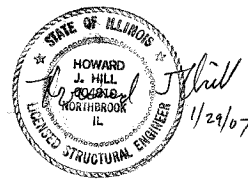
SHEET(S)	TITLE
S1	TITLE SHEET-ROADWAY A
S2	GENERAL NOTES
S3	SCOPE OF WORK
S4	KEY PLAN
S5	TOTAL BILL OF MATERIAL
S6 - S9	PROJECT PLAN, ELEVATION, AND SECTIONS
S10 - S16	TABLES OF ROADWAY ELEVATIONS
S17 - S24	DECK AND PARAPET REPAIR PLANS
S25 - S32	INFRARED THERMOGRAPHIC MAPPING RESULTS
S33 - S36	CONCRETE PARAPET DETAILS
S37 - S38	CONCRETE REPAIR DETAILS
S39 - S44	EXPANSION JOINT REPAIR DETAILS
S45 - S47	DECK DRAINAGE DETAILS
S48	STEEL PAINTING DETAILS
S49 - S50	ELASTOMERIC BEARING REPLACEMENT
S51 - S52	FATIGUE RETROFIT DETAILS
S53 - S56	SEISMIC ISOLATION DETAILS AND PIER ELEVATION



**LOCATION PLAN**

**CONTRACT NO. 76985**

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 Illinois Licensed Structural Engineer  
 License No. 081-004819  
 License Expires: 11/30/08



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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**

SUBMITTED \_\_\_\_\_ 20 \_\_\_\_\_

DISTRICT ENGINEER

\_\_\_\_\_ 20 \_\_\_\_\_

ENGINEER OF PROJECT DEVELOPMENT AND IMPLEMENTATION

\_\_\_\_\_ 20 \_\_\_\_\_

ENGINEER OF DESIGN AND ENVIRONMENT

\_\_\_\_\_ 20 \_\_\_\_\_

DIRECTOR, DIVISION OF HIGHWAYS

DATE: 1/26/2007  
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