

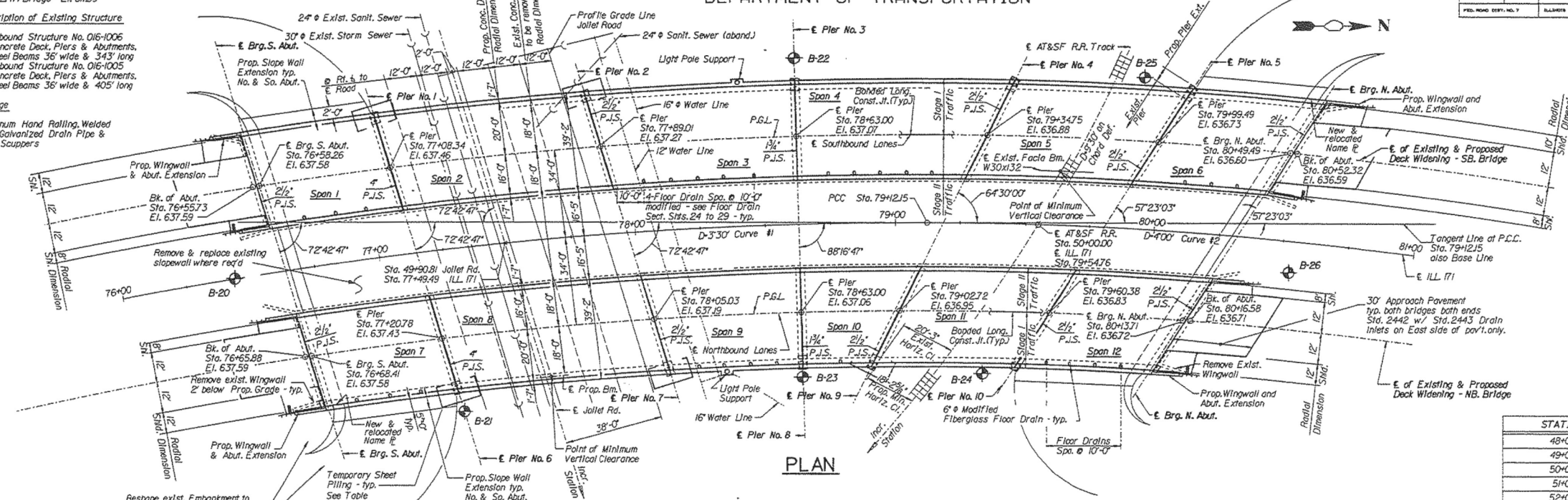
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COMPLY	DATE	SHEET
171	605-628	COOK	3/3	106
SHEET NO. S-1				
SHEETS 5-48				

**Benchmark**  
Cut in NW Corner of Traffic Control Box north of Joliet Road 20' east of the ILL 171 Bridge - El. 611.99

**Description of Existing Structure**  
Northbound Structure No. 016-1006  
Concrete Deck, Piers & Abutments, Steel Beams 36" wide & 34' long  
Southbound Structure No. 016-1005  
Concrete Deck, Piers & Abutments, Steel Beams 36" wide & 405' long

**Salvage**  
Aluminum Hand Railing, Welded Steel Galvanized Drain Pipe & Deck Scuppers



PLAN

STATION 77+49.4  
BUILT 199 BY  
STATE OF ILLINOIS  
FAU.R.T. 2746 SEC. 605-628VB  
F.A. PROJ. STP#-1003(10)  
LOADING HS20  
STR. NO. 016-1005  
**NAME PLATE**  
SOUTHBOUND

STATION 77+49.4  
BUILT 199 BY  
STATE OF ILLINOIS  
FAU.R.T. 2746 SEC. 605-628VB  
F.A. PROJ. STP#-1003(11)  
LOADING HS20  
STR. NO. 016-1006  
**NAME PLATE**  
NORTHBOUND

STATION	TRACK ELEVATION
48+00	611.20
49+00	610.99
50+00	610.61
51+00	610.31
52+00	610.20

AT&SF R.R. TOP OF TRACK ELEVATION

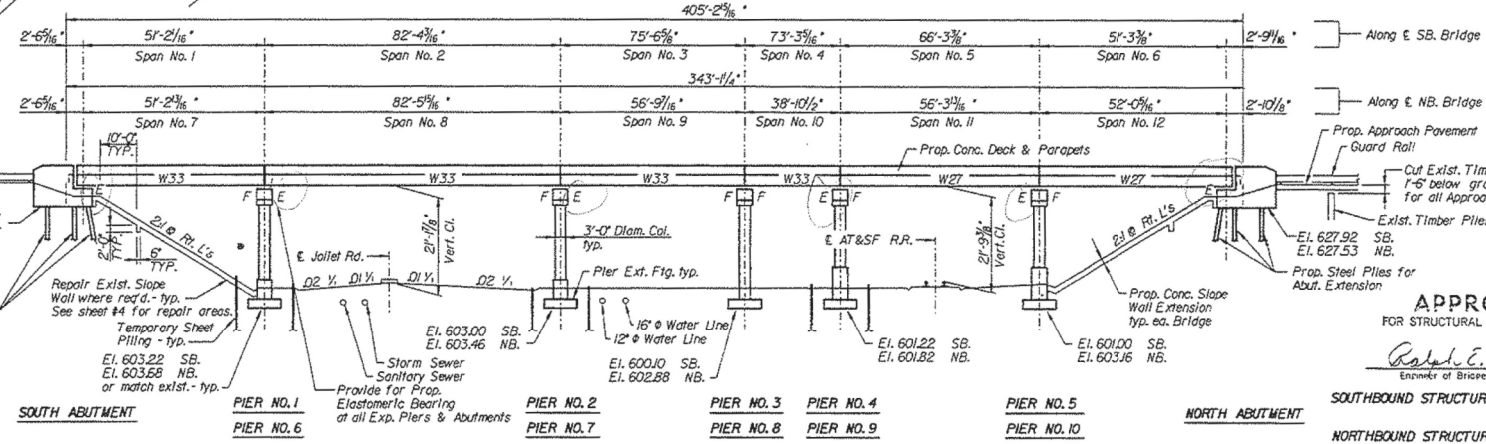
**NOTE:**  
Use Traffic Terminal Type 6 for Approach end of bridges and Traffic Terminal Type 5 for Exit end of bridges.

SB - Southbound Bridge  
NB - Northbound Bridge

**HORIZONTAL CURVE DATA**  
Along E. ILL. 171

CURVE # 1	CURVE # 2
Lc 31' 12" 18"	22' 24" 00"
Dc 3' 30" 00"	4' 00" 00"
Rc 1637.02	1432.39
Tc 457.14	283.62
Lc 891.57	560.00
Lc 880.59	556.44
Ec 62.63	27.81

DESIGNED	RC
CHECKED	ELD
DRAWN	MF
CHECKED	ELD



**ELEVATION NORTHBOUND STRUCTURE**  
**ELEVATION SOUTHBOUND STRUCTURE (SIMILAR)**  
(Looking West)

**STAGING INSTRUCTIONS**

**STAGE I:**  
Outer median lanes shall be used for traffic while inner lanes are reconstructed with new deck.

**STAGE II:**  
Inner lanes of reconstructed bridge shall be used for traffic while outer lanes are reconstructed with new deck.

**DESIGN SPECIFICATIONS**  
AASHTO (1992)

**LOADING HS20-44**  
Allow 25#/sq. ft. for future wearing surface.

**SEISMIC DATA**

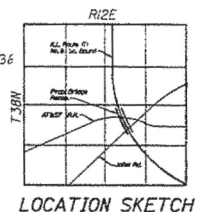
S.P.C. - A  
R = 0.04  
Site Coeff. = 1.0

**DESIGN STRESSES**  
New Deck & Rehab. Structures

$f_c = 3,500$  psi  
 $f_r = 60,000$  psi (Reinf.)  
 $f_r = 36,000$  psi (New Beams)  $m = 1.3$  or  $3.6$

**Existing Structures**

$f_c = 1,400$  psi  
 $f_r = 20,000$  psi (Reinf.)  
 $f_r = 36,000$  psi (Beams)  
Soil Pressure All = 5200 #/Sq. Ft.



LOCATION SKETCH

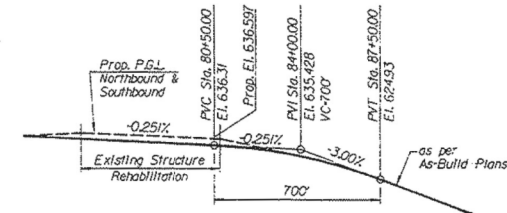
**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY

*Robert E. Anderson*  
Engineer of Bridges and Structures



**TEMPORARY SHEET PILING TOP & BOTTOM ELEVATION**

PIER	TOP EL.	BOTT. EL.
PIER 1	611.5	600.2
PIER 2	611.5	600.0
PIER 6	611.0	600.5
PIER 7	611.0	600.4



**PROFILE GRADE LINES**

ILL. Route 171  
along E. Northbound & Southbound Structures

**PROFILE GRADE LINE**  
Joliet Road

Sta. 48+00 El. 611.20  
Sta. 51+00 El. 610.31

**BOWMAN, BARRETT & ASSOCIATES INC.**  
222 N. MICHIGAN AVENUE SUITE 2200 CHICAGO, ILLINOIS 60601  
JOB NO. 016

**GENERAL PLAN**  
BRIDGE REHABILITATION ILLINOIS ROUTE 171  
NORTHBOUND & SOUTHBOUND  
OVER JOLIET RD. & AT&SF R.R.  
FAU 2746 SECTION 605-628 VB  
STATION 77+49.4  
COOK COUNTY  
STRUCTURE NO. 016-1005 S.B.  
STRUCTURE NO. 016-1006 N.B.

FOR INFORMATION ONLY

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION 1 OF 7  
STRUCTURE NO. 016-1005

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	320
CONTRACT NO. 60J16				
ILLINOIS FED. AID PROJECT				

**benesch**  
engineers · scientists · planners  
Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10093

FILE NAME =	USER NAME =	DESIGNED =	REVISIONS =
016-1005-60J16-007-gpe.dgn	tjenicke	CMK	CMK
		CHECKED =	REVISIONS =
		JAW	JAW
		DRAWN =	REVISIONS =
		CMK	CMK
		CHECKED =	REVISIONS =
		JAW	JAW

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