TBM#1: Chiseled "□" on top of N.E. Wingwall. Station 221+73, 23' Lt., Elev. 671.49.

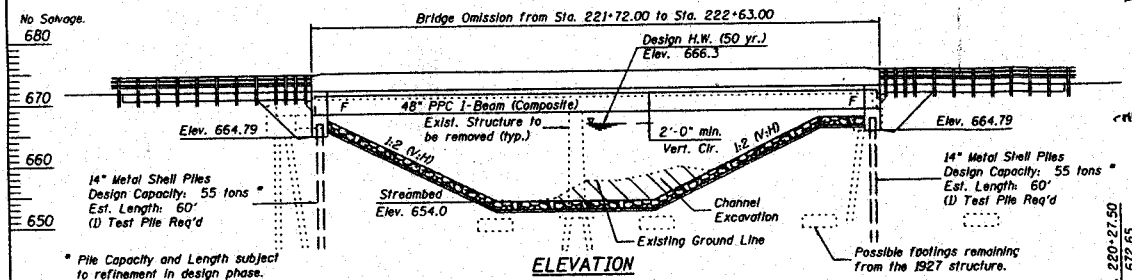
EXISTING STRUCTURE: S.N. 038-0046, re-constructed in 1969 as SBI Route 48, Section 112 BR-1 at Station 222+14 with 27" PPC deck beams and 1.5" bituminous overlay, two spans @ 46.9', 98.5' back-back abutments, 45.0' o. to o. width, R.C. open abutments on concrete piles. Solid wall pier on timber piles. Existing structure shall be removed and replaced using staged construction to maintain one lane of traffic at all times.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

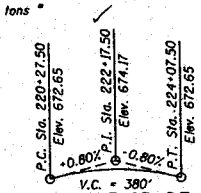
SHEET 1 OF 1

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 71	112 BR-1	IROQUOIS		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ.	

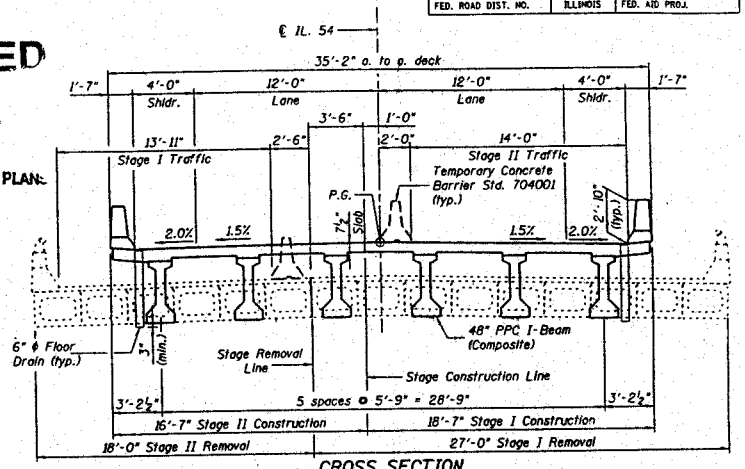
APPROVED
JUN 0 3 2003
AS A BASIS FOR PREPARATION OF DETAILED PLANS



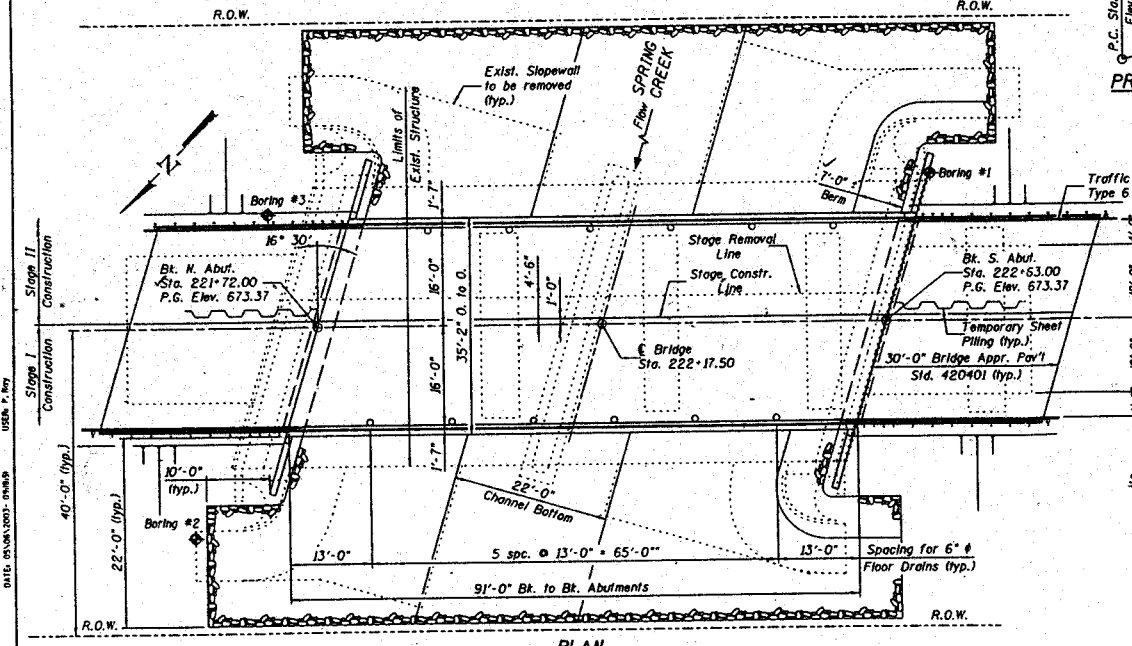
ELEVATION



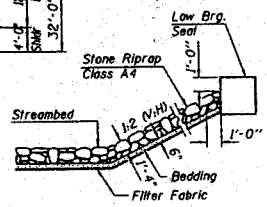
PROFILE GRADE



CROSS SECTION
(Looking South)



PLAN



STONE RIPRAP DETAIL

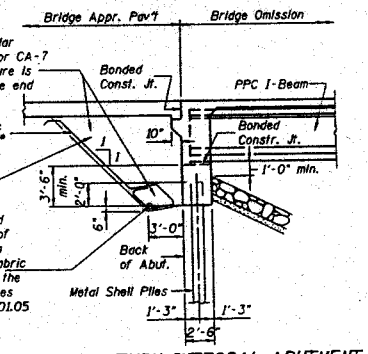
Backfill with uncompacted porous granular embankment with a gradation of CA-5 or CA-7 by Bridge Contractor after superstructure is in place. Limits shall be 1'-0" from the end of each wingwall.

Geotechnical fabric for french drains.*

Excavation for placing Porous Granular Embankment is paid for as "Structure Excavation".

A 6" ϕ perforated drain pipe shall be situated at the bottom of an approximate 2'x2' area of porous granular embankment. The 2'x2' area shall be wrapped completely in geotechnical fabric for french drains. Extend pipe parallel with the cap until intersecting with the sideslope. Pipes shall drain onto concrete headwalls (Article 601.05 of the Standard Specifications). *

* Included in the cost of "Porous Granular Embankment".



SECTION THRU INTEGRAL ABUTMENT
(Horiz. Dims. @ Rt. L's)

HIGHWAY CLASSIFICATION

Route F.A.P. 71 (IL. 54)
Functional Class: Rural Minor Arterial
ADT: 1150 (2001) ; 1750 (2021)
ADTT: 289 (2001) ; 440 (2021)
Design Speed: 55 m.p.h.
Posted Speed: 55 m.p.h.

DESIGN SPECIFICATIONS

2002 AASHTO

LOADING HS20-44

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

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.2

WATERWAY INFORMATION

Drainage Area = 18.65 Sq. Mi. Low Grade Elev. = 670.5' @ Sta. 217+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	1448	446	488	664.9	0.2	0.1	665.1	665.0
Design	50	2137	545	582	666.3	0.4	0.3	666.7	666.6
Base	100	2418	571	605	666.6	0.5	0.4	667.1	667.0
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	3071	628	654	667.3	0.6	0.7	667.9	668.0

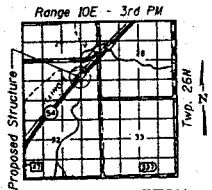
DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
f's = 270,000 psi (½" ϕ low lax strands)
fsi = 201,960 psi (½" ϕ low lax strands)



LOCATION SKETCH

DESIGNED	CDB
CHECKED	DCD
DRAWN	P. Ray
CHECKED	DCD

GENERAL PLAN (TS&L)
ILLINOIS 54 OVER
SPRING CREEK
FAP ROUTE 71 SECTION 112 BR-1
IROQUOIS COUNTY
STATION 222+17.50
STRUCTURE NO. 038-0213

FILE: F:\WORK\ILS\P roposals\TSL\Bridge_Pl.dgn
DATE: 05/08/2003 09:18:19
USER: P. Ray